BALDWIN

Feasibility- Appendix

Driscoll School, Brookline, Massachusetts

Owner

Brookline, Massachusetts

Client

Brookline, Massachusetts

Architect

Jonathan Levi Architects LLC

December 8, FINAL DRAFT

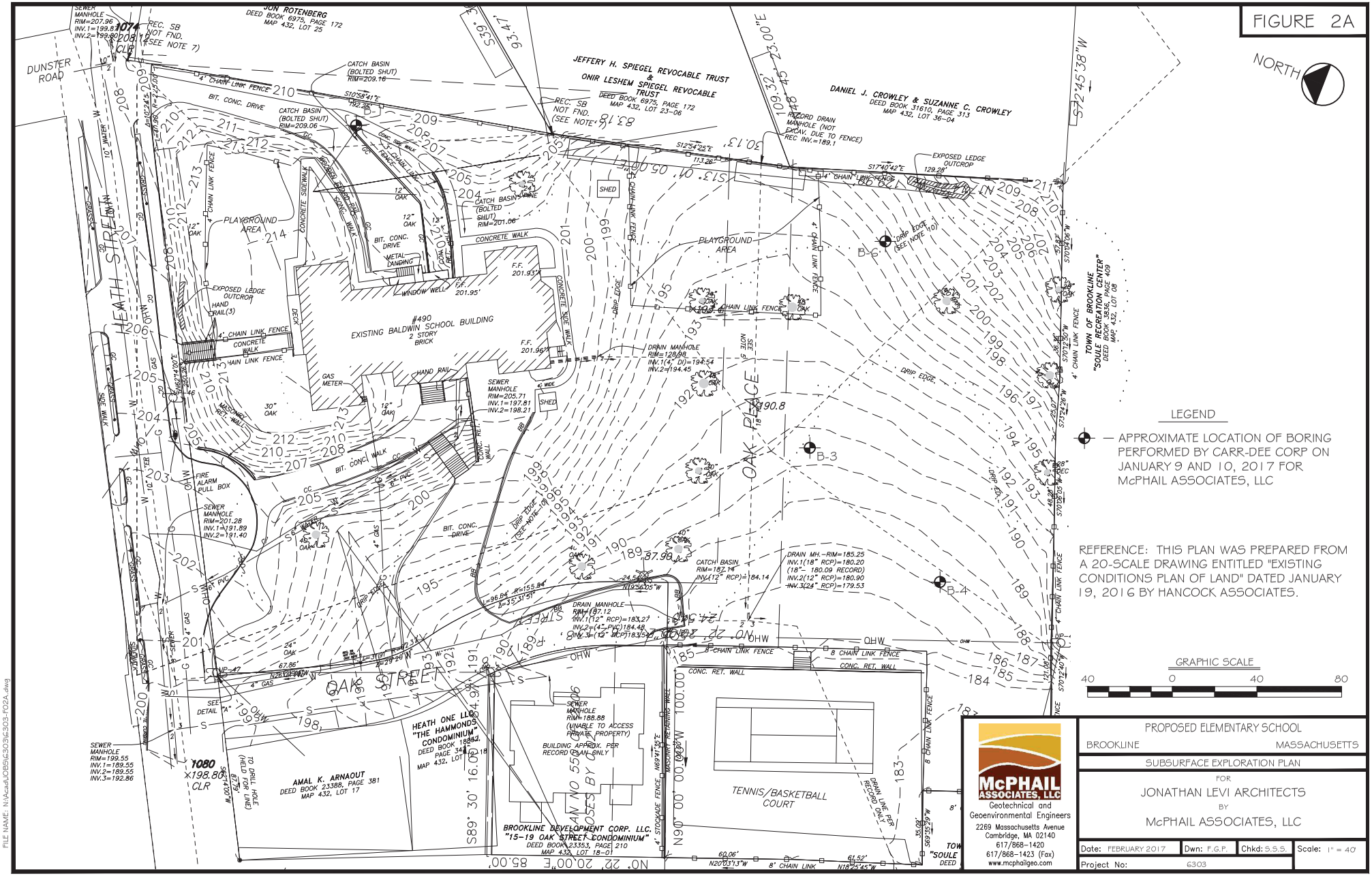
3.0 APPENDICES
3.1 Geotechnical
3.2 Geoenvironmental
3.3 Hazmat
3.4 Traffic

3.1 Geotechnical

Please see the following Documents and Report prepared by McPhail Associates.

-Boring locations - Subsurface Exploration Plan
-Geotechnical Engineering Data Report

FIGURE 2A


NORTH
JON ROTENBERG
DEED BOOK 6975, PAGE 172
MAP 432, LOT 25
JEFFERY H. SPIEGEL REVOCABLE TRUST
&
ONIR LESHEM SPIEGEL REVOCABLE TRUST
DEED BOOK 6975, PAGE 172
MAP 432, LOT 23-06
DANIEL J. CROWLEY & SUZANNE C. CROWLEY
DEED BOOK 31610, PAGE 313
MAP 432, LOT 36-04
TOWN OF BROOKLINE
"SOULE RECREATION CENTER"
DEED BOOK 3836, PAGE 409
MAP 432, LOT 08
DUNSTER ROAD
HEATH STREET
OAK STREET
OAK PLACE
#490
EXISTING BALDWIN SCHOOL BUILDING
2 STORY
BRICK
PLAYGROUND AREA
TENNIS/BASKETBALL COURT
AMAL K. ARNAOUT
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MAP 432, LOT 17
HEATH ONE LLC
"THE HAMMONDS CONDOMINIUM"
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MAP 432, LOT 18
BROOKLINE DEVELOPMENT CORP. LLC.
"15-19 OAK STREET CONDOMINIUM"
DEED BOOK 23353, PAGE 210
MAP 432, LOT 18-01
BUILDING APPROX. PER RECORD PLAN ONLY
SEWER MANHOLE
RIM=207.96
INV.1=199.87
INV.2=199.80
SEWER MANHOLE
RIM=205.71
INV.1=197.81
INV.2=198.21
SEWER MANHOLE
RIM=201.28
INV.1=191.89
INV.2=191.40
SEWER MANHOLE
RIM=199.55
INV.1=189.55
INV.2=189.55
INV.3=192.86
DRAIN MANHOLE
RIM=128.98
INV.1(4" DI)=194.54
INV.2=194.45
DRAIN MH.-RIM=185.25
INV.1(18" RCP)=180.20
(18"- 180.09 RECORD)
INV.2(12" RCP)=180.90
INV.3(24" RCP)=179.53
CATCH BASIN
RIM=187.14
INV.(12" RCP)=184.14
DRAIN MANHOLE
RIM=187.12
INV.1(12" RCP)=183.27
INV.2=(4" PVC)184.48
INV.3=(12" RCP)183.54
SEWER MANHOLE
RIM=188.88
(UNABLE TO ACCESS PRIVATE PROPERTY)
RECORD DRAIN MANHOLE (NOT EXCAV. DUE TO FENCE)
REC INV.=189.1
EXPOSED LEDGE OUTCROP
CATCH BASIN (BOLTED SHUT)
RIM=209.16
CATCH BASIN (BOLTED SHUT)
RIM=209.06
CATCH BASIN (BOLTED SHUT)
RIM=201.06
REC. SB NOT FND. (SEE NOTE 7)
REC. SB NOT FND. (SEE NOTE 10)
FIRE ALARM PULL BOX
GAS METER
HAND RAIL
WINDOW WELL
CONCRETE WALK
CONCRETE SIDEWALK
BIT. CONC. DRIVE
BIT. CONC. WALK
CONC. RET. WALL
8' CHAIN LINK FENCE
4' CHAIN LINK FENCE
DRIP EDGE
DRIP EDGE (SEE NOTE 10)
TO DRILL HOLE (HELD FOR LINE)
DRAIN LINE PER RECORD ONLY
B-3
B-4
B-6
S89° 30' 16.00"E
N90° 00' 00.00"W
N0° 22' 20.00"E 85.00'
S72°45'38"W
S13° 01' 05.00"E
S13° 01' 05.00"E
N0° 22' 20.00"E
S72°45'38"W
LEGEND
APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP ON JANUARY 9 AND 10, 2017 FOR McPHAIL ASSOCIATES, LLC
REFERENCE: THIS PLAN WAS PREPARED FROM A 20-SCALE DRAWING ENTITLED "EXISTING CONDITIONS PLAN OF LAND" DATED JANUARY 19, 2016 BY HANCOCK ASSOCIATES.
GRAPHIC SCALE
40 0 40 80
McPHAIL ASSOCIATES, LLC
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Cambridge, MA 02140
617/868-1420
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www.mcphailgeo.com
PROPOSED ELEMENTARY SCHOOL
BROOKLINE MASSACHUSETTS
SUBSURFACE EXPLORATION PLAN
FOR
JONATHAN LEVI ARCHITECTS
BY
McPHAIL ASSOCIATES, LLC
Date: FEBRUARY 2017
Dwn: F.G.P.
Chkd: S.S.S.
Scale: 1" = 40'
Project No: 6303
FILE NAME: N:\Acad\JOBS\6303\6303-F02A.dwg

GEOTECHNICAL ENGINEERING DATA REPORT

PROPOSED ELEMENTARY SCHOOL

BROOKLINE, MASSACHUSETTS

FEBRUARY 15, 2017

Prepared For:

Jonathan Levi Architects
266 Beacon Street
Boston, MA 02116

2269 Massachusetts Avenue
Cambridge, MA 02140
www.mcphailgeo.com
(617) 868-1420

PROJECT NO. 6303

February 15, 2017

Jonathan Levi Architects
266 Beacon Street
Boston, MA 02116

Attention: Mr. Philip Gray

Reference: Proposed Elementary School; Brookline, Massachusetts
Geotechnical Engineering Data Report

Ladies and Gentlemen:

This letter documents the results of our subsurface exploration program and geotechnical engineering data report for the proposed elementary school to be located in Brookline, Massachusetts. Refer to **Figure 1** for the general site location.

This letter was prepared in accordance with our proposal for preliminary geotechnical engineering services dated November 30, 2016 and the subsequent authorization of Jonathan Levi Architects. These services are subject to the limitations contained in **Appendix A**.

Available Information

Available information provided to McPhail Associates, LLC (McPhail) included a 20-scale drawing entitled, "Existing Conditions Plan of Land" (Baldwin Site Plan) dated February 3, 2017 and prepared by Hancock Associates; and a 20-scale drawing entitled, "Existing Conditions Plan Soule Playground" (Soule Site Plan) dated March 11, 1996 and prepared by the Town of Brookline Department of Public Works.

Elevations as referenced herein are in feet and are understood to refer to the Brookline Sewer Datum.

Existing Conditions and Proposed Site Development

The proposed project site consists of two sites, the Baldwin Site which is currently owned by the Brookline School Department and the Soule Recreation Center Site which is owned by the Brookline Parks and Recreation Department.

The Baldwin Site fronts onto Heath Street to the north, Oak Street to the west and currently includes the existing Baldwin School, playground areas, tennis/basketball court, paved roadways and lightly wooded areas. Bedrock outcrops were observed at various locations throughout the site. The existing ground surface generally slopes downward from north to south across the site ranging from about Elevation +214 just north of the existing school building to about Elevation +183 within the tennis/basketball court.

The Soule Site is located south of the Baldwin Site and extends from Hammond Street to the west to Heath Street to the east. The site contains playing fields, parking lots, associated structures and lightly wooded areas. The existing ground surface generally slopes upward from southwest to northeast across the site from about Elevation +175 along Hammond Street to about Elevation +217 along Heath Street. It is noted that the topography is highly variable within the site with isolated knolls extending as high as Elevation +225 and Elevation +230.

The currently proposed project scope for the Baldwin Site includes the construction of a new 800 student elementary school structure with a gross square footage of approximately 150,000 square feet. It is understood that a new surface parking lot associated with the proposed school is planned to be located within the northeastern portion of the Soule Site.

Investigation Procedures

On January 9 and 10, 2017, eight (8) borings were completed at the site by Carr-Dee Corp. (Carr-Dee) of Medford, Massachusetts under contract to McPhail. The approximate boring locations are indicated on the enclosed **Figure 2A and Figure 2B**. Please note that boring locations B-2 and B-5 were not accessible at the time of our subsurface exploration program; thus, borings were not performed at these locations.

The borings were performed at both the Baldwin and Soule sites to assess the subsurface soil and groundwater conditions at the site as they relate to foundation design and construction. The borings were performed utilizing truck-mounted and ATV-mounted drilling equipment and advanced using hollow-stem augers. Standard 2-inch O.D. split-spoon samples and standard penetration tests (SPT) were obtained in general accordance with the procedures described in ASTM D1586. With the exception of boring B-10, the borings were terminated within a natural glacial till deposit or weathered bedrock at depths ranging from about 1.6 to 16.5 feet below the existing ground surface. Boring B-10 was attempted at two locations and encountered refusal on what was believed to be obstructions in the fill deposit at depths of about 3.3 and 2.6 feet. Boring logs prepared by Carr-Dee are presented in **Appendix B** following the text of this report.

The explorations were monitored by a McPhail representative who performed field layout; prepared field logs; obtained and visually classified soil samples; monitored groundwater conditions in the completed boreholes; made minor relocations of the explorations; and determined the required exploration depths based upon the actual subsurface conditions encountered.

The existing conditions plans for the Baldwin and Soule sites were not available to us prior to our subsurface exploration program. Thus, the boring locations indicated on **Figure 2A** and **Figure 2B** should be considered approximate.

Subsurface Conditions

Detailed descriptions of the subsurface conditions encountered at the boring locations are presented on the exploration logs contained in **Appendix B**. The generalized subsurface conditions across the site were inferred primarily from the subsurface explorations, but also from our general knowledge of the local geology based on our foundation design and construction experience in the area. The subsurface conditions encountered in the explorations are described below.

At borings B-1 and B-8, an approximate 6-inch and 2-inch thickness, respectively, of asphalt was encountered directly beneath the existing ground surface. At borings B-3, B-4, B-6, and B-10, an approximate 1 to 2-foot thickness of topsoil was encountered directly beneath the existing ground surface.

Underlying the topsoil at B-4 and the fill deposit at B-1, an approximate 1-foot thickness of subsoil was encountered. The subsoil generally consists of a loose to compact, orange-brown silt and sand with a trace of organic material.

Underlying the surface treatments, subsoil, or directly beneath the ground surface at borings B-1, B-7, B-8, B-9, and B-10, a fill deposit was encountered that generally consists of a very loose to compact, dark brown to gray, sand and gravel with some silt and containing trace amounts of brick, mortar, ash, and cinders. With the exception of boring B-10, the fill was observed to extend to depths ranging from about 1.5 to 6.5 feet below the existing ground surface. The fill deposit was not penetrated at boring B-10 due to the presence of below-grade obstructions.

With the exception of borings B-6 and B-10, a natural glacial till deposit was encountered underlying the surface treatments, subsoil, or fill deposit. The surface of the glacial till deposit was generally encountered at depths ranging from about 1.5 to 6.5 feet below the existing ground surface. In general, the glacial till deposit consists of a very dense, gray to gray-brown well-graded mixture of silt and sand and gravel with cobbles.

With the exception of boring B-3, the borings were advanced to split-spoon and/or auger refusal at depths ranging from about 1.7 to 11.9 feet below the existing ground surface. With the exception of boring B-10, refusal of the drilling equipment was believed to have occurred on the bedrock surface, but may have been due to boulders within the glacial till deposit. At boring B-1, refusal of the drilling equipment was believed to have been caused by subsurface obstructions within the fill deposit. Published United States Geological Survey (USGS) bedrock maps for the general area of the site indicate that bedrock consists of Roxbury Conglomerate. Bedrock outcrops consisting of Roxbury Conglomerate were observed at various locations throughout the site.

Groundwater was observed during drilling in boreholes B-3 and B-4 at depths of about 14 and 8 feet below the existing ground surface, respectively. Due to the relatively impervious nature of the glacial till deposit and underlying bedrock, groundwater at the site is

considered to be "perched" on the surface of the glacial till deposit and/or bedrock during and after precipitation events.

It is anticipated that future groundwater levels across the project site may vary from those reported herein based on such factors such as normal seasonal changes, runoff during or following periods of heavy precipitation, and alterations to existing drainage patterns.

Preliminary Foundation Design Recommendations

Based on our understanding of the proposed construction and on the subsurface conditions encountered at the site, it is recommended that the proposed school building be supported on conventional spread footing foundations in conjunction with a soil-supported slab-on-grade. The foundations should bear directly on the undisturbed glacial till deposit or underlying bedrock utilizing a maximum design bearing pressure of 4 tons per square foot.

Soil-supported perimeter foundations should be provided with a minimum 4-foot thickness of soil cover as frost protection. Bedrock-supported perimeter footings may be founded 2 feet below exterior grades and should be provided with a 6-inch thick cushion of compacted 3/4-inch crushed stone placed directly over the bedrock surface. Interior foundations should be located such that the top of the foundation concrete is a minimum of 6 inches below the underside of the lowest level slab.

It is recommended that the portions of the proposed school building extending below the adjacent exterior grades be provided with perimeter and underslab drainage in order to protect against intrusion of groundwater that may become temporarily "perched" on the surface of the glacial till deposit and/or bedrock during precipitation events.

Depending upon the location of the proposed school building and the elevation of the lowest level floor slab, bedrock excavation may be required for construction of footings, slabs-on-grade and utilities. Based on the extent of the bedrock excavation and the quality of the bedrock, shallow rock excavation may be feasible using mechanical means such as conventional excavating equipment, a hoe ram, or a combination of a hoe ram and line drilling. Where bedrock removal cannot be accomplished using mechanical means, it is recommended that controlled blasting techniques be employed to limit the depth of overblast below the proposed finished grades or foundation elevations, to minimize the potential of damage to adjacent structures due to vibration, and to create a uniform exposed rock cut face.

Final Comments

Based on our current understanding of the project scope, a final subsurface exploration program will need to be conducted to obtain supplemental geotechnical information for final foundation design and for foundation pricing by potential Contractors. In addition, a final foundation engineering report should be prepared in conjunction with the final subsurface

exploration program which provides final foundation recommendations and construction considerations for the proposed school building.

It is recommended that McPhail be retained to provide design assistance to the design team during the final design phase of this project. The purpose of this involvement would be to review the structural foundation drawings and foundation notes for conformance with the recommendations presented herein and to generate the earthwork and aggregate pier specification sections for inclusion into the Contract Documents for construction.

We trust that the above is sufficient for your present requirements. Should you have any questions concerning the recommendations presented herein, please do not hesitate to call us.

Very truly yours,

McPHAIL ASSOCIATES, LLC

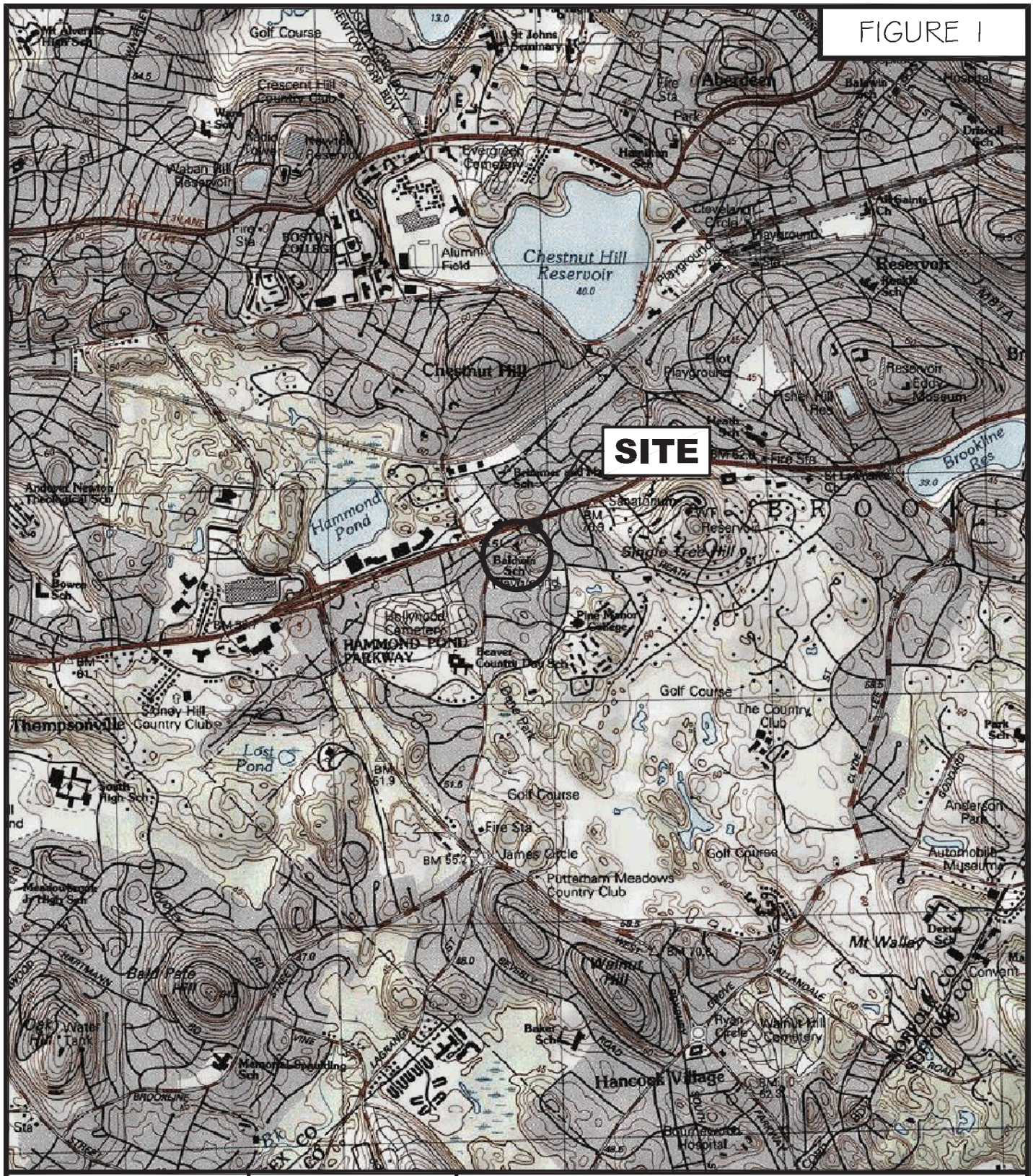
Scott S. Smith, P.E.

Chris M. Erikson, P.E.

SSS/cme

N:\Working Documents\Reports\6303 GDR 021517.docx

FIGURE 1



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N

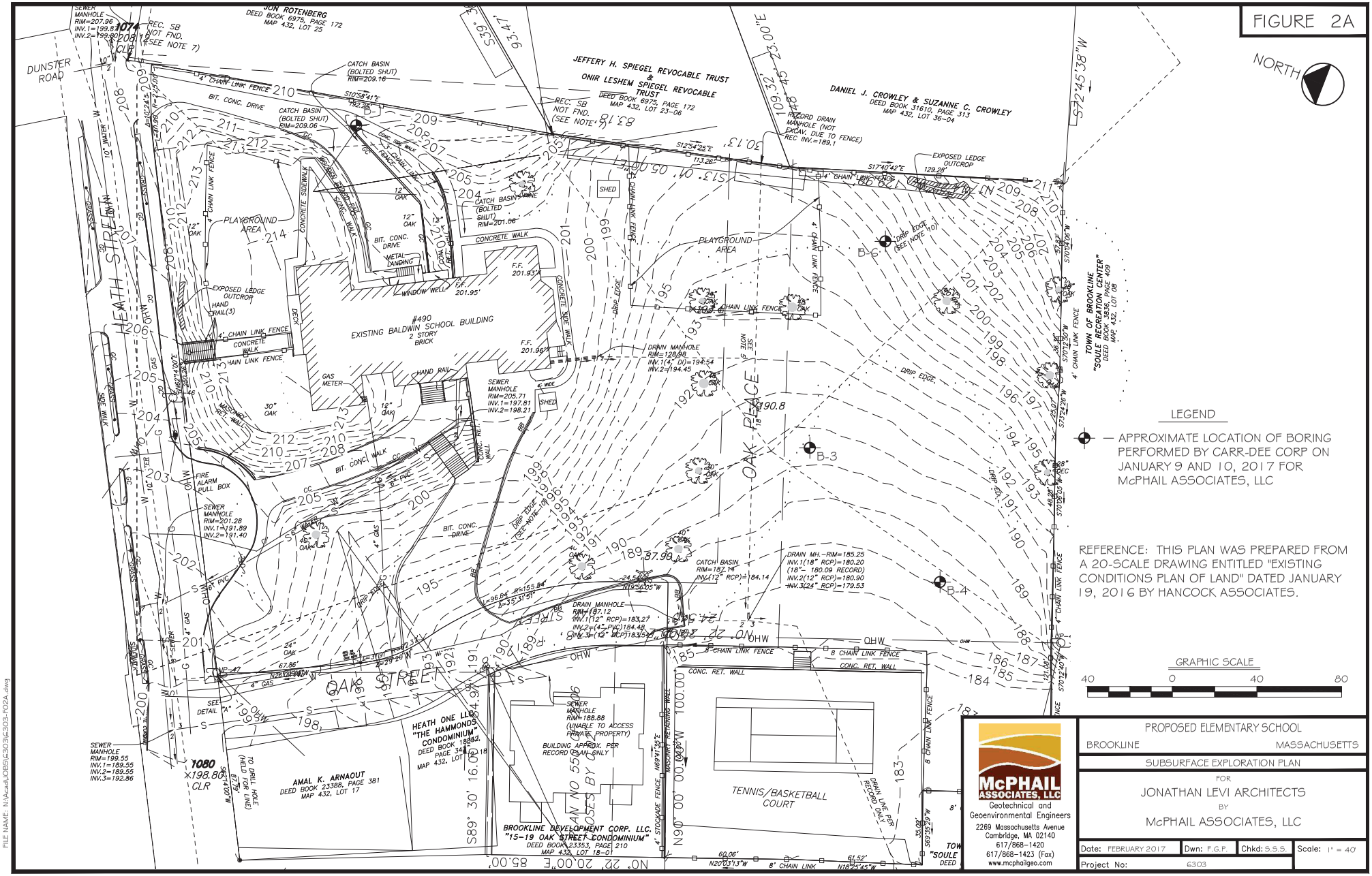
SCALE 1:25,000

PROJECT LOCATION PLAN

PROPOSED ELEMENTARY SCHOOL

BROOKLINE MASSACHUSETTS

FIGURE 2A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&
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OAK STREET
OAK PLACE
#490
EXISTING BALDWIN SCHOOL BUILDING
2 STORY
BRICK
PLAYGROUND AREA
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AMAL K. ARNAOUT
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MAP 432, LOT 17
HEATH ONE LLC
"THE HAMMONDS CONDOMINIUM"
DEED BOOK 18282, PAGE 341
MAP 432, LOT 18
BROOKLINE DEVELOPMENT CORP. LLC.
"15-19 OAK STREET CONDOMINIUM"
DEED BOOK 23353, PAGE 210
MAP 432, LOT 18-01
BUILDING APPROX. PER RECORD PLAN ONLY
SEWER MANHOLE RIM=207.96 INV.1=199.87 INV.2=199.80
SEWER MANHOLE RIM=205.71 INV.1=197.81 INV.2=198.21
SEWER MANHOLE RIM=201.28 INV.1=191.89 INV.2=191.40
SEWER MANHOLE RIM=199.55 INV.1=189.55 INV.2=189.55 INV.3=192.86
DRAIN MANHOLE RIM=128.98 INV.1(4" DI)=194.54 INV.2=194.45
DRAIN MH.-RIM=185.25 INV.1(18" RCP)=180.20 (18"- 180.09 RECORD) INV.2(12" RCP)=180.90 INV.3(24" RCP)=179.53
CATCH BASIN RIM=187.14 INV.(12" RCP)=184.14
DRAIN MANHOLE RIM=187.12 INV.1(12" RCP)=183.27 INV.2=(4" PVC)184.48 INV.3=(12" RCP)183.54
RECORD DRAIN MANHOLE (NOT EXCAV. DUE TO FENCE) REC INV.=189.1
EXPOSED LEDGE OUTCROP
CATCH BASIN (BOLTED SHUT) RIM=209.16
CATCH BASIN (BOLTED SHUT) RIM=209.06
CATCH BASIN (BOLTED SHUT) RIM=201.06
REC. SB NOT FND. (SEE NOTE 7)
REC. SB NOT FND. (SEE NOTE 7)
B-3
B-4
B-6
1074
1080
×198.80 CLR
S89° 30' 16.00"E 84.90'
N90° 00' 00.00"W 100.00'
N0° 22' 20.00"E 85.00'
S13° 01' 05.00"E
S12° 45' 38"W
S39° 93.47'
109.32' 23.00"E
S12°54'25"E 113.26'
S17°40'42"E 129.28'
S70°12'50"W
S73°24'26"W
S70°05'05"W
S70°12'40"W
N20°03'13"W
N18°25'45"W
S69°35'29"W
N69°41'35"E
N0°22'20.00"E
4' CHAIN LINK FENCE
8' CHAIN LINK FENCE
CONC. RET. WALL
BIT. CONC. DRIVE
CONCRETE WALK
CONCRETE SIDEWALK
HAND RAIL
GAS METER
FIRE ALARM PULL BOX
SHED
DRIP EDGE
DRAIN LINE PER RECORD ONLY
TO DRILL HOLE (HELD FOR LINE)
SEE DETAIL "A"
LEGEND
— APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP ON JANUARY 9 AND 10, 2017 FOR McPHAIL ASSOCIATES, LLC
REFERENCE: THIS PLAN WAS PREPARED FROM A 20-SCALE DRAWING ENTITLED "EXISTING CONDITIONS PLAN OF LAND" DATED JANUARY 19, 2016 BY HANCOCK ASSOCIATES.
GRAPHIC SCALE
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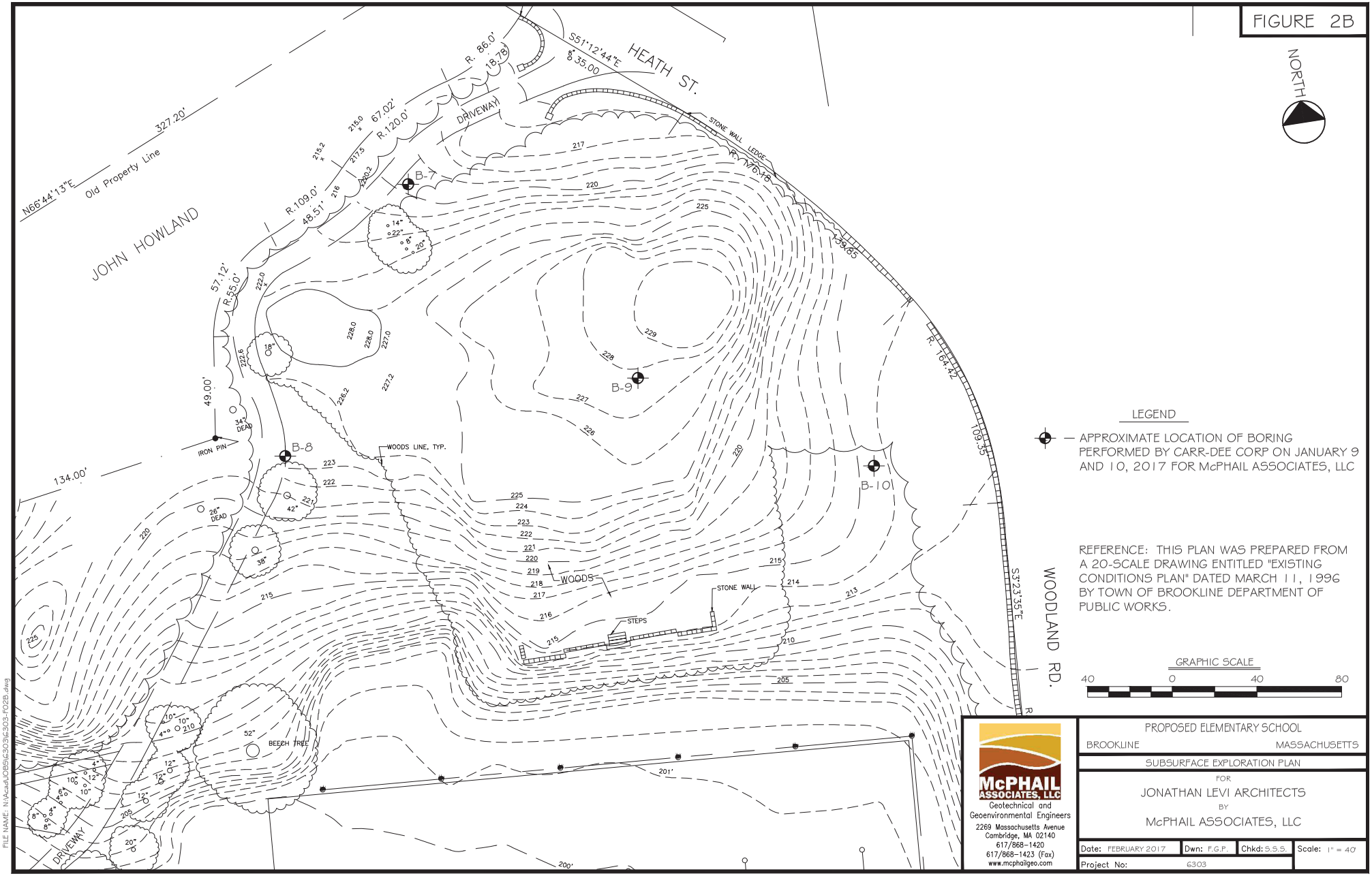
Date: FEBRUARY 2017
Dwn: F.G.P.
Chkd: S.S.S.
Scale: 1" = 40'
Project No: 6303
FILE NAME: N:\Acad\JOBS\6303\6303-F02A.dwg

FIGURE 2B



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SUBSURFACE EXPLORATION PLAN
FOR
JONATHAN LEVI ARCHITECTS
BY
McPHAIL ASSOCIATES, LLC

Date: FEBRUARY 2017	Dwn: F.G.P.	Chkd: S.S.S.	Scale: 1" = 40
Project No: 6303			

FILE NAME: N:\Acad\JOBS\6303\6303-F02B.dwg

APPENDIX A:

LIMITATIONS

LIMITATIONS

This preliminary report has been prepared on behalf of and for the exclusive use of Jonathan Levi Architects for specific application to the proposed school building to be located in Brookline, Massachusetts in accordance with generally accepted soil and geotechnical engineering practices. No other warranty, expressed or implied, is made.

In the event that any changes in nature or design of the proposed construction are planned, the conclusions and preliminary recommendations contained in this report should not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing by McPhail Associates, LLC.

The analyses and preliminary recommendations presented in this report are based upon the data obtained from the subsurface explorations performed at the approximate locations indicated on the enclosed plan. If variations in the nature and extent of subsurface conditions between the widely spaced explorations become evident during the course of construction, it will be necessary for a re-evaluation of the recommendations of this report to be made after performing on-site observations during the construction period and noting the characteristics of any variations.

APPENDIX B:

CARR-DEE CORP.'S
BORING LOGS B-1 THROUGH B-10

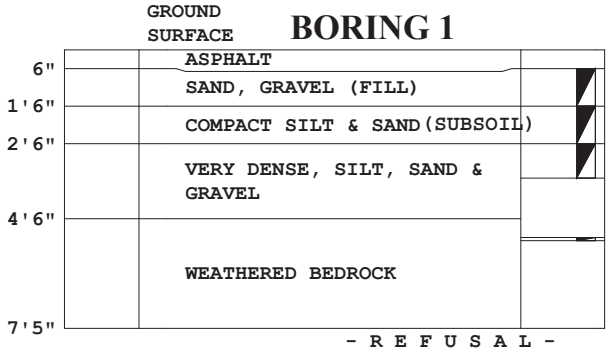
CARR-DEE CORP.

37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500

To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-11-2017 Job No.: 2016-208

Location: BALDWIN SCHOOL & PLAYGROUND, BROOKLINE, MA Scale: 1 in.= 5 ft.

BORING 1



S#1, 6" to 1'6" (11-7) RECOVERED 8 in.

S#1A, 1'6" to 2'6" (5-5) RECOVERED 8 in.

S#2, 2'6" to 3'5" (16-100/5") RECOVERED 2 in.

S#3, 5' to 5'1" (100/1") RECOVERED 1 in.

(NO PENETRATION WITH AUGERS)
NO WATER ENCOUNTERED
SIZE OF AUGERS: 2-1/4" I.D., LENGTH: 7'5"
DRILLER: S. DESIMONE, JR., INSPECTOR: T. CORMICAN
DATE STARTED & COMPLETED: 1-9-2017

All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

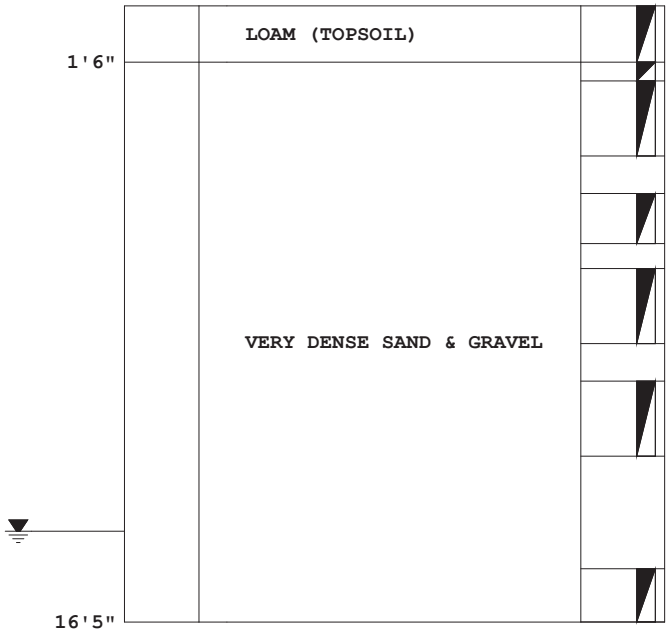
CARR-DEE CORP.

37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500

To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-11-2017 Job No.: 2016-208

Location: BALDWIN SCHOOL & PLAYGROUND, BROOKLINE, MA Scale: 1 in.= 5 ft.

BORING 3



S#1, 0' to 1'6"
(6-3-7)
RECOVERED 16 in.

S#1A, 1'6" to 2'
(13)
RECOVERED 4 in.

S#2, 2' to 4'
(16-27-43-81)
RECOVERED 18 in.

S#3, 5' to 6'4"
(29-44-100/4")
RECOVERED 14 in.

S#4, 7' to 9'
(27-25-36-40)
RECOVERED 16 in.

S#5, 10' to 12'
(25-30-33-37)
RECOVERED 18 in.

S#6, 15' to 16'5"
(44-74-100/5")
RECOVERED 14 in.

WATER LEVEL 14'
SIZE OF AUGERS: 2-1/4" I.D., LENGTH: 15'0"
DRILLER: S. DESIMONE, JR., INSPECTOR: T. CORMICAN
DATE STARTED & COMPLETED: 1-10-2017

All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

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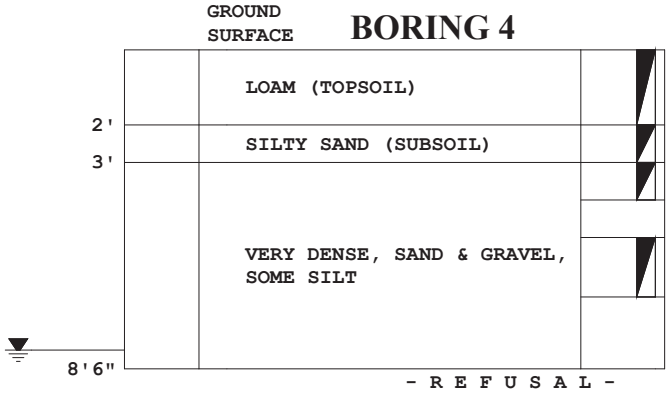
To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-11-2017 Job No.: 2016-208

Location: BALDWIN SCHOOL & PLAYGROUND, BROOKLINE, MA Scale: 1 in.= 5 ft.

BORING 4



S#1, 0' to 2'
(2-2-2-2)
RECOVERED 12 in.

S#2, 2' to 3'
(3-5)
RECOVERED 5 in.

S#2A, 3' to 4'
(12-20)
RECOVERED 8 in.

S#3, 5' to 6'7"
(19-31-81-100/1")
RECOVERED 16 in.

- R E F U S A L -
(100 BLOWS 2" S.S., 140 LB. WGT., NO PENETRATION)

WATER LEVEL 8'
SIZE OF AUGERS: 2-1/4" I.D., LENGTH: 8'6"
DRILLER: S. DESIMONE, JR., INSPECTOR: T. CORMICAN
DATE STARTED & COMPLETED: 1-10-2017

All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

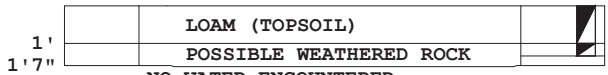
37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500

To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-11-2017 Job No.: 2016-208

Location: BALDWIN SCHOOL & PLAYGROUND, BROOKLINE, MA Scale: 1 in.= 5 ft.

BORING 6

GROUND SURFACE



S#1, 0' to 1' (3-5) RECOVERED 8 in.

S#1A, 1' to 1'4" (100/4") RECOVERED 4 in.

NO WATER ENCOUNTERED

SIZE OF AUGERS: 2-1/4" I.D., LENGTH: 1'7"

DRILLER: S. DESIMONE, JR., INSPECTOR: T. CORRIGAN

DATE STARTED & COMPLETED: 1-10-2017

All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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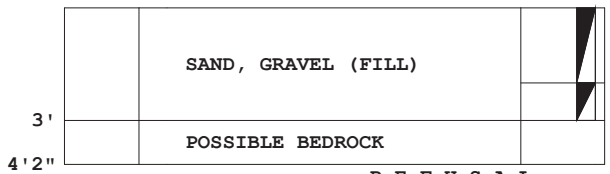
To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-11-2017 Job No.: 2016-208

Location: BALDWIN SCHOOL & PLAYGROUND, BROOKLINE, MA Scale: 1 in.= 5 ft.

BORING 7



S#1, 0' to 2' (3-2-1-1) RECOVERED 6 in.

S#2, 2' to 3' (1-1) RECOVERED 3 in.

S#2A, 3' to 3' (100/1") RECOVERED 0 in.

(NO PENETRATION WITH AUGERS)
NO WATER ENCOUNTERED
SIZE OF AUGERS: 2-1/4" I.D., LENGTH: 4'2"
DRILLER: S. DESIMONE, JR., INSPECTOR: T. CORMICAN
DATE STARTED & COMPLETED: 1-9-2017

All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

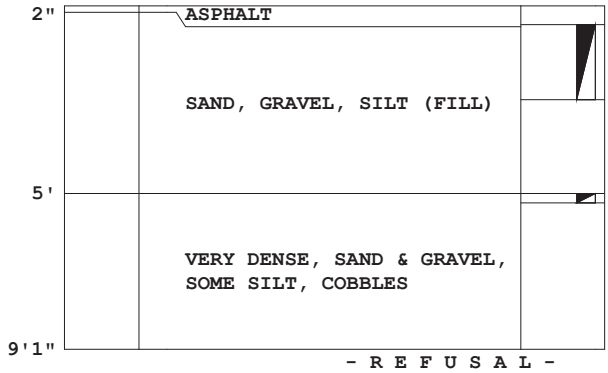
CARR-DEE CORP.

37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500

To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-11-2017 Job No.: 2016-208

Location: BALDWIN SCHOOL & PLAYGROUND, BROOKLINE, MA Scale: 1 in.= 5 ft.

BORING 8



S#1, 6" to 2'6"
(9-13-16-15)
RECOVERED 18 in.

S#2, 5' to 5'3"
(100/3")
RECOVERED 2 in.

(100 BLOWS, 2" S.S., 140 LB. WGT., NO PENETRATION)
NO WATER ENCOUNTERED
SIZE OF AUGERS: 2-1/4" I.D., LENGTH: 9'1"
DRILLER: S. DESIMONE, JR., INSPECTOR: T. CORMICAN
DATE STARTED & COMPLETED: 1-9-2017

All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

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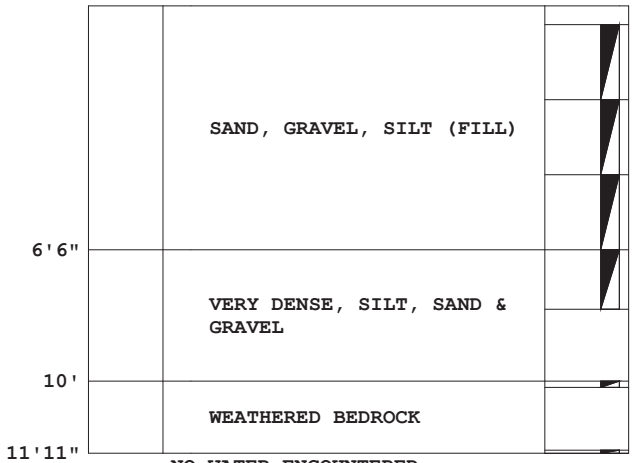
37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500

To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-11-2017 Job No.: 2016-208

Location: BALDWIN SCHOOL & PLAYGROUND, BROOKLINE, MA Scale: 1 in.= 5 ft.

BORING 9



S#1, 6" to 2'6"
(25-12-8-5)
RECOVERED 14 in.

S#2, 2'6" to 4'6"
(8-6-5-6)
RECOVERED 8 in.

S#3, 4'6" to 6'6"
(7-5-8-6)
RECOVERED 6 in.

S#4, 6'6" to 8'1"
(17-12-34-100/1")
RECOVERED 10 in.

S#5, 10' to 10'2"
(100/2")
RECOVERED 2 in.

s#6, 11'10" to 11'11"
(100/1")
RECOVERED 1 in.

NO WATER ENCOUNTERED
SIZE OF AUGERS: 2-1/4" I.D.
LENGTH: 11'10"
DRILLER: S. DESIMONE, JR.
INSPECTOR: T. CORMICAN
DATE STARTED & COMPLETED: 1-9-2017

All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

CARR-DEE CORP.

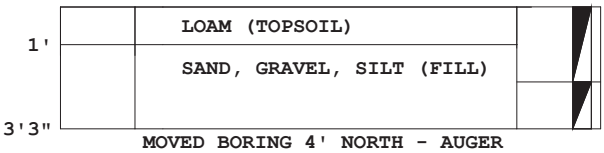
37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500

To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-11-2017 Job No.: 2016-208

Location: BALDWIN SCHOOL & PLAYGROUND, BROOKLINE, MA Scale: 1 in.= 5 ft.

BORING 10

GROUND SURFACE



s#1, 0' to 2'
(2-3-13-40)
RECOVERED 8 in.

S#2, 2' to 3'3"
(58-14-100/3")
RECOVERED 1 in.

MOVED BORING 4' NORTH - AUGER
REFUAL AT 2.6 FEET. AUGER HEAD BROKE
NO WATER ENCOUNTERED

DRILLER: S. DESIMONE, JR., INSPECTOR: T. CORMICAN
DATE STARTED & COMPLETED: 1-10-2017

All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

3.2 Geoenvironmental

Please see the following report prepared by EndPoint LLC:

-Phase I Environmental Site Assessment

ENGINEERS & ENVIRONMENTAL PROFESSIONALS

PHASE I ENVIRONMENTAL SITE ASSESSMENT
490 HEATH STREET AND 652 HAMMOND STREET
THE BALDWIN SCHOOL AND SOULE RECREATION CENTER
BROOKLINE, MASSACHUESTTS

Prepared For:
Jonathan Levi Architects
266 Beacon Street
Boston, MA 02116

EndPoint Project 2475-001
February 7, 2017

25 Buttrick Road, Unit D-2
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P:617-307-5058

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FIGURES

Figure 1 **Site Locus**

Figure 2 **Site Plan**

APPENDICES

Appendix A **Qualifications**

Appendix B **Limitations, Terms, Conditions, and User Reliance**

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Appendix G **Tier 1 VES**

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PHASE I ENVIRONMENTAL SITE ASSESSMENT
484 HEATH ST. AND 652 HAMMOND ST.
BROOKLINE, MASSACHUSETTS

EXECUTIVE SUMMARY

EndPoint, LLC (EndPoint), on behalf of Jonathan Levi Architects (the Client), conducted a Phase I Environmental Site Assessment (ESA) of properties located at 484 Heath Street and 652 Hammond Street in the Chestnut Hill neighborhood of Brookline, MA (the Subject Property). The ESA was conducted in accordance with the scope and limitations described in EndPoint Proposal 2475-001, which includes reference to American Society of Testing Materials (ASTM) Designations E1527-13 and E2600-10 regarding Phase I ESA and Vapor Encroachment Screening (VES), respectively. Limitations associated with this ESA are described in the **Limitations** section of this report.

For the purpose of keeping information clear and to avoid any confusion, the two properties that are considered "The Subject Property" will be discussed throughout this report as two separate entities, the Baldwin School (Baldwin), which includes 484 and 490 Heath Street, and the Soule Recreation Center (Soule), which includes 650, 652, and 654 Hammond Street.

Baldwin consists of one parcel of land totaling approximately 2.70 acres (ac) identified by the Brookline Tax Assessor's Parcel 432-02-24 (Block 432, Lot 02, Sub lot 24) and is improved by a single 10,617 square feet (sf) building. The building is a two-story school constructed in 1927, and is located along the northern portion of the property. The remainder of the property consists of asphalt-paved parking and travel ways, as well as grassed recreational space. Soule consists of one parcel of land totaling approximately 9.61 ac identified by the Brookline Tax Assessor's Parcel 432-08-00 (Block 432, Lot 08, Sub lot 00) and is improved by three buildings; a single-story environmental education building constructed in 1970 and located towards the western portion of the property, a 1½-story gymnasium constructed in 1970, and a three-story school building constructed in 1942, with a total area of 12,653 sf. The gymnasium and the school are centrally located on the property, and are surrounded by asphalt- and concrete-paved parking and travel ways, as well as grassed recreational space. Both properties are currently owned by the Town of Brookline. The surrounding area is primarily residential. This ESA has revealed one REC in connection with the Baldwin School:

- The presence of a 5,000-gallon #2 Fuel Oil tank, which is located in a room adjacent to the boiler room, within a block enclosure at the Baldwin School. The tank is also completely covered by sand and unable to be visually inspected, and is therefore considered an underground storage tank (UST). As a result of being buried and within an enclosure, EndPoint was unable to visually assess the tank or the surrounding floor. Documentation pertaining to the age and condition of the tank was unavailable at the time of this report. As a result, the 5,000-gallon #2 Fuel Oil UST on the Subject Property, which is not abandoned and is reportedly still used for at least one week each year, is considered an REC. (See Section **1.3 Limiting Conditions and Data Gaps**.)

ENGINEERS & ENVIRONMENTAL PROFESSIONALS

1.0 INTRODUCTION

EndPoint, LLC (EndPoint), on behalf of Jonathan Levi Architects (the Client), conducted a Phase I Environmental Site Assessment (ESA) of properties located at 484 Heath Street and 652 Hammond Street in the Chestnut Hill neighborhood of Brookline, MA (the Subject Property). The Site Locus and Site Plan are illustrated, respectively, in **Figure 1** and **Figure 2**. EndPoint conducted this ESA in accordance with the scope and limitations described in EndPoint Proposal 2475-001, which includes reference to American Society of Testing Materials (ASTM) Designations E1527-13 and E2600-10 regarding Phase I ESA and Vapor Encroachment Screening (VES), respectively.

1.1 PURPOSE

The purpose of this ESA was to identify whether Recognized Environmental Conditions (RECs) and Vapor Encroachment Concerns (VECs) are associated with the Subject Property in accordance with the following definitions per ASTM Designations E1527-13 or E2600-10:

- REC means "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." By contrast, a REC is not a *de minimis* condition, which is defined as "a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

- Historical REC or HREC means "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls."

- Controlled REC or CREC means a REC "resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority…, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls."

- VEC means "the presence or likely presence of chemicals of concern (COC) vapors in the subsurface of the [Subject Property] caused by the release of vapors from contaminated soil or groundwater or both either on or near the [Subject Property] as identified by Tier I or Tier 2 procedures…."

1.2 METHODOLOGY

This ESA consisted of a Phase I ESA conducted in accordance with ASTM Designation E1527-13 and a Tier I Vapor Encroachment Screen (VES) conducted in accordance with ASTM Designation E2600-10. EndPoint personnel working under the supervision of an Environmental Professional, as defined in Title 40 Section 312.10 of the Code of Federal Regulations (40 CFR 312.10), performed the component parts of this ESA; the qualifications of EndPoint personnel involved with this ESA are included in **Appendix A**.

1.3 LIMITING CONDITIONS AND DATA GAPS

This report, including conclusions and recommendations herein, is subject to the limitations presented in **Appendix B**. This ESA, including the term "Phase I" and "investigation" used herein, is independent of and nonequivalent to similar assessment and terms under the Massachusetts Contingency Plan (MCP). This ESA contains no material deviations from ASTM E1527-13 and ASTM E2600-10, no material exceptions to customary industry practice for subsurface investigations, and no Phase I ESA data gaps, except:

LIMITING CONDITIONS

- EndPoint gathered information to complete this ESA from various sources listed in the **Appendix C** section of this report, and presumes such information to be correct and complete; EndPoint is not responsible for the quality or content of such information.

- The inclusion herein of a VES investigation is an addition to ASTM E1527-13.

- Target distance limits for vapor screening were adjusted using the "Buonicore Methodology for Identifying the Areas of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby Contaminated Sources," dated June 2011, which is a deviation from ASTM E2600-10.

DATA GAPS

The User Questionnaire was not completed by the Client, who is the User of this Phase I ESA. This does not represent a significant data gap because other information gathered appears reasonably sufficient to identify RECs.

There were, however, a number of significant data gaps identified during this Phase I Environmental Site Assessment, and are as follows:

- The Town's Building Department was unable to locate their file for the Baldwin School property; therefore, EndPoint was unable to review said documentation, including any permits issued, significant renovations, and potentially the installation of the 5,000-gallon #2 Fuel Oil UST; and
- The Town's Fire Department did not have any documentation on the installation or maintenance of the Baldwin School's 5,000-gallon #2 Fuel Oil UST.

These are considered significant data gaps which contribute to the Baldwin School's 5,000-gallon #2 Fuel Oil UST being an REC.

2.0 RECONNAISSANCE

EndPoint personnel performed reconnaissance of the Subject Property, adjoining properties, and surrounding area on December 27 and 28, 2016. Interior and exterior areas of the Subject Property were systematically traversed on foot; the adjoining properties and surrounding area were observed from the Subject Property, public thoroughfares, and satellite imagery. Access to the Baldwin School was provided by a member of the custodial and maintenance staff, Mr. James Hennessey. Access to the Soule Recreation Center buildings was provided by the Town's Resource Manager, Mr. Jesse Myott. Photographs taken during reconnaissance are presented in **Appendix D**. The following subsections describe EndPoint's observations made during reconnaissance supplemented, where applicable and for reader convenience, with related information obtained during interviews and records review.

2.1 SUBJECT PROPERTY LOCATION AND CURRENT USE

The Subject Property includes two separate plots of land, the Baldwin School and the Soule Recreation Center. Baldwin consists of one parcel of land totaling approximately 2.70 acres (ac) identified by the Brookline Tax Assessor's Parcel 432-02-24 (Block 432, Lot 02, sub lot 24) and is improved by a single 10,617 square feet (sf) building. The building is a two-story school building constructed in 1927, and is located along the northern portion of the property, atop of a hill, which slopes moderately in the southwest direction. The remainder of the property consists of asphalt-paved parking and travel ways, as well as grassed recreational space. Soule consists of one parcel of land totaling approximately 9.61 ac identified by the Brookline Tax Assessor's Parcel 432-08-00 (Block 432, Lot 08, Sub lot 00) and is improved by three buildings; a single-story environmental education building constructed in 1970 and located towards the western portion of the property, a 1½-story gymnasium constructed in 1970, and a three-story school building constructed in 1942, with a total area of 12,653 sf. The gymnasium and the school are centrally located on the property, and are surrounded by asphalt- and concrete-paved parking and travel ways, as well as grassed recreational space, a sports field, and multiple playgrounds. The slope of the Soule property is relatively flat, with the exception of the gymnasium, which slopes more moderately to the southwest. Both properties are currently owned by the Town of Brookline and its use is primarily institutional and recreational in nature with the following improvements:

Baldwin

- The approximately 10,617 square-foot, two-story school building constructed in 1927, heating with both natural gas and #2 Fuel Oil. The exterior is primarily constructed with brick. It has a concrete foundation that appeared to be in good condition. The building basement has a partial, unfinished crawl space under the northernmost portion, which houses the building's plumbing and electrical conduit.
- The Baldwin property also has two wooden storage sheds, located southwest and southeast of the school building, which are used to store the school's recreational equipment, toys, and games for the students.
- The buildings are also surrounded by asphalt-paved parking and travel ways, as well as grassed recreational areas, and a recreational court (tennis/ basketball).

The Subject Property is bound to the north by Heath Street, beyond which are residential properties with some commercial properties (jeweler, coffee shop, convenience stores), Boylston Street, and the Longwood Cricket

Club; to the west is Oak Street, multifamily residential properties, and Hammond Street, beyond which are more residential properties with some commercial properties (auto repair, cleaner, banks, restaurants); to the south is the Soule Recreation Center; and to the east is a primarily residential neighborhood including Heath Street, Cary Road and Randolph Road.

Soule

- An approximately 810 square-foot, single-story environmental education building constructed in 1970. The building is heated with natural gas via forced hot air, and is located towards the western portion of the property. The exterior of the building is a mix of stucco, metal, and wood, with a slab on grade foundation.
- An approximately 3,564 square-foot, 2-story gymnasium constructed in 1970. The building is heated with natural gas via space heaters, and is centrally located on the property. The exterior of the building is concrete blocks, with a concrete block foundation.
- An approximately 8,280 square-foot, three-story school building constructed in 1942. The building is heated with natural gas via a steam heating system, and is centrally located on the property. The exterior of the building is a mix of stone, wood, and stucco, with a stone foundation.
- The Soule property also has two wooden storage sheds. The shed associated with the environmental education building is used to store gardening equipment, but was observed to be empty at the time of the site visit. The shed associated with the gymnasium building is used to store several propane grills and some tables and chairs.
- The buildings are surrounded by asphalt- and concrete-paved parking and travel ways, as well as grassed recreational space, a sports field, and multiple playgrounds.

The Subject Property is bound to the north by the Baldwin School and several residential properties; to the west is Hammond Street, beyond which are residential properties and the Holyhood Cemetery; to the south is a primarily residential neighborhood including Pine Road and Glenoe Road; and to the east is primarily residential along Woodland Road and Heath Street, with some recreational space. Kings Colleges, Pine Manor College, and the Dane Estate also present to the east of the Subject Property.

2.1.1 Hazardous Substances and Petroleum Products

Baldwin

EndPoint surveyed the Subject Property for indications of hazardous substances and petroleum products (e.g., drums, containers, stressed vegetation, stains, sheen, manufacturing activities), and observed none except relatively small quantities of typical janitorial and home cleaning supplies stored in original containers that were closed and stored in maintenance storage rooms and closets/cabinets of the residential units. The school's boiler room was found to have various cleaning supplies, floor wax and strippers, and paint cans stored on the floor or on pallets in several areas. The containers were observed to be in good condition with no signs of leaks or spills; however floor drains were observed in the area, which are believed to connect to the sanitary sewer system. An art storage closet with painting supplies (in good condition) and a shop sink were observed in the basement level. A locked corrosive cabinet was observed in the science classroom, but showed no signs of leaks or staining. No evidence of a release from any of the aforementioned areas was observed.

Soule

EndPoint surveyed the Subject Property for indications of hazardous substances and petroleum products (e.g., drums, containers, stressed vegetation, stains, sheen, manufacturing activities), and observed none except relatively small quantities of typical janitorial cleaning supplies stored in original containers that were closed and stored beneath sinks, and in maintenance storage rooms and closets/cabinets of the three buildings. Several storage areas for painting and arts and crafts supplies were observed in the Early Childhood Education Center building. Materials were observed to be in their original containers with no leaks noted. No evidence of a release from any of the aforementioned areas was observed.

2.1.2 Aboveground Storage Tanks

Baldwin

EndPoint surveyed the Subject Property for indications of aboveground storage tanks or ASTs (e.g., pavement bolts, generators, reservoirs). A fill port, vent, and emergency shut off and alarm (visual and audible) were observed on the exterior of the building, along with the signage "Fuel Oil Fill" and a hand-painted note of "5,000" denoting the tanks capacity in gallons. The tank itself was located within the boiler room behind a concrete block wall. Upon further inspection it was noted that the tank was between 90%-100% buried by sand; therefore, the

tank is technically considered an underground storage tank (UST) and will be discussed further below. No other ASTs were observed at the property.

Soule

EndPoint surveyed the Subject Property for indications of aboveground storage tanks or ASTs (e.g., pavement bolts, generators, reservoirs). Two approximately 100-120-gallon propane tanks were observed within a fenced area adjacent to the Environmental Science building. Tanks were observed to be in good condition with no signs of leaks or spills. No other ASTs were observed at the property.

2.1.3 Underground Storage Tanks

Baldwin

EndPoint surveyed the Subject Property for indications of underground storage tanks or USTs (e.g., vent piping, dispensing equipment, fill ports, pavement variations). As mentioned under **Section 2.1.2**, a fill port, vent, and emergency shut off and alarm (visual and audible) were observed on the exterior of the building, along with the signage "Fuel Oil Fill" and a hand-painted note of "5,000" denoting the tanks capacity in gallons. A tank, which was observed to be nearly 100% buried by sand, is located within the boiler room behind a concrete block wall. While the building is heating using natural gas, the #2 heating oil tank is maintained and used a couple of times each year to give the gas system a break. Because the 5,000-gallon UST is located within a walled enclosure and buried beneath sand, a full inspection of the tank was not possible, and the condition of the tank and the surrounding ground is unknown. A file review conducted at the Town's Fire Prevention office did not turn up any documentation regarding this tank, including date of installation and the general construction of the tank. Due to the lack of available information about the tank and the inability to conduct a full inspection on the tank, the 5,000-gallon #2 heating oil tank is considered an REC. No other USTs were observed at the property.

Soule

EndPoint surveyed the Subject Property for indications of underground storage tanks or USTs (e.g., vent piping, dispensing equipment, fill ports, pavement variations), and observed none.

2.1.4 Liquid Waste

EndPoint surveyed the Subject Property for indications of liquid waste (e.g., sumps, drains, clarifiers, pools of liquid, pits, ponds, lagoons, septic systems, wastewater, storm water) and observed that sanitary sewage and storm water reportedly discharge to the municipal sewers, and storm water apparently sheet flows to on-site storm drains that reportedly discharge to the municipal sewer. Floor drains were observed in the boiler room of the Baldwin School, as well as in the bathrooms. There was also a floor drain observed within a basement storage room, which appeared to be a converted locker room, at the Soule Gymnasium building.

2.1.5 Solid Waste

Baldwin

EndPoint surveyed the Subject Property for indications of solid waste (e.g., mounding, depressions, fill, bins, debris), and observed that refuse is stored in interior waste bins within the class rooms and bathrooms. A dumpster is present on the property on the east side of the building. No evidence of a release was observed.

Soule

EndPoint surveyed the Subject Property for indications of solid waste (e.g., mounding, depressions, fill, bins, debris), and observed that refuse is stored in interior waste bins within each of the Soule buildings. Several municipal style waste bins were present on the property behind a small wooden fence at the west side of the Early Childhood Education Center building. No evidence of a release was observed.

2.1.6 Polychlorinated Biphenyls

Baldwin

EndPoint surveyed the Subject Property for indications of polychlorinated biphenyls (PCBs) (e.g., liquid-cooled transformers, capacitors, hydraulic lifts) and observed none. One pole-mounted transformer was observed along the northern Subject Property boundary on Heath Street; no evidence of a release was observed.

Soule

EndPoint surveyed the Subject Property for indications of polychlorinated biphenyls (PCBs) (e.g., liquid-cooled transformers, capacitors, hydraulic lifts) and observed none. One pad-mounted transformer was observed along

the western side of the Early Childhood Education Center building. The transformer was observed to be in good condition with no evidence of a release.

2.1.7 Wells

EndPoint surveyed the Subject Property for indications of potable, irrigation, monitor, injection, dry, abandoned, or other wells (e.g., protruding pipes, cover plates, pumps, small sheds, large water storage containers, mounded grout), and observed none.

2.2 ADJOINING PROPERTIES AND SURROUNDING AREA USE

Baldwin

The Subject Property is bound to the north by Heath Street, beyond which are residential properties with some commercial properties (jeweler, coffee shop, convenience stores), Boylston Street, and the Longwood Cricket Club; to the west is Oak Street, multifamily residential properties, and Hammond Street, beyond which are more residential properties with some commercial properties (auto repair, cleaner, banks, restaurants); to the south is the Soule Recreation Center; and to the east is a primarily residential neighborhood including Heath Street, Cary Road and Randolph Road.

Soule

The Subject Property is bound to the north by the Baldwin School and several residential properties; to the west is Hammond Street, beyond which are residential properties and the Holyhood Cemetery; to the south is a primarily residential neighborhood including Pine Road and Glenoe Road; and to the east is primarily residential along Woodland Road and Heath Street, with some recreational space, Kings Colleges, Pine Manor College, and the Dane Estate also present.

3.0 INTERVIEWS

3.1 USERS

The User of this ESA is the Client. EndPoint provided a questionnaire to the User; however, after repeated attempts at obtaining the completed questionnaire for review and inclusion in this report, one was not provided.

The Client representative, Mr. Philip Gray, indicated this ESA was sought as part of due diligence associated with potential Subject Property redevelopment.

3.2 CURRENT SITE OWNERS / OPERATORS / OCCUPANTS

Baldwin

EndPoint interviewed a member of the custodial and maintenance staff, Mr. James Hennessey who indicated that:

- the Baldwin School was built in 1927 as a public school for the Town of Brookline, MA; and
- the building is heated using natural gas, but it also utilizes a 5,000-gallon #2 heating oil tank for approximately 1-2 weeks each year.

Soule

EndPoint interviewed the Town's Resource Manager, Mr. Jesse Myott who indicated that:

- the Soule Early Childhood Education Center building was built in 1942; and
- the Soule Gymnasium and Environmental Science buildings were both built in 1970.

3.3 PAST SITE OWNERS / OPERATORS / OCCUPANTS

EndPoint did not identify past Subject Property owners / operators / occupants whose information was unlikely duplicative.

3.4 NEIGHBORING OR NEARBY PROPERTY OWNERS / OCCUPANTS

EndPoint did not interview neighboring or nearby property owners / occupants because the Subject Property is not abandoned.

3.5 GOVERNMENT OFFICIALS

EndPoint did not interview any government officials as a part of this Phase I ESA.

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4.0 RECORDS REVIEW

EndPoint reviewed publically available, reasonably ascertainable records pertaining to the Subject Property that were likely to be useful. In addition, where practicable, EndPoint reviewed similar records indicating uses at the adjoining properties and surrounding area within approximate minimum search distances from the Subject Property. EndPoint also reviewed helpful documents that were likely to be useful, if any were provided by the User or others.

4.1 PHYSICAL SETTING

4.1.1 Physiography

EndPoint reviewed physiographic information presented on United States Geological Survey (USGS) Historical Topographic Maps from 1903 to 1950. Data provided within these maps and within the EDR Summary Radius Map Report describes the Subject Property as being approximately 194 feet above mean sea level (amsl). The nearest surface water body to the Subject Property is Hammond Pond, which is located approximately 0.36-miles to the northwest. The Chestnut Hill Reservoir is located hydraulically upgradient to the Subject Property, approximately 0.60-miles to the northeast. Local topography slopes in the southwesterly direction. Other than roadways and the Holyhood Cemetery, no specific building or other structures are shown and labeled on the USGS Topo Maps.

4.1.2 Geology

EndPoint reviewed local geologic data presented in the SSURGO Soil Map section of the EDR Summary Radius Map Report. The Subject Property is located in an area of multiple soil component categories, including: Urban Land, which does not have any reported characteristics, and the Charlton soil component, which is comprised of fine sandy loam and is known to be well drained soils. To the east of the Subject Property, soil is recorded as being silty loam to a 9-inch depth and channery silty loam from a depth of 9 to 59-inches below the ground surface. It is identified as Class C, or as having slow infiltration rates and well drained soils. To the west of the Subject Property, soil is recorded as being fine sandy loam to a 18-inch depth, gravelly loamy sand from a depth of 18 to 22-inches, and very gravelly coarse sand from a depth of 22 to 59-inches and is identified as Class A soil with high infiltration rates, and as being somewhat excessively drained. The Chestnut Hill Reservoir is located

hydraulically upgradient to and approximately 0.60-miles northeast of the Subject Property. Hammond Pond is located hydraulically cross-gradient to the Subject Property, approximately 0.35-miles to the northwest.

4.1.3 Hydrology

EndPoint reviewed local hydrology data presented in the SSURGO Soil Map section of the EDR Summary Radius Map Report. Groundwater depth is not presented for the Subject Property or the immediate vicinity of the Subject Property. Based on the local topography, groundwater flow at the Subject Property is inferred to be southwest.

4.2 REGULATORY AGENCIES

EndPoint reviewed records regarding the Subject Property from various local agencies. Copies of the records are provided in **Appendix E**.

4.2.1 Local Assessor's Office

EndPoint reviewed records regarding the Subject Property from the Brookline Assessor's Office. The Subject Property includes two separate plots of land, the Baldwin School and the Soule Recreation Center.

Baldwin

Baldwin consists of one parcel of land totaling approximately 2.70 acres (ac) identified by the Brookline Tax Assessor's Parcel 432-02-24 (Block 432, Lot 02, Sub lot 24) and is improved by a single 10,617 square feet (sf) building. The building is a two-story school building constructed in 1927, and is located along the northern portion of the property, atop of a hill, which slopes moderately in the southwest direction. The remainder of the property consists of asphalt-paved parking and travel ways, as well as grassed recreational space.

Soule

Soule consists of one parcel of land totaling approximately 9.61 ac identified by the Brookline Tax Assessor's Parcel 432-08-00 (Block 432, Lot 08, Sub lot 00) and is improved by three buildings; a single-story environmental education building constructed in 1970 and located towards the western portion of the property, a 1½-story gymnasium constructed in 1970, and a three-story school building constructed in 1942, with a total area

of 12,653 sf. The gymnasium and the school are centrally located on the property, and are surrounded by asphalt- and concrete-paved parking and travel ways, as well as grassed recreational space, a sports field, and multiple playgrounds. The slope of the Soule property is relatively flat, with the exception of the gymnasium, which slopes more moderately to the southwest. Both properties are currently owned by the Town of Brookline and its use is primarily institutional and recreational in nature.

4.2.2 Local Building Department

Baldwin

EndPoint attempted to obtain records regarding the Baldwin School from the Brookline Building Department; however, after much correspondence with various building department employees, it was determined that the property file was unable to be located, and was therefore, not reviewed under this ESA.

Soule

EndPoint reviewed records regarding the Soule Recreation Center from the Brookline Building Department, which included permits for various repairs and renovations, both minor and major in nature (plumbing in 1968, roof repairs in 1992, electrical work in 1999, truss repair on Gymnasium in 2013, etc.). The file also included building inspection reports related to the building.

4.2.3 Local Fire Department

EndPoint reviewed records regarding the Subject Property from the Brookline Fire Department. Review results follow:

Baldwin

The Building Inspection Report within the file indicated that during the 2009 inspection, the custodian was not present, and was, therefore, not able to provide access to some of the rooms, including parts of the boiler room. There was no mention of a 5,000-gallon fuel oil storage tank. A note was made to have paint stored within the boiler room removed. During this ESA, it was noted that paint cans were present in the rooms immediately adjacent to the boiler room.

Soule

A 1996 UST Closure and Limited Removal Action (LRA) Report from VERTEX was included in the file, regarding an abandoned 275-gallon UST within the basement level of a maintenance shed formerly located within the Soule Recreation Center's playground area. Approximately 62 cubic yards of petroleum impacted soil was excavated and disposed of, and post-excavation soil samples were noted to be below laboratory reporting limits. This work was done in accordance with 310 CMR 40.0318, and no additional remedial activities were recommended for the Site.

4.2.4 Local Health Department

EndPoint reviewed records regarding the Subject Property from the Town of Brookline Health Department. Review results follow.

Baldwin

While there were not a lot of records for the Baldwin Property on file with the Health Department, an Asbestos Abatement report from July 5, 2007 was reviewed. Approximately 200 lf of asbestos-containing pipe wrap and approximately 100 sf of miscellaneous suspected asbestos-containing material was removed from the Baldwin School building between July 2-9, 2007.

Soule

While there were not a lot of records for the Soule Property on file with the Health Department, an Asbestos Abatement report from August 2001 was reviewed. Approximately 1,200 sf of non-friable roof flashing was removed from the 652 Hammond Street building between August 16-20, 2001.

4.3 HISTORICAL INFORMATION

EndPoint reviewed the UNH obtained and EDR supplied report of historical records concerning the Subject Property, including aerial photographs, historical topographic maps, Sanborn Fire Insurance maps, and city directories. Copies of these materials are included in **Appendix F**. A review of the historical information is summarized as follows:

Sanborn Fire Insurance Maps. Historical Topographic Maps, Aerial Photographs, and City Directories

EndPoint reviewed historical Sanborn fire insurance maps of the Subject Property as well as the adjoining properties and surrounding area (where shown) from the EDR collection. EndPoint also reviewed aerial photographs and topographic maps from the USGS and Google Earth collections. Review results follow.

Baldwin

- 1925: The Subject Property appears improved with one structure. A Fire Department is located at the northwest corner of the lot.
- 1950: The Fire Department building has been reestablished as a Recreation Building and the Baldwin School is now present, as it was constructed in 1927.
- 1957: The Subject Property generally appears unchanged.
- 1965: The Fire Department Building turned Recreation Building is no longer present on the Subject Property. The Baldwin School appears generally unchanged.
- 1969: The Subject Property generally appears unchanged.

Soule

- 1925: The Subject Property appears improved with five structures. A residential dwelling, an auto house (garage), a green house, and a two-part cow barn. It is likely this property was used as a farm at this time.
- 1950: The Subject Property appears generally unchanged, with the exception of the addition of a gymnasium building; however, the uses of the other five buildings differ from that of 1925. The residential dwelling is now listed as the "Rivers Country Day School", the garage is now the "Lower School", and the cow barns are now listed as "lockers". The green house remains unchanged.
- 1957: The Subject Property appears generally unchanged, with the exception of the removal of one of the cow-barn turned lockers buildings. Also, the green house is now listed as "lockers".

- 1965: The Rivers Country Day School building and the green house turned lockers building are no longer present on the Subject Property. The entire property is now listed as the "Augustus W. Soule Recreation Center".

- 1969: The Subject Property generally appears unchanged.

4.4 ENVIRONMENTAL LIENS AND AULS

An environmental liens and AULs record search was not performed as a part of this Phase I ESA.

4.5 STANDARD ENVIRONMENTAL RECORD SOURCES

EndPoint subcontracted EDR to prepare an environmental database search summary report that EndPoint reviewed. A copy of the EDR report is provided in **Appendix F**. The Subject Property was not identified in the Map Findings Summary (summary of locations with environmental issues that are located within the search radius of the Property).

There were 47 findings in the EDR report within ½ of a mile of the Subject Property. Six of those properties were identified to be hydraulically upgradient or immediately adjacent to the Subject Property, and are as follows:

- 640 Hammond Street is located less than 35 feet to the west of the Subject Property. It is listed on the Reportable Releases (RELEASE) database and the State Reportable Release (SHWS) database, as well as the Reportable Spills (SPILLS) and the Underground Storage Tank (UST) databases. This property is currently listed by the MassDEP under RTN 3-0020733 with a Class A-2 Response Action Outcome (RAO) associated with an oil and hazardous materials release. A permanent solution has been achieved, though contamination has not been reduced to background levels.
- 1075 Boylston Street is located approximately 0.11 miles to the northeast of the Subject Property. It is listed on the RELEASE and SHWS databases. This property is currently listed by the MassDEP under RTN 3-0023648 with a Class A-2 RAO associated with a polychlorinated biphenyl (PCB) and petroleum hydrocarbon release. A permanent solution has been achieved, though contamination has not been reduced to background levels.

- 400 Heath Street is located approximately 0.15 miles to the east of the Subject Property. It is listed on the Very Small Quantity Generator (VSQG) of Hazardous Materials database. There are no releases or issues associated with this property.
- 30 Norfolk Road is located approximately 0.18 miles to the northeast of the Subject Property. It is listed on the RELEASE database and the Leaking Underground Storage Tank (LUST) database. This property is currently listed by the MassDEP under RTN 3-0015731 with a Class A-2 RAO associated with a #2 fuel oil release. A permanent solution has been achieved, though contamination has not been reduced to background levels.
- 375 Heath Street is located approximately 0.24 miles to the west of the Subject Property. It is listed on the RELEASE and LUST databases. This property is currently listed by the MassDEP under RTN 3-0012797 with a Class A-2 RAO associated with a #2 fuel oil release. A permanent solution has been achieved, though contamination has not been reduced to background levels.
- 910 Boylston Street is located approximately 0.33 miles to the west of the Subject Property. It is listed on the RELEASE, SHWS, and LUST databases, as well as Hazardous Waste Generator (HW GEN) database. This property is currently listed by the MassDEP under RTN 3-0024837 with a Class B-1 RAO associated with a naphthalene release. Remedial actions have not been conducted because a level of No Significant Risk exists.

Based on the status of the aforementioned Map Findings and the location of these properties in relation to the Subject Property, it is determined that these properties do not represent RECs for the Subject Property.

5.0 VAPOR ENCROACHMENT SCREENING

In accordance with ASTM Designation E2600-10, EndPoint reviewed the report described in the **Standard Environmental Record Sources** section of this report to evaluate the potential for VECs within the standard distances and in conjunction with the Buonicore Methodology. Thirty-one findings were identified in the EDR VEC App™ within the standard distances and with cases of potential concern. These facilities include the same facilities identified in the surrounding area discussion in the **Standard Environmental Record Sources** section of this report. Based on EndPoint's evaluation of reasonably ascertainable environmental data associated with those facilities, VECs at each can be ruled out. The Tier 1 VES is included as **Appendix G**.

6.0 EVALUATION

6.1 FINDINGS AND OPINIONS

EndPoint identified obvious uses of the Subject Property since 1846 when the parcels were first developed. The adjoining properties and surrounding area have been mixed residential and commercial since at least 1903.

Presented below are the findings of this ESA and EndPoint professional opinions:

Baldwin

- Current Site Use: Current use of the Subject Property is institutional in nature and involves relatively small quantities of janitorial cleaners and maintenance chemicals stored in closed containers. Sanitary wastewater and stormwater are discharged to the municipal sewer. Solid waste collection is collected in in small, classroom trash cans and transferred into the custodial barrels before being placed into the School's dumpsters, which are located on the eastern side of the building. The building has a 5,000-gallon #2 heating oil UST located in the basement of the building, adjacent to the boiler room with a walled enclosure. The UST is buried, and, therefore, unable to be inspected. The UST is, therefore, considered an REC.

- Historical Site Use: A former fire department building turned recreation building, formerly located on the western side of the property was no longer visible on Sanborn Fire Insurance Maps in 1957. The school building has been operated as a school since its construction in 1927.

Soule

- Current Site Use: Current use of the Subject Property is institutional in nature and involves relatively small quantities of household and janitorial cleaners stored in closed containers. The sanitary wastewater and stormwater discharges to the municipal sewer. Solid waste in each of the buildings is collected in classroom waste bins before being placed in larger, municipal-style trash bins for waste pickup. No indications of significant past, present, or threatened releases of hazardous substances or petroleum products were observed or reported. Therefore, this finding represents a *de minimis* condition.

- Historical Site Use – REM Chevrolet: Until approximately 1927, the Soule Recreation Center property appears to have been operated as a residential dwelling and farm. Also, a combined UST Closure and LRA Report was completed in 1996 by VERTEX for a former maintenance shed; however, a recommendation of no further remedial actions was made. No indications of significant past, present, or threatened releases of hazardous substances or petroleum products were observed or reported. Therefore, this finding represents a *de minimis* condition.

- Current and Historical Off-Site Uses: Current and historical use of the adjoining properties and surrounding area is and has been primarily residential, with limited commercial properties. Several off-Site facilities have documented releases of hazardous substances and petroleum products, but are not identified with a potential to adversely affect the Site based on the nature of the release, the investigative data associated with the release, and/or the location or distance of the release relative to the Site.

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6.2 CONCLUSIONS AND RECOMMENDATIONS

EndPoint has performed this ESA, which consisted of a Phase I ESA and a Tier 1 VES subject to the limiting conditions and data gaps described herein, in conformance with the scope and limitations of ASTM Designation E1527-13 as well as of ASTM Designation E2600-10 of the Subject Property located at 490 Heath Street and 652 Hammond Street in the Chestnut Hill neighborhood of Brookline, MA. This ESA has revealed evidence of one REC in connection with the Subject Property:

- The presence of a 5,000-gallon #2 heating oil UST located within a cinderblock enclosure in Baldwin School's basement (adjacent to the boiler room). No documentation or information was available from either the School Department's custodial staff or the Town's Fire Department, regarding the age of the tank or the presence or absence of leaks or spills. It is EndPoint's recommendation that use of the UST be ceased, and that it be emptied and removed from the property, following an appropriate UST closure process.

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312 and I have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the Subject Property. I have developed and performed All Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR Part 312

Richard J. Wozmak, P.E., P.H., LSP, LEP
Principal

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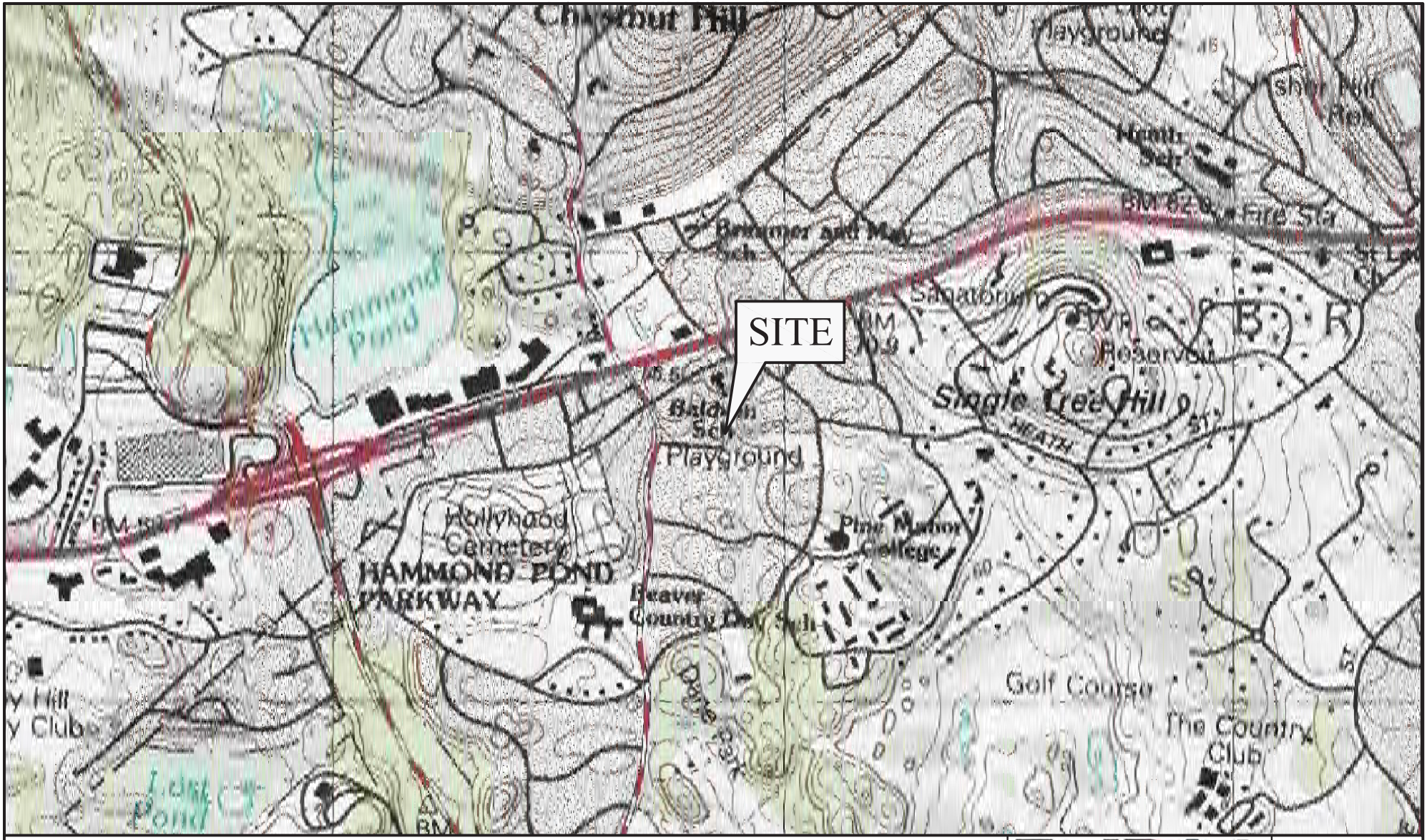
FIGURES



N

0 500 1,000 2,000

APPROXIMATE SCALE IN FEET

Note: Figure based on MyTopo.com USGS Topographic Map.

EndPoint LLC
ENGINEERS & ENVIRONMENTAL PROFESSIONALS
25 Buttrick Road, Unit D2
Londonderry, NH 03053

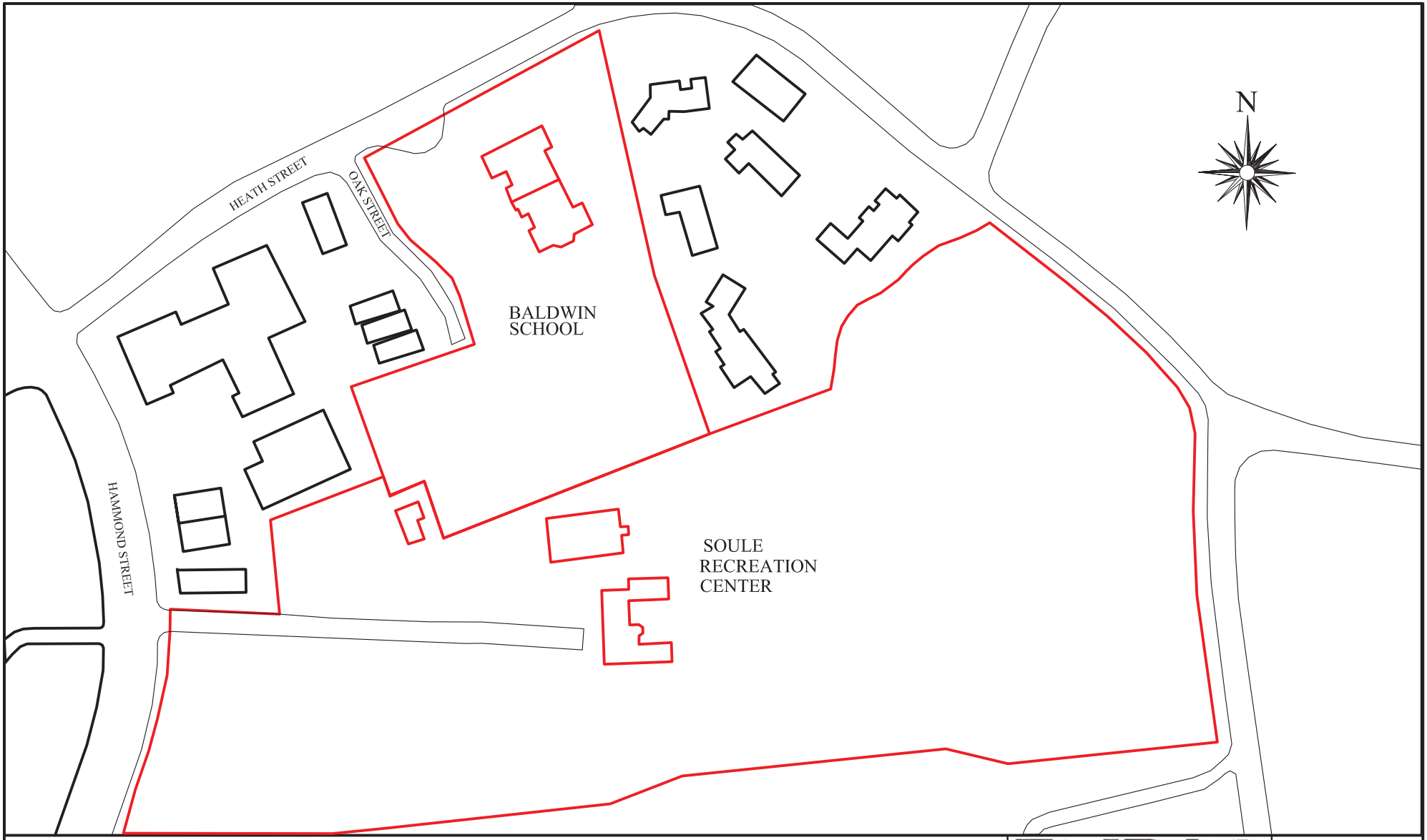
CLIENT: Jonathan Levi Architects

PROJECT: 490 Heath Street and 652 Hammond Street

TITLE: Site Locus

DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE NO.:
KLS	KLS	KLS	RJW	1
SCALE:	DATE:	FILE NO.:	PROJECT NO.:	
1"= 1,000'	01/20/2017	locus	2475-001	

\\SERVER\Business\EndPoint Projects\2475-001 Levi Brookline\Figures\Figure 1 - Site Locus.dwg



Subject Property

Neighboring Properties

EndPoint LLC
ENGINEERS & ENVIRONMENTAL PROFESSIONALS
25 Buttrick Road, Unit D2
Londonderry, NH 03053

CLIENT: Jonathan Levi Architects

PROJECT: 490 Heath Street and 652 Hammond Street

TITLE: Site Locus

DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE NO.:
KLS	KLS	KLS	RJW	2
SCALE: Not to Scale	DATE: 01/20/2017	FILE NO.: site plan	PROJECT NO.: 2475-001	

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APPENDIX A

Qualifications

Richard J. Wozmak, P.E., P.H., LSP, LEP
Principal
EndPoint, LLC

EDUCATION:

M.S., Northeastern University, 1989. Environmental Engineering - Water Resources
B.S., University of New Hampshire, 1981. Hydrology

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:

Massachusetts Licensed Site Professional
Connecticut Licensed Environmental Professional
Professional Engineer: New Hampshire, Massachusetts
Professional Hydrologist (Ground Water), American Institute of Hydrology

BACKGROUND:

For over the past 30 years, Mr. Wozmak has been a consultant and educator on the procedures and methods for investigating and remediating environmental media contamination caused by releases of hazardous substances and petroleum products under both federal and state environmental regulations. Mr. Wozmak has conducted and managed numerous hydrogeologic, hazardous waste investigation, and corrective action programs in the United States encompassing source delineation and characterization; ground water flow and dissolved contaminant fate and transport modeling; evaluation of impacts and risk to human and environmental receptors; evaluation, design, and operation of remedial technologies; and state and federal environmental regulatory compliance. As part of these programs, Mr. Wozmak has conducted and supervised field activities including boring and monitoring well installation activities; soil, soil vapor, sediment, surface water, ground water, and indoor air sampling; and various techniques and procedures to estimate the fate and transport of contaminants in the environment. Mr. Wozmak has performed these activities for industry as well as the U.S. Environmental Protection Agency (USEPA) as part of Technical Enforcement Support (TES) contracts. Mr. Wozmak has also performed litigation support activities and provided expert testimony for cases involving building and environmental media contamination, fate and transport of dissolve- phase organic compounds in ground water, subsurface transport of non-aqueous phase liquids (NAPLs) such as petroleum products and solvents in soil and ground water, and ground water and soil remediation.

PUBLICATIONS AND PRESENTATIONS:

Authored “Indoor Air Contamination Evaluation – A Weight of Evidence Approach,” Morrison Mahoney, LLP Environmental Law and Policy, Summer 2006.

Authored “Apparent vs. Actual LNAPL Thickness – Is Your Release as Bad as it Appears?” Morrison Mahoney, LLP Environmental Law and Policy, July 2003.

Presented “Decoding Site Investigation Reports,” Toxics Action Center Conference, 2001.

Presented “Use of Risk Characterization and Activity and Use Limitations in Site Closure,” University of Massachusetts Annual Soils Conference, 1998.

Presented “New Hampshire Reimbursement Program Requirements for Petroleum Releases” to Sunapee Board of Realtors, April 1996.

"Soiliner Model - Documentation and User's Guide (Version 1)," prepared for the U. S. Environmental Protection Agency, Office of Solid Waste, Washington, D. C. Contract No. 68-01-6871, Assignment No. 48. Co-authored with Russell A. Johnson and Eric S. Wood, April 1986.

"The Potable Water Well Field Protection Program for Broward County, Florida," co-authored with Thomas D. Walker and Mary M. Johnson, Water Resources Management Division, December 1983.

Presented “2003 Buzzards Bay Oil Spill: History and Cleanup under the MCP,”; University of Massachusetts Annual Soils Conference, 2009.

“The Application of the Massachusetts Licensed Site Professional Program during a Marine Oil Spill Response,” Prepared for the 2008 International Oil Spill Conference; Co-authored with Richard F. Packard, MassDEP, Oil Spill Prevention and Response Program and Kevin Trainer, C.P.G., P.G., L.S.P., GeoInsight, Inc.

A complete resume summarizing Mr. Wozmak’s experience can be furnished upon request.

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APPENDIX B

Limitations, Terms, Conditions, and User Reliance

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LIMITATIONS

1. The conclusions and observations described in this response action document and associated with the Licensed Site Professional (LSP) opinion as part of the attached Bureau of Waste Site Cleanup form (LSP opinion) are based solely upon the services provided to the Client and under the conditions stated herein and in EndPoint's agreement with the Client. Neither EndPoint nor the LSP who signed the LSP opinion shall be liable for the presence of any condition, the discovery of which would have required the performance of services not undertaken by EndPoint or authorized by the Client.

2. In preparing this report, EndPoint may have relied upon certain information obtained by or from state, federal and local agencies; previous consultants or contractors; or the Client. EndPoint did not verify the completeness or accuracy of all information reviewed or received during the course of response actions and cannot itself guarantee or warrant the information provided by non-EndPoint sources.

3. The conclusions and LSP opinion in this report may have been based upon data obtained from a limited number of samples and/or subsurface explorations agreed upon by the Client. Sampling and/or explorations may have been widely spaced in distance and/or time. The adequacy of sample and/or exploration spacing may not become evident until further exploration is conducted. If inadequate sample and/or exploration spacing becomes evident, it will be necessary to re-evaluate the conclusions and LSP opinion of this report.

4. Visual inspections or observations may have been made of the site and site structures as indicated in the report. Where EndPoint was unable to observe or inspect portions of the site or structures, or access was limited or obstructed, EndPoint cannot render a conclusion or LSP opinion regarding the presence of oil and hazardous materials in that portion of the site or structure.

5. Surface and/or ground water levels may have been gauged and used to evaluate distribution, discharge and flow rate. It should be noted that fluctuations in the level or location of water may occur seasonally due to variations in precipitation or other factors different from those present at the time measurements were made. These changes may also cause seasonal variations in water quality measurements as well as variations in the movement and distribution of contaminants in the environment.

6. The conclusions and LSP opinion may be based in part upon various types of field screening and laboratory data, and are contingent upon its validity, accuracy and representativeness. The validity, accuracy and representativeness of these data may have been evaluated in accordance with the Massachusetts Department of Environmental Protection's policy. EndPoint or the LSP who signed the LSP opinion shall not be liable for equipment or laboratory errors that are typically not discovered during this evaluation. Also, it should be noted that variations in environmental conditions such as moisture can affect concentrations or levels of contaminants in the environment.

7. Chemical analyses have been performed for specific chemicals or parameters during the course of response actions as described in the report. EndPoint or the LSP is not liable for the presence of contaminants in environmental media not tested or searched for during the course of response actions.

8. The passage of time may result in changes in technology, regulatory standards, manifestation of latent conditions, or the occurrence of future events which could render the report conclusions or LSP opinion inaccurate, incomplete or inapplicable. Neither EndPoint nor the LSP shall be liable or responsible for the consequences of any changed circumstances or conditions on the accuracy of this report or LSP opinion.

9. Except as required under the Massachusetts Contingency Plan, this response document shall not be used or relied upon by any third-party without the written approval of EndPoint.

10. Should EndPoint or the LSP be required or requested to review additional information or defend a MassDEP audit, or authorize others to use this report after its submission date, EndPoint shall be entitled to additional compensation at then existing rates and terms as may be agreed upon between EndPoint and the Client. Nothing contained herein shall be deemed to require EndPoint or the LSP to undertake any such review or authorize others to use this report.

11. This report and opinion is rendered for the purpose of meeting Massachusetts Contingency Plan response action requirements for the Client, and should not be deemed to be an opinion concerning compliance of any past or present owner or operator of the site with any federal, state and local laws or regulations. Without limiting the generality of the foregoing, no warranty or guarantee is made that all contamination at the site or sources of contamination have been detected or identified, that any action or

recommended action will achieve all of its objectives, or that the report conclusions and LSP opinion, or any action as to which this LSP opinion relates will be upheld by any audit conducted by MassDEP or any other party.

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APPENDIX C

References

REFERENCES

- EDR, Radius Map™ Report with GeoCheck® (No. 4795721.2s), December 2, 2016.
- EDR, Certified Sanborn® Map Report (No. 4795721.3), December 2, 2016.
- EDR, City Directory Image Report (No. 4795721.5), December 2, 2016.
- EDR, Vapor Encroachment Screen (No. 4795721.8s), February 6, 2017.
- USGS, Historical Topographic Maps, obtained from UNH website, December 1, 2016.
- EDR, Aerial Photo Decade Package (No. 4734979.9), September 23, 2016.
- Brookline Assessor's Department, Subject Property records provided via online database, obtained December 1, 2016.
- Brookline Fire Department – Fire Prevention; Located at 350 Washington Street, Brookline, MA; visited December 27, 2016.
- Brookline Health Department; Located at 11 Pierce Street, Brookline, MA; visited December 27, 2016.
- Brookline Town Hall – Building Department, School Department, Public Works Department; Located at 333 Washington Street, Brookline, MA; visited December 27, 2016.
- Brookline Water & Sewer Department; Contacted February 3, 2017.
- Massachusetts Department of Environmental Protection, Site records at http://public.dep.state.ma.us/SearchableSites2/Search.aspx; last accessed February 6, 2017.

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APPENDIX D

Photographs

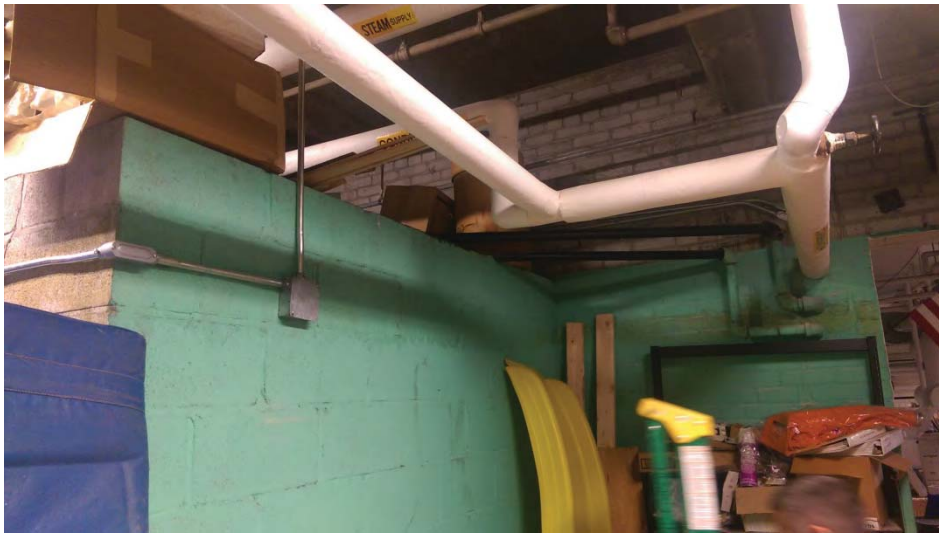
The Baldwin School

484/490 Heath Street, Brookline, MA
The Baldwin School
(view from North on Heath Street)

484/490 Heath Street, Brookline, MA
The Baldwin School
(view from South on the Baldwin School Playground)

484/490 Heath Street, Brookline, MA
The Baldwin School
(view from North on Heath Street)

484/490 Heath Street, Brookline, MA
5,000-gallon #2 Fuel Oil UST Fill and Vent Port



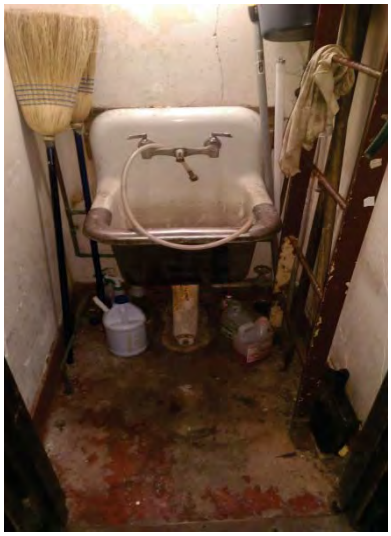
484/490 Heath Street, Brookline, MA
5,000-gallon #2 Fuel Oil UST – behind concrete block enclosure

484/490 Heath Street, Brookline, MA
5,000-gallon #2 Fuel Oil UST – buried under sand

484/490 Heath Street, Brookline, MA
Boiler Room Chemical Storage

484/490 Heath Street, Brookline, MA
Boiler Room Chemical Storage

484/490 Heath Street, Brookline, MA
Boiler Room Chemical Storage



484/490 Heath Street, Brookline, MA
Custodial and Art Supply Closets with Sinks

484/490 Heath Street, Brookline, MA
Solid Waste Dumpster
located on east side of building

484/490 Heath Street, Brookline, MA
Bathroom Floor Drains

484/490 Heath Street, Brookline, MA
Science Room – Chemical Storage Cabinet

484/490 Heath Street, Brookline, MA
Stormwater Drainage

484/490 Heath Street, Brookline, MA
Pole Mounted Transformer

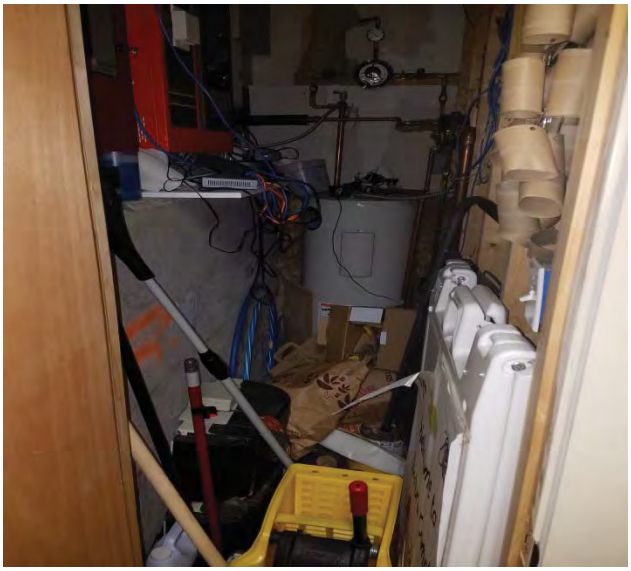
484/490 Heath Street, Brookline, MA
Storage Sheds

Soule Recreation Center

654 Hammond Street, Brookline, MA
Soule Environmental Science Building

654 Hammond Street, Brookline, MA
Soule Environmental Science Building
Classroom Cleaning Material Storage – Under Sink

654 Hammond Street, Brookline, MA
Soule Environmental Science Building
Two 120-gallon Propane Tanks



654 Hammond Street, Brookline, MA
Soule Environmental Science Building
Hot Water Tank and Janitorial Closet

654 Hammond Street, Brookline, MA
Soule Environmental Science Building
Heating System

654 Hammond Street, Brookline, MA
Soule Environmental Science Building
Storage Shed

650 Hammond Street, Brookline, MA
Soule Gymnasium

650 Hammond Street, Brookline, MA
Soule Gymnasium
Natural Gas Connection

650 Hammond Street, Brookline, MA
Soule Gymnasium
Heating System

650 Hammond Street, Brookline, MA
Soule Gymnasium
Basement Storage Room with Floor Drain

650 Hammond Street, Brookline, MA
Soule Gymnasium
Stormwater Drainage

650 Hammond Street, Brookline, MA
Soule Gymnasium
Storage Shed – Gas Grills with no Tanks

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
Natural Gas Connection and Vents

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
Paint Supply Storage

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
Heating System

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
Basement Chemical Storage

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
Basement Paint/Chemical Storage

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
Classroom Cleaning Material Storage – Under Sink

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
Paint Supply Storage

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
Transformer on Concrete Pad and Solid Waste Storage Area

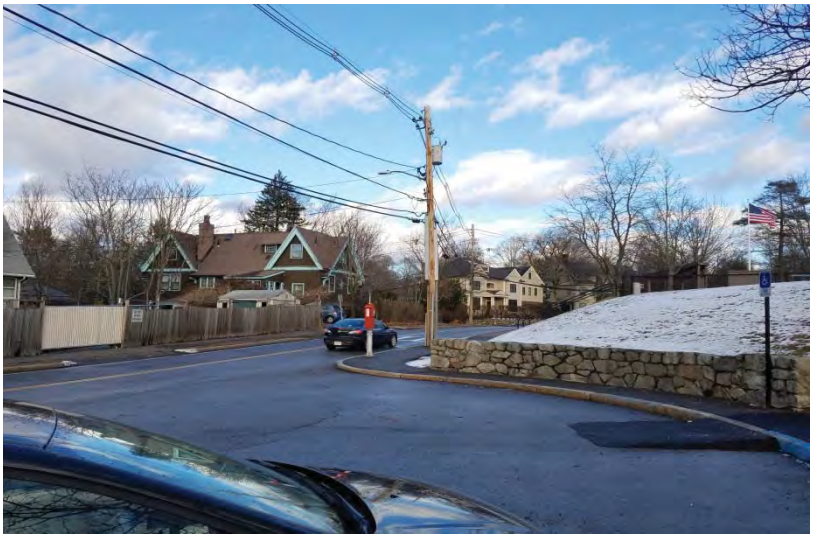
652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
Stormwater Drainage

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
Recreational Fields

652 Hammond Street, Brookline, MA
Soule Early Childhood Education Center
View of Property from Hammond Street

Surrounding Area

Residential Properties along Oak Street



Residential Properties along Heath Street

Residential Properties along Hammond Street

Residential Properties along Hammond Street

Residential Properties along Hammond Street

Residential Properties along Hammond Street

ENGINEERS & ENVIRONMENTAL PROFESSIONALS

APPENDIX E

Town Office Provided Documents

COMMONWEALTH OF MASSACHUSETTS

OFFICE FOR CHILDREN

DAY CARE CONSULTATION AND LICENSING UNIT

FIRE INSPECTION REPORT

This is to certify that Brookline Schools staff childrens Center
Name of Facility

located at 484 Heath St (490 Heath St)
Address

was inspected on NOV. 12. 2009. by Joseph Hughton
Date Name of Inspector

I certify that the above day care facility complies with the Rules and Regulations of the Board of Fire Prevention.

YES NO

Violations (if any):

Recommendations (if any):

Move paint out of Boiler Room.

(F.F.) Joseph Hughton
Name and Title

Please return this report to:

The Commonwealth of Massachusetts
Department [illegible]

(2 of 2)

Inspector: **FIREPREVENT**
Inspection Time: **10:45 AM**
Inspection Date: **Thursday, November 12, 2009**

TOWN OF BROOKLINE
350 WASHINGTON STREET
BROOKLINE, MASSACHUSETTS 02445

Jane Pinto
617-730-257[illegible]
Annual Inspection

Received of: **BROOKLINE SCHOOL STAFF CHI**ldren Center
Property: **484 HEATH ST**

FIRE DEPARTMENT INSPECTION AND PERMIT FEES

Ammunition - License to Store	$ 75.00	
Blasting Permit	75.00	
Fuel Oil Equipment - Install/Alter	100.00	
Gasoline Tanks - Removal/Installation	250.00	
Underground Fuel Oil Tank Removal/Installation	200.00	
Oxygen Acetylene - Use Storage	75.00	
LP Gas Use Storage	75.00	
Tar Kettles	50.00	
Fire Protection System/Permit to Shut Down	50.00	
Smoke Detector Inspection - 26F, 26F1/2 Per Units:1=$50,2=$100,3-6=$150, >6=$500		
Each Smoke Detector Re-Inspection - 26F, 26F1/2	50.00	
Fire Protection System/Plan Review/Permit to Install	50.00	
Certificate of Occupancy Inspection Cost Per Units:1=$50,2=$100,3-6=$150 >6=$500		
Commercial Cert.of Occup. Insp:<=1000 sq.ft.=$50:>1000 sq.ft.rounded up to next 1000 sq.ft., =$50 base fee + ($25 per each additional 1000 sq.ft.)		
Fire Reports Copies	15.00	
Site Assessment Review - 21 E	50.00	
Other		

TOTAL RECEIVED $ _____

PERMIT NO. **FMT090270**

ADDRESS OF PROPERTY: **484 HEATH ST**

INSPECTION MADE/PERMIT ISSUED BY: _____

Received by: _____

Please pay amount due at the Brookline Public Safety Building, 350 Washington St., between 8:30 and 10:00 AM, Monday thru Friday.

BROOKLINE FIRE DEPARTMENT

PREPLAN FACT SHEET
BUILDING INSPECTION REPORT

ADDRESS: 484 Heath St (490 Heath St) LOT/BLOCK#

BUILDING NAME: George S. Baldwin School
OWNER: Town of Brookline TELEPHONE #
OWNERS ADDRESS:
CITY: Brookline STATE: MA ZIP
MANAGEMENT COMPANY: Town of Brookline
ADDRESS:
CITY: STATE: ZIP:
EMERGENCY NOTIFICATION NUMBER:

ALARM SYS. TYPE: City Box II ALARM SYS. STATUS? (*NORMAL/TROUBLE*)
LOCATION OF RESET PANEL: Front Hall / Basement Boiler Room
FIRE ALARM MASTER BOX? (*YES/NO*) NUMBER: 6521
MASTER BOX LOCATION: RT Side ~~[illegible]~~ door Entrance
KNOX BOX LOCATION: RT Side door Entrance
ALARM COMPANY: Town of Brookline TELEPHONE:

SPRINKLER SYSTEM: (*YES/NO*) (*FULL* or *PARTIAL*)
LOCATION OF SPRINKLER VALVE: Basement Boiler room
VALVE OPEN? (*YES/NO*) UNOBSTRUCTED? yes
SPRINKLER VALVE: (*WET/DRY*) PRESSURE: 90° psi
NUMBER OF RISERS: 1 STANDPIPE: (*WET/DRY*)
LOCATION:

LOCATION OF FIRE DEPT. CONNECTION: 1st Floor RT RT Side of Building (missing Ca
IS FIRE DEPT. CONNECTION VISIBLE AND UNOBSTRUCTED? (*YES/NO*)
FIRE PUMP LOCATION:
EXTINGUISHERS? (*YES/NO*) DATE OF LAST INSPECTION: Aug 2009

EMERGENCY GENERATOR? (*YES/NO*) LOCATION: ?

AMOUNT OF APARTMENTS? N/A AMOUNT OF FLOORS? 2 Floor
BUILDING DIMENSIONS: 50 x 100
CONSTRUCTION TYPE: Brick & wood

ARE THE EXITS? (FREE, CLEAR, & UNOBSTRUCTED) yes
IF NOT WHICH LOCATIONS?
FIRE ESCAPES? (FRONT/BACK/SIDE) ARE THEY CLEAR? (*YES/NO*)
HEATING SYSTEM: (*GAS/OIL/ELECTRIC*) Both Gas Heat / Oil
LOCATION OF HEATING SYSTEM: Basement 2 Boilers

The Commonwealth of M[illegible]

? Can't get into Room ? locked (pad lock)

IF OIL, HOW MANY TANKS? 1 TOTAL CAPACITY: ?
ARE ANY UNDERGROUND? ? ENCLOSED? ?
IS THE HEATING SYSTEM IN A SEPARATE ROOM? yes
IS THERE A FIRE DOOR ON THE BOILER ROOM? Yes IS IT CLOSED? yes
IS THERE AN AUTOMATIC DOOR CLOSER? yes
CONDITIONS OVER BOILER? Good
FLUE PIPE PROPERLY CONNECTED? (*YES/NO*) IS IT CLEAN? unknown

GIVE LOCATIONS OF THE FOLLOWING: ?
GAS SHUTOFF? (
MAIN ELECTRICAL SHUTOFF? Basement
EMERENCY OIL BURNER SWITCH? Basemnt Hall
MAIN WATER SHUTOFF? Basemnt

IS THERE AN ELEVATOR? NO DATE OF LAST INSPECTION:
WHERE ARE THE ELEVATOR CONTROLS? N/A
IS THE ELEVATOR PIT CLEAN? N/A
KEY SWITCH INSTALLED? (*YES/NO*)
WHO IS THE ELEVATOR SERVICE COMPANY?
ADDRESS: CITY: N/A STATE:
TELEPHONE:

WHERE IS THE RUBBISH STORED? left side of Building
ARE THE HALLWAYS AND STAIRS CLEAR? yes
GENERAL CONDITON OF THE BUILDING? Good
ARE EXIT SIGNS POSTED? yes
ARE THE FIRE DOORS CLOSED? yes
IS THERE TEMPORARY WIRING? NO

OTHER VIOLATIONS, EXPLAIN IN DETAIL; USE EXTRA SHEET IF NEEDED:
Custodian was out Sick. Unable to get into all
Rooms especially Basement Area.
Obstruction needed w/ battery Back up.
Fire Dept connection needs cap

ABATEMENT ISSUED TO:
DATE OF RE-INSPECTION:
REFERRALS TO OTHER TOWN DEPARTMENTS: Building Dept

INSPECTORS NAME: Joseph Hinckley DATE: 11/12/2009

Rev 03/05

Copy to Fire Prevention Divsion

The Commonwealth of Massachusetts
Department of Education

350 Main Street, Malden, Massachusetts 02148-5023

Telephone: (617) 388-3300
TTY: N.E.T. Relay 1-800-439-2370

MEMORANDUM

TO: Fire Inspector

FROM: Program Quality Assurance Cluster

SUBJECT: Fire Inspections for Private Occupational Schools

The Regulations (603 CMR 15:06; 15.19 AND 603 CMR 3.06; 3.19) for Massachusetts General Laws c.75D and c.93 require inspection. We would appreciate it if you would arrange for the inspection of the school listed below and advise us whether all locations serving students meet all standards for the fire code.

Name of School/Facility: Winthrop Program

Address: 484 Heath ST

City, Zip, Code, Brookline MASS 020557

REMARKS: CO Detector w/ Battery Back up.

IS THIS FACILITY IN COMPLIANCE WITH APPLICABLE FIRE AND SAFETY CODES/REGULATIONS?

YES ✓ NO _____ NEXT INSPECTION DATE 11/12/2001

NAME OF INSPECTOR Joe Houston SIGNATURE OF INSPECTOR [signature]

ADDRESS 350 Washington St TEL.# 617-730-2270

DATE OF INSPECTION: 11/12/2009

PLEASE RETURN THE COMPLETED FORM TO THE SCHOOL WHICH WAS INSPECTED. THE SCHOOL WILL FORWARD THE COMPLETED FORM TO THE DEPARTMENT OF EDUCATION.

Revised "95"

(1-of-2)

Inspector: **FIREPREVENT**
Inspection Time: **10:30 AM**
Inspection Date: **Thursday, November 12, 2009**

Annual Inspection

TOWN OF BROOKLINE

350 WASHINGTON STREET

BROOKLINE, MASSACHUSETTS 02445

Received of: **BALDWIN SCHOOL** Winthrop House Owen
Property: **484 HEATH ST** office# minott
617-739-7647

FIRE DEPARTMENT INSPECTION AND PERMIT FEES

Ammunition - License to Store	$ 75.00	
Blasting Permit	75.00	
Fuel Oil Equipment - Install/Alter	100.00	
Gasoline Tanks - Removal/Installation	250.00	
Underground Fuel Oil Tank Removal/Installation	200.00	
Oxygen Acetylene - Use Storage	75.00	
LP Gas Use Storage	75.00	
Tar Kettles	50.00	
Fire Protection System/Permit to Shut Down	50.00	
Smoke Detector Inspection - 26F, 26F1/2 Per Units:1=$50,2=$100,3-6=$150, >6=$500		
Each Smoke Detector Re-Inspection - 26F, 26F1/2	50.00	
Fire Protection System/Plan Review/Permit to Install	50.00	
Certificate of Occupancy Inspection Cost Per Units:1=$50,2=$100,3-6=$150 >6=$500		
Commercial Cert.of Occup. Insp:<=1000 sq.ft.=$50:>1000 sq.ft.rounded up to next 1000 sq.ft., =$50 base fee + ($25 per each additional 1000 sq.ft.)		
Fire Reports Copies	15.00	
Site Assessment Review - 21 E	50.00	
Other		
TOTAL RECEIVED	$	

PERMIT NO. **FMT090269**

ADDRESS OF PROPERTY: **484 HEATH ST**

INSPECTION MADE/PERMIT ISSUED BY: _____

Received by: _____

Please pay amount due at the Brookline Public Safety Building, 350 Washington St., between 8:30 and 10:00 AM, Monday thru Friday.

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

[illegible]

CERTIFICATE OF INSPECTION

[illegible] CHARLES SIMMONS

[illegible] Educational Facility [illegible] BALDWIN SCHOOL

[illegible] HEATH ST

[illegible] 16 E EDUCATIONAL

[illegible]

STORY	ROOM	OCCUPANTS	STORY	ROOM	OCCUPANTS
1ST FLR	[illegible] 109	[illegible] 35			
	[illegible] 110	[illegible] 35			
	[illegible] 111	[illegible] 35			
	[illegible] 112	[illegible] 40			
	[illegible] 113	[illegible] 25			
[illegible]	[illegible] CLASSROOM	[illegible] 12			
[illegible]		[illegible] 35			

[illegible] BALDWIN SCHOOL

[illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible]

BROOKLINE FIRE DEPARTMENT

PREPLAN FACT SHEET
BUILDING INSPECTION REPORT

ADDRESS: 484 Heath St (490 Heath St) LOT/BLOCK#

BUILDING NAME: George S. Baldwin School
OWNER: Town of Brookline TELEPHONE #
OWNERS ADDRESS:
CITY: Brookline STATE: MA ZIP
MANAGEMENT COMPANY: Town of Brookline
ADDRESS:
CITY: STATE: ZIP:
EMERGENCY NOTIFICATION NUMBER:

ALARM SYS. TYPE: City Box II ALARM SYS. STATUS? (*NORMAL/TROUBLE*)
LOCATION OF RESET PANEL: Front Hall / Basement Boiler Room
FIRE ALARM MASTER BOX? (*YES/NO*) NUMBER: 6521
MASTER BOX LOCATION: RT Side ~~Front~~ door Enterance
KNOX BOX LOCATION: RT Side door Entera
ALARM COMPANY: Town of Brookline TELEPHONE:

SPRINKLER SYSTEM: (*YES/NO*) (*FULL* or *PARTIAL*)
LOCATION OF SPRINKLER VALVE: Basement Boiler room
VALVE OPEN? (*YES/NO*) UNOBSTRUCTED? yes
SPRINKLER VALVE: (*WET/DRY*) PRESSURE: 120 psi
NUMBER OF RISERS: 1 STANDPIPE: (*WET/DRY*)
LOCATION:

LOCATION OF FIRE DEPT. CONNECTION: ☐ RT Side of Building (missing Cap
IS FIRE DEPT. CONNECTION VISIBLE AND UNOBSTRUCTED? (*YES/NO*)
FIRE PUMP LOCATION:
EXTINGUISHERS? (*YES/NO*) DATE OF LAST INSPECTION: Aug 2009

EMERGENCY GENERATOR? (*YES/NO*) LOCATION: ?

AMOUNT OF APARTMENTS? N/A AMOUNT OF FLOORS? 2 Floor
BUILDING DIMENSIONS: 50 x 100
CONSTRUCTION TYPE: Brick & wood

ARE THE EXITS? (FREE, CLEAR, & UNOBSTRUCTED) yes
IF NOT WHICH LOCATIONS?
FIRE ESCAPES? (FRONT/BACK/SIDE) ARE THEY CLEAR? (*YES/NO*)
HEATING SYSTEM: (*GAS/OIL/ELECTRIC*) Both Gas Heat / oil ?
LOCATION OF HEATING SYSTEM: Basement 2 Boilers

? Can't get into Room, locked (pad loc

IF OIL, HOW MANY TANKS? ? TOTAL CAPACITY: ?
ARE ANY UNDERGROUND? ? ENCLOSED? ?
IS THE HEATING SYSTEM IN A SEPARATE ROOM? yes
IS THERE A FIRE DOOR ON THE BOILER ROOM? Yes IS IT CLOSED? yes
IS THERE AN AUTOMATIC DOOR CLOSER? yes
CONDITIONS OVER BOILER? Good
FLUE PIPE PROPERLY CONNECTED? (*YES/NO*) IS IT CLEAN? unknown

GIVE LOCATIONS OF THE FOLLOWING: ?
GAS SHUTOFF? ?
MAIN ELECTRICAL SHUTOFF? Basement
EMERENCY OIL BURNER SWITCH? Basement Hall
MAIN WATER SHUTOFF? Basement

IS THERE AN ELEVATOR? NO DATE OF LAST INSPECTION:
WHERE ARE THE ELEVATOR CONTROLS? N/A
IS THE ELEVATOR PIT CLEAN? N/A
KEY SWITCH INSTALLED? (*YES/NO*)
WHO IS THE ELEVATOR SERVICE COMPANY?
ADDRESS: CITY: N/A STATE:
TELEPHONE:

WHERE IS THE RUBBISH STORED? left side of Building
ARE THE HALLWAYS AND STAIRS CLEAR? yes
GENERAL CONDITON OF THE BUILDING? good
ARE EXIT SIGNS POSTED? yes
ARE THE FIRE DOORS CLOSED? yes
IS THERE TEMPORARY WIRING? no

OTHER VIOLATIONS, EXPLAIN IN DETAIL; USE EXTRA SHEET IF NEEDED:
Custodian was out sick, unable to get into all rooms especially Basement Area.
Co Detection needed w/ Battery Back up.
Fire dept connection needs cap

ABATEMENT ISSUED TO:
DATE OF RE-INSPECTION:
REFERRALS TO OTHER TOWN DEPARTMENTS: Building Dept

INSPECTORS NAME: Joseph Hingston DATE: 11/12/2009

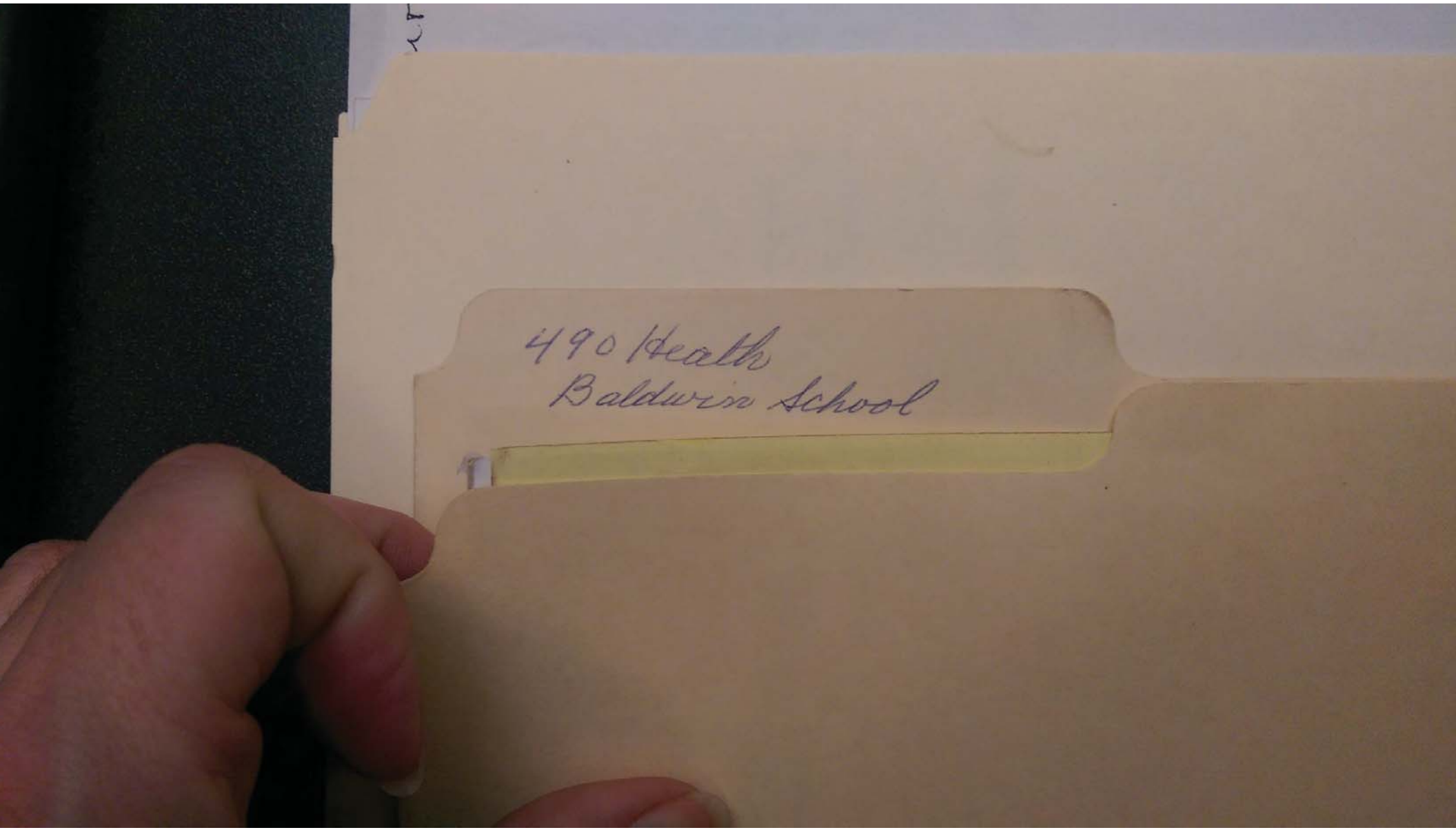
Rev 03/05 Copy to Fire Prevention Divsion

484 Heath St.

REFE

INSPE

Rev 03/0


490 Health
Baldwin School

The Commonwealth of Massachusetts
Department of Fire Services - Office of the State Fire Marshal
P.O. Box 1025, State Road, Stow, MA 01775

FP6 (rev. 3/00)

APPLICATION FOR PERMIT

City or Town BROOKLINE

Date 7/31/07

DIG SAFE NUMBER

Start Date:

In accordance with the provisions of M.G.L. Chapter 148, as provided in Section _____ application is hereby made

by Industrial Burner Systems Inc.
(Full name of person, Firm or Corporation)

Address 97 Rawson Rd. Quincy ma. (617-479-3900)
(Street or P.O. Box) (City or Town)

For permission to (state clearly purpose for which permit is requested) Welding & Cutting steel pipe in Boiler room

Name of competent operator (If Applicable) Richard A. Lee Cert. No. _____

Date ~~Issued~~-rejected 7/31/07 By Richard A. Lee
(Signature of Applicant)

Date of expiration 8/10/07 Fee 50.- $ Paid 50.00 Due _____

The Commonwealth of Massachusetts
Department of Fire Services - Office of the State Fire Marshal
P.O. Box 1025, State Road, Stow, MA 01775

FP6 (rev. 3/00)

PERMIT

City or Town BROOKLINE

Date 7/31/07

Permit Number (if applicable) 07-231

DIG SAFE NUMBER

Start Date:

In accordance with the provisions of M.G.L. Chapter 148, as provided in _____ this permit is granted

to Industrial Burner Systems Inc.
(Full name of person, Firm or Corporation)

for Cutting/Welding in boiler Room for Installation of new boiler/Gas line

Restrictions: Fire Detail Required.

at 490 Heath St. / Baldwin School
(Give location by street and no., or describe in such manner as to provide adequate identification of location)

Fee Paid $ 0 - (Town Building) This Permit will expire on 8/10/07

Signature of Official Granting Permit Mark O'Connor Title Inspector

This permit must be conspicuously posted upon the premises

ADDRESS FILE COPY

FP6 (rev. 3/00)

The Commonwealth of Massachusetts
Department of Fire Services - Office of the State Fire Marshal
P.O. Box 1025, State Road, Stow, MA 01775

APPLICATION FOR PERMIT

City or Town BROOKLINE

Date 12/3/04

DIG SAFE NUMBER

Start Date:

In accordance with the provisions of M.G.L. Chapter 148, as provided in Section _____ application is hereby made

by MiraBella Electric Co.
(Full name of person, Firm or Corporation)

Address 170 school ST. Somerville, MA
(Street or P.O. Box) (City or Town)

For permission to (state clearly purpose for which permit is requested) repair fire alarm panel

Name of competent operator (If Applicable) STeve MiraBella Cert. No. _____

Date Issued-rejected _____ By _____
(Signature of Applicant)

Date of expiration _____ Fee _____ $ Paid _____ Due _____

FP6 (rev. 3/00)

The Commonwealth of Massachusetts
Department of Fire Services - Office of the State Fire Marshal
P.O. Box 1025, State Road, Stow, MA 01775

PERMIT

City or Town BROOKLINE

Date 12/3/04

Permit Number (if applicable) _____

DIG SAFE NUMBER

Start Date:

In accordance with the provisions of M.G.L. Chapter 148, as provided in _____ this permit is granted

to _____
(Full name of person, Firm or Corporation)

for fire alarm panel repair at Baldwin school 490 HeaTH ST.

Restrictions: _____

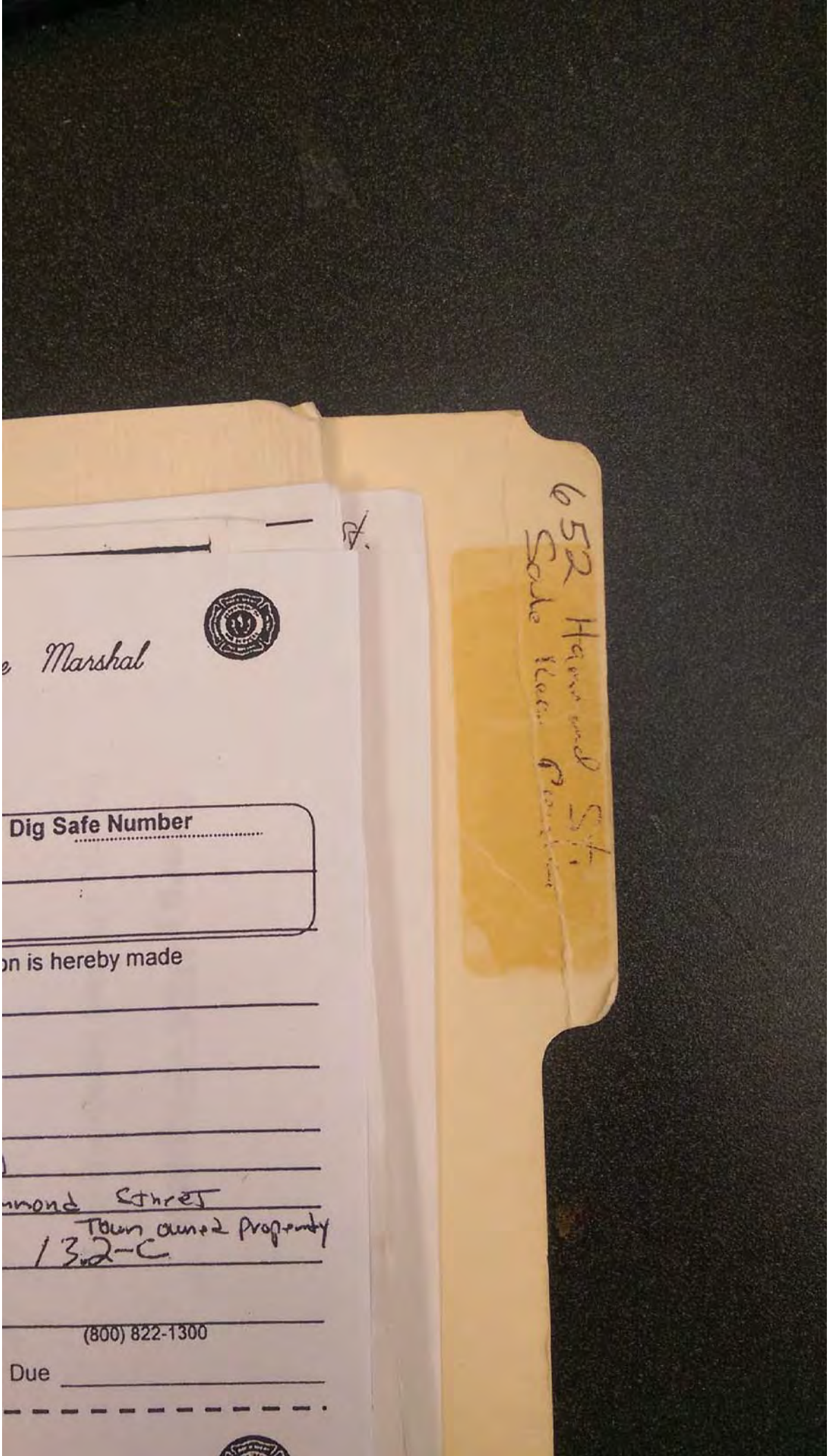
at Baldwin School 490 HeaTH ST.
(Give location by street and no., or describe in such manner as to provide adequate identification of location)

Fee Paid $ _____ This Permit will expire on _____

Signature of Official Granting Permit _____ Title _____

This permit must be conspicuously posted upon the premises

ORIGINAL



652 Hammond St.
Sale Rec. Pending

e Marshal

Dig Safe Number

on is hereby made

mmond Street
Town owned Property
13.2-C

(800) 822-1300

Due

The Commonwealth of Massachusetts
Department of Fire Services – Office of the State Fire Marshal
P.O. Box 1025, State Road, Stow, MA 01775

FP-5 (rev. 3/00)

Will call when Ready

APPLICATION FOR PERMIT

City or Town: Brookline

Date: 8-5-08

Dig Safe Number

Start Date:

In accordance with the provisions of M.G.L, Chapter 148, as provided in Section 10A, application is hereby made by EnergyUSA Propane, Inc.
(Full name of person, Firm or Corporation)

Address: 100 Myles Standish Blvd. Taunton, MA 02780
(Street or P.O. Box) (City or Town)

For permission to (state clearly purpose for which permit is requested)
Installation of propane storage tanks 2-100 gallon Tanks Aboveground

Appliances: Heat Address: 650 Hammond Street Town owned Property

Name of competant operator (If Applicable) Cert. No. 132-C

Date Issued-rejected By Steven Daughton (Signature of Applicant) (800) 822-1300

Date of expiration Fee n/c $ Paid N/C Due

The Commonwealth of Massachusetts
Department of Fire Services – Office of the State Fire Marshal
P.O. Box 1025, State Road, Stow, MA 01775

FP-5 (rev. 12/99)

PERMIT

City or Town: Brookline

Date: 8-5-08

Dig Safe Number

Start Date:

In accordance with the provisions of M.G.L, Chapter 148, as provided in Section 10A, this permit is granted to EnergyUSA Propane, Inc.
(Full name of person, Firm or Corporation)

for Heat at new office on Soule Recreation Property 650 Hammond St

Restrictions: None

at 650 Hammond St.
(Give location by street and no., or in such manneras to provide adequate identification of location)

Fee Paid $ N/C This Permit will expire on 8-5-09

Signature of Official Granting Permit S. [signature] Title D/C

This permit must be conspicupously posted upon the premises

The Commonwealth of Massachusetts

Department of Fire Services – Office of the State Fire Marshal

FP-5 (rev. 3/00) P.O. Box 1025, State Road, Stow, MA 01775

Will call when Ready

APPLICATION FOR PERMIT

City or Town Brookline

Dig Safe Number

Start Date:

Date 7-5-08

In accordance with the provisions of M.G.L. Chapter 148, as provided in Section 10A, application is hereby made

by EnergyUSA Propane Inc. (Full name of person, Firm or Corporation)

Address 100 Myles Standish Blvd. Taunton, MA 02780 (Street or P.O. Box) (City or Town)

For permission to state clearly purpose for which permit is requested)

Installation of propane storage tanks 2-100 gallon Tanks aboveground

Appliances: Heat Address: 650 Hammond Street Town owned Property

Name of compliant operator (If Applicable) Cert. No. 132-C

Date Issued-rejected By Steven Daniels (Signature of Applicant) (800) 822-1300

Date of expiration Fee n/c $ Paid N/C Due

The Commonwealth of Massachusetts

Department of Fire Services – Office of the State Fire Marshal

FP-5 (rev. 12/99) P.O. Box 1025, State Road, Stow, MA 01775

PERMIT

Dig Safe Number

Start Date:

City or Town Brookline

Date 8-5-08

In accordance with the provisions of M.G.L. Chapter 148, as provided in Section 10A, this permit is granted

to EnergyUSA Propane, Inc. (Full name of person, Firm or Corporation)

for Heat AT NEW OFFICE ON State Recreation property 650 Hammond St

Restrictions: None

at 650 Hammond St. (Give location by street and no., or in such manner as to provide adequate identification of location)

Fee Paid $ N/C This Permit will expire on 8-5-09

Signature of Official Granting Permit S. Dwyer Title D/C

This permit must be conspicuously posted upon the premises

652 HAMMOND ST. BROOKLINE MASSACHUSETTS

652 Ham
Sale Rec

EnergyUSA™ - Propane

Receipt of Propane Storage Application

Date: 7/15/08

Propane storage to be located at:

Name: Town of Brookline

Address: 650 Hammond ST

City / Town: Brookline, MA

Application left at:

Address:

City / Town: Brookline Fire Dept

Application received by: D/C SB

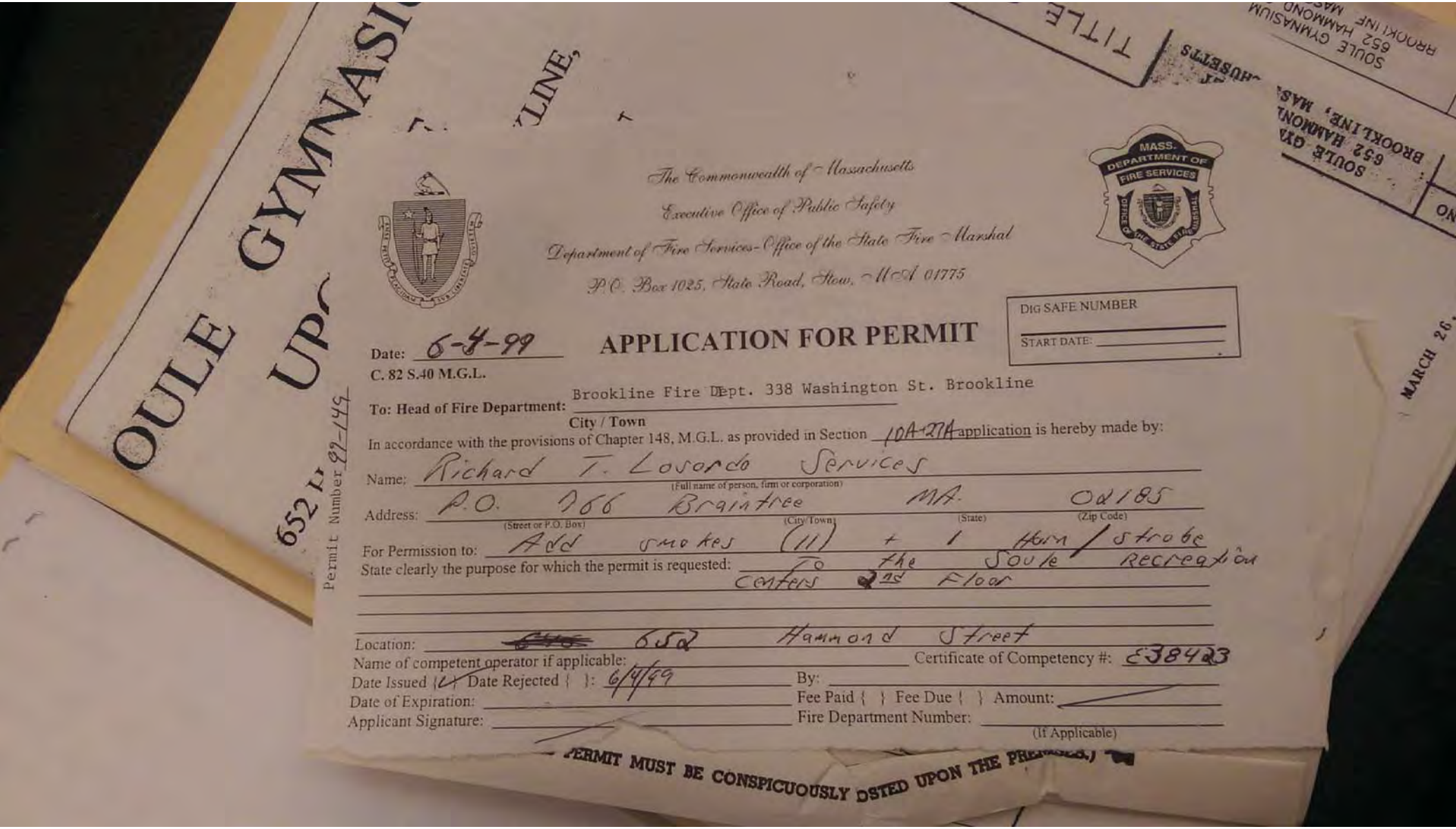
Title: D/C

Date Received: 8-5-08

Fee Paid: N/C

Paid by Customer: Check #

Cash: N/C



The Commonwealth of Massachusetts

Executive Office of Public Safety

Department of Fire Services - Office of the State Fire Marshal

P.O. Box 1025, State Road, Stow, MA 01775

MASS. DEPARTMENT OF FIRE SERVICES

DIG SAFE NUMBER

START DATE:

APPLICATION FOR PERMIT

Date: 6-4-99

C. 82 S.40 M.G.L.

To: Head of Fire Department: Brookline Fire Dept. 338 Washington St. Brookline
City / Town

In accordance with the provisions of Chapter 148, M.G.L. as provided in Section 10A-27A application is hereby made by:

Name: Richard T. Losardo Services
(Full name of person, firm or corporation)

Address: P.O. 766 Braintree MA. 02185
(Street or P.O. Box) (City/Town) (State) (Zip Code)

For Permission to: Add smokes (11) + 1 Horn / strobe

State clearly the purpose for which the permit is requested: To the Soule Recreation Centers 2nd Floor

Location: ~~[illegible]~~ 652 Hammond Street

Name of competent operator if applicable: Certificate of Competency #: E38423

Date Issued {✓} Date Rejected { }: 6/4/99 By:

Date of Expiration: Fee Paid { } Fee Due { } Amount:

Applicant Signature: Fire Department Number: (If Applicable)

PERMIT MUST BE CONSPICUOUSLY DSTED UPON THE PREMISES.)

Permit Number 99-149

652 H

SOULE GYMNASIUM

UPO

LINE,

TITLE

SOULE GYMNASIUM 652 HAMMOND BROOKLINE, MASSACHUSETTS

MARCH 26,

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC SAFETY — DIVISION OF FIRE PREVENTION
1010 COMMONWEALTH AVENUE, BOSTON

BROOKLINE AUG 26 1997
(City or Town) (Date)

PERMIT

In accordance with the provisions of Chapter 148, G. L. as provided in _____, this permit is granted to

Name BRITE LITE ELECTRICAL CO. INC. 373 GRANITE AVE QUINCY
(Full name of person, firm or corporation granted permit)

State clearly purpose for which permit is granted: to INSTALL FIRE ALARM IN GYMNASIUM AT SOULE RECREATION 252 HAMMOND ST.

Restrictions: _____

at _____
(Give location by street and no., or describe in such manner as to provide adequate identification of location)

Fee Paid $ ~

INSPECTOR _____
(Signature of official granting permit)

This permit will expire NOV 26 1997

FIRE INSPECTOR
(Title)

(THIS PERMIT MUST BE CONSPICUOUSLY POSTED UPON THE PREMISES.)

SOULE GYMNASIUM UPGRADE

652 HAMMOND STREET BROOKLINE, MASSACHUSETTS

LIST OF DRAWINGS

T-1 TITLE SHEET, LOCUS PLAN
A-1 FLOOR PLAN
A-2 REFLECTED CEILING PLAN, EXTERIOR STAIR DETAIL
A-3 INTERIOR ELEVATIONS
A-4 SECTIONS & DETAILS
S-1 GENERAL NOTES
S-2 CEILING FRAMING
S-3 TRUSS ELEVATION
S-4 PART CEILING FRAMING
S-5 SECTIONS / DETAILS
M-1 HVAC GYMNASIUM FLOOR PLAN
M-2 HVAC BASEMENT PART PLAN
M-3 HVAC DETAILS, LEGEND AND ABBRV.(S)
M-4 HVAC NOTES AND CONTROL SPECIFICATION
E-1 ELECTRICAL LIGHTING PLAN
E-2 LOWER LEVEL ELECTRICAL PLAN
E-3 UPPER LEVEL POWER PLAN

LIST OF ABBREVIATIONS

IN COMPLIANCE WITH PARAGRAPH 127.2.1 OF THE COMMONWEALTH OF MASSACHUSETTS STATE BUILDING CODE, I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THAT THE PLANS, COMPUTATIONS AND SPECIFICATIONS MEET THE APPLICABLE PROVISIONS OF SAID CODE, AND ALL APPLICABLE [illegible] AND ORDINANCES,

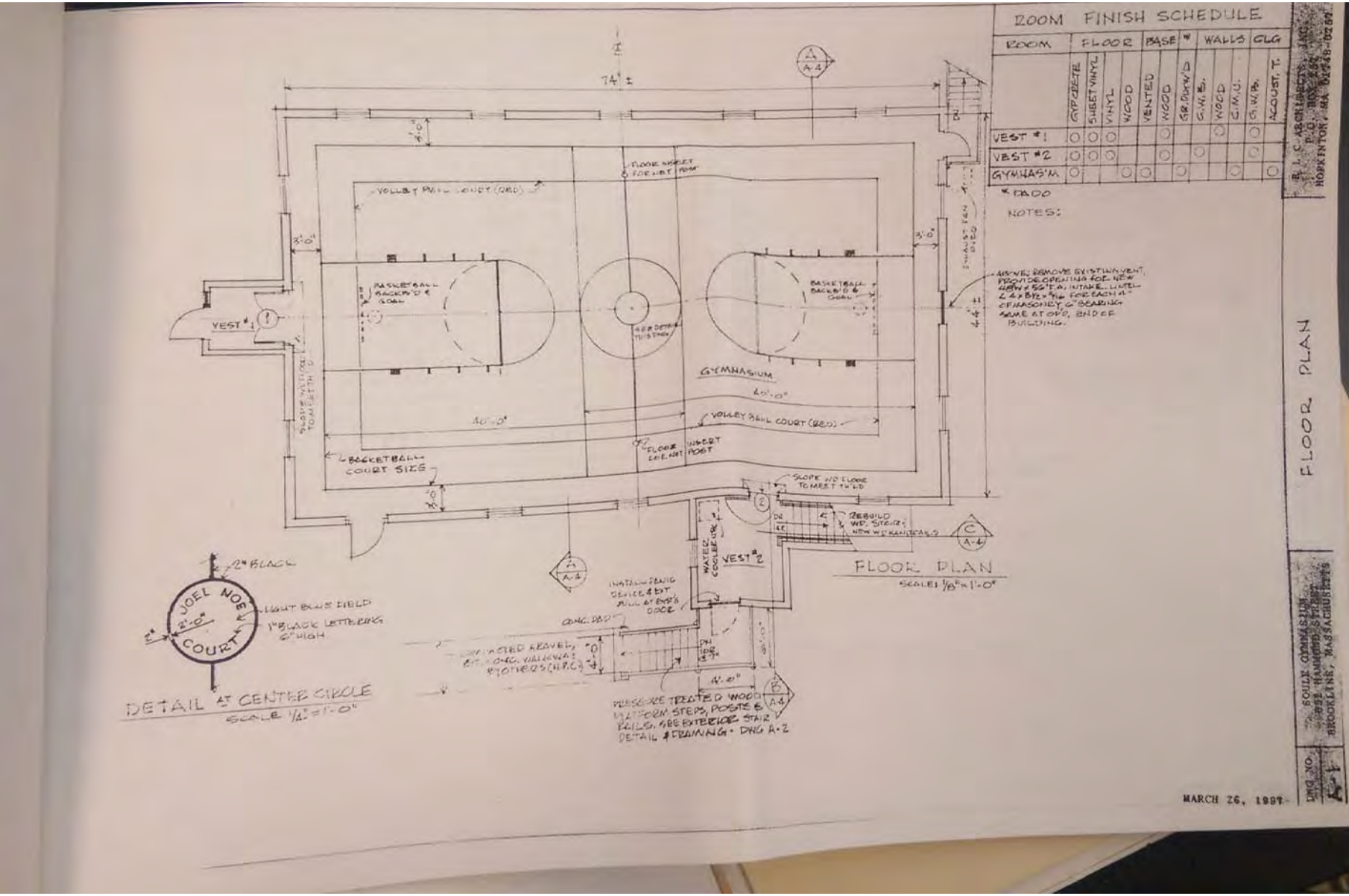
R. C. ARCHITECTS, INC.
P.O. BOX 257
HOPKINTON, MA 01748-0257

TITLE SHEET, LOCUS PLAN

SOULE GYMNASIUM
652 HAMMOND STREET
BROOKLINE, MASSACHUSETTS

DWG NO T-1

MARCH 26, 1997



ROOM FINISH SCHEDULE

ROOM	FLOOR				BASE		WALLS				CLG
	GYP. CRETE	SHEET VINYL	VINYL	WOOD	VENTED	WOOD	GR. BRK'D	G.W.B.	WOOD	C.M.U.	G.W.B.	ACOUST. T.
VEST #1	○	○	○						○		○	
VEST #2	○	○	○						○		○	
GYMNAS'M	○			○	○		○			○		○

* DADO

NOTES:

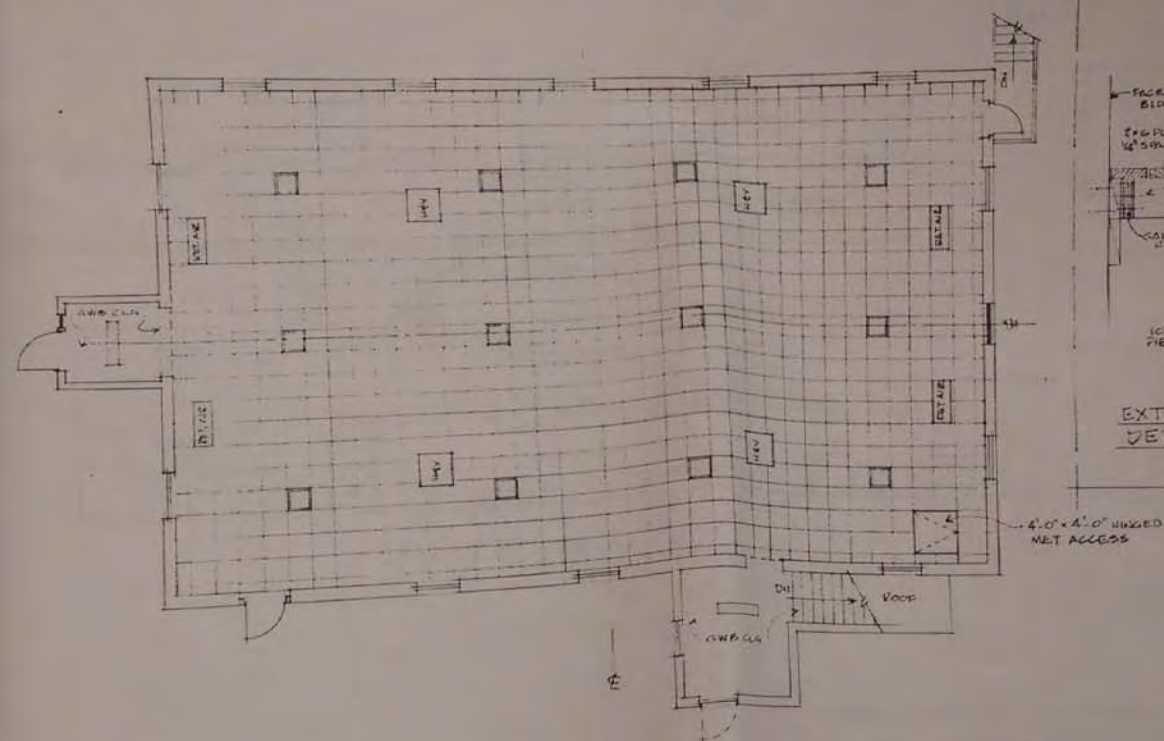
R. L. C. ARCHITECTS, INC.
P.O. BOX 485
HOPKINTON, MA 02148-0282

SOULE COMMUNITY
BROOKLINE, MASSACHUSETTS

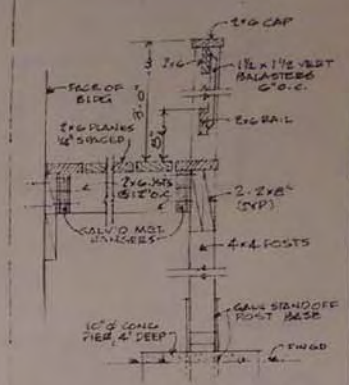
FLOOR PLAN

DWG. NO.

MARCH 26, 1997



REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"



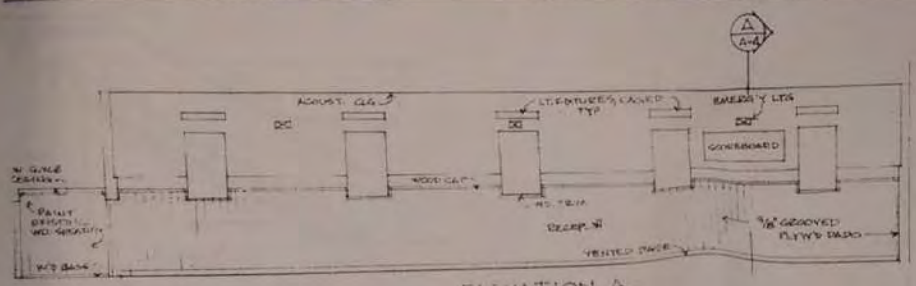
EXTERIOR STAIR DETAIL & FRAMING
NOT TO SCALE

REFLECTED CEILING PLAN & EXTERIOR STAIR DETAIL

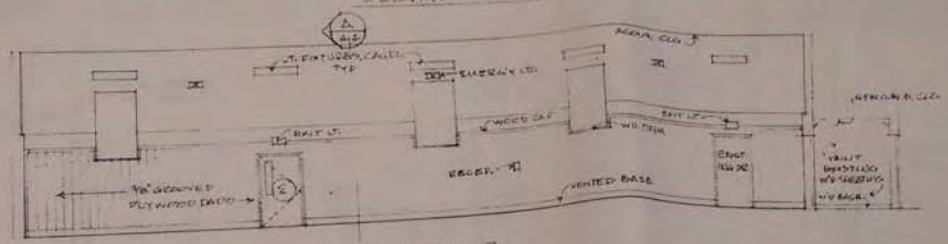
SOULE GYMNASIUM
652 HAMMOND STREET
BROOKLINE, MASSACHUSETTS

DWG NO A-2

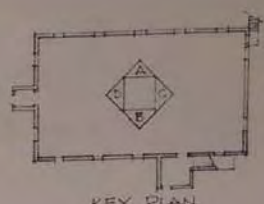
MARCH 26, 1997



ELEVATION A

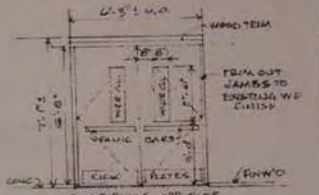


ELEVATION B

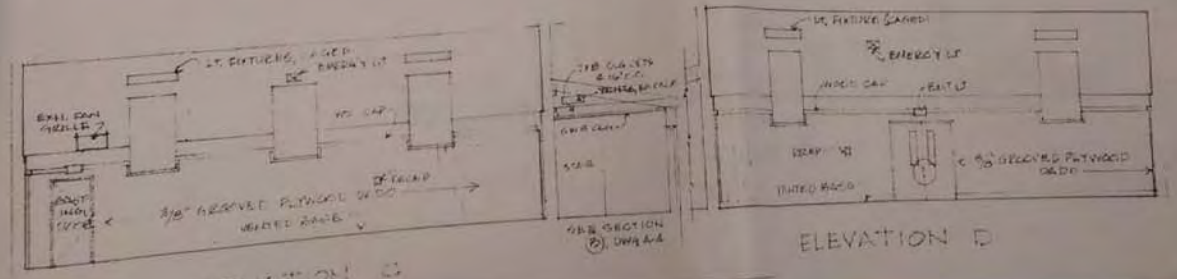


KEY PLAN

NOT TO SCALE



NOTE:
LOCKSETS FOR DOORS #1 & #2 NOT REQ'D



ELEVATION C

ELEVATION D

INTERIOR ELEVATIONS

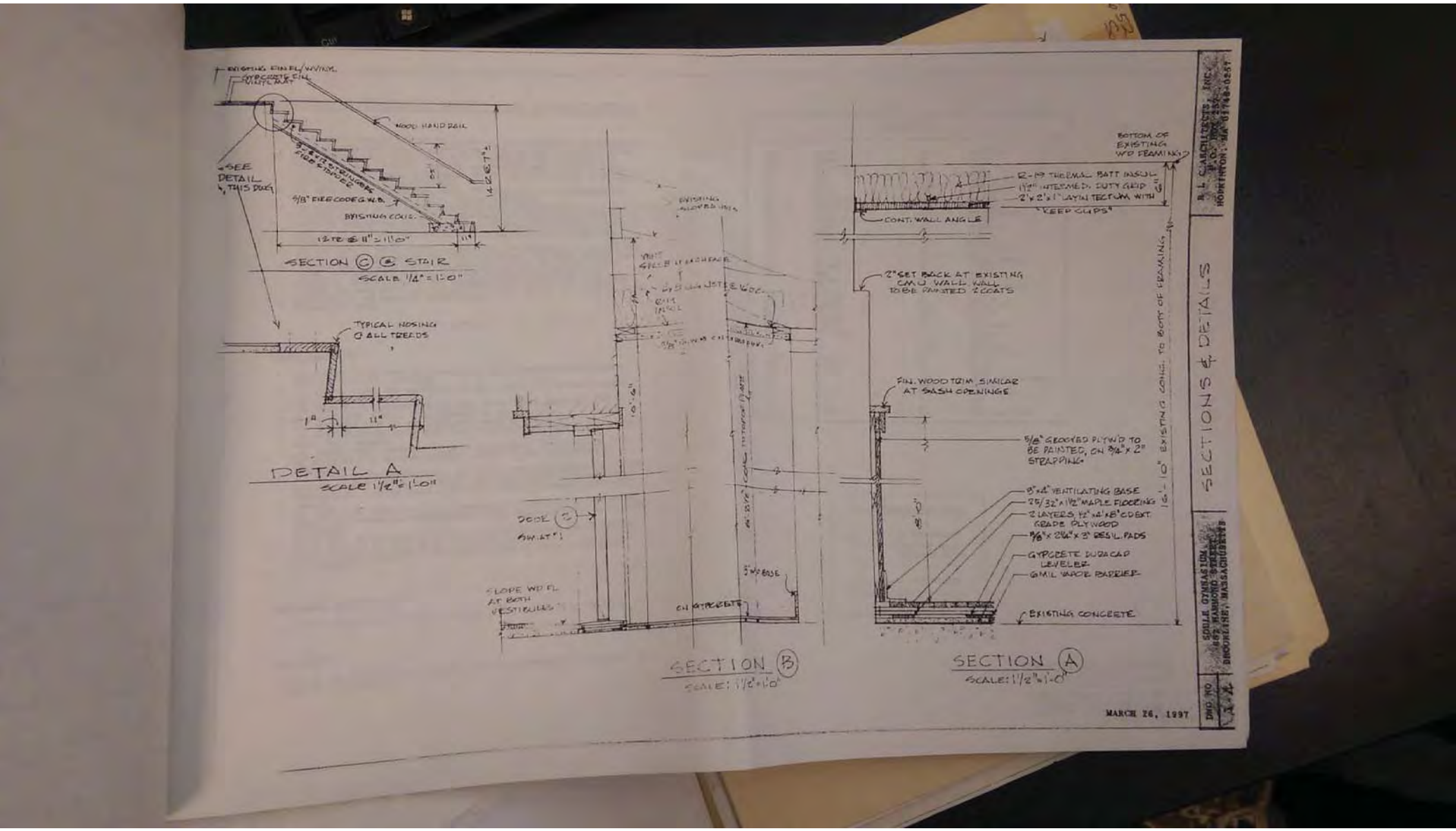
SCALE 1/8" = 1'-0"

A.E.C. ARCHITECTS, INC.
P.O. BOX 255
HOPKINTON, MA 01748-0255

SOULE GYMNASIUM
492 DIAMOND STREET
BROCKTON, MASSACHUSETTS

DWG NO. A-3

MARCH 26, 1997



EXISTING FIN FL/WVINYL
GYPCRETE FIN
VINYL MAT
WOOD HAND RAIL
SEE DETAIL 4, THIS DWG
5/8" FIRE CODE G.W.B.
EXISTING CONC.
12 TR @ 11" = 11'-0"
SECTION C @ STAIR
SCALE 1/4" = 1'-0"
TYPICAL NOSING @ ALL TREADS
DETAIL A
SCALE 1 1/2" = 1'-0"
EXISTING SLOPED UNIT
DOOR 2
SLOPE WD FL AT BOTH VESTIBULES
ON GYPCRETE
SECTION B
SCALE: 1 1/2" = 1'-0"
BOTTOM OF EXISTING WD FRAMING
R-19 THERMAL BATT INSUL
1 1/2" INTERMED. DUTY GRID
2'x2'x1" LAYIN TECTUM WITH "KEEP CLIPS"
CONT. WALL ANGLE
2" SET BACK AT EXISTING CMU WALL WALL TO BE PAINTED 2 COATS
FIN. WOOD TRIM SIMILAR AT SASH OPENINGS
5/8" GROOVED PLYW'D TO BE PAINTED, ON 3/4" x 2" STRAPPING
8"x4" VENTILATING BASE
25/32"x1 1/2" MAPLE FLOORING
2 LAYERS 1/2"x4'x8' CD EXT. GRADE PLYWOOD
3/8"x2 1/4"x3" RESIL. PADS
GYPCRETE DURACAP LEVELER
6 MIL VAPOR BARRIER
EXISTING CONCRETE
16'-10" EXISTING CONC. TO BOTT OF FRAMING
SECTION A
SCALE: 1 1/2" = 1'-0"
MARCH 26, 1997
SECTIONS & DETAILS
R. L. CARCHITECTS, INC.
P.O. BOX 257
HOPKINTON, MA 01748-0257
SOULE GYMNASIUM
682 HARMOND STREET
BROOKLINE, MASSACHUSETTS
DWG NO

GENERAL STRUCTURAL NOTES AND SPECIFICATIONS

GENERAL

1. REFER TO THE PROJECT SPECIFICATIONS AND THE COMMONWEALTH OF MASSACHUSETTS STATE BUILDING CODE FOR THE MATERIAL AND WORKMANSHIP NOT SPECIFIED HEREIN.
2. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. THESE DRAWINGS AND SPECIFICATIONS SHALL BE REFERRED TO FOR SIZE AND LOCATION OF OPENINGS, VENTS, PIPES, INSERTS, HANGERS, ETC.
3. ALL METHODS OF CONSTRUCTION, NOTES, ETC., INDICATED ON THE DRAWINGS ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
4. THE CONTRACTOR SHALL REVIEW AND SUBMIT SHOP DRAWINGS AND RECEIVE APPROVAL BEFORE FABRICATION OF MATERIAL. SHOP DRAWINGS SHALL NOT BE SUBMITTED FOR APPROVAL WITHOUT THE CONTRACTOR'S FULL REVIEW AND COORDINATION, ANNOTATED AND SIGNED AS SUCH. ERECTION SHALL BE MADE FROM THE APPROVED SHOP DRAWINGS ONLY.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE AND REPORT ANY DISCREPANCY TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
6. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND/OR THE TESTING AGENCY WITHIN A REASONABLE TIME, OF ACTIVITIES ON SITE WHICH REQUIRE THEIR PRESENCE. OBSERVATIONS BY THE ARCHITECT AND INSPECTION BY THE TESTING AGENCY ARE MANDATORY AND THE SCOPE OF THESE WILL BE PRE-ARRANGED BY THE ARCHITECT AT THE START OF CONSTRUCTION.
7. DESIGN LIVE LOADS:

ROOF LOADS (SNOW) ———— 30 PSF

ROUGH CARPENTRY

1. ALL LUMBER TO BE SURFACED DRY (S-DRY) AT A MAXIMUM MOISTURE CONTENT OF 19%, AND MARKED ACCORDINGLY.
2. ALL JOISTS, STUDS, AND RAFTERS TO BE HEM-FIR No. 2 OR SPRUCE/PINE/FIR No. 2 GRADE MARKED.
3. ALL SILLS TO BE PRESSURE TREATED WITH WATER BOURN SALTS PER AWPB LP-2.
4. ALL POSTS AND TIMBERS TO BE DOUGLAS FIR No. 2.
5. ALL STUDS TO BEAR PROPER STUD GRADE MARK OR BETTER.
6. ALL ROOF SHEATHING TO BE 5/8" THICK C-D 32/16 APA INTERIOR WITH EXTERIOR GLUE, GRADE MARKED.
7. ALL CROSS-GRAIN BEARING UNITS (SILLS, SOLE PLATES, BAND JOIST, ETC...) TO BE INSTALLED AT A MAXIMUM MOISTURE CONTENT OF 15% AS MEASURED IN THE FIELD.
8. ALL FLOORS TO BE SHEATHED WITH 3/4" THICK SUBFLOOR-UNDERLAYMENT, GROUP 1, APA-INT, TONGUE AND GROOVE EDGES. ALL UNDERLAYMENT TO BE GLUED WITH CONSTRUCTION ADHESIVE WHICH CONFORMS TO APA PERFORMANCE SPECIFICATION AFG-01.
9. ALL MICRO-LAM BEAMS (M.L.) TO BE FABRICATED OF MATERIAL FOR Fb=2800 PSI BENDING OR GREATER AS MANUFACTURED BY THE TRUS-JOIST CORP., BOISE, IDAHO (OR EQUAL).
10. BEAMS MADE UP OF MULTIPLE MICRO-LAMS TO BE GLUED AND NAILED TOGETHER. USE 2 ROWS OF 8d NAILS AT 12" ON CENTER (STAGGERED).
11. ALL CONNECTING HARDWARE TO BE SIMPSON BRAND OR EQUAL, APPROVED BY THE ARCHITECT.

STRUCTURAL QUALITY CONTROL

ALL WORK TO BE SUBJECT TO THE APPROVAL OF THE ARCHITECT IN THE FIELD.

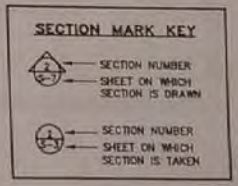
DIMENSIONING

REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT INCLUDED IN THE STRUCTURAL DOCUMENTS.

LEGEND

ALT.	ALTERNATE	H.P.	HIGH POINT
ARCH.	ARCHITECT	INT.	INTERIOR
B.O.	BOTTOM OF	JT.	JOINT
BOT.	BOTTOM	LG.	LONG
BM.	BEAM	L.L.H.	LONG LEG HORIZONTAL
BRG.	BEARING	L.L.V.	LONG LEG VERTICAL
CENT.	CENTER	L.P.	LOW POINT
C.J.	CONSTRUCTION JOINT	MAX.	MAXIMUM
C/L , CL.	CENTER LINE	MECH.	MECHANICAL
CLR.	CLEAR	MFR'S.	MANUFACTURERS
C.M.U.	CONCRETE MASONRY UNIT	MIN.	MINIMUM
COL.	COLUMN	M.L.	MICRO-LAM
CONC.	CONCRETE	MTL.	METAL
CONST.	CONSTRUCTION	N.S.	NEAR SIDE
CONT.	CONTINUOUS	N.T.S.	NOT TO SCALE
DIA.	DIAMETER	O/C , O.C.	ON CENTER
DIM.	DIMENSION	O.D.	OUTSIDE DIAMETER
DWG.	DRAWING	OPP.	OPPOSITE
DWL.	DOWEL	OPNG.	OPENING
(E)	EXISTING	PL.	PLATE
EA.	EACH	P.T.	PRESSURE TREATED
E.F.	EACH FACE	R	RADIUS
EL.	ELEVATION	REF.	REFER TO
EMB.	EMBEDMENT	REINF.	REINFORCING
E.S.	EACH SIDE	REQ'D.	REQUIRED
EQ.	EQUAL	SIM.	SIMILAR
EXP.	EXPANSION	SPECS.	SPECIFICATIONS
EXT.	EXTERIOR	STD.	STANDARD
F.D.	FLOOR DRAIN	STL.	STEEL
FIN.	FINISH	STRUCT.	STRUCTURAL
FLR.	FLOOR	T & G	TONGUE & GROOVE
F.O.	FACE OF	T.J.	TJI JOIST
FOUND.	FOUNDATION	T.O.	TOP OF
FRMG.	FRAMING	TYP.	TYPICAL
F.S.	FAR SIDE	U.O.N.	UNLESS OTHERWISE NOTED
FTG.	FOOTING	VERT.	VERTICAL
GA.	GAGE	V.I.F.	VERIFY IN FIELD
GALV.	GALVANIZE	W	WIDTH
GR.	GRADE	W/	WITH
HGT.	HEIGHT	W.W.F.	WELDED WIRE FABRIC
HORIZ.	HORIZONTAL		

SECTION MARK KEY



COWEN ASSOCIATES
Consulting Structural Engineers
29 Vesta Road
Natick, Massachusetts 01760
Telephone (508) 655-3976
Facsimile (508) 655-4284

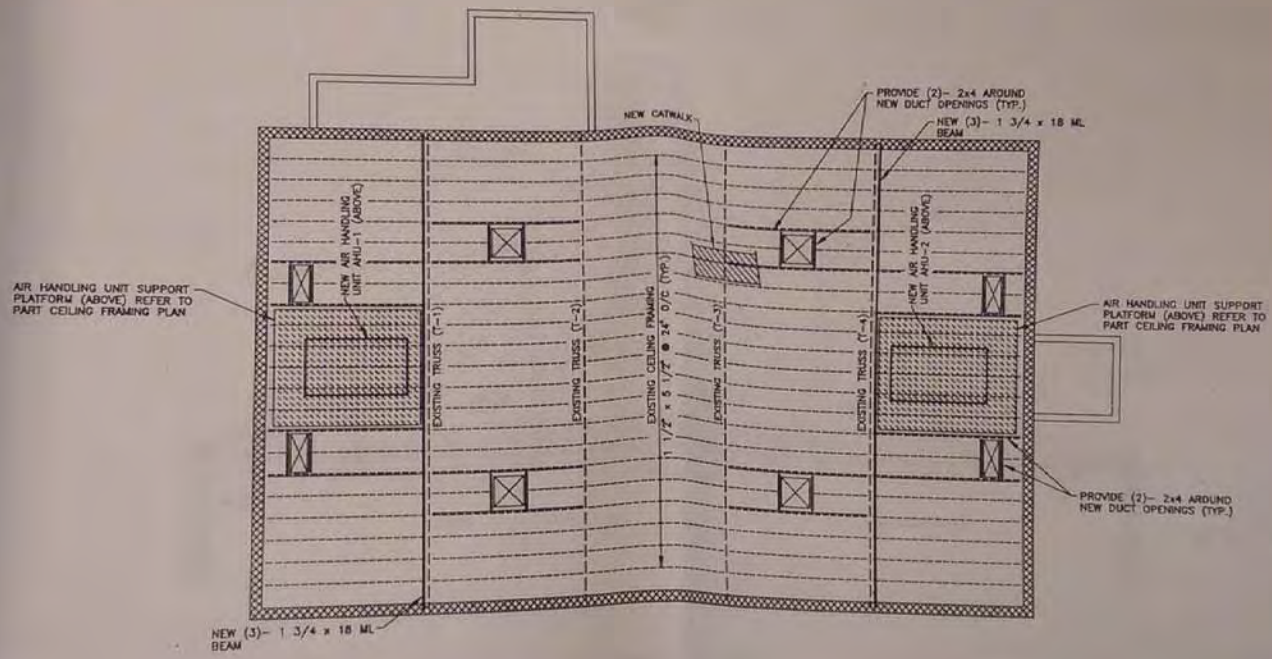
MARCH 26, 1997

B L C ARCHITECTS, INC.
P.O. BOX 257
HOPEDALE, MA 01747-0257

GENERAL NOTES

BOYLE O'DONNATTIA
652 DIAMOND STREET
BROOKLINE, MASSACHUSETTS

DWG. No. S-1



CEILING FRAMING / TRUSS BOTTOM CHORD
SCALE: 1/8" = 1'-0"

COWEN ASSOCIATES
Consulting Structural Engineers
29 Vesta Road
Natick, Massachusetts 01760
Telephone (508) 655–3978
Facsimile (508) 655–4284

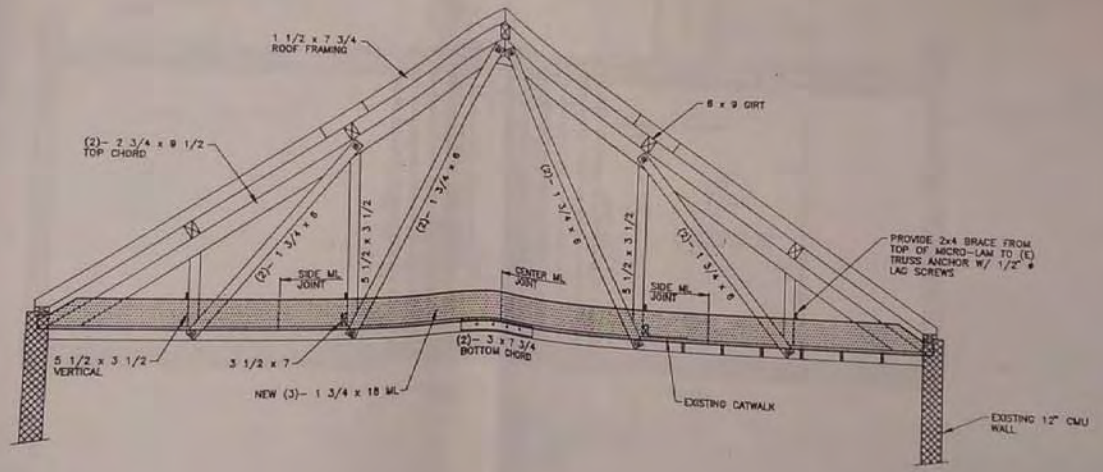
MARCH 26, 1997

B L C ARCHITECTS, INC.
P.O. BOX 557
HOPKINTON, MA 01748–0557

CEILING FRAMING

SOUTH GYMNASIUM
632 HANCOCK STREET
BROOKLINE, MASSACHUSETTS

DWG. No. S–2



TRUSS ELEVATION
SCALE: 1/4" = 1'-0"

COWEN ASSOCIATES
Consulting Structural Engineers
29 Vesta Road
Natick, Massachusetts 01760
Telephone (508) 655-3978
Facsimile (508) 655-4284

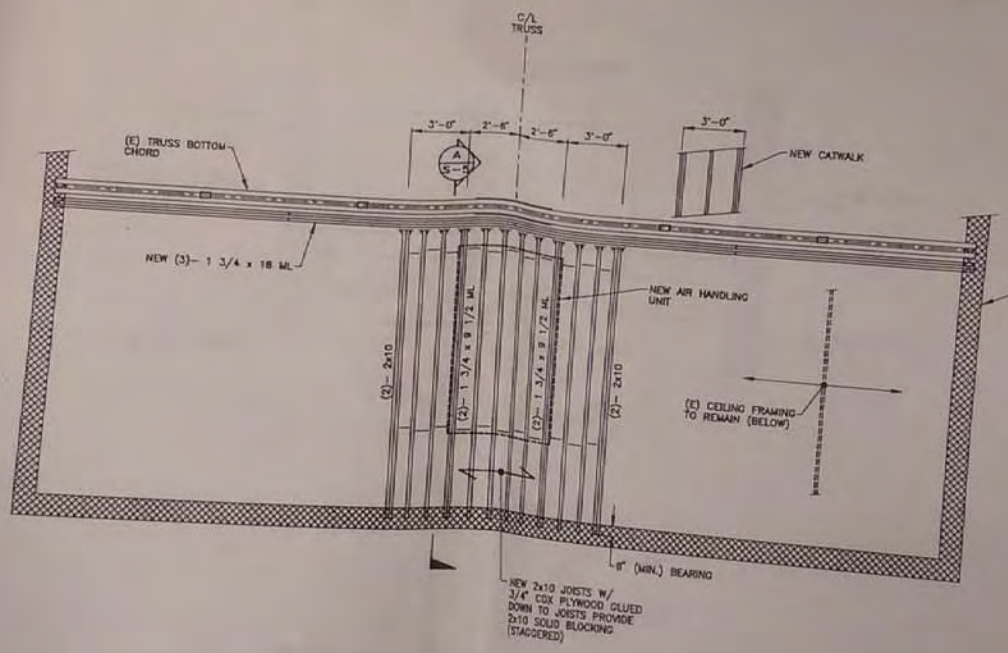
MARCH 26, 1997

P L C ARCHITECTS, INC.
P.O. BOX 257
ROPEINTON, MA 01748-0257

TRUSS ELEVATION

BOYLE GYMNASIUM
452 HAMMOND STREET
BROOKLINE, MASSACHUSETTS

SHEET No. S-3



PART CEILING FRAMING PLAN

SCALE: 1/4" = 1'-0"

AIR HANDLING UNIT SUPPORT PLATFORM FRAMING

COWEN ASSOCIATES
Consulting Structural Engineers
29 Vesta Road
Natick, Massachusetts 01760
Telephone (508) 655-3878
Facsimile (508) 655-4264

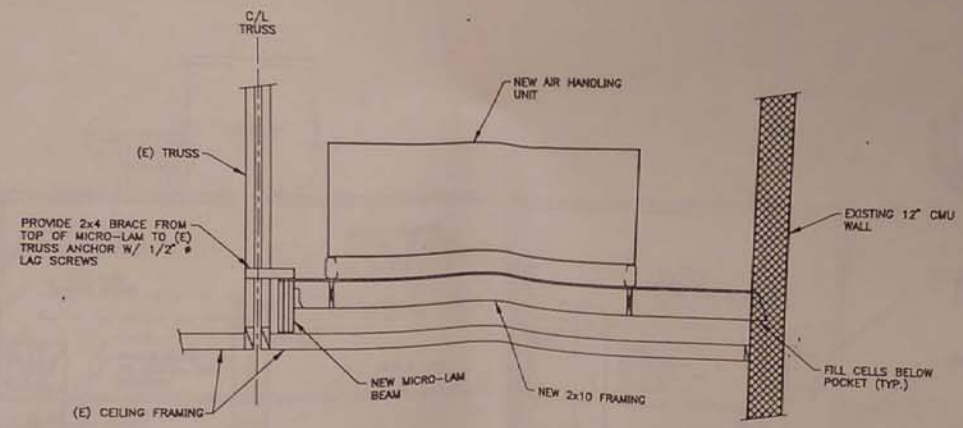
MARCH 26, 1997

R L C ARCHITECTS, INC.
P.O. BOX 257
HOPKINTON, MA 01748-0257

PART CEILING FRAMING

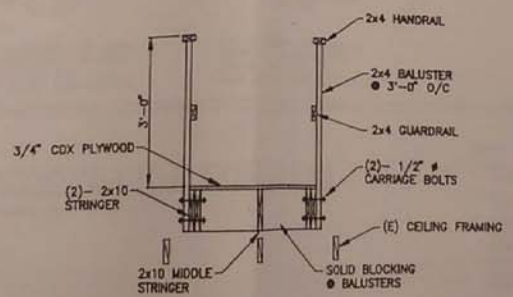
SOULE GYMNASIUM
652 HANCOCK STREET
BROOKLINE, MASSACHUSETTS

DWG. No. S-4



SECTION
SCALE: 3/4" = 1'-0"

A
S-4



NEW CATWALK
SCALE: 1" = 1'-0"

COWEN ASSOCIATES
Consulting Structural Engineers
28 Vesta Road
Natick, Massachusetts 01760
Telephone (508) 655-3976
Facsimile (508) 655-4284
MARCH 26, 1997

SOUTH GYMNASIUM
652 HAMMOND STREET
BROOKLINE, MASSACHUSETTS

SECTIONS / DETAILS

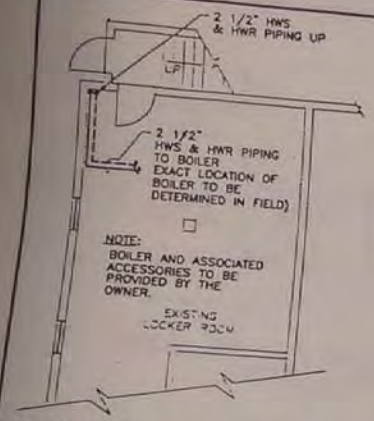
DWG. No. S-5

R. L. C ARCHITECTS, INC.
P.O. BOX 257
HOPKINTON, MA 01748-0257

SOULE GYM BROOKLINE, MA	HVAC GYMNASIUM FLOOR PLAN
DESIGNED BY: BEO	RICHARD D. KIMBALL CO., INC. CONSULTING ENGINEERS 580 MAIN STREET READING, MA 01867 (617) 942-0130
DRAWN BY: BEO	
CHECKED BY: JFL	
APPROVED BY: JFL	SCALE: AS NOTED

DWG NO	SOULE GYMNASIUM 652 HAMMOND STREET BROOKLINE, MASSACHUSETTS
H-1	

R L C ARCHITECTS, INC.
P.O. BOX 257
HOPKINTON, MA 01748-0257



BASEMENT PART PLAN

SCALE: 1/8"=1'-0"

AIR HANDLING UNIT SCHEDULE

TAG No.	MANUFACTURER & MODEL No. (AS STANDARD)	TYPE	FAN CFM	FAN MIN. OA CFM	FAN ESP (IN WG)	FAN TSP (IN WG)	FAN MOTOR HP	FAN MOTOR ELECT DATA V/Ø/HZ	HEATING EAT (F)	HEATING LAT (F)	HEATING EWT (F)	HEATING LWT (F)	HEATING TOTAL MBH	HEATING GPM
AHU-1	DUNHAM-BUSH HD12ALF	FLOOR MOUNTED HORIZONTAL UNIT	6300	750	1"	1.4"	5	208/3/60	64.5	93.5	180	160	198	21.8
AHU-2	DUNHAM-BUSH HD12ALF	FLOOR MOUNTED HORIZONTAL UNIT	6300	750	1"	1.4"	5	208/3/60	64.5	93.5	180	160	198	21.8

NOTE:
1. PROVIDE UNITS WITH EXTERNAL FACE & BYPASS SECTION, COMBINATION MIXING BOX & FILTER SECTION, 2" 35% PLEATED DISPOSABLE FILTERS AND VIBRATION ISOLATORS. TOTAL WEIGHT 1300 LBS.
2. WATER PRESSURE DROP THROUGH THE HOT WATER COIL FOR AHU-1 AND AHU-2 IS 2.305 FT OF WATER.
3. PROVIDE AHU-1 AND AHU-2 WITH SMOKE DETECTORS IN THE SUPPLY AIR DUCTWORK. WIRE SMOKE DETECTOR TO SHUT DOWN FAN UPON DETECTION OF SMOKE.
4. PROVIDE UNITS WITH FLEXIBLE DUCT CONNECTIONS AT ALL SUPPLY AND RETURN/FRESH AIR OPENINGS.
5. CONTRACTOR TO VERIFY VOLTAGE OF UNITS WITH OWNER BEFORE ORDERING AND INSTALLATION.
6. PROVIDE 40% PROPYLENE GLYCOL SOLUTION IN PIPING SERVING AHU-1 AND AHU-2
7. ALL DAMPERS SHALL BE OPPOSED BLADE, LOW LEAKAGE TYPE.
8. CONTRACTOR TO VERIFY LOCATION OF ACCESS PANELS, COIL PULLS AND PIPING CONNECTIONS, ETC. BEFORE ORDERING AIR HANDLING UNITS.
9. PROVIDE AHU-1 AND AHU-2 WITH NUT AND BOLT CONSTRUCTION FOR FIELD DISMANTLING AND REASSEMBLY IN THE ATTIC SPACE.

EXHAUST FAN SCHEDULE

DESIGNATION	MANUFACTURER & MODEL No. (AS STANDARD)	TYPE	CFM	S.P. (IN. W.G.)	RPM (MAX)	BHP (MAX)	MOTOR (HP)	ELECTRICAL DATA VOLTS	PHASE	HZ	REMARKS
EF-1	GREENHECK GWB 14-4	CENTRIFUGAL SIDEWALL	1500	.250	1000	.22	.25	120	1	60	FURNISH W/BIRDSCREEN, DISCONNECT SWITCH, FLANGED ALUMINUM WALL GRILLE, BACK DRAFT DAMPER

SUPPLY GRILLES SCHEDULE

DESIGNATION	MANUFACTURER (AS STANDARD)	MODEL No. (AS STANDARD)	MAX CFM	NECK SIZE	BLOW PATTERN	REMARKS
(A)	TITUS	300RLHD	3150	30x30	INDICATED ON DWG'S.	STANDARD WHITE FINISH PROVIDE OPPOSED BLADE DAMPER HEAVY DUTY STEEL CONSTRUCTION

NOTE: HARD DUCT ALL DIFFUSERS AND GRILLES. DO NOT USE FLEXIBLE CONNECTIONS. ALL SIDE PIECES SHALL HAVE A MINIMUM BORDER GAUGE OF 14. THE FRONT BLADES SHALL BE MADE OF 14 GAUGE STEEL.

RETURN AIR REGISTER SCHEDULE

DESIGNATION	MANUFACTURER (AS STANDARD)	MODEL No. (AS STANDARD)	MAX CFM	NECK SIZE	REMARKS
(1)	TITUS	355RLHD	3150	20x48	STANDARD WHITE FINISH PROVIDE OPPOSED BLADE DAMPER HEAVY DUTY STEEL CONSTRUCTION

NOTE: ALL SIDE PIECES SHALL HAVE A MINIMUM BORDER GAUGE OF 14. THE FRONT BLADES SHALL BE MADE OF 14 GAUGE STEEL.

COMMONWEALTH OF MASSACHUSETTS JAMES F. LETTICE JR. MECHANICAL No. 34300 REGISTERED PROFESSIONAL ENGINEER

SOULE GYM
BROOKLINE, MA

HVAC BASEMENT PART PLAN

RICHARD D. KIMBALL CO., INC.
CONSULTING ENGINEERS
580 MAIN STREET
READING, MA 01867
(617) 942-0130

DESIGNED BY: BEO
DRAWN BY: BEO
CHECKED BY: JFL
APPROVED BY: JFL
SCALE: AS NOTED

SOULE GYMNASIUM
652 HAMMOND STREET
BROOKLINE, MASSACHUSETTS

DWG NO M-2

R L C ARCHITECTS, INC.
P.O. BOX 237
HOPKINTON, MA 01748-0237

TYPICAL AIR HANDLING UNIT WATER COIL PIPING SCHEMATIC

- NO SCALE -

LOUVER CONNECTION DETAIL

- NO SCALE -

HVAC LEGEND

HWS	HOT WATER SUPPLY PIPING
HWR	HOT WATER RETURN PIPING
	AIR VENT
	COMBINATION BALANCING/ SHUT-OFF VALVE
	GATE VALVE
	HOSE END GATE VALVE WITH CAP
	STRAINER W/BLOWOFF VALVE, HOSE THREADED CONNECTION, CAP & CHAIN
	UNION
	RETURN AIR REGISTER
	SUPPLY GRILLE
	RETURN/EXHAUST AIR DUCT UP
	RETURN/EXHAUST AIR DUCT DN
	SUPPLY AIR DUCT UP
	SUPPLY AIR DUCT DN
	FLEXIBLE CONNECTION
VD	VOLUME DAMPER
VD	MOTOR OPERATED DAMPER
T	WALL MOUNTED THERMOSTAT
SD	SMOKE DETECTOR
	SUPPLY GRILLE DESIGNATION
	RETURN REGISTER DESIGNATION

ABBREVIATIONS

AHU	AIR HANDLING UNIT
CFM	CUBIC FEET PER MINUTE
EAT	ENTERING AIR TEMPERATURE
ESP	ENTERING STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
F	FAHRENHEIT
HP	HORSEPOWER
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
HZ	FREQUENCY (CYCLES PER SECOND)
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTUH
MD	MOTOR OPERATED DAMPER
MIN	MINIMUM
NO.	NUMBER
NTS	NOT TO SCALE
OA	OUTSIDE AIR
SD	SMOKE DETECTOR
TSP	TOTAL STATIC PRESSURE (IN W.G.)
TYP	TYPICAL
V	VOLT (ELECTRICAL)
VD	MANUAL VOLUME DAMPER
WG	WATER GAUGE
Ø	PHASE (ELECTRICAL)
#	SQUARE FEET

JAMES F. LISTON JR. MECHANICAL No. 34380 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

SOULE GYM BROOKLINE, MA	HVAC DETAILS, LEGEND AND ABBRV.(S)
DESIGNED BY: BEO DRAWN BY: BEO CHECKED BY: JFL APPROVED BY: JFL SCALE: AS NOTED	RICHARD D. KIMBALL CO., INC. CONSULTING ENGINEERS 580 MAIN STREET READING, MA 01867 (617) 942-0130

DWG NO H-3	SOULE GYMNASIUM 652 HAMMOND STREET BROOKLINE, MASSACHUSETTS	R L C ARCHITECTS, INC. P.O. BOX 257 HOPKINTON, MA 01748-0257

MARCH 26, 1982

CONTROL SYSTEM SPECIFICATION

SEQUENCE OF CONTROL:

BOILER AND PUMPS

OCCUPIED:

WHEN THE OUTSIDE AIR TEMPERATURE DROPS BELOW 50 DEGREES F, THE HOT WATER CIRCULATION PUMP AND THE BOILER SHALL START. FLOW SWITCH SHALL BE WIRED TO BOILER CIRCUIT TO PREVENT BOILER FIRING UNTIL FLOW IS SENSED. BOILER SHALL OPERATE TO MAINTAIN A SUPPLY WATER TEMPERATURE SHALL BE LINEARLY 10 DEGREES F AND BELOW OUTSIDE AIR TEMPERATURE. SUPPLY WATER TEMPERATURE. BOILER CONTROLS SHALL REDUCED TO 140 DEGREES F AT 40 DEGREES F AND ABOVE OUTSIDE AIR TEMPERATURE. BOILER IS ALLOWED TO OPERATE. BE WIRED SO THAT COMBUSTION AIR DAMPER MUST BE PROVEN OPEN BEFORE BOILER IS ALLOWED TO OPERATE.

UNOCCUPIED:

DURING THE UNOCCUPIED PERIOD, THE BOILER SHALL BE CYCLED AS REQUIRED TO MAINTAIN THE NIGHT SETBACK TEMPERATURE (55 DEGREES F-ADJ.) AS SENSED BY EITHER OF THE SPACE TEMPERATURE SENSORS.

AIR HANDLING UNITS

OCCUPIED:

AIR HANDLING UNITS SHALL RUN CONTINUOUSLY. THE OUTSIDE AIR DAMPERS SHALL BE OPEN TO THE MINIMUM POSITION (750 CFM) AND THE RETURN AIR DAMPERS SHALL BE CLOSED PROPORTIONALLY (3550 CFM). DISCHARGE AIR TEMPERATURE SENSOR SHALL MODULATE FACE AND BYPASS DAMPERS TO MAINTAIN DISCHARGE AIR SETPOINT (68 DEGREES F-ADJ.). SPACE TEMPERATURE SENSOR SHALL RESET DISCHARGE AIR TEMPERATURE UP/DOWN AS SPACE TEMPERATURE DROPS BELOW/RISES ABOVE SETPOINT. WHEN THE OUTSIDE AIR TEMPERATURE IS ABOVE 50 DEGREES F(ADJ.), THE FACE AND BYPASS DAMPERS ARE TO BE IN THE 100% BYPASS POSITION. THE OUTSIDE AIR INTAKE DAMPERS SHALL BE OPEN 100% (6300 CFM) AND THE RETURN AIR DAMPERS SHALL BE CLOSED.

UNOCCUPIED:

FAN SHALL BE OFF, OUTSIDE AIR DAMPERS SHALL BE CLOSED, RETURN AIR DAMPERS SHALL BE FULLY OPEN AND FACE AND BYPASS DAMPERS SHALL BE IN THE FULL FACE POSITION. UPON A DROP IN SPACE TEMPERATURE BELOW THE UNOCCUPIED SETTING OF THE SPACE TEMPERATURE SENSOR (55 DEGREES F-ADJ.), THE FAN SHALL BE CYCLED TO MAINTAIN THE SETPOINT.

SAFETIES:

WHENEVER THE DISCHARGE AIR TEMPERATURE DROPS BELOW 40 DEGREES F(ADJ.), A LOW LIMIT SAFETY THERMOSTAT LOCATED ON THE DOWNSTREAM SIDE OF THE HEATING COIL SHALL DE-ENERGIZE THE FAN, PUT THE FACE AND BYPASS DAMPERS IN THE 100% BYPASS POSITION, AND CLOSE THE OUTSIDE AIR DAMPERS. RESET TO BE AUTOMATIC. WHEN THE SMOKE DETECTOR SENSES SMOKE, THE FAN SHALL BE DE-ENERGIZED, THE FACE AND BYPASS DAMPERS SHALL BE PUT IN THE 100% BYPASS POSITION AND THE OUTSIDE AIR DAMPERS SHALL BE CLOSED. RESET TO BE MANUAL AND LOCATED AT SMOKE DETECTOR.

EXHAUST FAN

OCCUPIED:

EXHAUST FAN SHALL BE INTERLOCKED TO RUN WHEN EITHER OR BOTH AHU'S ARE RUNNING.

UNOCCUPIED:

EXHAUST FAN SHALL BE OFF AND SHALL NOT RUN WHEN AHU'S RUN TO MAINTAIN UNOCCUPIED SETPOINT.

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES.
2. ALL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA.
3. ALL HOT WATER PIPING AND DUCTS SHALL BE INSULATED IN ACCORDANCE WITH THE MASSACHUSETTS ENERGY CODE.
   - ** DUCT INSULATION SHALL BE AT LEAST 1-1/2 INCHES THICK, FOIL-KRAFT FLAME RESISTANT VAPOR BARRIER, 3/4 LB/CF WITH A MAXIMUM K-FACTOR OF 0.30 AT A 75° MEAN TEMPERATURE.
   - ** PROVIDE MOLDED FIBERGLASS PIPE INSULATION FOR HOT WATER PIPING WITH AN ALL SERVICE JACKET OF SCRIM REINFORCED FOIL BACKED BY KRAFT OR VINYL JACKET OF 0.02 PERMS VAPOR PERMEANCE. PROVIDE INSULATION WITH MAXIMUM HEAT TRANSFER COEFFICIENT OF 0.28 BTU/HR/SQ/FT/F. PROVIDE LOAD BEARING INSULATION AT ALL PIPE SUPPORTS LOCATIONS. PROVIDE PRE-MOLDED INSULATION (TO MATCH PIPE INSULATION) WITH PVC JACKET FOR VALVES AND FITTINGS. INSULATION TO BE 1 INCH THICK FOR PIPING TWO INCHES AND BELOW AND 1-1/2 INCHES THICK FOR PIPING TWO AND ONE HALF INCHES AND ABOVE.
   - ** ALL INSULATION SHALL HAVE A MAXIMUM FLAMESPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50.
4. ALL HYDRONIC PIPING HIGH POINTS SHALL HAVE 3/4 INCH MANUAL VENTS AND LOW POINTS SHALL HAVE 3/4 INCH DRAINS.
5. ALL PIPING AND VALVES SHALL BE CLEARLY LABELED AND TAGGED INDICATING DIRECTION OF FLOW AND NORMAL VALVE POSITION AS SPECIFIED.
6. TESTING, ADJUSTING AND BALANCING SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE ASHRAE HANDBOOK IN THE CHAPTER HEADED "TESTING, ADJUSTING AND BALANCING." SUBMIT FINAL AIR AND HYDRONIC SYSTEMS TEST DATA TO THE BUILDING OWNER ON APPLICABLE FORMS.
7. INTAKE LOUVERS SHALL BE EXTRUDED ALUMINUM CONSTRUCTION; 6" DEEP; MINIMUM 50% FREE AREA; STORM PROOF BLADES (CONSTRUCTION SPECIALTIES, INC. MODEL 6097)

COMMONWEALTH OF MASSACHUSETTS — JAMES F. LOTTICH, JR. — REGISTERED PROFESSIONAL ENGINEER

HVAC NOTES AND CONTROL SPECIFICATION

SOULE GYM
BROOKLINE, MA

DESIGNED BY: REO
DRAWN BY: REO
CHECKED BY: JFL
APPROVED BY: JFL

RICHARD D. KIMBALL CO., INC.
CONSULTING ENGINEERS
580 MAIN STREET
READING, MA 01867
(617) 942-0130

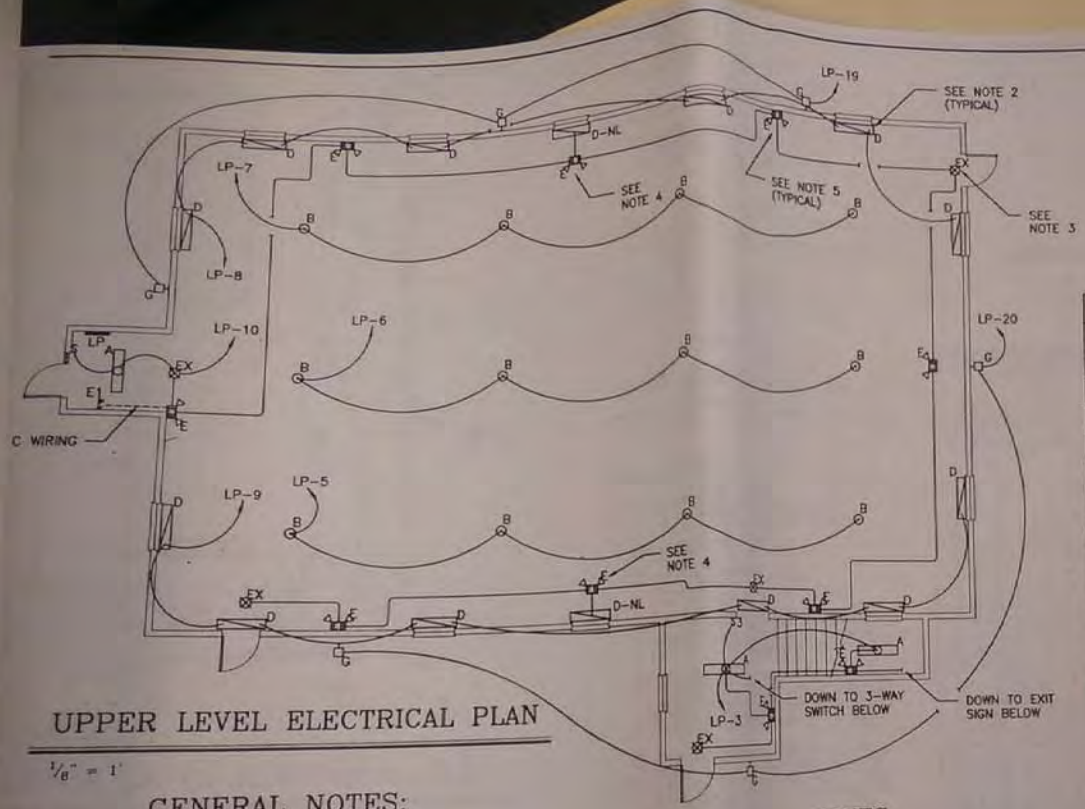
SCALE: AS NOTED

MARCH 26, 1997

R. L. C. ARCHITECTS, INC.
P.O. BOX 257
HOPKINTON, MA 01748-0257

DWG NO H-4

SOULE GYMNASIUM
62 HAMMOND STREET
BROOKLINE, MASSACHUSETTS



UPPER LEVEL ELECTRICAL PLAN

1/8" = 1'

ELECTRICAL LEGEND

○	INCANDESCENT OR HID CEILING LIGHT
□H	WALL PACK
	FLUORESCENT LIGHT
	FLUORESCENT LIGHT
⊠	EXIT SIGN
EB	EMERGENCY LIGHTING BATTERY UNIT
	REMOTE EMERGENCY LIGHT
⊖	DUPLEX RECEPTACLE
⊕	QUAD RECEPTACLE
S	SINGLE POLE SWITCH
S3	THREE WAY SWITCH
▼	TELEPHONE OUTLET
	MANUAL FIRE STATION
	FIRE HORN/LIGHT
(S)	SMOKE DETECTOR
(H)	HEAT DETECTOR
(S)D	DUCT MOUNTED SMOKE DETECTOR
FACP	FIRE ALARM CONTROL PANEL
□H	DISCONNECT SWITCH
▬	PANEL (LP)
AFF	ABOVE FINISHED FLOOR

GENERAL NOTES:

1. ELECTRICIAN SHALL CONNECT MECHANICAL CONTRACTOR SUPPLIED DUCT SMOKE DETECTOR.
2. WHERE FIRE ALARM SYSTEM COMPONENTS ARE SHOWN, THEY ARE INTENDED TO INDICATE THE TYPE OF PROTECTION OR ALARM INDICATION AND NOT THE REQUIRED NUMBER OF DEVICES.
3. ELECTRICIAN SHALL CONNECT ALL HARD-WIRED ELECTRICAL EQUIPMENT AND WIRE PER MANUFACTURER'S INSTRUCTIONS.
4. REFER TO ARCHITECTUAL REFLECTED CEILING PLAN FOR ACTUAL LOCATION OF FIXTURES.
5. FURNISH ALL ELECTRICAL DEVICES WITH WIRE GUARDS SUCH AS FOR LIGHT FIXTURES, EXIT SIGNS, EGRESS LIGHTS, ETC.

DRAWING NOTES:

1. FOR GENERAL NOTES & LEGEND REFER TO THIS DRAWING.
2. MOUNT LIGHT FIXTURE 15" ABOVE TOP OF WINDOW
3. MOUNT EXIT SIGN 6" ABOVE TOP OF DOOR
4. MOUNT EMERGENCY LIGHT ABOVE TOP OF WINDOW & BELOW LIGHT FIXTURE "D"
5. MOUNT EMERGENCY LIGHT FIXTURES AT THE SAME HEIGHT AS THE TWO IN NOTE 4

MARCH 26, 1997

ISSUED SRS

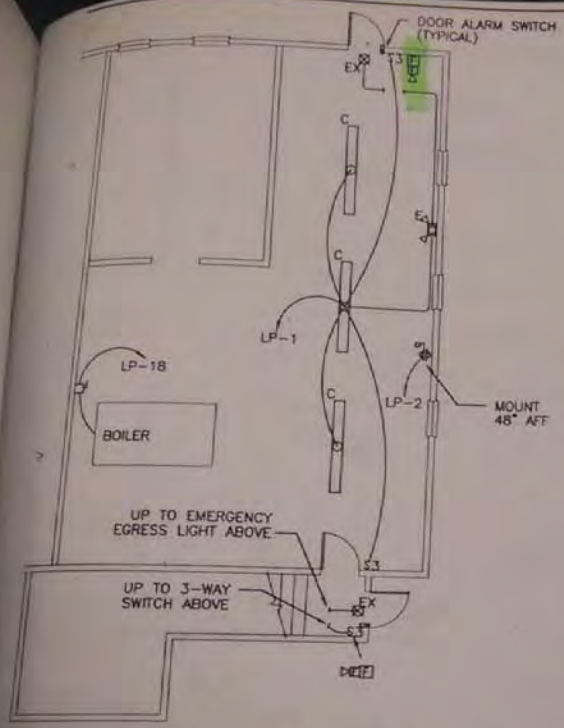
R L C ARCHITECTS, INC.
P.O. BOX 257
WASHINGTON MA 01748-0257

ELECTRICAL LIGHTING PLAN

SCALE AS NOTED

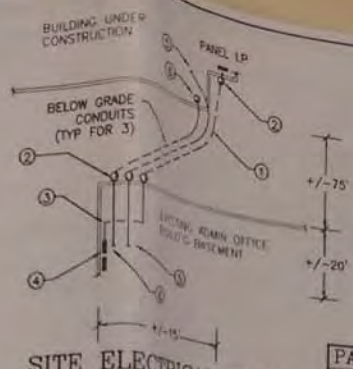
SOULE GYMNASIUM
652 HANCOCK ST
FRAMINGHAM MASSACHUSETTS

DWG NO E1-1



LOWER LEVEL ELECTRICAL PLAN

SCALE: 1/8" = 1'



SITE ELECTRICAL PLAN

NOT TO SCALE

SITE NOTES:

1. BELOW GRADE CONDUIT 2½"PVC, (4) #3/0 AWG & #6 AWG GROUND
2. WEATHERPROOF JUNCTION BOX
3. EXPOSED CONDUIT 2½"EMT, (4) #3/0 AWG & #6 AWG GROUND
4. EXISTING PANEL: FURNISH & INSTALL NEW 3-POLE, 200A CIRCUIT BREAKER, MATCH EXISTING PANEL MANUFACTURER
5. ¾"PVC, EMPTY CONDUIT WITH PULL LINE, TO EXISTING TELEPHONE SERVICE ENTRANCE. LOCATE OTHER END AS DIRECTED BY OWNER (EXPOSED CONDUIT IS ¾"EMT)
6. 1"PVC CONDUIT WITH INTRUSION ALARM CABLES TO, INTRUSION ALARM AND FIRE ALARM SERVICE ENTRANCE, LOCATE OTHER END IN A JUNCTION BOX AS DIRECTED BY ALARM COMPANY

DRAWING NOTES:

FOR GENERAL NOTES & LEGEND REFER TO DRAWING NO. E-1

PANEL SCHEDULE "LP"

PANEL RATING: 200 A — MOUNTING: RECESSED
VOLTAGE: 208/120 V — MAIN BREAKER RATING: 200 A
NUMBER OF PHASES: 3 — GROUND STRAP: REQUIRED
SERVICE ENTRANCE RATED — MANUFACTURER: SQUARE D

NO.	AMPS	POLES	LOAD	DESCRIPTION	REMARKS
1	20	1	480	BASEMENT LIGHTING	
2	20	1	360	BASEMENT RECEPTACLE	
3	20	1	500	SIDE HALL LIGHTING	
4	20	1	360	SIDE HALL RECEPTALCES	
5	20	1	1200	MAIN HALL LIGHTING CKT #1	
6	20	1	1200	MAIN HALL LIGHTING CKT #2	
7	20	1	1200	MAIN HALL LIGHTING CKT #3	
8	20	1	600	MAIN HALL LIGHTING CKT #4	
9	20	1	600	MAIN HALL LIGHTING CKT #5	
10	20	1	1200	EMERGENCY LIGHTING	
11	20	1	1440	MAIN HALL RECEPTACLES	
12	20	1	500	FIRE ALARM SYSTEM	
13	20	1	1440	SCOREBOARD POWER	
14	20	1	300	EXHAUST FAN (EF-1) POWER	
15	20	3	5000	FEED TO AHU-1	
16	20	3	5000	FEED TO AHU-2	
17	20	1	500	ATTIC LIGHT & RECEPT	
18	20	1	1440	FEED TO BOILER	
19	20	1	1440	EXTERIOR LIGHT CKT #1	VIA TIMECLOCK
20	20	1	1440	EXTERIOR LIGHT CKT #2	VIA TIMECLOCK
21	20	1	500	TIMECLOCK CONTROL POWER	
22	20	1	1440	SPARE	
23	20	1	1440	SPARE	
24	20	1	1440	SPARE	
25	20	1	1440	SPARE	
26	20	1	1440	SPARE	

TOTAL LOAD: 34640 — LOAD CURRENT: 97

NOTE: THIS IS A 30 CIRCUIT PANEL

LIGHT FIXTURE SCHEDULE

ITEM	DESCRIPTION	MANUFACTURER	CATALOG NO.	VOLTAGE	NO. OF LAMPS/ TYPE/WATTAGE	MOUNTING	REMARKS
A	FLORESCENT	HUBBELL	N448019-120	120V	2 / F32T83500 / 32W	CEILING	
B	HID	HUBBELL	RVL-250H9-A02	120V	1 / MH / 250W	CEILING	
C	FLORESCENT	HUBBELL	SN82R-B1-120	120V	2 / F32T83500 / 32W	CEILING	WIRE GUARD
D	WALL MTD FLOR	HUBBELL	N448019-120	120V	2 / F32T83500 / 32W	WALL	
F	DRUM LIGHT	GE	5740-7	120V	1 / PAR 19 / 75W	CEILING	WIRE GUARD
E	EM. EGRESS	HUBBELL	HE6-12-2-R61-WG-L	120V	N/A	WALL	WIRE GUARD
EX	EXIT SIGN	HUBBELL	LED1-EM-R-B-W-WGW	120V	LED	WALL	
	WALL PACK	HUBBELL	PRP-250H-118	120V	1 / MH / 250W	WALL	

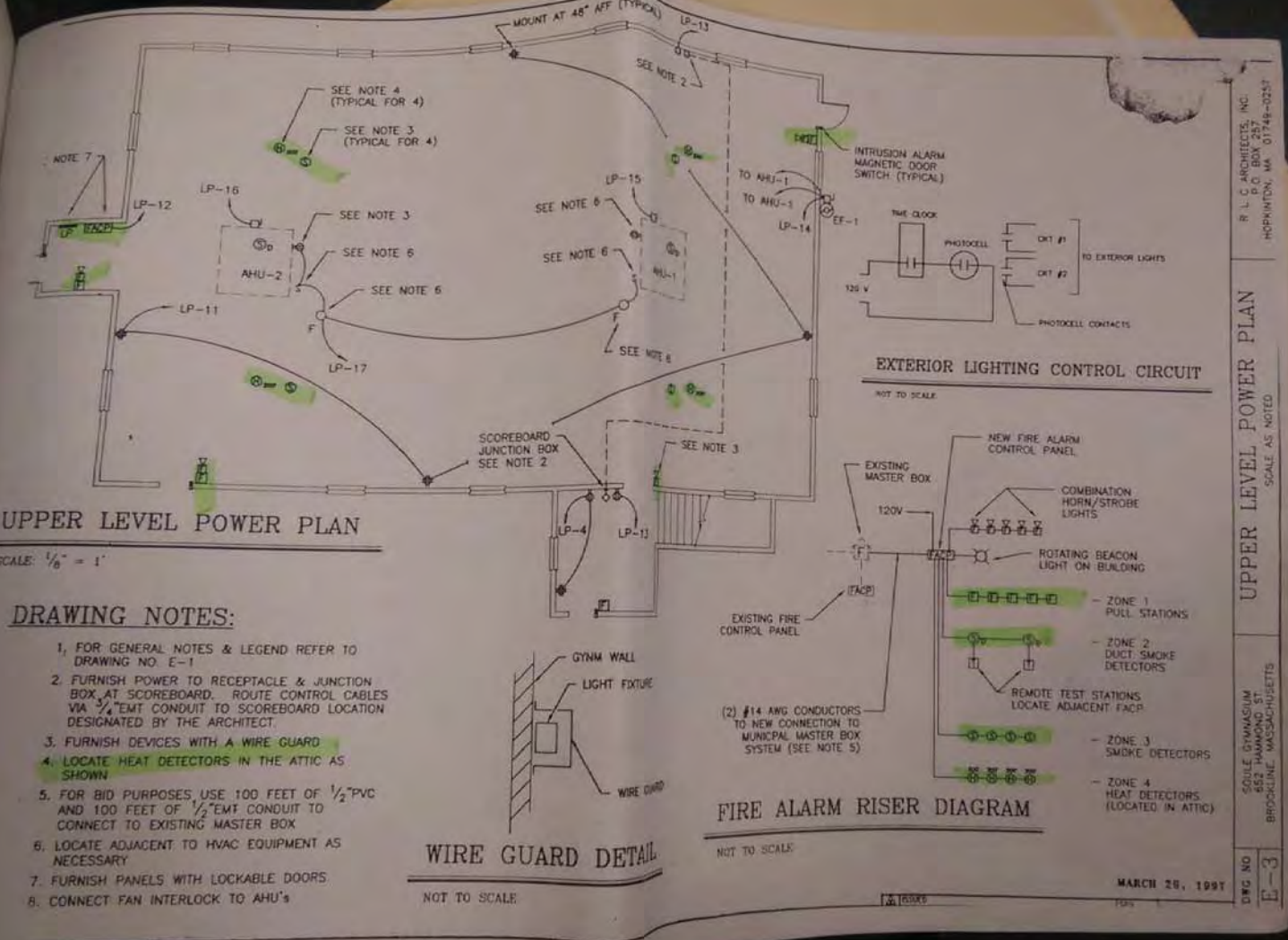
MARCH 26, 1997

R L C ARCHITECTS, INC.
P.O. BOX 257
HOPKINTON, MA 01748-0257

LOWER LEVEL ELECTRICAL PLAN
SCALE AS NOTED

SOULE GYMNASIUM
452 HAMMOND ST.
BROOKLINE, MASSACHUSETTS

DWG NO. E-2



UPPER LEVEL POWER PLAN

SCALE: 1/8" = 1'

DRAWING NOTES:

1. FOR GENERAL NOTES & LEGEND REFER TO DRAWING NO. E-1
2. FURNISH POWER TO RECEPTACLE & JUNCTION BOX AT SCOREBOARD. ROUTE CONTROL CABLES VIA 3/4"EMT CONDUIT TO SCOREBOARD LOCATION DESIGNATED BY THE ARCHITECT.
3. FURNISH DEVICES WITH A WIRE GUARD
4. LOCATE HEAT DETECTORS IN THE ATTIC AS SHOWN
5. FOR BID PURPOSES, USE 100 FEET OF 1/2"PVC AND 100 FEET OF 1/2"EMT CONDUIT TO CONNECT TO EXISTING MASTER BOX
6. LOCATE ADJACENT TO HVAC EQUIPMENT AS NECESSARY
7. FURNISH PANELS WITH LOCKABLE DOORS
8. CONNECT FAN INTERLOCK TO AHU's

WIRE GUARD DETAIL

NOT TO SCALE

EXTERIOR LIGHTING CONTROL CIRCUIT

NOT TO SCALE

FIRE ALARM RISER DIAGRAM

NOT TO SCALE

R. L. C. ARCHITECTS, INC.
P.O. BOX 257
HOPKINTON, MA 01748-0257

SOULE GYMNASIUM
652 HAMMOND ST.
BROOKLINE, MASSACHUSETTS

UPPER LEVEL POWER PLAN
SCALE AS NOTED

DWG NO. E-3

MARCH 26, 1997

Underground Storage Tank (UST) Closure and
Limited Removal Action (LRA)
Town of Brookline Soule Recreation Center
652 Hammond Street
Brookline, Massachusetts
VERTEX Project No. 0197

VERTEX

VERTEX

Engineering Services Inc.

Underground Storage Tank (UST) Closure and
Limited Removal Action (LRA)
Town of Brookline Soule Recreation Center
652 Hammond Street
Brookline, Massachusetts
VERTEX Project No. 0197

wealth of Massachusetts
Fire Services
Marshal

Underground Storage Tank (UST) Closure and Limited Removal Action (LRA)
Town of Brookline Soule Recreation Center
652 Hammond Street
Brookline, Massachusetts

1.0 INTRODUCTION

On June 28, 1996, VERTEX Engineering Services, Inc. (VERTEX) was contracted to oversee the excavation and removal of an underground storage tank (UST) from property known as the Soule Recreation Center, located at 652 Hammond Street, Brookline, Massachusetts (the "site"). Please see Figure 1 - Site Locus Map.

Petroleum hydrocarbon impacted soil was encountered during storage tank closure activities conducted on June 27 and 28, 1996. The storage tank was encountered in the basement level of a former maintenance shed during site work associated with a new recreation center and playground for the site. Apparently, the maintenance shed was raised while the foundation was abandoned in place. The partially filled oil tank was backfilled in the basement following the demolition of the maintenance shed. Pursuant with 527 CMR 9.00, if 10 percent or more of a storage tank is touching the ground surface, the storage tank shall be considered a UST.

The UST was found on its side during the June 1996 closure activities. Most of the contents of the UST were pumped; however, oil was also observed on the soil immediately surrounding the tank and on the underlying concrete surface, formerly the basement floor.

Figure 2 is a Site Schematic which depicts the location of the former UST and other pertinent site features. Appendix A is Photographic Documentation of the closure activities.

2.0 RESPONSE ACTIONS

All soil was removed from the basement floor and from within each of the four remaining walls and stockpiled on site for off-site disposal. Following the excavation of the soil from the basement, all walls and base of the foundation were removed in order to assess the underlying soil conditions. Soil samples were placed into 250 mL driller jars for field screening according to the standard "jar headspace" protocol. Field screening was conducted utilizing an HNu model 10.2 eV photo-ionization detector (PID) calibrated "as benzene" to an isobutylene standard. Approximately 62 cubic yards of No. 2 fuel oil contaminated soil was stockpiled onto 6-mil polyethylene sheeting for off-site disposal.

Five grab samples (S-1 through S-5) were collected from beneath the foundation and submitted to Mitkem Corporation, Warwick, Rhode Island for total petroleum hydrocarbon (TPH) analysis according to EPA Method 8100 Modified. One composite soil sample was collected from the stockpile for disposal characterization in accordance with DEP's Interim Remediation Waste Management Policy for Petroleum Contaminated Soils #WSC-94-400. None of the grab samples exhibited TPH concentrations exceeding the laboratory reporting limits; therefore, further soil excavation was not warranted. Copies of the laboratory analytical data reports are included with this report as Appendix B.

3.0 PETROLEUM IMPACTED SOIL MANAGEMENT

On July 31, 1996, 93.03 tons of petroleum impacted soil was loaded and hauled from the site for off-site asphalt batching at Bardon Trimount's facility located in Stoughton, Massachusetts under DEP Bill of Lading (BWSC-012). Excavation of soil from the vicinity of the former UST was performed as part of a Limited Removal Action (LRA) in accordance with 310 CMR 40.0318. A copy of the Bill of Lading Package has been included as Appendix C.

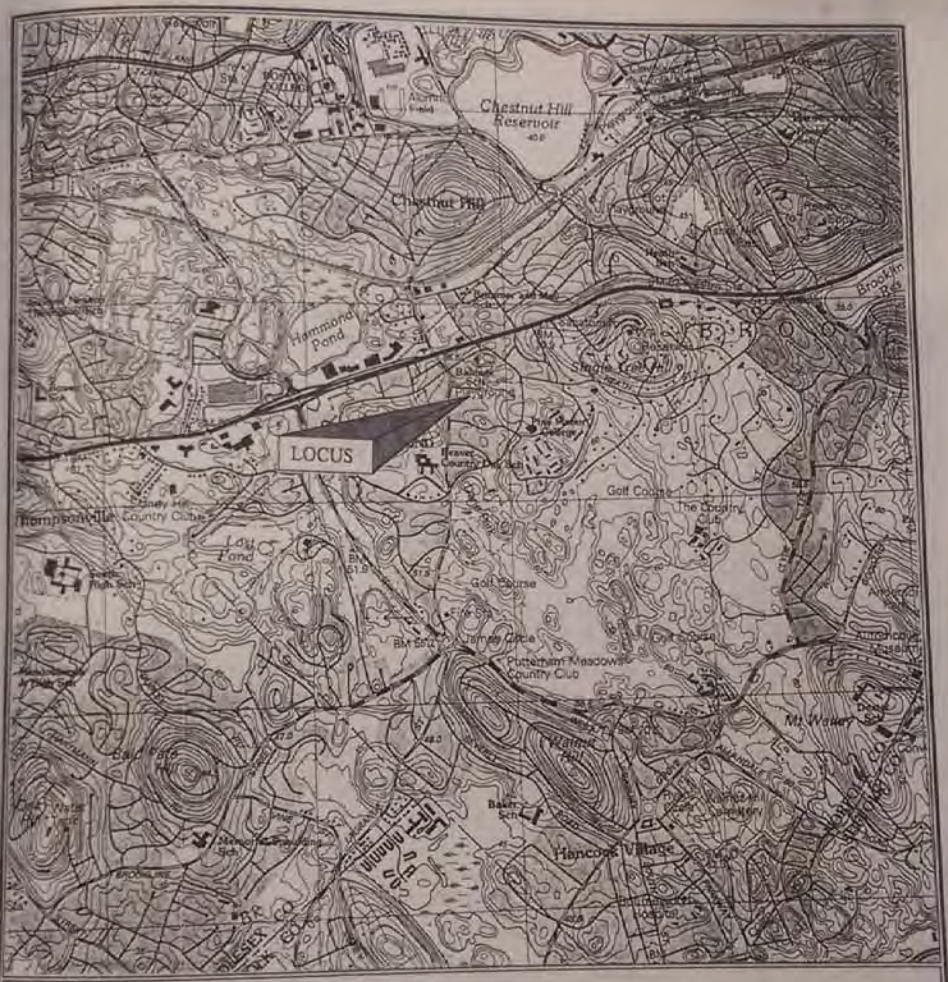
4.0 CONCLUSION AND RECOMMENDATIONS

The presumed background concentrations for Oil and Hazardous Materials (OHM) encountered in the soil at the site are not non-detectable concentrations (ND). Approximately 62 cubic yards of petroleum impacted soil was excavated and disposed of off-site in July 1996.

Post excavation soil samples collected from the vicinity of the former No. 2 fuel oil UST were analyzed for TPH according to EPA Method 8100 Modified. TPH concentrations did not exceed the laboratories reporting limits. Therefore, VERTEX does not recommend additional remedial work at the site.

FIGURES

...nwealth of Massachusetts
... Fire Services
... Marshal



USGS Topographic Map

Boston South, Massachusetts Quandrangle (1987)

Contour Interval: 3 Meters

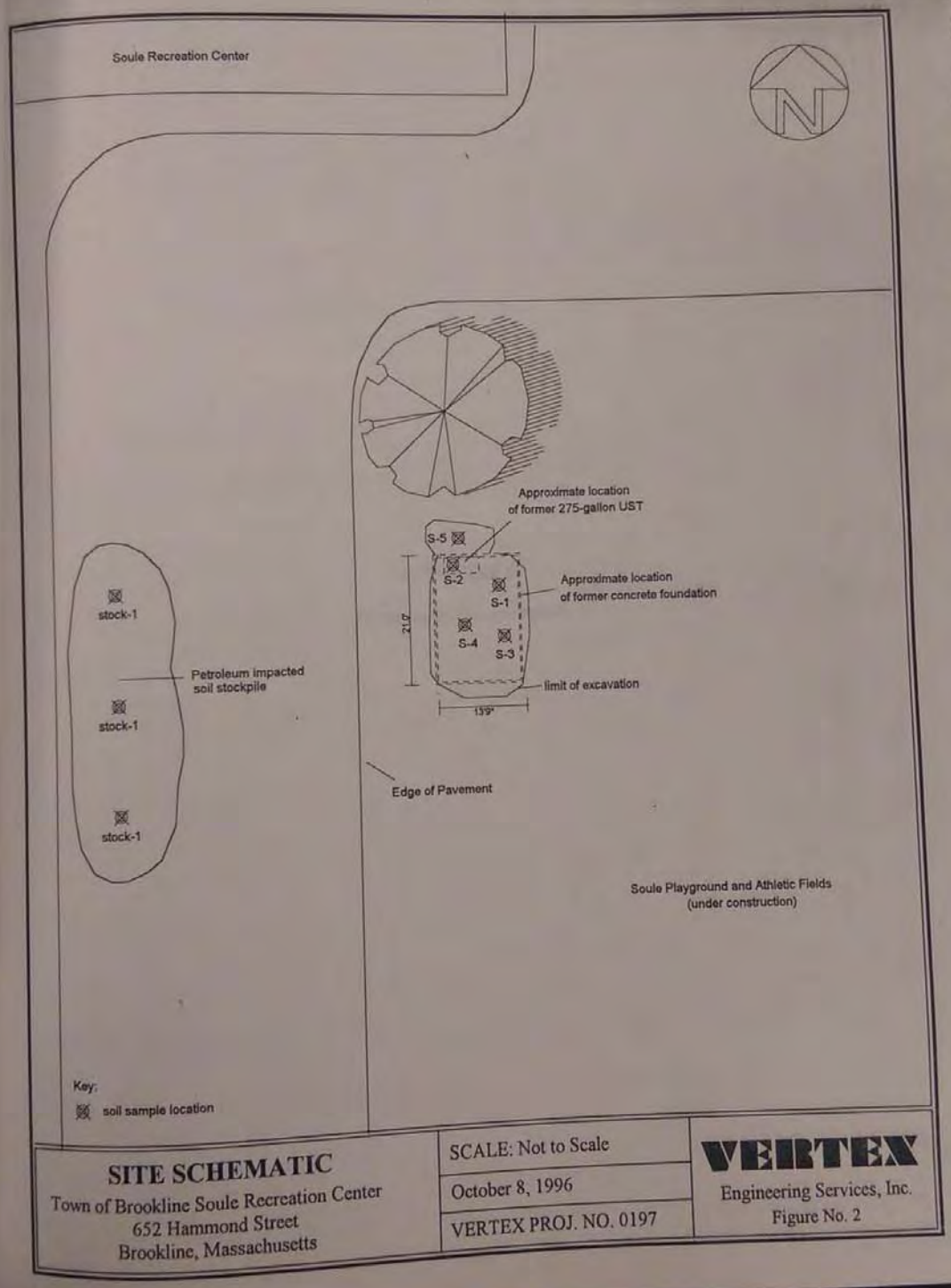
1/2 mi. **Graphic Scale** 1 mi.

0' 2000' 4000' 6000' 8000'

N

SITE LOCUS MAP Town of Brookline Soule Recreation Center 652 Hammond Street Brookline, Massachusetts	SCALE: AS SHOWN October 8, 1996 VERTEX PROJ. NO. 0197	**VERTEX** Engineering Services, Inc. FIGURE NO. 1

...nwealth of Massachusetts
...of Fire Services
...Marshal



SITE SCHEMATIC Town of Brookline Soule Recreation Center 652 Hammond Street Brookline, Massachusetts	SCALE: Not to Scale October 8, 1996 VERTEX PROJ. NO. 0197	**VERTEX** Engineering Services, Inc. Figure No. 2

Commonwealth of Massachusetts
Department of Fire Services
Office of the State Fire Marshal

APPENDIX A

Photographic Documentation

A-1

Photograph depict the 275-gallon No. 2 fuel oil storage tank upon removal from the basement.

A-5

Photograph depicts the No. 2 impacted soil located in the immediate vicinity of the UST.

PHOTOGRAPHIC DOCUMENTATION
Town of Brookline Soule Recreation Center
652 Hammond Street
Brookline, Massachusetts

VERTEX PROJ. NO. 0197

October 8, 1996

VERTEX
Engineering Sevices, Inc.

...mealth of Massachusetts
...ire Services
...Marshal

A-3

Photograph depict the basement floor (post excavation), prior to demolition of the walls.

A-4

Photograph depicts soil exploration activities along the exterior of the eastern basement wall.

PHOTOGRAPHIC DOCUMENTATION Town of Brookline Soule Recreation Center 652 Hammond Street Brookline, Massachusetts	VERTEX PROJ. NO. 0197 October 8, 1996	**VERTEX** Engineering Sevices, Inc.

APPENDIX B

Laboratory Analytical Results

...lth of Massachusetts
...rvices ...hal

METKEM CORPORATION

July 12, 1996

Vertex Engineering Services
400 Libbey Parkway
Weymouth, MA 02189

Attn: Mr. Jim O' Brien

Dear Mr. O' Brien

RE: Project # 197
Lab Project # C0616

Enclosed is the Data Report of the analyses required for the samples associated with the Project. If you have any questions regarding this report, please contact either Kin Chiu or myself.

We appreciate your business.

Sincerely,

Reinier A. Courant
QA/QC Director

175 Metro Center Boulevard • Warwick, Rhode Island 02886-1755 • (401) 732-3400 • Fax (401) 732-3499

...ealth of Massachusetts
...services
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...nd St.

MITKEM CORPORATION

Client: Vertex Engineering Services

Client Project: 197 (Brookline)

Lab Project No.: C0616

Date Samples Received: June 28, 1996

Project Narrative

Six (6) soil samples were received from Vertex Engineering Services on June 28, 1996 and analyzed for the parameters specified in the Chain of Custody Form. For reference, a copy of the Mitkem Sample Log-in Sheet is included for cross-referencing the Client sample ID and laboratory sample ID.

No unusual observation was made for the analysis.

The enclosed data package has been reviewed and is authorized for release as evidenced by the signature below.

Reinier A. Courant
QA/QC Director

Data Qualifiers:

J	Detected below the Reporting Limit
B	The analyte was detected in the associated Method Blank
D	The analyte concentration is obtained from a diluted analysis
E	The analyte concentration exceeded the calibration range

Massachusetts

MITKEM CORPORATION

Analysis Report: Total Petroleum Hydrocarbons

Client: Vertex Engineering Services
Analysis: Method 8100
Matrix: Soil
Concentration in: mg/kg, dry weight basis

Lab ID	Client ID	Result	Reporting Limit	% Solid	p-Terphenyl Surrogate Recovery %	Analysis Date
C0616-01	S-1	ND	18	91	81	7/2/96
C0616-02	S-2	ND	18	91	81	7/2/96
C0616-03	S-3	ND	18	91	86	7/2/96
C0616-04	S-4	ND	18	92	87	7/2/96
C0616-05	S-5	ND	19	90	85	7/2/96
C0616-06	Stock-1	520	19	87	56	7/2/96
QA/QC						
Method Blank F0701-B1		ND	17		74	7/2/96
Lab Control Sample (% Recovery) F0701-LCS1		60			91	7/2/96

ND = Not detected

The samples were quantitated using diesel as standard.

TPHGC-S

Massachusetts

MITKEM CORPORATION

Analysis Report: Wet Chemistry Parameters

Client: Vertex Engineering Services
Client ID: Stock-1
Lab ID: C0616-06

Matrix: Soil

Analyte	Results	Reporting Limit	Units	Analysis Method	Analysis Date
Cyanide, reactive	ND	0.5	mg/kg	SW846 7.3.3.2	7/6/96
Flashpoint	No Flash	*	degF	SW846 1010	7/1/96
pH	7.8		S.U.	SM 4500-H B	7/3/96
Sulfides, reactive	ND	1	mg/kg	SW846 7.3.4.2	7/6/96

ND = Not detected

* Up to 200 deg F

WET CHEM_6.C0616

MITKEM CORPORATION

Analysis Report: Wet Chemistry Parameters

Client: Vertex Engineering Services
Client ID:
Lab ID: Method Blank

Matrix: Soil

Analyte	Results	Reporting Limit	Units	Analysis Method	Analysis Date
Cyanide, reactive	ND	0.5	mg/kg	SW846 7.3.3.2	7/6/96
Sulfides, reactive	ND	1	mg/kg	SW846 7.3.4.2	7/6/96

ND = Not detected

WET CHEM_MB.C0616

MITKEM CORPORATION

Analysis Report: Total Metals

Client: Vertex Engineering Services
Client ID: Stock-1
Lab ID: C0616-06
Analysis Method: 7471 (Mercury)
6010 (Others)

Matrix: Soil, 87% solid
Concentration in: mg/kg, dry weight basis
Analysis Date: 7/5/96

Analyte	Results	Reporting Limits
Arsenic	16	1
Cadmium	1.3	0.1
Chromium	17	1
Lead	340	0.5
Mercury	0.3	0.3

QC Batch: 0703 PBS

MET_6.C0616

MITKEM CORPORATION

Analysis Report: Total Metals

Client: Vertex Engineering Services
Client ID:
Lab ID: Prep Blank, 0703 PBS
Analysis Method: 7471 (Mercury)
6010 (Others)

Matrix: Soil
Concentration in: mg/kg
Analysis Date: 7/5/96

Analyte	Results	Reporting Limits
Arsenic	ND	1
Cadmium	ND	0.1
Chromium	ND	1
Lead	ND	0.5
Mercury	ND	0.3

ND = Not detected

QC Batch: 0703 PBS

MET_PB.C0616

MITKEM CORPORATION

Analysis Report: Total Metals

Client: Vertex Engineering Services
Client ID:
Lab ID: Lab Control Sample, 0703 LCSS
Analysis Method: 7471 (Mercury)
6010 (Others)

Matrix: Soil
Analysis Date: 7/5/96

Analyte	% Recovery
Arsenic	151
Cadmium	139
Chromium	126
Lead	139
Mercury	96

QC Batch: 0703 PBS

MET_LCS.C0616

MITKEM CORPORATION

Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Vertex Engineering Services
Client ID: Stock-1
Lab ID: C0616-06
Analysis: Method 8080

Analysis Date: 7/3/96
Matrix: Soil, 87% solids
Concentration in: ug/kg, dry weight basis
Dilution: 1

Analyte	Results	Reporting Limits
Aroclor-1016	ND	38
Aroclor-1221	ND	76
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	ND	38
Aroclor-1260	ND	38

Surrogate Recovery:	
2,4,5,6-Tetrachloro-m-xylene	62%
Decachlorobiphenyl	130%

ND=Not Detected

QC Batch: P0703-B1

C0616-06

MITKEM CORPORATION

Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Vertex Engineering Services
Client ID:
Lab ID: Method Blank, P0703-B1
Analysis: Method 8080

Analysis Date: 7/3/96
Matrix: Soil
Concentration in: ug/kg
Dilution: 1

Analyte	Results	Reporting Limits
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:	
2,4,5,6-Tetrachloro-m-xylene	72%
Decachlorobiphenyl	70%

ND=Not Detected

QC Batch: P0703-B1

C0616-MB

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...services ...hal

MITKEM CORPORATION

Analysis Report: Volatile Organic Compounds

Client: Vertex Engineering Services
Client ID: Stock-1
Lab ID: C0616-06
Analysis: Method 8260

Analysis Date: 7/2/96
Matrix: Soil, 89% solids
Concentration in: ug/kg, dry weight basis
Dilution: 1

Analyte	Results	Reporting Limits
Dichlorodifluoromethane	ND	6
Chloromethane	ND	6
Vinyl chloride	ND	6
Bromomethane	ND	6
Chloroethane	ND	6
Trichlorofluoromethane	ND	6
1,1-Dichloroethene	ND	6
Carbon disulfide	ND	6
Iodomethane	ND	6
Acetone	ND	6
Methylene chloride	9 B	6
trans-1,2-Dichloroethene	ND	6
1,1-Dichloroethane	ND	6
Vinyl acetate	ND	6
2,2-Dichloropropane	ND	6
cis-1,2-Dichloroethene	ND	6
Methyl ethyl ketone	ND	6
Bromochloromethane	ND	6
Chloroform	ND	6
1,1,1-Trichloroethane	ND	6
Carbon tetrachloride	ND	6
1,1-Dichloropropene	ND	6
Benzene	ND	6
1,2-Dichloroethane	ND	6
Trichloroethene	ND	6
1,2-Dichloropropane	ND	6
Dibromomethane	ND	6
Bromodichloromethane	ND	6
2-Chloroethyl vinyl ether	ND	6
cis-1,3-Dichloropropene	ND	6
4-Methyl-2-pentanone	4 J	6
Toluene		

C0616-06

MITKEM CORPORATION

Client ID: Stock-1

Lab ID: C0616-06

Analyte	Results	Reporting Limits
trans-1,3-Dichloropropene	ND	6
1,1,2-Trichloroethane	ND	6
Tetrachloroethene	ND	6
1,3-Dichloropropane	ND	6
2-Hexanone	ND	6
Dibromochloromethane	ND	6
1,2-Dibromoethane (EDB)	ND	6
Chlorobenzene	ND	6
1,1,1,2-Tetrachloroethane	ND	6
Ethylbenzene	8	6
Xylenes, total	48	6
Styrene	ND	6
Bromoform	ND	6
Isopropylbenzene	4 J	6
Bromobenzene	ND	6
1,1,2,2-Tetrachloroethane	ND	6
1,2,3-Trichloropropane	ND	6
n-Propylbenzene	10	6
2-Chlorotoluene	ND	6
4-Chlorotoluene	ND	6
1,3,5-Trimethylbenzene	45	6
tert-Butylbenzene	ND	6
1,2,4-Trimethylbenzene	96	6
sec-Butylbenzene	5 J	6
1,3-Dichlorobenzene	ND	6
4-Isopropyltoluene	8	6
1,4-Dichlorobenzene	ND	6
1,2-Dichlorobenzene	ND	6
n-Butylbenzene	28	6
1,2-Dibromo-3-chloropropane	ND	6
1,2,4-Trichlorobenzene	ND	6
Hexachlorobutadiene	ND	6
1,2,3-Trichlorobenzene	ND	6
MTBE		

QC Batch: V2B0702A

Surrogate Recovery:	
1,2-Dichloroethane-d4	102%
Toluene-d8	102%
Bromofluorobenzene	95%

ND = Not detected

C0616-

MITKEM CORPORATION

Analysis Report: Volatile Organic Compounds

Client: Vertex Engineering Services
Client ID:
Lab ID: Method Blank, V2B0702A
Analysis: Method 8260

Analysis Date: 7/2/96
Matrix: Soil
Concentration in: ug/kg
Dilution: 1

Analyte	Results	Reporting Limits
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
Carbon disulfide	ND	5
Iodomethane	ND	5
Acetone	ND	5
Methylene chloride	14	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Vinyl acetate	ND	5
2,2-Dichloropropane	ND	5
cis-1,2-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Bromochloromethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
1,1-Dichloropropene	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Dibromomethane	ND	5
Bromodichloromethane	ND	5
2-Chloroethyl vinyl ether	ND	5
cis-1,3-Dichloropropene	ND	5
4-Methyl-2-pentanone	ND	5
Toluene	ND	

Massachusetts

MITKEM CORPORATION

Client ID:

Lab ID: Method Blank, V2B0702A

Analyte	Results	Reporting Limits
trans-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,3-Dichloropropane	ND	5
2-Hexanone	ND	5
Dibromochloromethane	ND	5
1,2-Dibromoethane (EDB)	ND	5
Chlorobenzene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Ethylbenzene	ND	5
Xylenes, total	ND	5
Styrene	ND	5
Bromoform	ND	5
Isopropylbenzene	ND	5
Bromobenzene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,2,3-Trichloropropane	ND	5
n-Propylbenzene	ND	5
2-Chlorotoluene	ND	5
4-Chlorotoluene	ND	5
1,3,5-Trimethylbenzene	ND	5
tert-Butylbenzene	ND	5
1,2,4-Trimethylbenzene	ND	5
sec-Butylbenzene	ND	5
1,3-Dichlorobenzene	ND	5
4-Isopropyltoluene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5
n-Butylbenzene	ND	5
1,2-Dibromo-3-chloropropane	ND	5
1,2,4-Trichlorobenzene	ND	5
Hexachlorobutadiene	ND	5
1,2,3-Trichlorobenzene	ND	
MTBE		

QC Batch: V2B070

Surrogate Recovery:	
1,2-Dichloroethane-d4	103%
Toluene-d8	103%
Bromofluorobenzene	99%

ND = Not detected

MITKEM CORPORATION

175 Metro Center Boulevard • Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499
1232 East Broadway Road • Suite 210 • Tempe, Arizona 85282
(602) 303-9535 • Fax (602) 921-2883

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

INVOICE TO		REPORT TO		LAB REFERENCE #:
COMPANY Vertex Eng. Services.	PHONE 617-335-6341	COMPANY Same	PHONE —	
NAME James B. O'Brien	FAX 617-335-3534	NAME	FAX —	TURNAROUND TIME: ASAP.
ADDRESS 400 Libbey Parkway		ADDRESS		
CITY/ST/ZIP Weymouth MA 02189		CITY/ST/ZIP		

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
Brookline	197	197

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	TPH 8100 MOD	VOCs 8260	FLASH	PH	REACTIVITY	PCBs	As	Cd	Cr	Hg	Pb	COMMENTS
S-1	6-28 / 8:30		X		X			1	X											
S-2	6-28 / 8:30		X		X			1	X											
S-3	6-28 / 8:30		X		X			1	X											
S-4	6-28 / 8:30		X		X			1	X											
S-5	6-28 / 8:30		X		X			1	X											
STOCK-1	6-28 / 10:00		X		X			6	X	X	X	X	X	X	X	X	X	X	X	
	/																			
	/																			
	/																			
	/																			
	/																			
	/																			

SF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
1st	[signature]	6/28 / 2:00	[signature]	6/28 / 2:00
nd		/		/
rd		/		/

ADDITIONAL REMARKS:

COOLER TEMP:

WHITE: LABORATORY COPY YELLOW: REPORT COPY PINK: CLIENT'S COPY

Last Page of Data Report

Commonwealth of Massachusetts
Fire Services
Marshal

MITKEM CORPORATION

August 1, 1996

Vertex Engineering Corporation
400 Libbey Parkway
Weymouth, MA 02189

Attn: Mr. Jim O'Brien

RE: Project: 197
Lab Project # C0712

Dear Mr. O' Brien:

Enclosed is the Data Report of the analyses required for the sample associated with the Project. If you have any questions regarding this report please contact either Kin Chiu or myself.

We appreciate your business.

Sincerely,

Reinier A. Courant
QA/QC Director

175 Metro Center Boulevard • Warwick, Rhode Island 02886-1755 • (401) 732-3400 Fax (401) 732-3499
1232 East Broadway Road, Suite 210 • Tempe, Arizona • (602) 303-9535 • Fax (602) 921-2883
email: mitkem19@mail.idt.net

Massachusetts

MITKEM CORPORATION

Client: Vertex Engineering Services

Client Project: 0197

Lab Project No.: C0712

Date Samples Received: June 28, 1996

Project Narrative

Per client's request on July 25, 1996, additional TCLP analysis for lead was performed for one (1) soil sample that was received from Vertex Engineering Services on June 28, 1996. For reference, a copy of the Mitkem Sample Log-in Sheet is included for cross-referencing the Client sample ID and laboratory sample ID.

No unusual observation was made for the analysis.

The enclosed data package has been reviewed and is authorized for release as evidenced by the signature below.

Reinier A. Courant
QA/QC Director

Commonwealth of Massachusetts
...tment of Fire Services
...State Fire Marshal
... MA 01775
...MIT

6/24/02 19

MITKEM CORPORATION

Analysis Report: TCLP Lead

Client: Vertex Engineering Services
Analysis Method: 6010A

Matrix: TCLP Leachate
Concentration in: mg/L
Analysis Date: 7/29/96

Lab ID	Client ID	Result
C0712-01	Stock-1	1.7
Reporting Limits		0.005

QA/QC

TCLP Blank	
0726FL1	ND

ND = Not detected

Last Page of Data Report

APPENDIX C

Bill of Lading Package

Commonwealth of Massachusetts
Department of Fire Services
State Fire Marshal
Stow, MA 01775
PERMIT
Date: 6/24/02 19
SAFE NUMBER

Massachusetts Department of Environmental Protection BWSC-012A
Bureau of Waste Site Cleanup

DEP

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number: N/A

A. LOCATION OF SITE OR DISPOSAL SITE WHERE REMEDIATION WASTE WAS GENERATED:

Release Name (optional): Town of Brookline Soule Recreation Center
Street: 652 Hammond Street Location Aid:
City/Town: Brookline Zip Code: 02167
Period of Generation: 6 / 27 /96 to 6 /28 / 96
Release Tracking Numbers Associated with this Bill of Lading:

***Note: If this Bill of Lading is the result of a Limited Removal Action (LRA) taken prior to Notification, a Release Tracking Number is not needed.**

B. PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH BILL OF LADING:

Name of Organization: Town of Brookline Department of Public Works Engineering Div.
Name of Contact: Keith Coleman, P.E. Title: Project Engineer
Street: 333 Washington Street
City/Town: Brookline State: MA Zip Code: 02146
Telephone: 617 - 730 - 2316 Ext.

C. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH BILL OF LADING:

(check one/specify)

- [x] RP Specify (circle one): Owner Operator Generator Transporter Other RP:
- [ ] PRP Specify (circle one): Owner Operator Generator Transporter Other PRP:
- [ ] Fiduciary/Secured Lender
- [ ] Agency/Public Utility on a Right of Way
- [ ] Other Person:

If an owner and/or operator is not conducting the response action associated with the Bill of Lading, provide on an attachment the name, contact person, address and telephone number, including any area code and extension, for each, if known.

D. TRANSPORTER/COMMON CARRIER INFORMATION:

Transporter/Common Carrier Name: Bardon Trimont, Inc.
Contact Person: David Peters Title: Dir. Environmenatal Services
Street: 1101 Turnpike Street
City/Town: Stoughton State: MA Zip Code: 02072
Telephone: 617 - 341 - 5500 Ext.

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION:

Operator/Facility Name: Bardon Trimont, Inc.
Contact Person: David Peters Title: Dir. Environmental Services
Street: 1101 Turnpike Street
City/Town: Stoughton State: MA Zip Code: 02072
Telephone: 617 - 341 - 5500 Ext.

Type of Facility: (check one)

- [x] Asphalt Batch/Cold Mix
- [x] Asphalt Batch/Hot Mix
- [ ] Thermal Processing
- [ ] Landfill/Disposal
- [ ] Landfill/Daily Cover
- [ ] Landfill/Structural Fill
- [ ] Incinerator
- [ ] Temporary Storage
- [ ] Other:

Division of Hazardous Waste/Class A Permit #: S-90-020 Division of Solid Waste Management Permit #: N/A EPA Identification #: MAD981213531

Actual/Anticipated Period of Temporary Storage (specify dates if applicable): __/__/__ to __/__/__

Reason for Temporary Storage (if applicable):

Massachusetts Department of Environmental Protection BWSC-012A
Bureau of Waste Site Cleanup

Release Tracking Number: ☐ - N/A

BILL OF LADING (pursuant to 310 CMR 40.0030)

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION (continued):

Temporary Storage Address:
Street: _____
City/Town: _____ State: _____ Zip Code: _____ - _____

F. DESCRIPTION OF REMEDIATION WASTE:

(check all that apply)

☒ Contaminated Media (circle all that apply): (Soil) Groundwater Surface Water Other: _____
☐ Contaminated Debris (circle all that apply): Demolition/Construction Waste Vegetation/Organic Materials
Inorganic Absorbant Materials Other: _____
☐ Non-hazardous Uncontainerized Waste (circle all that apply): Non-aqueous Phase Liquid Other: _____
☐ Non-hazardous Containerized Waste (circle all that apply): Tank Bottoms/Sludges Containers Drums
Engineered Impoundments Other: _____
Type of Contamination (circle all that apply): Gasoline Diesel Fuel (#2 Oil) #4 Oil #6 Oil Waste Oil
Kerosene Jet Fuel Other: _____
Estimated Volume of Materials: Cubic Yards: less than 100 Tons: 100-150 Other: _____
Contaminant Source (check one/specify): ☐ Transportation Accident ☒ Underground Storage Tank ☐ Other: _____
Response Action Associated with Bill of Lading (circle one): Immediate Response Action Release Abatement Measure
Utility-Related Abatement Measure (Limited Removal Action (LRA)) Comprehensive Response Action
Other (specify): _____
Remediation Waste Characterization Support Documentation attached:
☒ Site History Information ☐ Sampling and Analytical Methods and Procedures ☒ Laboratory Data ☐ Field Screening Data
If supporting documentation is not appended, provide an attachment stating the date and in connection with what document such information was previously submitted to DEP.

G. LICENSED SITE PROFESSIONAL (LSP) OPINION:

Name of Organization: Vertex Engineering Services, Inc.
LSP Name: James B. O'Brien Title: President
Telephone: 617 - 335 - 6361 Ext. _____

I have personally examined and am familiar with the information contained on and submitted with this form. Based on this information, it is my Opinion that the testing and assessment actions undertaken were adequate to characterize the Remediation Waste, in accordance with 310 CMR 40.0030, and that the facility or location can accept remediation wastes with the characteristics described in this submittal. I am aware that significant penalties including, but not limited to, possible fines and imprisonment may result if I wilfully submit information which I know to be false, inaccurate, or materially incomplete.

Signature: _____ Seal: COMMONWEALTH OF MASSACHUSETTS JAMES B. O'BRIEN 9092 REGISTERED LICENSED SITE PROFESSIONAL
Date: 7/24/96
License Number: 9092

H. CERTIFICATION OF PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH THIS BILL OF LADING:

I certify under penalties of law that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for wilfully submitting false, inaccurate, or incomplete information.

Signature: X Keith A. Coleman Date: 7/24/96
Keith Coleman P.E.
Name of Person (print): _____

GB 21

37.61

Massachusetts Department of Environmental Protection **BWSC-012B**
Bureau of Waste Site Cleanup

Release Tracking Number: ☐-N/A

BILL OF LADING (pursuant to 310 CMR 40.0030)
LOG SHEET ____ **OF** ____

I. LOAD INFORMATION:

LOAD 1: Signature of Transporter Representative:

Date of Shipment: 2/13/96 Time of Shipment: 9:10 (circle one) am/pm
Truck/Tractor Registration: E13403 Trailer Registration (if any): 11978

Receiving Facility/Temporary Storage Representative:
Date of Receipt: 2/13/96 Time of Receipt: 9:45 (circle one) am/pm
289471 Load Size (cu. yds./tons): 27.35

LOAD 2: Signature of Transporter Representative:

Date of Shipment: 2/13/96 Time of Shipment: 9:20 (circle one) am/pm
Truck/Tractor Registration: E13403 Trailer Registration (if any): 11978

Receiving Facility/Temporary Storage Representative:
Date of Receipt: 2/13/96 Time of Receipt: 9:52 (circle one) am/pm
289499 Load Size (cu. yds./tons): 37.93

LOAD 3: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm
Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:
Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm
Load Size (cu. yds./tons):

LOAD 4: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm
Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:
Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm
Load Size (cu. yds./tons):

LOAD 5: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm
Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:
Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm
Load Size (cu. yds./tons):

LOAD 6: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm
Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:
Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm
Load Size (cu. yds./tons):

LOAD 7: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm
Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:
Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm
Load Size (cu. yds./tons):

J. LOG SHEET VOLUME INFORMATION:

Total Volume This Page (cu.yds./tons):
Total Carried Forward (cu.yds./tons):
Total Carried Forward and This Page(cu.yds./tons):

Page 1 of 1

Revised 10/1/93

This form is printed on recycled paper.

MARSHALL

Massachusetts Department of Environmental Protection BWSC-012B
Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)
LOG SHEET ____ **OF** ____

Release Tracking Number: ☐-N/A.

I. LOAD INFORMATION:

LOAD 1: Signature of Transporter Representative: x Michael Borges

Date of Shipment: 7/31/96 Time of Shipment: 7:59 (circle one) am/pm

Truck/Tractor Registration: AH982 Trailer Registration (if any): 615 TB

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 7/31/96 Time of Receipt: 8:30 (circle one) am/pm

289481

Load Size (cu. yds./tons): 27.81

LOAD 2: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm

Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm

Load Size (cu. yds./tons):

LOAD 3: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm

Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm

Load Size (cu. yds./tons):

LOAD 4: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm

Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm

Load Size (cu. yds./tons):

LOAD 5: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm

Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm

Load Size (cu. yds./tons):

LOAD 6: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm

Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm

Load Size (cu. yds./tons):

LOAD 7: Signature of Transporter Representative:

Date of Shipment: __/__/__ Time of Shipment: ____:____ (circle one) am/pm

Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: __/__/__ Time of Receipt: ____:____ (circle one) am/pm

Load Size (cu. yds./tons):

J. LOG SHEET VOLUME INFORMATION:

Total Volume This Page (cu.yds./tons):

Total Carried Forward (cu.yds./tons):

Total Carried Forward and This Page(cu.yds./tons):

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)
SUMMARY SHEET 1 OF 1

BWSC-012C

Release Tracking Number: ☐-LPA

K. SUMMARY OF SHIPMENTS:

DATE OF SHIPMENT:	DATE OF RECEIPT:	NUMBER OF LOADS SHIPPED:	DAILY VOLUME SHIPPED (CU. YDS./TONS):
	7/31/96	3	93.09
SUMMARY SHEET TOTAL SHIPPED:		3	93.09
BILL OF LADING TOTALSHIPPED (only if different):			

This form is printed on recycled paper.

Revised 10/1/94

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)
SUMMARY SHEET

BWSC-012C

Release Tracking Number: ☐ - LRA

L. ACKNOWLEDGEMENT OF RECEIPT OF REMEDIATION WASTE AT RECEIVING FACILITY OR TEMPORARY STORAGE LOCATION:

Receiving Facility/Temporary Location Representative (print): David M. Peter

Title: Manager-Env. Services

Signature: David M. Peter (Rep.)

Date: 8/2/96

M. ACKNOWLEDGEMENT OF SHIPMENT AND RECEIPT OF REMEDIATION WASTE BY PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH THIS BILL OF LADING:

I certify under penalties of law that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

Signature: X Keith A. Coleman

Date: X 8/22/96

Name of Person (print): X Keith A. Coleman

This form is printed on recycled paper.

October 8, 1996

Mr. Gregg Berkley
G.M. Berkley Corporation
P.O. Box 1617
North Falmouth, Massachusetts 02556

RE: Underground Storage Tank Closure and
Limited Removal Action (LRA)
Town of Brookline Soule Recreation Center
652 Hammond Street
Brookline, Massachusetts
VERTEX Project No. 0197

Dear Mr. Berkley:

Vertex Engineering Services, Inc. (VERTEX) is pleased to present the following information which documents the excavation and removal a No. 2 fuel oil underground storage tank (UST) and associated petroleum impacted soil from the above referenced location (the "site").

Petroleum hydrocarbon impacted soil was encountered during the UST closure activities conducted on June 27 and 28, 1996. The excavation of soil from the vicinity of the former UST was performed as part of a Limited Removal Action (LRA) and was completed in accordance with 310 CMR 40.0318. It is required that the Town of Brookline retain all documentation associated with the UST closure activities and the LRA for at least five years.

Thank for the opportunity to work with you on this project. Please feel free to contact our office should you have any questions or require additional information.

Sincerely,

Vertex Engineering Service, Inc.

Amy Salvadore-Trombly
Project Manager

James B. O'Brien, LSP
President

cc: Mr. Keith Coleman - Town of Brookline Dept. of Public Works, Engineering Division
Inspector Mark Jefferson - Town of Brookline Fire Department, Office of Fire Prevention

VERTEX
Engineering Services, Inc.

Main Office
400 Libbey Parkway
Weymouth, MA 02189
Office (617) 335-6361
Fax (617) 335-3543

New York Office
102 West 85th Street, Suite 7H
New York, NY 10024
Office (212) 721-8011
Fax (212) 721-6353

October 8, 1996

Mr. Gregg Berkley
G.M. Berkley Corporation
P.O. Box 1617
North Falmouth, Massachusetts 02556

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Limited Removal Action (LRA)
Town of Brookline Soule Recreation Center
652 Hammond Street
Brookline, Massachusetts
VERTEX Project No. 0197

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Thank for the opportunity to work with you on this project. Please feel free to contact our office should you have any questions or require additional information.

Sincerely,

Vertex Engineering Services, Inc.

Amy Salvadore-Trombly
Project Manager

James B. O'Brien, LSP
President

cc: Mr. Keith Coleman - Town of Brookline Dept. of Public Works, Engineering Division
Inspector Mark Jefferson - Town of Brookline Fire Department, Office of Fire Prevention ✓

The Commonwealth of Massachusetts

Department of Fire Services

Office of the State Fire Marshal

P.O. Box 1025, State Road, Stow, MA 01775

APPLICATION FOR PERMIT

Form FP 6 Rev. 12/97

Brookline (City or Town) Permit No 02-182 (If Applicable)

Date: 6/24/02 19

DIG SAFE NUMBER M.G.L. C. 82, S. 40

Start Date

In accordance with the provisions of M.G.L. Chapter 148, as provided in Section _____ application is hereby made by WCI Corp / G & S Iron Works (Full name of person, Firm or Corporation)

Address 652 Hammond Street Brookline MA (Street or P.O. Box) (City or Town)

For permission to Use Cutting / Welding Equipment

(as clearly purpose for which permit requested)

To Weld a structural post to an existing I-Beam

Name of competent operator Sal Morle' (If Applicable) Cert. No.

Date issued-rejected 6-24-02 19 2002 By _____ (Signature of Applicant)

Date of expiration 7-1-02 19 2002

Fee $ 0 Paid 0 Due 0

The Commonwealth of Massachusetts

Department of Fire Services

Office of the State Fire Marshal

P.O. Box 1025, State Road, Stow, MA 01775

Form FP 6 Rev. 12/97

PERMIT

Brookline (City or Town) Permit No _____ (If Applicable)

Date: _____ 19

DIG SAFE NUMBER M.G.L. C. 82, S. 40

Start Date

In Accordance with the provisions of M.G.L. Chapter 148 as provided in _____

This Permit is granted to: _____ (Full name of person, Firm or Corporation)

for _____

Restrictions: _____

at _____ (Give location by street and no., or describe in such manner as to provide adequate identification of location)

Fee Paid $ _____

This Permit will expire _____ 19 ____

_____ (Signature of offical granting permit)

Brookline Fire Dept.-Fire Prevent Division (Title)

THIS PERMIT MUST BE CONSPICUOUSLY POSTED UPON THE PREMISES

Tank Data

Gallons 275

Previous Contents #2

Diameter _____ Length _____

Date Received 7-1-96

Serial # (if available) _____

Tank I.D. # (Form FP-290) _____

Tank Removed From:

652 Hammond St.
(No. and Street)

Brookline
(City or Town)

Fire Dept. Permit # 96-162

Owner/Operator to mail revised copy of Notification Form(FP-290, or Fp-290R) to: UST Compliance, Office of the State Fire Marshal, 1010 Commonwealth Avenue, Boston, Ma. 02215.

6/1/96

Grant

ation

TANK YARD

27/1996

Fee Paid: $ —

start date 6/26/96

In accordance with the provisions of Chapter 148, Sec. 38A, M.G.L., 527 CMR 9.00 application is hereby made by: G.M. Berkley Corp

Street Address & City or Town: North Falmouth Rd North Falmouth Ma.

Signature of applicant: G.M. Berkley

Applicants name printed: Gregg Berkley

For permission to remove and transport one underground storage tank from.

Owner: Town of Brookline Street Address: 652 Hammond St.

Firm transporting waste: Enpro State Lic.# 261

Hazardous waste manifest # MAH 562.155 E.P.A.# Mad980670004

Approved tank yard: Grant Co. # 008

Tank yard Address: 828 Wolcott St. Boston

Type of inert gas: _____ UL tank #: _____

Tank capacity: 275 Substance last stored: Fuel oil

Date of issue: 6/27/1996 Date of expiration: 6/28/1996

Signature/Title of Officer granting permit: M. Jefferson

KEEP ORIGINAL AS APPLICATION AND ISSUE DUPLICATE AS PERMIT

F.P. 730-2270
F.A. 730-2260

FORM F.P. 292
(rev. 9/90)

6/1/96
Grant

The Commonwealth of Massachusetts
Department of Public Safety
Division of Fire Prevention and Regulation

APPLICATION FOR PERMIT, AND PERMIT, FOR REMOVAL AND TRANSPORTATION TO APPROVED TANK YARD

FDID#_

Permit # 96-162 Date 6/27/1996

Brookline
City, Town or District

C.82 S.40 M.G.L.

Fee Paid: $—

DIG SAFE NUMBER
962206736
start date 6/26/96

In accordance with the provisions of Chapter 148, Sec. 38A, M.G.L., 527 CMR 9.00 application is hereby made by: G.M. Berkley Corp

Street Address & City or Town: North Falmouth Rd North Falmouth Ma.

Signature of applicant: G M Berkley

Applicants name printed: Gregg Berkley

For permission to remove and transport one underground storage tank from.

Owner: Town of Brookline Street Address: 652 Hammond St.

Firm transporting waste: Enpro State Lic.# 261

Hazardous waste manifest # MAH 562155 E.P.A.# Mad980670004

Approved tank yard: Grant Co #008

Tank yard Address: 828 Wolcott St. Boston

Type of inert gas: _____ UL tank #: _____

Tank capacity: 275 Substance last stored: Fuel oil

Date of issue: 6/27/1996 Date of expiration: 6/28/1996

Signature/Title of Officer granting permit: M. Jefferson

KEEP ORIGINAL AS APPLICATION AND ISSUE DUPLICATE AS PERMIT

F P 730-2270
F A 730-2260

BROOKLINE FIRE DEPARTMENT

Name Soule Recreation Center

Address Adjacent to 652 Hammond St.

City-Town-State

Nature of Incident Building Fire

caused by brush ignited by fireworks.

Incident number 3306

Date July 30,1992

Time 1625 hours

Report by Deputy Spillane

Brookline Fire Department
338 Washington Street
Brookline, Massachusetts 02147

1994

Date 3-7- Rec'd by EO Inspector West Dist. FPD

Condition New Installation Oil Burner

Location Hammond St.

Owner: Name Town of Brookline Notified

Address Tel.

Complainant: Name Brookline Gas & Coal Co.

Address 46 Pearl St. Tel.

Remarks:

Report: P.O.F.

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BROOKLINE FIRE DEPARTMENT

e Soule Recreation Center

ss Adjacent to 652 Hammond St.

own-State

of Incident Building Fire

ed by brush ignited by fireworks.

Incident number 3306

Date July 30,1992

Time 1625 hours

Report by Deputy Spillane

6313 was transmitted at 1625 hr for a reported building fire at
n complex at 652 Hammond Street. First arriving
1 story abandoned building adjacent
Spillane and
were

City or Town Brookline

PERMIT TO INSTALL - ALTER
FUEL OIL BURNING EQUIPMENT

n accordance with provisions of Chapter 148, G.L., and Regulations made under authority thereof.

Name Town of Brookline (owner or occupant) Name Brookline Ice & Coal Co (Installer)

Address Seoule Recreation Hammond St. Address 46 Pearl Street Brookline

Burner

Name Wayne

Manufacturer Wayne Home Equipment Wayne Indiana

Model No. or Size 5-to 15 gals

Type Gun Mass. Approval No. 1535 B

Storage

Type of Tank existing

Capacity _____ gals. (or) Size _____

Location _____

_____ gals. fuel oil may be temporarily stored and used for testing purposes.

Permit issued _____ expires _____

Fee _____ Paid _____

_____ (Head of Fire Department)

By _____

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either demolished or reinforced. The Building Department was notified and Commr.
ickerson responded as well as Mr. Panterra the Director of Parks and Recreation.
he open door was secured by Insp. Jefferson using the broken hasp.

time. Th
guishers scattered ar
rubber cement and the remains of a
was damage to the roof deck, rafters and
the fire. Because of the amount of rot in the areas
d by the fire it appeared the structure should be secured and

BROOKLINE FIRE DEPARTMENT

Name Soule Recreation Center

Address Adjacent to 652 Hammond St.

City-Town-State

Incident number 3306

Date July 30,1992

Time 1625 hours

Nature of Incident Building Fire

Report by Deputy Spillane

caused by brush ignited by fireworks.

Box 6313 was transmitted at 1625 hr for a reported building fire at the Soule Recreation complex at 652 Hammond Street. First arriving apparatus found a fire in a 1 story abandoned building adjacent to the main building.

Deputy Spillane and Insp. Jefferson responded on the report of fire showing and were arriving as Deputy Pucci requested Fire Prevention to the scene..

The point of origin was determined to be outside of the structure in the rear in grass and brush which then spread up to the underside of the roof where the deteriorated condition of the building allowed the fire to spread to the attic area. The fire spread was limited to an area of about 15' x 15'. The exterior of the building was stucco in good condition which prevented fire extension into the walls.

The cause of the brush fire was determined to be children playing with fireworks. Officer M.Siebolt who was assigned to the Sector 549 car reported that witnesses saw children in the area just prior to the fire. We found a 1 lb. propane torch, unignited, but with the gas still running in the paved playground behind the building. This torch was apparently the device used to ignite the fireworks. A 12" cardboard fireworks device was recovered nearby.

The building was in poor condition before the fire and had at one time been secured against entry. The door nearest the parking lot was found open when the first company arrived (Eng.6) and the hasp had been broken off. There was evidence that the area has been used as a "Hangout" for some time. There were several discharged and disassembled small fire extinguishers scattered around, empty beer cans, an empty 1 gallon can of rubber cement and the remains of a school bus first aid kit. There was damage to the roof deck, rafters and ceiling joists from the fire. Because of the amount of rot in the areas uneffected by the fire it appeared the structure should be secured and either demolished or reinforced. The Building Department was notified and Commr. Nickerson responded as well as Mr. Panterra the Director of Parks and Recreation. The open door was secured by Insp. Jefferson using the broken hasp.

FORM F.P. 292

BROOKLINE FIRE DEPARTMENT

Name Soule Recreation Center

Address

City-Town-State

Nature of Incident

Incident number ~~3306~~

Date 7/30

Time

Report by

Top

Top

Rear Exterior - Roof line

Top

Area at base of wall P/O 20x20'

FORM F.P. 292
(rev. 9/90)

The Commonwealth of Massachusetts

Department of Public Safety
Division of Fire Prevention and Regulation

APPLICATION FOR PERMIT, AND PERMIT, FOR REMOVAL AND TRANSPORTATION TO APPROVED TANK YARD

FDID#_ - Permit # 96-162 Date 6/27/1996

Brookline
City, Town or District

C.82 S.40 M.G.L.

Fee Paid: $—

DIG SAFE NUMBER
962306736
start date 6/26/96

In accordance with the provisions of Chapter 148, Sec. 38A, M.G.L., 527 CMR 9.00 application is hereby made by: G.M. Berkley Corp

Street Address & City or Town: North Falmouth Rd, North Falmouth Ma.

Signature of applicant: Gm Berkley

Applicants name printed: Gregg Berkley

For permission to remove and transport one underground storage tank from.

Owner: Town of Brookline Street Address: 652 Hammond St.

Firm transporting waste: Enpro State Lic.# 261

Hazardous waste manifest # MAH 562155 E.P.A.# Mad 980670004

Approved tank yard: Grant Co. # 008

Tank yard Address: 828 Wolcott St. Boston

Type of inert gas: _____ UL tank #: _____

Tank capacity: _____ Substance last stored: Fuel oil

Date of issue: 6/27/1996 Date of expiration: 6/28/1996

Signature/Title of officer granting permit: M. Jefferson

KEEP ORIGINAL AS APPLICATION AND ISSUE DUPLICATE AS PERMIT

F.P. 730-2270
F.A. 730-2260

Make application to local Fire Department.
Fire Department retains original application and issues duplicate as Permit.

Commonwealth of Massachusetts

Department of Fire Services – Board of Fire Prevention

APPLICATION and PERMIT

Fee: N/A

for storage tank removal and transportation to approved tank disposal yard in accordance with the provisions of M.G.L. Chapter 148, Section 38A, 527 CMR 9.00, application is hereby made by:

Tank Owner

Tank Owner Name (please print) Town of Brookline - Recreation Dept Signature (if applying for permit)

Address 652 Hammond St (Street) Brookline (City) Ma (State) 02467 (Zip)

Removal Contractor

Company Name _____ (Print)

Address _____ (Print)

Signature (if applying for permit)

☐ IFCI Certified Other _____

Contamination Assessment

Co. or Individual N/A (Print)

Address _____ (Print)

Signature (if applying for permit)

☐ IFCI Certified ☐ LSP # _____ Other _____

Tank Information

Tank Location off 1281 Newton St (Street Address) (City)

Tank Capacity (gallons) approx 1000 gallon Substance Last Stored Unknown - probably #2 Fuel

Tank Dimensions (diameter x length) _____

Remarks: Tank found dumped off parking area at Municipal golf course - never in use at the site

Disposal Information

Firm transporting waste _____ State Lic. # _____

Hazardous waste manifest# _____ E.P.A. # _____

Approved tank disposal yard _____ Tank yard # _____

Type of inert gas _____ Tank yard address _____

Approvals

City or Town Brookline FDID# 21046 Permit# 99-101

Date of issue 4/8/99 Date of expiration —

Dig safe approval number: N/A Dig Safe Toll Free Tel. Number - 800-322-4844

Signature / Title of Officer granting permit D/C John Smith

After removal(s) send Form FP-290R signed by Local Fire Dept. to UST Regulatory Compliance Unit, One Ashburton Place, Room 1310, Boston, MA 02108-1618.

FP-292 (revised 9/96)

652 Hammond St.

527 CMR: BOARD OF FIRE PREVENTION REGULATIONS

4.03: continued

The Commonwealth of Massachusetts
Department of Public Safety

527 CMR 4.00 - Form 1

Application for Permit, Permit, and Certificate of completion for the Installation or Alteration of Fuel Oil Burning Equipment and the Storage of Fuel Oil

Brookline 10/30/98
(City or Town) (Date)

Permit #'s: FD 98-338 Elec. _____ FDID#: _____ Fee Paid: NC

Owner/Occupant Name: Soule Rec. C+R. Tel #: _____

Installation Address: #652 Hammond St. Serviced Floor or Unit #: _____

☒ Heating Unit ☐ Domestic Water Heater ☐ Power Vent ☐ Other _____

Burner: ☒ New ☐ Existing Location: Basement.

Trade Name: Steam Boiler Mfg: Burnham

Type: Carlin Model # or Size: 702 CRD Nozzle Size: 8.50 GPH

☒ Fuel Oil ☐ Kerosene ☐ Waste oil

Storage Tank: ☐ New ☒ Existing Location: Basement

Type: 2-330 Capacity: 660 gals. No. of Tanks: 2

Special requirements (or additional safety devices) _____

☐ OSV Valve ☒ Oil line protected ☒ Sheet Rock ☐ Sprinkler AFUE: ☒ yes ☐ no EF: ☐ yes ☐ no
(Furnace and boilers) (Water heater)

Co. Name: Industrial Burner Systems Tel # 617 479 3900

Address: 97 Rawson Rd. City: Quincy Zip: 02120

Completion Date: 10/30/98

Combustion Test: Gross Stack Temp.: _____ Net Stack Temp.: _____

CO^2 Test: _____ Breech Draft: _____

Smoke: _____ Overfire Draft: _____ Efficiency rating %: _____

I, the undersigned certify that the installation of fuel burning equipment has been made in accordance with M.G.L. c. 148 and 527 CMR 4.00 currently in effect. Furthermore, this installation has been tested in accordance with such requirements, is now in proper operating condition and complete instructions as to its use and maintenance have been furnished to the person for whom the installation (or alteration) was made.

Installer: Richard A Lee 020497 Richard A Lee
Print Name *Cert of C#* *Signature (no Stamp)*

Address: 97 Rawson Rd City: Quincy mass.

Once signed by the fire department, this is a PERMIT for the storage and use of oil burning equipment.

Approved by: _____ Date: 11/2/98

Keep Original as application. Issue duplicate as permit. This form may be photocopied.

AFSCME
in the public service®

AFSCME Local 1358
Brookline Municipal Employees Union
P.O. Box 470694
Brookline Village, MA 02447

President
Joseph Geary

Vice President
Tom Hantakas

Treasurer
Jack Hogan

Secretary
Ruth Fischer

Sgt-at-Arms
Bill Phillips

Executive Board
John Crowley
Betty Friar
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Stewards
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Betty Friar
Bruce Genest
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Maureen Holbrook
Robin Magner
Roger Mello
David Moroney
Mary Murphy
Bill Phillips
Peggy Randall
Ben Steinberg

December 2, 2004

Dr. Alan Balsam, Director
Brookline Health Department
Brookline, MA 02445

Dear Dr. Balsam,

The Officers and Board of AFSCME Local 1358 request a copy of Patrick Maloney's report following the environmental inspection of the Highway Department, including but not limited to the report on air quality in the Town Garage.

Thank you for your cooperation.

Sincerely,

Joseph Geary

Joseph Geary
President, Local 1358

Cc: John Dunlap, Director of Human Resources
Stephen Dolan, Staff Representative, Council 93

JJG:rf

BROOKLINE HEALTH DEPARMENT

M E M O R A N D U M

To: Alan Balsam Ph.D., MPH
Director of Public Health and Human Services

From: Patrick Maloney MPAH
Chief of Environmental Health

Date: 12/07/04

Re: DPW – Garage
652 Hammond St.

In response to concerns raised regarding construction related issues at the above noted facility and a complaint filed by an employee, please be advised of the following:

The primary issues raised relate to air quality in the building from construction work. Specifically the task of repairing the floor of the facility which is being done over night has caused complaints.

I visited the facility on 12/02/04 at 5:00 p.m. At that time construction work was in progress. Jack-hammering of the floor surface, power water blasting and power grinding of metal surfaces were all being performed. These activities are potential sources of complaint conditions.

The following day (12/03/04) the Director of Highway and Sanitation advised that a meeting was held with staff and the following steps will be taken to address the complaints and concerns:

- Water will be used to suppress any dust that is generated from construction.
- A portable HEPA (high efficiency particulate air system) will be used in the work areas during construction.
- The buildings garage ventilation system will be operating at all times.
- All work areas will be cleaned and vacuumed each evening.

These steps will be monitored and altered if needed.

The above noted actions should adequately address the issues raised by the building users. I do not see any additional recommendations to make at this time.

H:\PAT\DPW-garage 652 Hammond st.doc

TOWN OF BROOKLINE

Alan Balsam, Ph.D. MPH
Director of Public Health and Human Services

DEPARTMENT OF PUBLIC HEALTH

11 Pierce St.

Asbestos Removal/Encapsulation Permit

PERMIT NO.: HAS010120
DATE ISSUED:

This certifies that: NEW ENGLAND SURFACE MAINTENANCE, LLP

is permitted to **REMOVE/ENCAPSULATE ASBESTOS** at **652 HAMMOND ST BRKL** in the Town of Brookline, under the Laws of the Commonwealth of Massachusetts, the By-Laws of the Town of Brookline and the Regulations of the Brookline Health Department, from **08/16/2001** to **08/20/2001** unless sooner modified, revoked or suspended.

Should date of removal change, you must contact the Health Department 24 hours in advance (Failure to do so will require re-submission of application and fee).

Any asbestos material remaining on premises, not included in the work plan that is in friable condition, will be subject to a Health Department Order to remove or encapsulate.

Upon completion of all work air sample results & asbestos manifest slip must be submitted to Health Department upon receipt (Glove bag removals do not require air samples).

This permit is not transferable.

Health Inspector

cc: Property Owner

Town of Brookline
Health Department

11 Pierce Street Massachusetts, 02445
(617) 730-2300 fax (617) 730-2296

NO Charge

HAS010120

Alan Balsam, Ph.D, MPH, Director
Public Health and Human Services

ASBESTOS REMOVAL / ENCAPSULATION PLAN

1. Name of building owner/agent: Town of Brookline Recreation Department

   Address: 652 Hammond St. Phone: 617.730.2069

2. Job Location: Tappan St. Pool - 60 Tappan St.

3. Contractor: NESM, LLP
   (Name, Address and Phone Number)
   650 WASHINGTON ST
   Weymouth MA 02189

4. Sub-Contractor: _____
   (Name, Address and Phone Number)

5. Massachusetts Asbestos Contract License Number: AC 000196

6. On Site Job Supervisor and Massachusetts Certification Number: Paul Braun AS 40577

7. Abatement Activity: (Removal) Encapsulation-Enclosure
   (Circle One)

8. Amount and type of Asbestos Material to be Removed, Encapsulated or Enclosed:

   _____ LF
   ROOFING/FLASHING 1200 SF

9. Start Date: 8-16
   Completion Date: 8-20
   (Application and required fee to arrive at Brookline Health Department (10) days prior to starting date.)

10. (1) DEP Notification Date: 8-2-01
    (2) EPA Notification Date: N/A
    (3) Labor and Workforce Developement Date: 8-2-01

11. Description of Removal/Disposal Methods to be Employed to Comply with Labor & Industries Regulations 453 CMR 6.14 (2) (g) & DEP Regulations:

PROJECT INVOLVES THE REMOVAL OF NON FRIABLE ROOF FLASHING ONLY

12. Location of Approved Landfill Disposal Site:

VALLEY LANDFILL
PLEASANT VALLEY RD
IRWIN PA

13. Name, Address & Phone Number of Transporting Company:

WASTE MANAGEMENT 209 PICKERING ST PORTLAND CT

14. Emergency Abatement Removal Date:
(To be submitted twenty-four (24) hours prior to removal.) (Emergency abatement as provided by 453 CMR Department of Labor & Industry, 6.02).
Reason for Emergency:

15. Procedures for Asbestos Removal in Accordance with Department of Labor & Industries 435 CMR 6.00, EPA Regulations, DEQE Regulations 7.00 and NESHAP Regulations.

(1) Persons engaged in asbestos work shall only be assigned to perform those tasks authorized by a valid current certificate.
(2) At least one certified supervisor/foreman shall be assigned to and be present at each asbestos project job site when work is in progress.
(3) All persons engaged in asbestos work should keep their certification identification card at their job site and shall present is upon request.
(4) Warning signs shall be posted at all approaches to the work ares. Signs shall be posted a sufficient distance from the work area to permit a person to read the sign(s) and the precautionary measures to avoid exposure to asbestos.

(5) All movable objects shall be removed from work area.
(6) All non-movable or fixed objects remaining within the work area shall be wrapped or covered with six (6) mil thick plastic sheeting. The covering shall be completely sealed with duct tape or equivalent.
(7) The work area shall be isolated by sealing all openings, including but not limited to windows, doors, ventilation openings, drains, grilles and grates.
(8) Floor and wall surfaces shall be covered with plastic sheeting (polyethylene sheeting).
(9) A three compartment decontamination system to be installed on all asbestos removal; exception 453 CMR 6.14, sec. 6, sec. 7.
(10) Air testing to be performed prior to removal and completion of abatement. In no case shall clearance air monitoring samples be collected by the contractor or an employee of the contractor.
(11) Prior to removal, asbestos material shall be thoroughly wetted to which surfactant has been added.
(12) Removed asbestos material shall not remain in the work area, asbestos shall be contained in double (2) plastic bags (6 mil) minimum thickness each.
(13) Protective clothing and equipment: Personnel protective clothing shall mean full body disposable clothing, including head, body and foot coverings consisting of material impenetrable by asbestos fibers.
(14) Asbestos waste will be transported in closed trucks for disposal at approved landfill location.
(15) Negative air pressure will be continuously maintained during asbestos removal by use of HEPA filtration units.
(16) A complete cleanup of the work area will be performed using the wet wipe method along with HEPA vacuums.

* A $60.00 fee payable to the Town of Brookline must be submitted with this application ($60.00 will be charged for <u>each</u> address, listed at job location.) Fee waived, Town Buildint

* Jobs canceled without informing the Health Department at least 24 hours in advance will be required to submit a new application and fee.

* Jobs starting without prior Health Department approval will be charged <u>TRIPLE</u> the amount indicated.

* Asbestos shingles must also be removed per Brookline Health Department requirements (stricter than State requirements).

Commonwealth of Massachusetts
Asbestos Notification Form — ANF-001

E EXEMPT

757108

A Asbestos Abatement Description

1. Facility location:
Tappan Street Pool (Name) 60 Tappan Street (Address)
Brookline, MA (City/Town) 02445 (Zip code) 617-730-2778 (Telephone)
Exterior/Roof
What is the worksite location? building name, #, wing, floor, room

2. Is the facility occupied? ☒ Yes ☐ No

3. Asbestos Contractor:
New England Surface Maintenance, LLP (Name) 850 Washington Street (Address)
Weymouth, MA (City/Town) 02189 (Zip code) 781-337-2117 (Telephone)
AC 000196 (DLI License #) (Contract Type (written/verbal))

4. On-Site Project Supervisor/Foreman:
Paul Brown (Name) AS 40577 (DLI Certification #)

5. Project Monitor:
N/A (Name) (DLI Certification #)

6. Asbestos Analytical Lab:
N/A (Name) (DLI Certification #)

7. Project start date 08/16/01 end date 08/20/01 specific work hours (Mon.-Fri.) 8p-8a (Sat. Sun.) 8p-8a

8. What type of project is this? (circle one): demolition repair (renovation) other (explain)

9. Describe the asbestos abatement procedures to be used (circle): glove bag enclosure full containment cleanup encapsulation disposal only (other (explain)) Roofing

10. Is the job being conducted ☐ indoors ☒ outdoors ?

11. Total amount of each type of Asbestos Containing Materials (ACM) to be handled on pipes or ducts (linear ft.)_____ or other surfaces (square ft.) 1,200 to be removed, enclosed or encapsulated:
linear/square feet

boiler, breaching, duct, tank surface coatings	/	thermal, solid core pipe insulation	/
corrugated or layered paper pipe insulation	/	insulating cement	/
spray-on fireproofing	/	trowel/sprayer coatings	/
cloths, woven fabrics	/	transite board, wall board	/
other (please describe) Roofing	1,200		

12. Describe the decontamination system(s) to be used:
-As required-

13. Describe the containerization/disposal methods to comply with 310 CMR 7.15 and 453 CMR 6.14(2)(g):
Two layers/labelled bags

14. For Emergency Asbestos Abatement Operations, the DEP and DLI officials who evaluated the emergency:

Name of DEP Official — Title
N/A
Date of Authorization — Waiver #

Name of DLI Official — Title
Date of Authorization — Waiver #

15. Do prevailing wage rates apply as per M.G.L. c. 149, § 26, 27, or 27A - F to this project? ☒ Yes ☐ No

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Official Use Only
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ersion Date

B Facility Description

1. Current or prior use of facility: Rec/Recreation Center

2. Is the facility owner-occupied residential with 4 units or less? ☐ Yes ☒ No

3. Facility Owner:
Town of Braintree Recreation Dept. 632 Hamman
Name / Address
Braintree, MA 02445 617-730-2069
City/Town / Zip code / Telephone

4. Facility's Owner's On-Site Manager:
Mark Casey
Name / Address
City/Town / Zip code / Telephone

5. General Contractor:
Casey Brothers Construction 107 Gardner Street
Name / Address
W Roxbury 02132 617 327 2374
City/Town / Zip code / Telephone
Contractor's Workers Comp. Insurer / Policy # / Exp. Date

6. What is the size of the facility? 1200 (sq ft) — (# of floors) work area

C Asbestos Transportation and Disposal

1. Transporter of asbestos-containing waste material from site to temporary storage site (if necessary) to final disposal site:
NESM, LLP — 850 Washington Street
Name / Address
Weymouth, MA — 02189 — 781-337-2117
City/Town / Zip code / Telephone

2. Transporter of asbestos-containing waste material from removal/ temporary storage site to final disposal site:
Waste Management — 209 Pickering Street
Name / Address
Portland, CT — 06480 — 860-342-0667
City/Town / Zip code / Telephone

Note: Transfer Stations must comply with the Solid Waste Division regulations 310 CMR 16.00

3. Refuse transfer station and owner (if applicable):
Name / Address
City/Town / Zip code / Telephone

4. Final Disposal Site:
Valley Landfill — USA Waste Services
Location Name / Owner Name
Pleasant Valley Road
Address
Irwin, PA — 15642 — 412-744-4000
City/Town / Zip code / Telephone

D Certification

The undersigned hereby states, under the penalties of perjury, that he/she has read the Commonwealth of Massachusetts Regulations for the Removal, Containment or Encapsulation of Asbestos, 453 CMR 6.00 and 310 CMR 7.15, and that the information contained in this notification is true and correct to the best of his/her knowledge and belief.

T. Reilly — [signature] — 8-2-01
Print Name / Authorized Signature / Date

Note: Contractor must sign this form for DLI notification purposes

Partner — NESM, LLP — 781-337-2117
Position/Title / Representing / Telephone

850 Washington Street — Weymouth, MA — 02189
Address / City/Town / Zip code

Fee exempt (City, Town, district, municipal housing authority, owner-occupied residential of four units or less)? ☒ yes ☐ no

Sticker # (from front of form): 745105

640 Hammond Street C.C.

TOWN OF BROOKLINE
Massachusetts

BOARD OF APPEALS

DIANE R. GORDON, Co-Chair
HARRY MILLER, Co-Chair
BAILEY S. SILBERT

333 Washington Street
Brookline, MA 02445
617-730-2010
Fax: 617-730-2298
PATRICK J. WARD, Secretary

TOWN OF BROOKLINE
BOARD OF APPEALS
NO. 3624

Petitioner, Hammond Street 640 Associates Limited Partnership, Hammond Street 648 Associates Limited Partnership (on behalf of developer Ronald Simons), applied to the Building Commissioner for permission to construct a new building containing ten (10) residential dwelling units, to construct three (3) new townhouses and to renovate an existing residence, for a total of fourteen (14) residential dwelling units per plans, at 640 and 648 Hammond Street, Brookline. The application, which has since been revised, was denied and an appeal was taken to this Board.

On September 21, 2000, the Board met and determined that the properties affected were those shown on a schedule in accordance with the certification prepared by the Assessors of the Town of Brookline and approved by the Board of Appeals and fixed October 19, 2000, as the time and place of a hearing on the appeal, which was subsequently rescheduled to November 16, 2000, at 7:30 P.M. in the Selectman's Hearing Room on the sixth floor of Town Hall. Notice of the hearing was mailed to the petitioners, to their attorney (if any of record), to the owners of properties deemed by the Board to be affected as they appeared on the most recent local tax list, to the Planning Board and to all others required by law. Notice of the rescheduled hearing was published October 26 and November 2, 2000, in the Brookline Tab, a newspaper published in Brookline. Copy of said notice is as follows:

TOWN OF BROOKLINE
MASSACHUSETTS
BOARD OF APPEALS
NOTICE OF HEARING

PETITIONER: Hammond Street 640 Associates Limited Partnership
Hammond Street 648 Associates Limited Partnership

DATE AND PLACE OF HEARING: Thursday, November 16,2000 at 7:30 P.M. in the Selectmen's Hearing Room on the sixth floor of Town Hall, 333 Washington, Street, Brookline. A public hearing will be held for a variance from Section 5.60; Side Yard Requirements; and special permit under Section 4.30; Table of Use Regulations; Use #5 and Use #6; Section 4.40, Affordable Housing Requirements; Section 5.04(a); Residential Building on Rear of a Lot; Section 5.09(b)(2)(4); Community and Environmental Impact and Design Review; Section 5.43; Exceptions to Yard and Setback Regulations; Section 7.2(a)(1); Signs in M Districts; as regulated by Section 7. 1 (a)(6); Section 8. 1 (b); Alteration or Extension; Section 6.13(d)(3), Design of All Off-Street Parking Facilities; Section 6.13(e)(5), Design of All Off-Street Parking Facilities of the Zoning By-Law to construct a new building containing ten (10) residential dwelling units; to construct three (3) new townhouses and to renovate an existing residence for a total of fourteen (14) residential dwelling units per plans at 640 and 648 Hammond Street said premises located in an M-1.0 (apartment house) Residence District.

Diane R. Gordon
Harry Miller
Bailey S. Silbert
Board of Appeals

At the time and place specified in the notice, a public hearing was held by this Board. Present at the hearing were Board Members Harry Miller, Lawrence Kaplan and Bailey S. Silbert. Petitioner was represented at the hearing by Attorney Jeffrey P. Allen of Lane Altman & Owens.

At the hearing, Polly Selkoe, Senior Planner, distributed the Planning Board Report dated November 9, 2000. Mr. Allen then described the factual background of the petition as follows:

The property at 640 Hammond Street was formerly occupied by the Carroll School Bus Depot and presently is being used by a rental car, truck and recreation vehicle company. The existing building is approximately 7,500 square feet, is concrete and concrete block and in poor condition. Underground fuel tanks were removed several years ago.

The property at 648 Hammond Street is the site of the historic Hunter Gatehouse (1908), a turn-of-the-century cottage of the "Medieval Revival" style, which was part of a larger estate. This structure is a contributing property on the Chestnut Hill National Register Historic District. In 1951, an addition to the Gatehouse was added, creating a two-family house.

A stone wall exists along the property lines between 640 Hammond Street and Soule Park, as well as along the property line between 640 and 648 Hammond Street. The wall also extends along Hammond Street and is part of the front wall of the Hunter Gatehouse and continues down Hammond Street as a boundary for Soule Park.

The neighborhood is a block and a half from the Chestnut Hill shopping area and abuts Town park land. Adjacent to the four-story building is the parking lot for Soule Park and a public tennis court. Directly to the north and east of it is property formerly owned by the McNeilly Oldsmobile dealership, and still for the most part occupied by automotive uses, and now proposed for a larger residential development. Residential housing types in the immediate area include triple deckers, apartment houses and single-family homes.

The applicant is proposing to demolish the commercial building and retain and reuse the historic residential Gatehouse, although the garage and 1951 addition will be removed. Initially, the plan for new construction was three new townhouses facing Hammond Street, with two-car garages underneath, and to the rear of the townhouses, a four-story, ten-unit residential

condominium building with a 22-car underground parking garage. The Hunter Gatehouse was to be retained as a free-standing townhouse with a new two-car garage and deck in the rear. The total number of dwelling units was to be 14. The revised plan is for two attached townhouses with four garaged parking spaces, a three-story, six-unit residential condominium building with a 17-car parking garage, and a two-car garage and addition to the Hunter Gatehouse. The total number of dwelling units will be nine. Additionally, the vehicular circulation will be modified with sole ingress from Hammond Street and egress onto the drive leading to the parking lot of Soule Park. The developer will also relocate a portion of the existing stone wall on the property to the front property line facing Hammond Street. A cash payment will be made to the Housing Trust Fund to meet the affordable housing requirement.

The zoning relief required is as follows:

Section 4.30, Table of Use Regulations, Use #5: A special permit is required for attached dwellings occupied by not more than one family in each unit between side walls.

Section 4.30, Table of Use Regulations, Use#6: A special permit to develop ten or more multiple or attached dwelling units was required by the original proposal but is not required for the redesign.

Section 4.40, Affordable Housing Requirements: A special permit is required for residential development of six (6) or more units pursuant to which an affordable housing contribution will be required which, for development of six (6) to fifteen (15) units, may be in the form of a cash payment.

Section 5.04(a), Residential Building on Rear of a Lot: A special permit is required to reduce yard dimensions between principle buildings on a single lot.

Section 5.09(b)(2)(4), Community and Environmental Impact and Design Review: A special permit is required for all new structures, outdoor uses, exterior alterations, additions and changes for attached dwelling in groups of three or more. The original proposal also required such a special permit for multiple dwellings of ten or more units, but the redesigned proposal does not require relief under that category.

Section 5.43, Exceptions to Yard and Setback Requirements or Section 5.60, Side Yard Requirements: Either a special permit is required to substitute alternative dimensional setback requirements which assure the same standard of amenity as by compliance with the standard setback requirements, or a variance is required to reduce the side yard requirement.

Section 6.13(d)(3), Design of All Offstreet Parking Facilities: A special permit is required for an entrance and exit drive greater than 20 feet wide in a residential district.

Section 6.13(e)(5), Design of All Offstreet Parking Facilities: A special permit is required to authorize owners of adjoining properties to share a common driveway.

Section 7.2(a)(1) Signs in M. Districts as regulated by Section 7. 1 (a)(6): A special permit is required for temporary construction or development signs.

Section 8. 1 (b), Alteration or Extension: A special permit is required to increase a nonconforming condition specifically provided for in a section of the Bylaw other than Section 8. 1 (a)(1).

Polly Selkoe, Senior Planner, on behalf of the planning staff, gave the following Planning Board report:

The Planning Board supports this revised proposal to replace an automotive commercial use with a residential one. The project will provide several benefits to the community, including: a cash payment to the Town for future affordable housing in Brookline, an improved streetscape along Hammond Street with an attractive stone wall at the property edge, underground parking and the retention of an historic Gatehouse built at the turn of the century, which is on the National Register. The applicant has also agreed to provide a common driveway with the adjacent property owner, if agreement can be reached.

A Design Advisory Team [Jerome Kampler, Chris Hussey and Robert Stein] appointed by the Planning Board, along with a Preservation Commission representative and neighborhood residents, met six times with the developer and his architect on this project (8/2, 8/30, 9/13, 101/4, 10/18 and 11/1). As a result, several improvements were made to the project regarding the massing and siting of the buildings, the entrances to the garage and the condominium building, the design of the internal drive, and fagade materials, which have been changed to brick and a slate roof In sum, this project will provide an important transition from the Chestnut Hill shopping area and multi-family homes closer to Route 9, and the single-family residential neighborhoods to the south.

Therefore, the Planning Board recommends approval of the requested relief, subject to conditions.

Frank Hitchcock, Senior Building Inspector, spoke on behalf of the Building Commissioner. He restated the various sections of the Zoning By-law under which relief is needed. The Building Department has no objections to the petition and will ensure that all Code provisions are satisfied.

The Board, having deliberated on this matter and considered the foregoing testimony, concludes that it is desirable to grant all special permit relief identified below, subject to certain conditions.

The Board considered the visual relationships of the proposed buildings to the terrain and to the use, scale, and architecture of the existing buildings and neighborhood. The proposal of the applicant will allow preservation of an existing historic structure. The use as proposed to be developed will also be of benefit to the neighborhood because the new structures will be in keeping with the character of the neighborhood, and the site design is aesthetically pleasing. The proposed use as designed takes into consideration traffic concerns, and the placement of driveways will not cause a nuisance or serious hazard to vehicles or pedestrians. The structures, garage, driveway and common open space are functional and are proper for the proposed use. The placement of parking spaces below ground is a valuable amenity to the neighborhood. The Board finds that, the proposed use will not remove any existing low- or moderate-income housing in the Town.

The Board further makes the following findings pursuant to Sections 5.09 and 9.5:

1. The location, topography, vicinity and natural features of the site make it particularly suitable for the proposed mixed development as townhouses and multiple-dwelling residences.

2. The design of the proposed development will be in harmony with the prevailing character of the neighborhood.

3. The specific site is an appropriate location for the proposed use and structures.

4. The use as proposed by the Petitioner will not adversely affect the neighborhood.

5. There will be no nuisance or serious hazard to vehicles or pedestrians from the proposed use.

6. Adequate and appropriate facilities will be provided for the proper operation of the proposed use.

7. The development as proposed will not have a significant adverse effect on the supply of housing available for low and moderate-income people.

Accordingly, the Board grants special permits pursuant to Sections 4.30, 4.40, 5.04(a), 5.09(b)(2), 5.43,6.13(d)(3),6.13(c)(5),7.2(a)(1) and 8. l(b), being all zoning relief necessary for the redesigned proposal, subject to the following conditions:

1. Final design of facades, colors, materials, landscaping and rooftop details shall be completed after consultation with the Planning and Community Development Director.

2. Final site plan, including the exact location and dimensions of the driveway from Hammond Street; the design of the internal drive and security gates, if necessary, to permit egress only onto Soule Park Drive, not ingress; the stone wall repair and design; dumpster location and screening; mechanical equipment location; exterior lighting and parking layout shall be subject to the review and approval of the Planning and Community Development Director.

3. The cash payments agreed to in accordance with Section 4.40 of the Zoning By-law and pursuant to this Special Permit shall be an obligation of the owner of the property and shall be due to the Town upon the sale of each unit as follows:

A sum equal to 3.67% of the adjusted sales price of the property (adjusted sales price is the actual sales price less an exemption deduction of $ 100,000.00) shall be deducted from the net proceeds due the Seller for each of the eight new units and delivered or forwarded to the Town of Brookline in the form of a bank or certified check, payable to the "Brookline Housing Trust", by first-class mail or hand delivery to:

TOWN OF BROOKLINE

DEPARTMENT OF PUBLIC HEALTH

11 Pierce St.

Alan Balsam, Ph.D., MPH
Director of Public Health and Human Services

Asbestos Removal/Encapsulation Permit

PERMIT NO.: **HAS070074**
DATE ISSUED: **06/05/2007**

This certifies that: NEW ENGLAND SURFACE MAINTENACE, LLP

is permitted to **REMOVE/ENCAPSULATE ASBESTOS** at **484 HEATH ST BRKL** in the Town of Brookline, under the Laws of the Commonwealth of Massachusetts, the By-Laws of the Town of Brookline and the Regulations of the Brookline Health Department, from **07/02/2007** to **07/09/2007** unless sooner modified, revoked or suspended.

Should date of removal change, you must contact the Health Department 24 hours in advance (Failure to do so will require re-submission of application and fee).

Any asbestos material remaining on premises, not included in the work plan that is in friable condition, will be subject to a Health Department Order to remove or encapsulate.

Upon completion of all work air sample results & asbestos manifest slip must be submitted to Health Department upon receipt (Glove bag removals do not require air samples).

This permit is not transferable.

Health Inspector

cc: Property Owner

Town of Brookline
Health Department

11 Pierce Street Massachusetts, 02445
(617) 730-2300 fax (617) 730-2296

Alan Balsam, Ph.D, MPH, Director
Public Health and Human Services

RM

ASBESTOS REMOVAL / ENCAPSULATION PLAN

1. Name of building owner/agent: TOWN OF BROOKLINE

   Address: 333 WASHINGTON ST Phone: 617-730-2420

2. Job Location: Brown School 490 HEATH ST (484

3. Contractor: [illegible]
   (Name, Address and Phone Number)
   340 WASHINGTON ST
   [illegible]

4. Sub-Contractor: —
   (Name, Address and Phone Number)

5. Massachusetts Asbestos Contract License Number: A [illegible]

6. On Site Job Supervisor and Massachusetts Certification Number: [illegible]

7. Abatement Activity: Removal-Encapsulation-Enclosure
   (Circle One)

8. Amount and type of Asbestos Material to be Removed, Encapsulated or Enclosed:
   [illegible] LF
   [illegible] SF

9. Start Date: 7-2-07
   Completion Date: 7-9-07
   (Application and required fee to arrive at Brookline Health Department (10) days prior to starting date.)

10. (1) DEP Notification Date: 6/
    (2) EPA Notification Date:
    (3) Labor and Workforce Developement Date: 6/

11. Description of Removal/Disposal Methods to be Employed to Comply with Labor & Industries Regulations 453 CMR 6.14 (2) (g) & DEP Regulations:

[illegible] for containment negative pressure

[illegible] chamber [illegible]

[illegible] of contaminated [illegible] [illegible] [illegible]

[illegible] as necessary

12. Location of Approved Landfill Disposal Site:

Minerva Enterprises

[illegible] Minerva Road

Waynesburg OH 44688

13. Name, Address & Phone Number of Transporting Company: _____

[illegible] 173 [illegible] St Portland CT

14. Emergency Abatement Removal Date: _____
(To be submitted twenty-four (24) hours prior to removal.) (Emergency abatement as provided by 453 CMR Department of Labor & Industry, 6.02).
Reason for Emergency: _____

15. Procedures for Asbestos Removal in Accordance with Department of Labor & Industries 435 CMR 6.00, EPA Regulations, DEQE Regulations 7.00 and NESHAP Regulations.

(1) Persons engaged in asbestos work shall only be assigned to perform those tasks authorized by a valid current certificate.
(2) At least one certified supervisor/foreman shall be assigned to and be present at each asbestos project job site when work is in progress.
(3) All persons engaged in asbestos work should keep their certification identification card at their job site and shall present is upon request.
(4) Warning signs shall be posted at all approaches to the work ares. Signs shall be posted a sufficient distance from the work area to permit a person to read the sign(s) and the precautionary measures to avoid exposure to asbestos.

(5) All movable objects shall be removed from work area.
(6) All non-movable or fixed objects remaining within the work area shall be wrapped or covered with six (6) mil thick plastic sheeting. The covering shall be completely sealed with duct tape or equivalent.
(7) The work area shall be isolated by sealing all openings, including but not limited to windows, doors, ventilation openings, drains, grilles and grates.
(8) Floor and wall surfaces shall be covered with plastic sheeting (polyethylene sheeting).
(9) A three compartment decontamination system to be installed on all asbestos removal; exception 453 CMR 6.14, sec. 6, sec. 7.
(10) Air testing to be performed prior to removal and completion of abatement. In no case shall clearance air monitoring samples be collected by the contractor or an employee of the contractor.
(11) Prior to removal, asbestos material shall be thoroughly wetted to which surfactant has been added.
(12) Removed asbestos material shall not remain in the work area, asbestos shall be contained in double (2) plastic bags (6 mil) minimum thickness each.
(13) Protective clothing and equipment: Personnel protective clothing shall mean full body disposable clothing, including head, body and foot coverings consisting of material impenetrable by asbestos fibers.
(14) Asbestos waste will be transported in closed trucks for disposal at approved landfill location.
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* A $60.00 fee payable to the Town of Brookline must be submitted with this application ($60.00 will be charged for <u>each</u> address, listed at job location.)

* Jobs canceled without informing the Health Department at least 24 hours in advance will be required to submit a new application and fee.

* Jobs starting without prior Health Department approval will be charged <u>TRIPLE</u> the amount indicated.

* Asbestos shingles must also be removed per Brookline Health Department requirements (stricter than State requirements).

490 HEATH ST

Complaint Detail Report

Complaint #:	CT-2016-000976	**Status:**	INTAKE	**GIS #:**	17189	**Violato**	
Address:	490 HEATH ST			**Map:**	432	**Addres**	
Date Recvd.:	Dec-01-2016	**Time Recvd.:**	04:13 PM	**Block:**	20		
Category:	Health - Housing - Certification Inspection			**Lot:**	24	**Type:**	
GeoTMS Module:	Board of Health			**District:**	Fire Station 6	**Trade:**	
Recorded By:	Wendy Machmuller			**Zoning:**	T-6	**Structu**	
Description:	Winthrop House			**Date Resolved.**			
Complaint:	request for certificate inspection						
Comments:							
Inspector Assigned to Complaint:	DANIELLA WODNICKI MPH					**Parer**	

See Chief on how to handle

Contacts

Contact Type	Date	Time	Name	Phone	Best Time To Reach	Record
RESIDENT	Dec-01-2016	4:13 PM	Owen Minott	(617) 739-7647 ()		Wendy

Actions Taken

GeoTMS Module	Status	Date	Time	Response Type	Action Taken
Board of Health	REFERRAL				

@ 10:30 am 12/7/16

12/7: Mailed NSB report to Owen Minott

Closed 12/9/16

GeoTMS® 2016 Des Lauriers Municipal Solutions, Inc.

Pat Maloney

From: Owen Minott <owen_minott@psbma.org>
Sent: Thursday, December 01, 2016 12:26 PM
To: Pat Maloney
Subject: Fwd: WH Health Inspection

Hi Pat:

As part of our annual license recertification, we need to submit to DESE a Health Inspection Certificate. Our address is: Winthrop house, 490 Heath St, MA, 02467.
My direct phone line is 617-879-4720. Thanks so much for your help with this. Please confirm that this e-mail came through.
Best, Owen

--
Owen Minott
Winthrop House Coordinator
617-879-4732

--
Owen Minott
Winthrop House Coordinator
617-739-7647

BROOKLINE HEALTH DEPARTMENT 11 Pierce Street Telephone 617-730-2306
Brookline, Massachusetts 02145

HOUSING INSPECTION REPORT

ADDRESS OF PREMISES 490 Heath ST.
Number Street Apartment Number

OCCUPANT _____ TELEPHONE: _____
Last Name First Middle I.
02467

OWNER The Winthrop House TELEPHONE: 617-739-7647
Last Name First Middle I. Owen Minot

OWNER'S ADDRESS _____
Number Street City

INSPECTION REQUESTED BY _____ DATE: _____

DATE OF INSPECTION: MO. 10 DAY 7 YEAR 08 HOUR 11 am

ROOM(S)/VIOLATIONS REG. NO.

OK New Bathrooms, hot water temp 120°F

Dumpster OK

Glass Arms OK

NO visible evidence of Asbestos materials

_____ (INITIAL) One or more of the violations cited above is a condition which may materially impair the health, safety or well-being of the occupant(s) as determined by Regulation 29.2 of the the State Sanitary Code or the authorized inspector.

SIGNED UNDER PAINS AND PENALTIES OF PERJURY:
INSPECTOR _____ APPROXIMATE DATE & TIME OF REINSPECTION _____

Town of Brookline
Health Department

11 Pierce Street Massachusetts, 02445
(617) 730-2300 fax (617) 730-2296

Alan Balsam, Ph.D, MPH, Director
Public Health and Human Services

RM

ASBESTOS REMOVAL / ENCAPSULATION PLAN

1. Name of building owner/agent: TOWN OF BROOKLINE

   Address: 333 WASHINGTON ST Phone: 617-730-2420

2. Job Location: Brown School 490 HEATH ST (484

3. Contractor: [illegible]
   (Name, Address and Phone Number)
   340 WASHINGTON ST
   [illegible]

4. Sub-Contractor: —
   (Name, Address and Phone Number)

5. Massachusetts Asbestos Contract License Number: A [illegible]

6. On Site Job Supervisor and Massachusetts Certification Number: [illegible]

7. Abatement Activity: Removal-Encapsulation-Enclosure
   (Circle One)

8. Amount and type of Asbestos Material to be Removed, Encapsulated or Enclosed:
   [illegible] LF
   [illegible] SF

9. Start Date: 7-2-07
   Completion Date: 7-9-07
   (Application and required fee to arrive at Brookline Health Department (10) days prior to starting date.)

10. (1) DEP Notification Date: 6/
    (2) EPA Notification Date:
    (3) Labor and Workforce Developement Date: 6/

(5) All movable objects shall be removed from work area.
(6) All non-movable or fixed objects remaining within the work area shall be wrapped or covered with six (6) mil thick plastic sheeting. The covering shall be completely sealed with duct tape or equivalent.
(7) The work area shall be isolated by sealing all openings, including but not limited to windows, doors, ventilation openings, drains, grilles and grates.
(8) Floor and wall surfaces shall be covered with plastic sheeting (polyethylene sheeting).
(9) A three compartment decontamination system to be installed on all asbestos removal; exception 453 CMR 6.14, sec. 6, sec. 7.
(10) Air testing to be performed prior to removal and completion of abatement. In no case shall clearance air monitoring samples be collected by the contractor or an employee of the contractor.
(11) Prior to removal, asbestos material shall be thoroughly wetted to which surfactant has been added.
(12) Removed asbestos material shall not remain in the work area, asbestos shall be contained in double (2) plastic bags (6 mil) minimum thickness each.
(13) Protective clothing and equipment: Personnel protective clothing shall mean full body disposable clothing, including head, body and foot coverings consisting of material impenetrable by asbestos fibers.
(14) Asbestos waste will be transported in closed trucks for disposal at approved landfill location.
(15) Negative air pressure will be continuously maintained during asbestos removal by use of HEPA filtration units.
(16) A complete cleanup of the work area will be performed using the wet wipe method along with HEPA vacuums.

* A $60.00 fee payable to the Town of Brookline must be submitted with this application ($60.00 will be charged for <u>each</u> address, listed at job location.)

* Jobs canceled without informing the Health Department at least 24 hours in advance will be required to submit a new application and fee.

* Jobs starting without prior Health Department approval will be charged <u>TRIPLE</u> the amount indicated.

* Asbestos shingles must also be removed per Brookline Health Department requirements (stricter than State requirements).

Commonwealth Of Massachusetts

Town of Brookline

Map:	Block:	Lot:
432	08	00

In Accordance With The Massachusetts State Building Code, Section 110, This

CERTIFICATE OF INSPECTION

is issued to CHARLES SIMMONS

I Certify that I have Inspected the 903 DAY CARE CENTER *known as* SOULE EARLY CHILDHOOD C

located at 652 HAMMOND ST, Fire Station 4 *in the* Town of Brookline

The Means Of Egress Are Sufficient For The Following Number Of Persons:

BY STORY

Story	Capacity	Story	Capacity
DAY CARE FACILITY E/I-4			

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
DAYCARE >2YRS 9MOS	23	2ND FL	DAYCARE >2YRS 9MOS	40	1ST FL
DAYCARE <2YRS 9MOS	11	1ST FL			

CI-2015-0262	09/01/2015	08/31/2016	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Daniel F. Bennett*

*** A COPY OF THIS CERTIFICATE MUST BE POSTED IN CLEAR VIEW NEAR ALL ENTRANCES ***

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE: July 1, 2015

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION 625 Hammond Street

NAME OF PREMISES Soule Recreation Center

CERTIFICATE TO BE ISSUED TO Charles Simmons, Director of Public Buildings

ADDRESS 333 Washington Street, Town Hall, Brookline MA 02445

OWNER OF RECORD OF BUILDING The Town of Brookline TELEPHONE # 617-730-2420

ADDRESS Town Hall, 333 Washington Street, Brookline, MA 02445

NAME OF PRESENT HOLDER OF CERTIFICATE Town of Brookline

NAME OF AGENT, IF ANY TELEPHONE #

SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR AUTHORIZED AGENT

Charles A. Simmons
Director of Public Buildings

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE. RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MA 02446.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE: X RECEIPT: X CERTIFICATE # 2015-0262 ISSUED: 9.1.15

7/16/15

Commonwealth Of Massachusetts

Town of Brookline

Map:	Block:	Lot:
432	08	00

In Accordance With The Massachusetts State Building Code, Section 110, This

CERTIFICATE OF INSPECTION

is issued to **CHARLES SIMMONS**

I Certify that I have Inspected the **27 R-7 GYMNASIUM** *known as* **SOULE GYM**

located at **652 HAMMOND ST, Fire Station 4** *in the* **Town of Brookline**

The Means Of Egress Are Sufficient For The Following Number Of Persons:

BY STORY

Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
GYMNASIUM	200	1ST FLOOR			

CI-2014-0171	09/12/2014	08/31/2015	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Daniel F. Bennett*

*** A COPY OF THIS CERTIFICATE MUST BE POSTED IN CLEAR VIEW NEAR ALL ENTRANCES ***

TOWN of BROOKLINE

Massachusetts

BUILDING DEPARTMENT

Daniel F. Bennett
Building Commissioner

APPLICATION FOR CERTIFICATE OF INSPECTION

(Places of Assembly-Schools-Daycare-Camps-Religious Bldgs.-similar uses)

Date: 3/21/14 Use Group:

IN ACCORDANCE WITH THE PROVISION OF 780 CMR, TABLE 110 THE MASSACHUSETTS STATE BUILDING CODE, 8TH EDITION, AS AMENDED, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES AT THE FOLLOWING ADDRESS:

NAME OF PREMISES/BUSINESS: Soule Gym

USE OF PREMISES/BUSINESS:

ADDRESS OF PREMISES/BUSINESS: 652 ~~436~~ Hammond Street

SEATING CAPACITY / S.F. AREA:

CERTIFICATE TO BE ISSUED TO: Annual Inspection PHONE:

SIGNATURE OF APPLICANT:

PRINT NAME: Charlie Simmons

CERTIFICATE MAILING ADDRESS:

OWNER OF PREMISES/BUILDING: Town of Brookline PHONE: X2420

OWNER ADDRESS:

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER STATE/GOVERNMENT AGENCIES:

INSTRUCTIONS: 9-13-14 JK

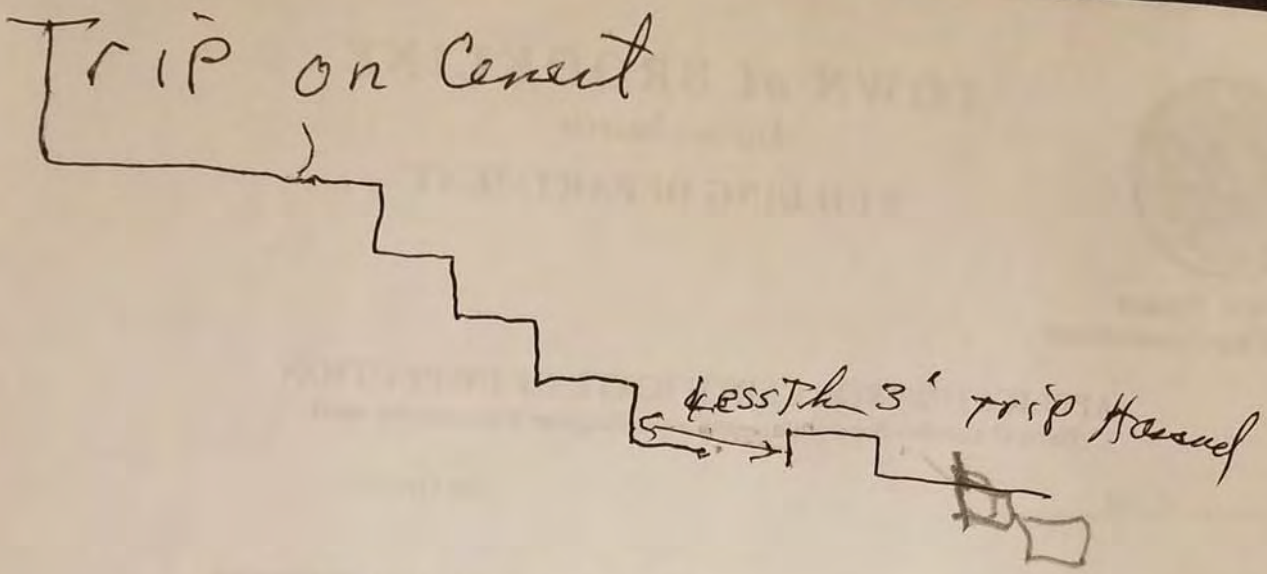
- Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified. Application and fee must be received prior to the issuance of the certificate
- Submit copies of Annual Fire Alarm and Sprinkler Test Reports.
- All exit signs and emergency lights should be tested to verify they are in good working order. Malfunctioning devices must be repaired immediately. Mechanical & Boiler Rooms should be cleaned and free of debris & combustibles.
- Failure to complete application with required documentation, pay fee and return to the Building Department may result in suspension of licenses and/or enforcement action by the Town of Brookline.
- Return completed application with fee to Brookline Building Department, 333 Washington Street, Brookline, MA 02445

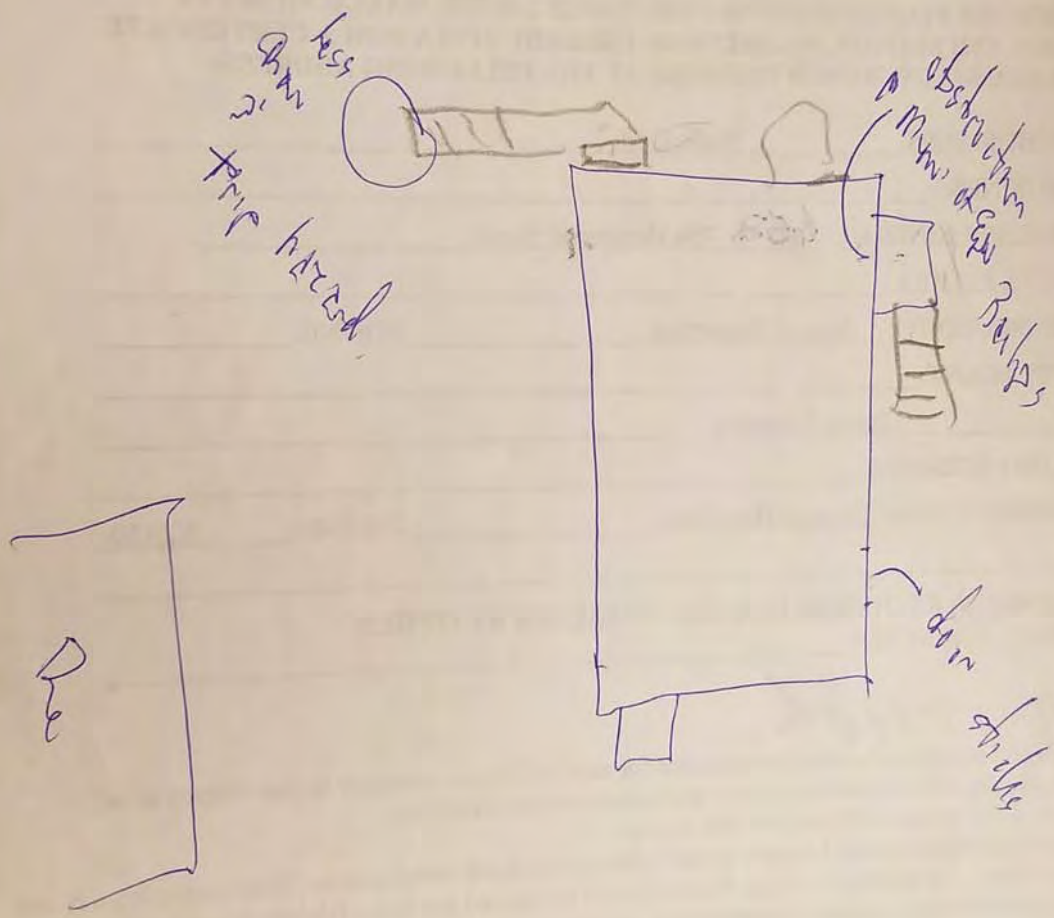
Emergency lights out 3 Door Stuck Hand to open, Clear Debris at express Door on side, Deck needs Rails and Repair on side

Fee	Check No.	Certificate No.	Issued Date	Expiration Date	Approved By
$100 Waived		2014-0171	9.12.14	8.31.15	

Ceiling Leaking / exit sign out, Bottom of Fire Ex

333 Washington Street, Brookline, Massachusetts 02445
Tel: (617) 730-2100 Fax: (617) 739-7542


Trip on Cement
Less than 3' trip Hazard


less than 3' trip hazard
obstruction
Min. of Exp Bulbs
door sticks
Re

Commonwealth Of Massachusetts

Town of Brookline

Map:	Block:	Lot:
432	08	00

In Accordance With The Massachusetts State Building Code, Section 110, This

CERTIFICATE OF INSPECTION

is issued to LISA PARADIS

I Certify that I have Inspected the 903 DAY CARE CENTER *known as* SOULE EARLY CHILDHOOD C

located at 652 HAMMOND ST, Fire Station 4 *in the* Town of Brookline

The Means Of Egress Are Sufficient For The Following Number Of Persons:

BY STORY

Story	Capacity	Story	Capacity
DAY CARE FACILITY E/I-4			

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
DAYCARE >2YRS 9MOS	23	2ND FL	DAYCARE >2YRS 9MOS	40	1ST FL
DAYCARE <2YRS 9MOS	11	1ST FL			

CI-2014-0173	09/12/2014	08/31/2015	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Daniel F. Bennett*

*** A COPY OF THIS CERTIFICATE MUST BE POSTED IN CLEAR VIEW NEAR ALL ENTRANCES ***

TOWN of BROOKLINE

Massachusetts

BUILDING DEPARTMENT

Daniel F. Bennett
Building Commissioner

APPLICATION FOR CERTIFICATE OF INSPECTION

(Places of Assembly-Schools-Daycare-Camps-Religious Bldgs.-similar uses)

Use Group: E | I-4

Date: 3/21/14

IN ACCORDANCE WITH THE PROVISION OF 780 CMR, TABLE 110 THE MASSACHUSETTS STATE BUILDING CODE, 8TH EDITION, AS AMENDED, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES AT THE FOLLOWING ADDRESS:

NAME OF PREMISES/BUSINESS: Soule Recreation

USE OF PREMISES/BUSINESS: ~~65~~

ADDRESS OF PREMISES/BUSINESS: 652 Hammond Street

SEATING CAPACITY / S.F. AREA:

CERTIFICATE TO BE ISSUED TO: Annual Inspection PHONE:

SIGNATURE OF APPLICANT:

PRINT NAME: Charlie Simmons

CERTIFICATE MAILING ADDRESS:

OWNER OF PREMISES/BUILDING: Town of Brookline PHONE: X2420

OWNER ADDRESS:

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER STATE/GOVERNMENT AGENCIES:

INSTRUCTIONS: JK JK

- Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified. Application and fee must be received prior to the issuance of the certificate
- Submit copies of Annual Fire Alarm and Sprinkler Test Reports.
- All exit signs and emergency lights should be tested to verify they are in good working order. Malfunctioning devices must be repaired immediately. Mechanical & Boiler Rooms should be cleaned and free of debris & combustibles.
- Failure to complete application with required documentation, pay fee and return to the Building Department may result in suspension of licenses and/or enforcement action by the Town of Brookline.
- Return completed application with fee to Brookline Building Department, 333 Washington Street, Brookline, MA 02445

~~Emergency Light out 652~~
~~652 Hammond Emergency Light out Wood Rails on Handicap Road Need Poly, Fire Grill on Set~~

Fee	Check No.	Certificate No.	Issued Date	Expiration Date	Approved By
$100 Waived		2014-0173	9/12/14	9/31/15	JK

9-12-14
JK

333 Washington Street, Brookline, Massachusetts 02445
Tel: (617) 730-2100 Fax: (617) 739-7542

MASSACHUSETTS UNIFORM APPLICATION FOR A PERMIT TO PERFORM PLUMBING WORK

P

TYPE OR PRINT CLEARLY

CITY: BROOKLINE MA DATE: 6·23·15 PERMIT #: PP-2015-0751

JOBSITE ADDRESS: ~~625~~ 637 HAMMOND ST. OWNER'S NAME: BROOKLINE

OWNER ADDRESS: 333 WASHINGTON ST. TEL: 617·730·2420 FAX: 730·2187

OCCUPANCY TYPE: COMMERCIAL ☐ EDUCATIONAL ☒ RESIDENTIAL ☐ PLANS SUBMITTED: YES ☐ NO ☒

NEW: ☐ RENOVATION: ☒ REPLACEMENT: ☐

FIXTURES ↴ FLOOR→	BSM	1	2	3	4	5	6	7	8	9	10	11	12	13	14
BATHTUB															
CROSS CONNECTION DEVICE															
DEDICATED SPECIAL WASTE SYSTEM															
DEDICATED GAS/OIL/SAND SYSTEM															
DEDICATED GREASE SYSTEM															
DEDICATED GRAY WATER SYSTEM															
DEDICATED WATER RECYCLE SYSTEM															
DISHWASHER															
DRINKING FOUNTAIN															
FOOD DISPOSER															
FLOOR / AREA DRAIN															
INTERCEPTOR (INTERIOR)															
KITCHEN SINK															
LAVATORY			1												
ROOF DRAIN															
SHOWER STALL															
SERVICE / MOP SINK															
TOILET			1												
URINAL															
WASHING MACHINE CONNECTION															
WATER HEATER ALL TYPES															
WATER PIPING															
OTHER															

INSURANCE COVERAGE:

I have a current liability insurance policy or its substantial equivalent which meets the requirements of MGL Ch. 142. YES ☑ NO ☐

IF YOU CHECKED YES, PLEASE INDICATE THE TYPE OF COVERAGE BY CHECKING THE APPROPRIATE BOX BELOW

LIABILITY INSURANCE POLICY ☑ OTHER TYPE OF INDEMNITY ☐ BOND ☐

OWNER'S INSURANCE WAIVER: I am aware that the licensee does not have the insurance coverage required by Chapter 142 of the Massachusetts General Laws, and that my signature on this permit application waives this requirement.

SIGNATURE OF OWNER OR AGENT — CHECK ONE ONLY: OWNER ☐ AGENT ☐

I hereby certify that all of the details and information I have submitted or entered regarding this application are true and accurate to the best of my knowledge and that all plumbing work and installations performed under the permit issued for this application will be in compliance with all Pertinent provision of the Massachusetts State Plumbing Code and Chapter 142 of the General Laws.

PLUMBER'S NAME: William M. Gillespie LICENSE #: 10865 — SIGNATURE

MP ☑ JP ☐ CORPORATION ☑ # 2531 C PARTNERSHIP ☐ # LLC ☐ #

COMPANY NAME: Robert W. Irvine & Sons Inc. ADDRESS: 147 Blossom Street

CITY: Lynn STATE: MA ZIP: 01902 TEL: 781-581-0464

FAX: 781-581-2860 CELL: EMAIL: bgillespie@irvineandsons.com

BP-2015-1004

RECEIVED
2015 JUN 24 PM 4:08
TOWN OF BROOKLINE

Town of Brookline Building Department
333 Washington Street Brookline, Massachusetts 02445
617.730.2100

Building Permit Application
PLEASE PRINT LEGIBLY

Job Address: 652 ~~625~~ Hammond St. Soule Rec. Center Submittal Date: 6/24/15
Existing Use: Educational Proposed Use: same
Description of work: Partitions for unisex bathrm 2nd Fl

Total Estimated Value of Work: $5000 Permit Fee: 0
Structure: Plumb: Wire: HVAC:
* Subject to Final Cost Affidavit*

Property Owner: Town of Brookline Are you a Lessee?
Address: 333 Hammond St Phone №: 617 730-2420
Brookline, Ma Zip Code: Email:

Construction Supervisor: Thomas Cooney Cell №: 617 640-0410
Address: 621 E. Second St Phone №: 617 269-4077
South Boston, Ma Zip Code: 02127 Email: 617 269-4776
CSL №: CS 067352 Type: unrestricted Expiration: 12/29/15
H.I.C. Reg.№: 109219 Expiration: 9/4/16

Architect/Engineer: NA Cell №:
Address: Phone №:
Zip Code: Email:

Debris Disposal Facility as approved by Brookline DPW:
DIGSAFE Case № NA

"By signing this application I do hereby certify that I am the owner of record of the above captioned property and I have authorized the work described in this application. I hereby authorize the people named in this application to act as my agents in matters concerning this described work. I hereby certify under the pains and penalties of perjury that all statements made herein are true and accurate."

Property Owner's Signature: **Date:**
Property Owner's Name **(please print)**

Agent/Const. Super. Signature: Tom Cooney **Date:** 6/24/15
Agent/Const. Super. Name **(please print)** Tom Cooney

Building Department Use Only:

Permit Fee: Town Job: N/A

Zoning District: F.A.R.: Complies?

Construction Type: Use Code:

ZBA Case №: Historic District: Flood Zone:

Existing Setbacks:	Front:	Side L:	Side R:	Rear:
Proposed Setbacks:	Front:	Side L:	Side R:	Rear:
Required Setbacks:	Front:	Side L:	Side R:	Rear:

Departmental Approvals (if required)

Fire Dept.:	Date:
Wire Dept.:	Date:
Plumbing Dept.:	Date:
DPW/Engineering:	Date:
Conservation Commission:	Date:
Water/Sewer:	Date:
Health:	Date:
Planning:	Date:
Historic Preservation:	Date:

TYPE OF IMPROVEMENT:
- New Building
- Addition
- Alteration
- Repair, Replacement
- Demolition
- Swimming Pool
- Sign
- Kitchen
- Bath
- Roofing/Siding
- Other (specify)

PROPOSED USE:
- Single Family
- Multi-Family

№ of Units
- Hotel, Motel, Dorm.

№ of Units:
- Garage
- Porch, Deck
- Accessory Building
- Recreation
- Other (specify)

NON-RESIDENTIAL USE:
- Amusement, Recreation
- Temple, Church, Religious
- Industrial
- Theater, Assembly
- Service Station, Repair Garage
- Hospital, Institutional
- Office, Bank, Professional
- Restaurant
- Library, Other Educational
- Stores, Mercantile
- Other (specify)

Approval/Denial by: **Date:** 6/30/15 **Permit №** BP-2015-1004

AFFIDAVIT OF A HOMEOWNER FOR CONSTRUCTION SUPERVISOR LICENSE EXEMPTION PLEASE READ BEFORE SIGNING

A **'Homeowner'** may obtain a building permit without having a construction supervisor's license if they qualify for the license exemption in the 8th Edition of the Massachusetts State Building Code 780 CMR Licensing of Construction Supervisors.

The **'Homeowner'** must supervise anyone they hire to perform the work described in the permit.

This exemption does **not** apply to the field erection of manufactured buildings.

A **'Homeowner'** is defined as: Person(s) who owns a parcel of land on which he or she resides or intends to reside, on which there is, or is intended to be, a one- or two-family dwelling, attached or detached structures accessory to such use and/or farm structures. A person who constructs more than one home in a two-year period shall **not** be considered a homeowner.

I hereby certify that I am a **'Homeowner'** according to the above definition and I will assume full responsibility for the work described in the attached building permit. I will assure conformance o the applicable sections of the Massachusetts State Building Code, Town of Brookline Zoning By-laws, and any other applicable law, rule, or regulation. **I UNDERSTAND THAT I MAY BE HELD LIABLE FOR ANY VIOLATIONS OF THE LAW, DEFECTS IN WORKMANSHIP, AND ANY ACCIDENTS OR INJURIES THAT MAY OCCUR IN THE COURSE OF THIS PROJECT.**

Signed under the pains and penalties of perjury this ___ day of _____ 20 ___.

_____

Homeowner

EXEMPTION FROM HOME IMPROVEMENT CONTRACTOR REGISTRATION FOR PERSONS OBTAINING BUILDING PERMIT AS A HOMEOWNER

MGL c. 142A requires that the "reconstruction, alteration, renovation, repair, modernization, conversion, improvement, removal, demolition, or construction of an addition to any pre-existing owner-occupied building containing at least one but not more than four dwelling units…" be done by registered contractors, with certain exceptions, along with other requirements.

A 'Homeowner' as defined above, is exempt from registration as a Home Improvement Contractor as described in MGL c. 142A.

HOMEOWNERS OBTAINING THEIR OWN BUILDING PERMIT OR ENGAGING UNREGISTERED CONTRACTORS TO PERFORM APPLICABLE HOME IMPROVEMENT WORK DO NOT HAVE ACCESS TO THE ARBITRATION PROGRAM OR GUARANTY FUND AS FOR PROVIDED UNDER MGL c. 142 A.

I have read the above statements and understand that I have waived my right to arbitration and access to the Guaranty Fund as provided for under MGL c. 142A by obtaining the attached permit as a 'Homeowner', as defined above.

Homeowner Signature: **Date:**

Building Department Use Only:

Permit Fee: Town Job: N/C

Zoning District: F.A.R.: Complies?

Construction Type: Use Code:

ZBA Case №: Historic District: Flood Zone:

Existing Setbacks:	Front:	Side L:	Side R:	Rear:
Proposed Setbacks:	Front:	Side L:	Side R:	Rear:
Required Setbacks:	Front:	Side L:	Side R:	Rear:

Departmental Approvals (if required)

Fire Dept.:	Date:
Wire Dept.:	Date:
Plumbing Dept.:	Date:
DPW/Engineering:	Date:
Conservation Commission:	Date:
Water/Sewer:	Date:
Health:	Date:
Planning:	Date:
Historic Preservation:	Date:

TYPE OF IMPROVEMENT:
- ___ New Building
- ___ Addition
- ___ Alteration
- ___ Repair, Replacement
- ___ Demolition
- ___ Swimming Pool
- ___ Sign
- ___ Kitchen
- ___ Bath
- ___ Roofing/Siding
- ___ Other (specify)

PROPOSED USE:
- ___ Single Family
- ___ Multi-Family
- № of Units ___
- ___ Hotel, Motel, Dorm.
- № of Units: ___
- ___ Garage
- ___ Porch, Deck
- ___ Accessory Building
- ___ Recreation
- ___ Other (specify)

NON-RESIDENTIAL USE:
- ___ Amusement, Recreation
- ___ Temple, Church, Religious
- ___ Industrial
- ___ Theater, Assembly
- ___ Service Station, Repair Garage
- ___ Hospital, Institutional
- ___ Office, Bank, Professional
- ___ Restaurant
- ___ Library, Other Educational
- ___ Stores, Mercantile
- ___ Other (specify)

Approval/Denial by: **Date:** 6/30/15 **Permit №** BP-2015-1004

AFFIDAVIT OF A HOMEOWNER FOR CONSTRUCTION SUPERVISOR LICENSE EXEMPTION PLEASE READ BEFORE SIGNING

A **'Homeowner'** may obtain a building permit without having a construction supervisor's license if they qualify for the license exemption in the 8th Edition of the Massachusetts State Building Code 780 CMR Licensing of Construction Supervisors.

The **'Homeowner'** must supervise anyone they hire to perform the work described in the permit.

This exemption does **not** apply to the field erection of manufactured buildings.

A **'Homeowner'** is defined as: Person(s) who owns a parcel of land on which he or she resides or intends to reside, on which there is, or is intended to be, a one- or two-family dwelling, attached or detached structures accessory to such use and/or farm structures. A person who constructs more than one home in a two-year period shall **not** be considered a homeowner.

I hereby certify that I am a **'Homeowner'** according to the above definition and I will assume full responsibility for the work described in the attached building permit. I will assure conformance o the applicable sections of the Massachusetts State Building Code, Town of Brookline Zoning By-laws, and any other applicable law, rule, or regulation. **I UNDERSTAND THAT I MAY BE HELD LIABLE FOR ANY VIOLATIONS OF THE LAW, DEFECTS IN WORKMANSHIP, AND ANY ACCIDENTS OR INJURIES THAT MAY OCCUR IN THE COURSE OF THIS PROJECT.**

Signed under the pains and penalties of perjury this ___ day of _____ 20 ___.

_____

Homeowner

EXEMPTION FROM HOME IMPROVEMENT CONTRACTOR REGISTRATION FOR PERSONS OBTAINING BUILDING PERMIT AS A HOMEOWNER

MGL c. 142A requires that the "reconstruction, alteration, renovation, repair, modernization, conversion, improvement, removal, demolition, or construction of an addition to any pre-existing owner-occupied building containing at least one but not more than four dwelling units…" be done by registered contractors, with certain exceptions, along with other requirements.

A 'Homeowner' as defined above, is exempt from registration as a Home Improvement Contractor as described in MGL c. 142A.

HOMEOWNERS OBTAINING THEIR OWN BUILDING PERMIT OR ENGAGING UNREGISTERED CONTRACTORS TO PERFORM APPLICABLE HOME IMPROVEMENT WORK DO NOT HAVE ACCESS TO THE ARBITRATION PROGRAM OR GUARANTY FUND AS FOR PROVIDED UNDER MGL c. 142 A.

I have read the above statements and understand that I have waived my right to arbitration and access to the Guaranty Fund as provided for under MGL c. 142A by obtaining the attached permit as a 'Homeowner', as defined above.

Homeowner Signature: _____ **Date:** _____

Commonwealth Of Massachusetts
Town of Brookline

Map:	Block:	Lot:
432	08	00

In Accordance With The Massachusetts State Building Code, Section 110, This

CERTIFICATE OF INSPECTION

is issued to **CHARLES SIMMONS**

I Certify that I have Inspected the **27 R-7 GYMNASIUM** known as **SOULE GYM**

located at **652 HAMMOND ST, Fire Station 4** in the **Town of Brookline**

The Means Of Egress Are Sufficient For The Following Number Of Persons:

BY STORY

Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
GYMNASIUM	200	1ST FLOOR			

CI-2013-0325	09/24/2013	08/31/2014	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Daniel F. Bennett*

*** A COPY OF THIS CERTIFICATE MUST BE POSTED IN CLEAR VIEW NEAR ALL ENTRANCES ***

FMD

TOWN OF BROOKLINE
Massachusetts
BUILDING DEPARTMENT

Daniel F. Bennett
Building Commissioner

APPLICATION FOR CERTIFICATE OF INSPECTION

Date: 7/24/13

Use Group Description: A-3

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 110.0, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS

LOCATION: 652 ~~436~~ Hammond St.

USE OF PREMISES: Soule Gym

NAME OF PREMISE:

CERTIFICATE TO BE ISSUED TO: Bldg Dept- TELEPHONE:

SIGNATURE OF APPLICANT:

ADDRESS CERTIFICATE IS TO BE MAILED:

OWNER OF BUILDING: TELEPHONE:

ADDRESS: Emergency Light + exit sign out

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER STATE/GOVERNMENT AGENCIES Install Bollston on side deck + stairs

9-13-13 JK

INSTRUCTIONS:

- Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified.
- Application and fee must be received prior to the issuance of the certificate.
- Failure to complete application, pay fee and return to the Building Department may result in suspension of other licenses and/or enforcement action by the Town of Brookline.
- Return completed application with fee to Brookline Building Department, 333 Washington Street, Brookline, MA 02445

$100	waived	2013-0325	9/24/13	
Fee Amount	Check #	Certificate #	Issued date	Approval by

DKO
12/24/13
BP-2013

Town of Brookline Building Department
333 Washington Street Brookline, Massachusetts 02445
617.730.2100

Building Permit Application
PLEASE PRINT LEGIBLY

TOWN JOB

Job Address: Soule Gym 652 Hammond Street Submittal Date: 12/23/13
Existing Use: Proposed Use:

Description of work: ADD R-38 KRAFT FACED FIBERGLASS BATTS TO THE TOP OF THE EXISTING DROPPED TILE CEILING.

Total Estimated Value of Work: $8,772 Permit Fee: $0
Structure: Plumb: Wire: HVAC:
* Subject to Final Cost Affidavit*

Property Owner: THE TOWN OF BROOKLINE Are you a Lessee?
Address: 333 WASHINGTON ST. BROOKLINE Phone №:
Zip Code: Email:

Construction Supervisor: STEPHEN HINES Cell №: 401-465-5337
Address: 222 NARRAGANSETT AVE Phone №: 401-784-3700
JAMESTOWN, RI Zip Code: 02835 Email: SHINES@THIELSCH.COM
CSL №: 102935 Type: UNRESTRICTED Expiration: 6-23-15
H.I.C. Reg.№: Expiration:

Architect/Engineer: Cell №:
Address: Phone №:
Zip Code: Email:

Debris Disposal Facility as approved by Brookline DPW: RI RESOURCE RECOVERY CENTER 62 SHUN PIKE, JOHNSTON, RI
DIGSAFE Case №

"By signing this application I do hereby certify that I am the owner of record of the above captioned property and I have authorized the work described in this application. I hereby authorize the people named in this application to act as my agents in matters concerning this described work. I hereby certify under the pains and penalties of perjury that all statements made herein are true and accurate."

Property Owner's Signature: **Date:**
Property Owner's Name (please print)

Agent/Const. Super. Signature: **Date:** 12/23/13
Agent/Const. Super. Name (please print)

Building Department Use Only:

Permit Fee: 0 Town Job:

Zoning District: F.A.R.: Complies?

Construction Type: Use Code:

ZBA Case №: Historic District: Flood Zone:

Existing Setbacks:	Front:	Side L:	Side R:	Rear:
Proposed Setbacks:	Front:	Side L:	Side R:	Rear:
Required Setbacks:	Front:	Side L:	Side R:	Rear:

Departmental Approvals (if required)

Fire Dept.:	Date:
Wire Dept.:	Date:
Plumbing Dept.:	Date:
DPW/Engineering:	Date:
Conservation Commission:	Date:
Water/Sewer:	Date:
Health:	Date:
Planning:	Date:
Historic Preservation:	Date:

TYPE OF IMPROVEMENT:
- New Building
- Addition
- Alteration
- Repair, Replacement
- Demolition
- Swimming Pool
- Sign
- Kitchen
- Bath
- Roofing/Siding
- Other (specify)

PROPOSED USE:
- Single Family
- Multi-Family

№ of Units
- Hotel, Motel, Dorm.

№ of Units:
- Garage
- Porch, Deck
- Accessory Building
- Recreation
- Other (specify)

NON-RESIDENTIAL USE:
- Amusement, Recreation
- Temple, Church, Religious
- Industrial
- Theater, Assembly
- Service Station, Repair Garage
- Hospital, Institutional
- Office, Bank, Professional
- Restaurant
- Library, Other Educational
- Stores, Mercantile
- Other (specify)

Insulation

TOW JOB

Approval/Denial by: JK Date: 12-23-13 Permit №: BP-2073

654 HAMMOND ST BP-2013-2073

GIS #:	17177
Map:	432
Block:	08
Lot:	00
Category:	1insulation
Permit #	BP-2013-2073
Project #	JS-2013-005279
Est. Cost:	$8,772.00
Fee Charged:	$0.00
Balance Due:	$.00
Const. Class:	
Use Group:	
Lot Size(sq. ft.):	418625
Zoning:	S25
Units Gained:	
Units Lost:	
Dig Safe #:	

COMMONWEALTH OF MASSACHUSETTS
TOWN OF BROOKLINE

BUILDING PERMIT

PERMISSION IS HEREBY GRANTED TO:

Contractor: HINES, STEPHEN M *License:* *Expires:*

Owner: TOWN OF BROOKLINE SOULE RECREATION CENTER

Applicant: HINES, STEPHEN M

AT: 654 HAMMOND ST

ISSUED ON: 23-Dec-2013 *AMENDED ON:* *EXPIRES ON:*

TO PERFORM THE FOLLOWING WORK:

ADD INSULATION ON TOP OF CEILING

POST THIS CARD SO IT IS VISIBLE FROM THE STREET

Electric	Gas	Plumbing	Building
Underground:	Underground:	Underground:	Excavation:
Service:	Meter:		Footings:
Rough:	Rough:	Rough:	Foundation:
Final:	Final:	Final:	Rough Frame:
			Fireplace/Chimney:
D.P.W.	**Fire**	**Health**	Insulation:
Meter:	Oil:		Final:
House #	Smoke:		Treasury:
Water:	Alarm:	**Assessor**	
Sewer:	Sprinklers:	Final:	

THIS PERMIT MAY BE REVOKED BY THE TOWN OF BROOKLINE UPON VIOLATION OF ANY OF ITS RULES AND REGULATIONS.

MGL CH 142A HOME IMPROVEMENT CONTRACTOR REGISTRATION. PERSONS CONTRACTING WITH UNREGISTERED CONTRACTORS DO NOT HAVE ACCESS TO THE GUARANTY FUND IN THE EVENT OF A DISPUTE.

Signature: 12/26/13

JAMES KIRBY
Local Building Inspector
Tel (617) 730-2094
Fax (617) 739-7542
JKIRBY@BROOKLINEMA.GOV

333 Washington Street
Brookline, MA 02445
www.brookline.gov

Office Hours
Mon-Thurs 8:00am - 10:00am
4:00pm - 5:00pm
Friday 8:00am - 9:30am
12:00pm - 12:30pm

33 WASHINGTON ST, Phone:(617) 730-2100

GeoTMS® 2013 Des Lauriers Municipal Systems

Massachusetts - Department of Public Safety
Board of Building Regulations and Standards

Construction Supervisor

License: CS-102935

STEPHEN M HINES
222 NARRAGANSETT AVENUE
Jamestown RI 02835

Commissioner

Expiration
06/23/2015

Client#: 73967 THIELENG2

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/22/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Starkweather & Shepley PO Box 549 Providence, RI 02901-0549 401 435-3600	CONTACT NAME: Susan Wilson PHONE (A/C, No, Ext): 401-886-1822 FAX (A/C, No): 401-431-9674 E-MAIL ADDRESS: swilson@prestonagency.com
INSURED Thielsch Engineering, Inc. Attn: Trent Theroux 195 Frances Avenue Cranston, RI 02910	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A: Zurich American Cos — 16535 INSURER B: Twin City Fire - Hartford — 19682 INSURER C: North American Capacity Insuran — 25038 INSURER D: American Guarantee & Liability INSURER E: INSURER F:

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY			373096203	01/01/2013	01/01/2014	EACH OCCURRENCE	$1,000,000
	X COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$300,000
	CLAIMS-MADE X OCCUR						MED EXP (Any one person)	$5,000
							PERSONAL & ADV INJURY	$1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$2,000,000
	POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$2,000,000
								$
A	AUTOMOBILE LIABILITY			373096303	01/01/2013	01/01/2014	COMBINED SINGLE LIMIT (Ea accident)	$2,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS / X NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
D	UMBRELLA LIAB / OCCUR			AUC485718802	01/01/2013	01/01/2014	EACH OCCURRENCE	$10,000,000
	EXCESS LIAB / CLAIMS-MADE						AGGREGATE	$10,000,000
	DED RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N			373096103	01/01/2013	01/01/2014	X WC STATU-TORY LIMITS / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N	N/A					E.L. EACH ACCIDENT	$1,000,000
	(Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$1,000,000
							E.L. DISEASE - POLICY LIMIT	$1,000,000
B	Leased/Rented			02UUNHE6930	01/01/2013	01/01/2014	Equipment $200,000	
C	Professional Liab			PPL10003848100	01/01/2013	01/01/2014	$2,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

(See Attached Descriptions)

CERTIFICATE HOLDER

SAMPLE

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Donna M. Canario

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PRSEW

DESCRIPTIONS (Continued from Page 1)

Supplemental Named Insureds*
Thielsch Group, Inc.
Hi Tech Realty, Inc.
RISE Engineering, a division of Thielsch Engineering, Inc.
Gaskell Associates, a division of Thielsch Engineering, Inc.
BAL Laboratory, a division of Thielsch Engineering, Inc.
ESS Laboratory, a division of Thielsch Engineering, Inc.
ALCO Engineering, a division of Thielsch Engineering, Inc.
Water Management Services, a division of Thielsch Engineering, Inc.

COPY

14206332 TOWN BROOKLINE BLDG. DEPT. SERVICE ORDER FY2014

VENDOR	NUMB
ARA Fire Protec	26181
Ace Plate Glass	40761
Arrell Corp	40760
Assoc Elev	40726
C&G Suspend	40103
Cleanco	7545
Coupl Fir Solut	40275
DeGiovanni	39461
Door Systems	6863
Heatrol ATC	27461
Indust Burney	1531
Kraft	1669
Labbe Welding	39479
Lan-Tel	45020
Lemar HVAC	27190
McKenna Roof	35819
NESM	2276
NESS	2274
Pasek	5536
TBA	42145
Viking Controls	23007
Yee Consult	35919
YES	21314

VENDOR NAME:

ELISE ENERGY

VENDOR NUMBER:

AUTHOR and DATE:

Author: AW

Date: 12-19-13

25002510 TOWN

age	Senior Center	93 Winchester S	SR
bldg	Health Center	11 Pierce St.	HL
bldg	Larz-Crptr Shp	15 Newton St.	LT
bldg	Larz-Elec Shp	13 Newton St.	LE
bldg	Pub Safty Bldg	350 Washington	PO
bldg	Town Hall	333 Washington	TH
dpw	Incinerator Hse	815 Newton St.	IH
dpw	Metering Stn	0 Single Tree Ro	MS
dpw	New Mum Grg	870 Hammond S	GR
dpw	Transfer Stn	813 Newton St	TR
dpw	Water Garage	44 Netherlands	WT
dpw	Wood Hog	817 Newton St.	HG
dpwp	Amory Field Hse	15 Amory St.	AM
dpwp	Harry Downs Fld	24 Highland St	DW
dpwp	L.A. Refriger	27 Newton St.	PF
dpwp	LA Pool/Rink	353 Godard Ave	LH
dpwp	LA Toilets	350 Godard Ave	LS
dpwp	Park Forestry	19 Newton St.	P3
dpwp	Park Forestry	25 Newton St.	P5
dpwp	Reservoir Pump	0 Lee St.	RP
dpwp	Waldstein Field	26 Clinton Path	WF
fire	Fire Train Bld 1	962B Hammond	T1
fire	Fire Train Bld 2	962C Hammond	T2
fire	Fire Train Stretr	962D Hammond	TS
fire	Fire Train Tower	962A Hammond	TT
fire	Fire Stat No. 1	140 Washington	F1
fire	Fire Stat No. 4	527 Boylston St.	F4
fire	Fire Stat No. 5	45 Babcock St.	F5
fire	Fire Stat No. 6	962 Hammond S	F6
fire	Fire Stat No. 7	665 Washington	F7
hist	Arts Center	86 Monmouth St	BA
hist	Gate House	15 Warren St.	GH
hist	Pump House	17 Warren St.	PM
libr	Cool Corn Lib	31 Pleasant St.	LC
libr	Main Library	361 Washington	LM
libr	Putter Library	959 W. Roxbury	LP
recr	Eliot Rec. Ctr	133 Eliot St.	EL
recr	Grdnr's Shed	425 Hammond S	SS
recr	Putter Golf Club	1281 W. Roxbur	GF
recr	Putter pro shop	1279 W Roxbury	GP
recr	Soule Gym	436 Hammond S	SG
recr	Soule Rec Ctr	625 Hammond S	SO
recr	Swimming Pool	60 Tappan St	SP
recr	Warrn Pk Cabin	135 Eliot St	WC

25003430 SCHOOL

schl	Baker	205 Beverly Rd	BK
schl	Baldwin	490 Heath Stree	BW
schl	Devotion	345 Harvard St	DV
schl	Driscoll	64 Westbourne T	DR
schl	Heath	100 Eliot St	HE
schl	High Schl	115 Greenough ;	HS
schl	Lawrence	27 Fuller St.	LW
schl	Lynch Rec Ctr	599 Brookline A	LY
schl	New Lincoln	25 Kennard Rd	LN
schl	Old Lincoln	194 Beelston	LO
schl	Physical Ed	66 Tappan St	PH
schl	Pierce Prim	32 Pierce St.	PP
schl	Pierce Schl	50 School St.	PR
schl	Runkle	50 Druce St.	RN
schl	Unified Arts	46 Tappan St.	UA

2500SP25 RENTAL

dpwp	Cemetery Offic	96A Grove St.	C9
dpwp	Cemetery Hse	96 Grove St.	CH
dpwp	Cemetery Main	90 Grove St.	CM
dpwp	Cemetery Vault	92 Grove St.	CV
hist	Devotion House	347 Harvard St	DH
hist	Widow Harris	21 Newton St.	WH
thst	Museum Transp	15 Newton St.	AU
thst	Music School	19 Kennard Rd	MU
thst	Town House	27 Ackers Ave.	27
thst	Town House	29 Avon St.	29
thst	Town House	55 Newton St.	55
thst	Town House	9 Newton St	09
thst	Town House	154 University I	UN
thst	Putterh Schl	17 Newton	PU
hist	Sportmen's Clb	1 Warren	SB

DESCRIPTION OF WORK:

ATTIC

Insulate ceiling

ORG: _____

OBJ: _____

$ 877.2

Town contract ?_____

State contract ?_____

No state, no town, >$9,999: provide Chapman with three hard copy quotes.

14206332

FY2014

AFFIDAVIT OF A HOMEOWNER FOR CONSTRUCTION SUPERVISOR LICENSE EXEMPTION PLEASE READ BEFORE SIGNING

A **'Homeowner'** may obtain a building permit without having a construction supervisor's license if they qualify for the license exemption in the 7th Edition of the Massachusetts State Building Code 780 CMR 5108.3.5 Licensing of Construction Supervisors.

The **'Homeowner'** must supervise anyone they hire to perform the work described in the permit.

This exemption does not apply to the field erection of manufactured buildings.

A **'Homeowner'** is defined as: Person(s) who owns a parcel of land on which he or she resides or intends to reside, on which there is, or is intended to be, a one- or two-family dwelling, attached or detached structures accessory to such use and/or farm structures. A person who constructs more than one home in a two-year period shall not be considered a homeowner.

I hereby certify that I am a **'Homeowner'** according to the above definition and I will assume full responsibility for the work described in the attached building permit. I will assure conformance o the applicable sections of the Massachusetts State Building Code, Town of Brookline Zoning By-laws, and any other applicable law, rule, or regulation. **I UNDERSTAND THAT I MAY BE HELD LIABLE FOR ANY VIOLATIONS OF THE LAW, DEFECTS IN WORKMANSHIP, AND ANY ACCIDENTS OR INJURIES THAT MAY OCCUR IN THE COURSE OF THIS PROJECT.**

Signed under the pains and penalties of perjury this____day of_____ 20____.

_____

Homeowner

EXEMPTION FROM HOME IMPROVEMENT CONTRACTOR REGISTRATION FOR PERSONS OBTAINING BUILDING PERMIT AS A HOMEOWNER

MGL c. 142A requires that the "reconstruction, alteration, renovation, repair, modernization, conversion, improvement, removal, demolition, or construction of an addition to any pre-existing owner-occupied building containing at least one but not more than four dwelling units…" be done by registered contractors, with certain exceptions, along with other requirements.

A 'Homeowner' as defined above, is exempt from registration as a Home Improvement Contractor as described in MGL c. 142A.

HOMEOWNERS OBTAINING THEIR OWN BUILDING PERMIT OR ENGAGING UNREGISTERED CONTRACTORS TO PERFORM APPLICABLE HOME IMPROVEMENT WORK DO NOT HAVE ACCESS TO THE ARBITRATION PROGRAM OR GUARANTY FUND AS FOR PROVIDED UNDER MGL c. 142 A.

I have read the above statements and understand that I have waived my right to arbitration and access to the Guaranty Fund as provided for under MGL c. 142A by obtaining the attached permit as a 'Homeowner', as defined above.

Homeowner Signature: _____ **Date:** _____

The Commonwealth of Massachusetts
Department of Industrial Accidents
Office of Investigations
600 Washington Street
Boston, MA 02111
www.mass.gov/dia

Workers' Compensation Insurance Affidavit: Builders/Contractors/Electricians/Plumbers

Please Print Legibly

Applicant Information

Name (Business/Organization/Individual): RISE ENGINEERING, A DIVISION OF THIELSCH ENG. INC

Address: 195 FRANCES AVENUE

City/State/Zip: CRANSTON RI 02910 Phone #: 401-784-3700 EXT. 6117

Are you an employer? Check the appropriate box:

1. [x] I am a employer with 515 employees (full and/or part-time).*
2. [ ] I am a sole proprietor or partnership and have no employees working for me in any capacity. [No workers' comp. insurance required.]
3. [ ] I am a homeowner doing all work myself. [No workers' comp. insurance required.] †
4. [ ] I am a general contractor and I have hired the sub-contractors listed on the attached sheet. These sub-contractors have employees and have workers' comp. insurance.‡
5. [ ] We are a corporation and its officers have exercised their right of exemption per MGL c. 152, §1(4), and we have no employees. [No workers' comp. insurance required.]

Type of project (required):

6. [ ] New construction.
7. [x] Remodeling
8. [ ] Demolition
9. [ ] Building addition.
10. [ ] Electrical repairs or additions
11. [ ] Plumbing repairs or additions
12. [ ] Roof repairs
13. [ ] Other_____

*Any applicant that checks box #1 must also fill out the section below showing their workers' compensation policy information.
† Homeowners who submit this affidavit indicating they are doing all work and then hire outside contractors must submit a new affidavit indicating such.
‡Contractors that check this box must attached an additional sheet showing the name of the sub-contractors and state whether or not those entities have employees. If the sub-contractors have employees, they must provide their workers' comp. policy number.

I am an employer that is providing workers' compensation insurance for my employees. Below is the policy and job site information.

Insurance Company Name: ZURICH AMERICAN CO.'S

Policy # or Self-ins. Lic. #: 373096103 Expiration Date: 1/1/2014

Job Site Address: SOULE GYM 652 HAMMOND STREET City/State/Zip: BROOKLINE, MA

Attach a copy of the workers' compensation policy declaration page (showing the policy number and expiration date). Failure to secure coverage as required under Section 25A of MGL c. 152 can lead to the imposition of criminal penalties of a fine up to $1,500.00 and/or one-year imprisonment, as well as civil penalties in the form of a STOP WORK ORDER and a fine of up to $250.00 a day against the violator. Be advised that a copy of this statement may be forwarded to the Office of Investigations of the DIA for insurance coverage verification.

I do hereby certify under the pains and penalties of perjury that the information provided above is true and correct.

Signature: [signature] Date: 6/23/13

Phone #: 401-465-5337

Official use only. Do not write in this area, to be completed by city or town official.

City or Town: _____ Permit/License #_____

Issuing Authority (circle one):
1. Board of Health 2. Building Department 3. City/Town Clerk 4. Electrical Inspector 5. Plumbing Inspector
6. Other _____

Contact Person:_____ Phone #:_____

Commonwealth Of Massachusetts
Town of Brookline

Map:	Block:	Lot:
432	08	00

In Accordance With The Massachusetts State Building Code, Section 110, This

CERTIFICATE OF INSPECTION

is issued to **CHARLES SIMMONS**

I Certify that I have Inspected the **27 R-7 GYMNASIUM** known as **SOULE GYM**

located at **652 HAMMOND ST, Fire Station 4** in the **Town of Brookline**

The Means Of Egress Are Sufficient For The Following Number Of Persons:

BY STORY

Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
GYMNASIUM	200	1ST FLOOR			

CI-2013-0325	09/24/2013	08/31/2014	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Daniel F. Bennett*

** A COPY OF THIS CERTIFICATE MUST BE POSTED IN CLEAR VIEW NEAR ALL ENTRANCES **

652 HAMMOND ST

BP-2013-1026

GIS #:	17177
Map:	432
Block:	08
Lot:	00
Category:	STRUCTURAL REP
Permit #	BP-2013-1026
Project #	JS-2013-002624
Est. Cost:	
Fee Charged:	$0.00
Balance Due:	$.00
Const. Class:	
Use Group:	
Lot Size(sq. ft.):	418625
Zoning:	S25
Units Gained:	
Units Lost:	
Dig Safe #:	

COMMONWEALTH OF MASSACHUSETTS
TOWN OF BROOKLINE

BUILDING PERMIT

PERMISSION IS HEREBY GRANTED TO:

Contractor: Bilt-Rite Construction ***License:*** ***Expires:***

Owner: TOWN OF BROOKLINE

Applicant: Bilt-Rite Construction

AT: 652 HAMMOND ST

ISSUED ON: ***AMENDED ON:*** ***EXPIRES ON:***

TO PERFORM THE FOLLOWING WORK:

STRUCTURAL REPAIRS TO ROOF/TRUSSES PER PLANS BY BOSTON BLDG CONSULTANTS DTD 7/2/13 (SKS-1-SKS-3) BY J. BALMER (ENG#29743

POST THIS CARD SO IT IS VISIBLE FROM THE STREET

Electric	Gas	Plumbing	Building
Underground:	Underground:	Underground:	Excavation:
Service:	Meter:		Footings:
Rough:	Rough:	Rough:	Foundation:
Final:	Final:	Final:	Rough Frame: JRF 8/13/13
			Fireplace/Chimney:
			Insulation:
			Final: JRF
			Treasury:

D.P.W.	Fire	Health
Meter:	Oil:	
House #	Smoke:	
Water:	Alarm:	Assessor
Sewer:	Sprinklers:	Final:

THIS PERMIT MAY BE REVOKED BY THE TOWN OF BROOKLINE UPON VIOLATION OF ANY OF ITS RULES AND REGULATIONS.

MGL CH 142A HOME IMPROVEMENT CONTRACTOR REGISTRATION. PERSONS CONTRACTING WITH UNREGISTERED CONTRACTORS DO NOT HAVE ACCESS TO THE GUARANTY FUND IN THE EVENT OF A DISPUTE.

Signature:

Fee Type:	Receipt No:	Date Paid:	Check No:	Amount:
Town Job	REC-2013-009666	16-Jul-13	waived	$0.00

JAMES KIRBY
Local Building Inspector
(617) 730-2094
Fax (617) 739-7542
JKIRBY@BROOKLINEMA.GOV

Date	Building Inspections	Type of Inspection
8.13.13	Rough Mech	
	See eng final report	

Date	Mechanical Inspection	Type of Inspection

Date	Electrical Inspections	Type of Inspection

Date	Plumbing Inspections	Type of Inspection

Date	Gas Inspections	Type of Inspection

Date	Fire Inspections	Type of Inspection

Date	Sprinkler Inspections	Type of Inspection

Date	Board of Health	Type of Inspection

Date	Engineering Dept.	Type of Inspection

Date	Misc. Departments/Inspections	Type of Inspection

IMPORTANT TELEPHONE NUMBERS

Chris Sullivan 617-592-6148

Building Inspectors: 617-730-2100
Electrical Inspector: 617-730-2110
Plumbing & Gasfitting Inspector: 617-730-2105
Fire Department Inspector: 617-730-2270
Engineering Department: 617-730-2139
Board of Health: 617-730-2300
Sprinkler or Mechanical Inspection: 617-730-2100

ALL WORK SHALL CONFORM TO THE STAMPED OR ENDORSED APPLICATION AND PLANS FOR WHICH THIS PERMIT HAS BEEN ISSUED (107.4).THIS PERMIT WILL BECOME NULL AND VOID IF CONSTRUCTION IS NOT STARTED WITHIN 180 DAYS FROM THE DATE THE PERMIT WAS ISSUED (105.5). APPROVED PLANS MUST BE RETAINED ON THE JOB AND THIS CARD MUST BE DISPLAYED UNTIL FINAL INSPECTION (105.7, 107.3.1). SEPARATE PERMITS ARE REQUIRED FOR; PLUMBING, GAS, ELECTRICAL, SHEETMETAL, MECHANICAL AND SPRINKLER INSTALLATIONS. THIS PERMIT CONVEYS NO RIGHT TO OCCUPY ANY STREET, ALLEY, and SIDEWALK. A DEBRIS REMOVAL FORM AS REQUIRED BY THE STATE BUILDING CODE MUST BE ON FILE WITH PERMIT (105.3.1.2).

NOTICE

1. **INSPECTIONS ARE REQUIRED FOR:**
   - A. EXCAVATION BEFORE POURING OF CONCRETE (24 hr. notification before time of delivery)
   - B. FOOTING – SOIL – REBAR (if applicable)
   - C. FOUNDATION BEFORE BACKFILLING (Fnd. drain/damproofing in place)
     FOUNDATION AS-BUILT
     MUST BE SUBMITTED PRIOR TO PLACING SILL
     (Failure to submit certification at this time, contractor/homeowner cont. at own risk)
   - D. ENGINEERING DEPARTMENT SIGN OFF FOR UTILITIES.
   - E. ROUGH WIRING - ROUGH PLUMBING/GAS
     ROUGH FRAME (drywall fire rated assembly/rated recessed lighting if applicable)
     ROUGH MECHANICAL - SPRINKLER
     (WEATHER TIGHT SHELL & FIRESTOPPING IN PLACE)
   - F. INSULATION
   - G. FINISH WIRING, PLUMBING/GAS, MECHANICAL AND SPRINKLER.
   - H. FINAL INSPECTION.
2. **BEFORE A CERTIFICATE OF OCCUPANCY CAN BE ISSUED:**
   - A. THIS PERMIT JOB CARD MUST BE RETURNED TO THE BUILDING DEPARTMENT WITH ALL REQUIRED SITE INSPECTION SIGNATURES.
   - B. THE HOUSE NUMBER MUST BE VISIBLY AFFIXED TO THE BUILDING.
   - C. ALL OUTSTANDING VIOLATIONS MUST BE CORRECTED.
   - D. ALL REQUIREMENTS OF THE TOWN OF BROOKLINE ZONING BY-LAWS MUST BE MET (ARTICLE 9).
   - E. AN APPLICATON FOR A CERTIFICATE OF USE AND OCCUPANCY FILED AND COMPLETED.
   - F. CERTIFIED PLOT PLAN MUST BE ON FILE (IF APPLICABLE).
   - G. ORIGINAL FINAL AFFIDAVITS MUST BE SUBMITTED (IF APPLICABLE).
3. **TOWN BY-LAWS**

§8.15.6 CONSTRUCTION HOURS: 7 A.M. to 7 P.M. Monday thru Friday, and 8:30 A.M. to 6 P.M. Saturdays, Sundays & Holidays.
§7.5.8 IDLING OF MOTOR VEHICLES: No person shall permit the unnecessary operation of the engine of a motor vehicle while said vehicle is stopped in excess of five minutes.

BP-2013-1074

Town of Brookline Building Department
333 Washington Street Brookline, Massachusetts 02445
617.730.2100

RECEIVED
2013 JUL 23 PM 12:03
TOWN OF BROOKLINE

Building Permit Application
PLEASE PRINT LEGIBLY

Job Address: 652 Hammond Street Submittal Date: 7-23-13
Existing Use: Gym Proposed Use: Gym

Description of work: Repair of 3 Trusses
Per plans (Engineer)

Total Estimated Value of Work: $47,000 Permit Fee:
Structure: $47,000 Plumb: 0 Wire: 0 HVAC: 0
* Subject to Final Cost Affidavit*

Property Owner: Town of Brookline Are you a Lessee? No
Address: 333 Washington Street Phone №: 617-737-2420
Brookline, MA Zip Code: 02445 Email:

Construction Supervisor: Christopher Sullivan Cell №: 617-592-6148
Address: 7 Heritage Lane Phone №: 617-541-9777
Canton, MA Zip Code: 02021 Email: csullivan@bilfite construct.com
CSL №: CS-030507 Type: Unrestricted Expiration: 1-10-14
H.I.C. Reg.№: 101787 Expiration: 6-29-14

Architect/Engineer: Jim Balmer Boston Building Consultants Cell №: 617-462-2303
Address: 241 A Street Suite 220 Phone №: 617-542-3933
Boston, MA Zip Code: 02210 Email: JABalmer@BBC Boston.com

Debris Disposal Facility as approved by Brookline DPW: United Waste Management
DIGSAFE Case № N/A

"By signing this application I do hereby certify that I am the owner of record of the above captioned property and I have authorized the work described in this application. I hereby authorize the people named in this application to act as my agents in matters concerning this described work. I hereby certify under the pains and penalties of perjury that all statements made herein are true and accurate."

Property Owner's Signature: **Date:**
Property Owner's Name (please print)

Agent/Const. Super. Signature: Christopher Sullivan **Date:** 7-23-13
Agent/Const. Super. Name (please print) Christopher Sullivan

Building Department Use Only:

Permit Fee: Town Job: YES

Zoning District: F.A.R.: Complies?

Construction Type: Use Code:

ZBA Case №: Historic District: Flood Zone:

Existing Setbacks:	Front:	Side L:	Side R:	Rear:
Proposed Setbacks:	Front:	Side L:	Side R:	Rear:
Required Setbacks:	Front:	Side L:	Side R:	Rear:

Departmental Approvals (if required)

Fire Dept.:	Date:
Wire Dept.:	Date:
Plumbing Dept.:	Date:
DPW/Engineering:	Date:
Conservation Commission:	Date:
Water/Sewer:	Date:
Health:	Date:
Planning:	Date:
Historic Preservation:	Date:

TYPE OF IMPROVEMENT:
- New Building
- Addition
- Alteration
- Repair, Replacement
- Demolition
- Swimming Pool
- Sign
- Kitchen
- Bath
- Roofing/Siding
- Other (specify)

PROPOSED USE:
- Single Family
- Multi-Family

№ of Units
- Hotel, Motel, Dorm.

№ of Units:
- Garage
- Porch, Deck
- Accessory Building
- Recreation
- Other (specify)

NON-RESIDENTIAL USE:
- Amusement, Recreation
- Temple, Church, Religious
- Industrial
- Theater, Assembly
- Service Station, Repair Garage
- Hospital, Institutional
- Office, Bank, Professional
- Restaurant
- Library, Other Educational
- Stores, Mercantile
- Other (specify)

Approval/Denial by: Date: 7/23/13 BP-2013-1026 Permit №

BOSTON BUILDING CONSULTANTS

Subject: Soule Gym

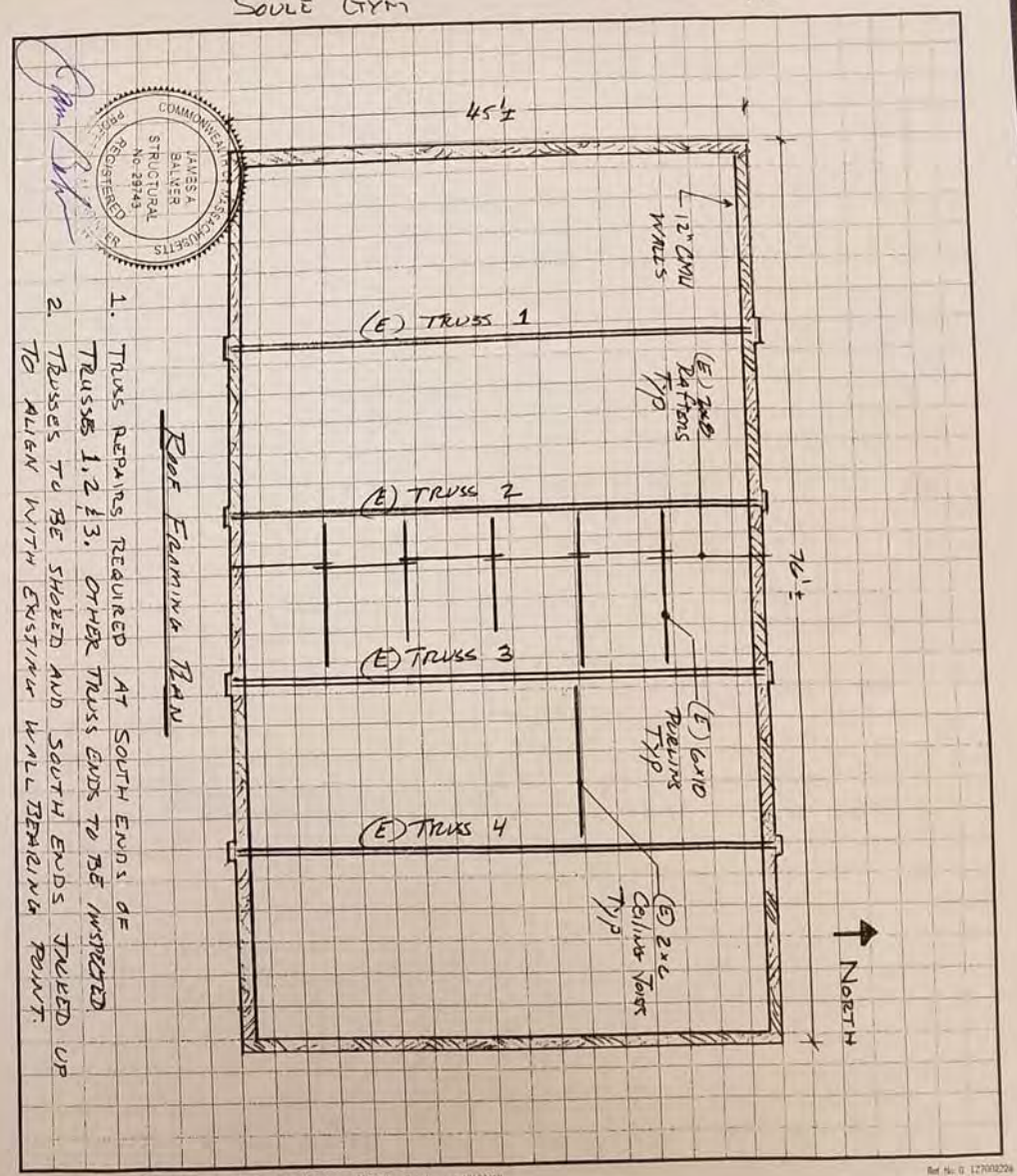
Job No.: 13060 Sheet: SKS-1

By: JB Date: 7/2/13 Checked:

COMMONWEALTH OF MASSACHUSETTS JAMES A. PALMER REGISTERED STRUCTURAL ENGINEER No. 29743

Roof Framing Plan

1. Truss repairs required at south ends of Trusses 1, 2 & 3. Other truss ends to be inspected.
2. Trusses to be shored and south ends jacked up to align with existing wall bearing point.



Reorder Call NEBS CUSTOM printing service TOLL FREE 1-800-888-6327 NEBS, Inc., Peterborough, NH 03458.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 7/17/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Charles River Ins. Brokerage, Inc. 5 Whittier Street 4th Floor Framingham MA 01701	CONTACT NAME: Jeff Dee PHONE (A/C, No, Ext): (508) 656-1400 FAX (A/C, No): (508) 656-1499 E-MAIL ADDRESS: Jdee@charlesriverinsurance.com
INSURED Bilt-Rite Construction Inc. 150 Shirley Street Boston MA 02119	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A: Arbella Mutual — 17000 INSURER B: Arbella Protection INSURER C: Merchants Mutual Ins Co INSURER D: INSURER E: INSURER F:

COVERAGES CERTIFICATE NUMBER: 13-basic REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC			8500 0501 38	2/17/2013	2/17/2014	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
B	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS X SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS			1020 0142 53 01	2/17/2013	2/17/2014	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Uninsured motorist BI split limit	$ 1,000,000 $ 20,000 $ 40,000 $ $ 100,000
C	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $			CUP 0000 478	2/17/2013	2/17/2014	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		9117 7902 13	2/17/2013	2/17/2014	X WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
Project - Soule Gym Trusses/ Roof Repairs - 652 Hammond Street, Brookline, MA

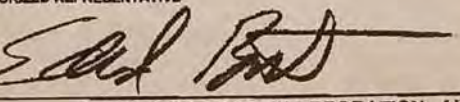
CERTIFICATE HOLDER

Town of Brookline
Building Department
333 Washington Street
Brookline, MA 02445

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



ACORD 25 (2010/05)
INS025 (2010/05) 01
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The Commonwealth of Massachusetts

Office of Consumer Affairs and Business Regulation
10 Park Plaza - Suite 5170
Boston, Massachusetts 02116
Home Improvement Contractor Registration

Registration: 101787
Type: Private Corporation
Expiration: 6/29/2014 Tr# 224643

BILT-RITE CONSTRUCTION INC
John Sullivan
150 Shirley St
Boston, MA 02119

Update Address and return card. Mark reason for change.
☐ Address ☐ Renewal ☐ Employment ☐ Lost Card

SCA 1 ♻ 20M-05/11

The Commonwealth of Massachusetts
Office of Consumer Affairs & Business Regulation
HOME IMPROVEMENT CONTRACTOR
Registration: 101787 Type: Private Corporation
Expiration: 6/29/2014

BILT-RITE CONSTRUCTION INC

John Sullivan
150 Shirley St
Boston, MA 02119

Undersecretary

License or registration valid for individul use only
before the expiration date. If found return to:
Office of Consumer Affairs and Business Regulation
10 Park Plaza - Suite 5170
Boston, MA 02116

John B. Sullivan
Not valid without signature

Massachusetts - Department of Public Safety
Board of Building Regulations and Standards
Construction Supervisor
License: CS-030507

CHRISTOPHER SULLIVAN
7 HERITAGE LN.
Canton MA 02021

Commissioner

Expiration
01/10/2014

AFFIDAVIT OF A HOMEOWNER FOR CONSTRUCTION SUPERVISOR LICENSE EXEMPTION PLEASE READ BEFORE SIGNING

A **'Homeowner'** may obtain a building permit without having a construction supervisor's license if they qualify for the license exemption in the 7th Edition of the Massachusetts State Building Code 780 CMR 5108.3.5 Licensing of Construction Supervisors.

The **'Homeowner'** must supervise anyone they hire to perform the work described in the permit.

This exemption does not apply to the field erection of manufactured buildings.

A **'Homeowner'** is defined as: Person(s) who owns a parcel of land on which he or she resides or intends to reside, on which there is, or is intended to be, a one- or two-family dwelling, attached or detached structures accessory to such use and/or farm structures. A person who constructs more than one home in a two-year period shall not be considered a homeowner.

I hereby certify that I am a **'Homeowner'** according to the above definition and I will assume full responsibility for the work described in the attached building permit. I will assure conformance o the applicable sections of the Massachusetts State Building Code, Town of Brookline Zoning By-laws, and any other applicable law, rule, or regulation. **I UNDERSTAND THAT I MAY BE HELD LIABLE FOR ANY VIOLATIONS OF THE LAW, DEFECTS IN WORKMANSHIP, AND ANY ACCIDENTS OR INJURIES THAT MAY OCCUR IN THE COURSE OF THIS PROJECT.**

Signed under the pains and penalties of perjury this____day of_____ 20____.

_____

Homeowner

EXEMPTION FROM HOME IMPROVEMENT CONTRACTOR REGISTRATION FOR PERSONS OBTAINING BUILDING PERMIT AS A HOMEOWNER

MGL c. 142A requires that the "reconstruction, alteration, renovation, repair, modernization, conversion, improvement, removal, demolition, or construction of an addition to any pre-existing owner-occupied building containing at least one but not more than four dwelling units…" be done by registered contractors, with certain exceptions, along with other requirements.

A 'Homeowner' as defined above, is exempt from registration as a Home Improvement Contractor as described in MGL c. 142A.

HOMEOWNERS OBTAINING THEIR OWN BUILDING PERMIT OR ENGAGING UNREGISTERED CONTRACTORS TO PERFORM APPLICABLE HOME IMPROVEMENT WORK DO NOT HAVE ACCESS TO THE ARBITRATION PROGRAM OR GUARANTY FUND AS FOR PROVIDED UNDER MGL c. 142 A.

I have read the above statements and understand that I have waived my right to arbitration and access to the Guaranty Fund as provided for under MGL c. 142A by obtaining the attached permit as a 'Homeowner', as defined above.

Homeowner Signature: _____ **Date:** _____

The Commonwealth of Massachusetts
Department of Industrial Accidents
Office of Investigations
600 Washington Street
Boston, MA 02111
www.mass.gov/dia

Workers' Compensation Insurance Affidavit: Builders/Contractors/Electricians/Plumbers

Please Print Legibly

Applicant Information

Name (Business/Organization/Individual): B:IT R:TE CONSTRUCTION

Address: 150 Shirley STREET

City/State/Zip: BOSTON, MA 02119 Phone #: 617-541-9777

Are you an employer? Check the appropriate box:

1. ☑ I am a employer with _____ employees (full and/or part-time).*
2. ☐ I am a sole proprietor or partnership and have no employees working for me in any capacity. [No workers' comp. insurance required.]
3. ☐ I am a homeowner doing all work myself. [No workers' comp. insurance required.] †
4. ☐ I am a general contractor and I have hired the sub-contractors listed on the attached sheet. These sub-contractors have employees and have workers' comp. insurance.‡
5. ☐ We are a corporation and its officers have exercised their right of exemption per MGL c. 152, §1(4), and we have no employees. [No workers' comp. insurance required.]

Type of project (required):

6. ☐ New construction
7. ☐ Remodeling
8. ☐ Demolition
9. ☐ Building addition
10. ☐ Electrical repairs or additions
11. ☐ Plumbing repairs or additions
12. ☐ Roof repairs
13. ☐ Other _____

*Any applicant that checks box #1 must also fill out the section below showing their workers' compensation policy information.
† Homeowners who submit this affidavit indicating they are doing all work and then hire outside contractors must submit a new affidavit indicating such.
‡Contractors that check this box must attached an additional sheet showing the name of the sub-contractors and state whether or not those entities have employees. If the sub-contractors have employees, they must provide their workers' comp. policy number.

I am an employer that is providing workers' compensation insurance for my employees. Below is the policy and job site information.

Insurance Company Name: Arbella

Policy # or Self-ins. Lic. #: 9117 7902 13 Expiration Date: 2-17-14

Job Site Address: 852 Hammond STREET City/State/Zip: Brookline, MA 02445

Attach a copy of the workers' compensation policy declaration page (showing the policy number and expiration date). Failure to secure coverage as required under Section 25A of MGL c. 152 can lead to the imposition of criminal penalties of a fine up to $1,500.00 and/or one-year imprisonment, as well as civil penalties in the form of a STOP WORK ORDER and a fine of up to $250.00 a day against the violator. Be advised that a copy of this statement may be forwarded to the Office of Investigations of the DIA for insurance coverage verification.

I do hereby certify under the pains and penalties of perjury that the information provided above is true and correct.

Signature: [signature] Date: 7-23-13

Phone #: 617-541-9777 x 104

Official use only. Do not write in this area, to be completed by city or town official.

City or Town: _____ Permit/License # _____

Issuing Authority (circle one):
1. Board of Health 2. Building Department 3. City/Town Clerk 4. Electrical Inspector 5. Plumbing Inspector
6. Other _____

Contact Person: _____ Phone #: _____

TOWN of BROOKLINE
Massachusetts

FIRE ESCAPE AND FIRE BALCONY AFFIDFAVIT

BUILDING DEPARTMENT
730-2100

DATE: October 16, 2012

TO THE BUILDING COMMISSIONER OF THE TOWN OF BROOKLINE

I certify that I have inspectedf the Fire Escape/Fire Balcony located in the building at:

Soule Recreation Center 652 Hammond St.

To the best of my knowledge, information and belief the Fire Escape/Fire Balcony is in conformity with the provisions of the Massachusetts State Building Code and all other pertinent laws.

The egress path from each occupancy which requires the Fire Escape/Fire Balcony for its means of egress is clear, unobstructed and adequately lighted.

James Balmer
Engineer

29743
(Mass./Reg. No.)

COMMONWEALTH OF MASSACHUSETTS
JAMES A. BALMER
STRUCTURAL
No. 29743
REGISTERED
PROFESSIONAL ENGINEER

Boston Building Consultants
(Address)
241 A St. Boston MA 02210

617 542 3933
(Telephone - Area Code)

COMMONWEALTH OF MASSACHUSETTS SUFFOLK ss:

Then personally appeared the above named: James Balmer
and made oath that the above statement by him is true.

Before me: [signature] DATE 10-16-12

My Commission expires 6-25-15

DANIEL J. PLATCOW
Notary Public
Commonwealth of Massachusetts
My Commission Expires June 25, 2015

Commonwealth Of Massachusetts

Town of Brookline

Map:	Block:	Lot:
432	08	00

In Accordance With The Massachusetts State Building Code, Section 110, This

CERTIFICATE OF INSPECTION

is issued to CHARLES SIMMONS

I Certify that I have Inspected the 27 R-7 GYMNASIUM *known as* SOULE GYM

located at 652 HAMMOND ST, Fire Station 4 *in the* Town of Brookline

The Means Of Egress Are Sufficient For The Following Number Of Persons:

BY STORY

Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity
GYMNASIUM	200	1ST FLOOR		

Location

CI-2012-0300	08/30/2012	08/31/2013	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Building Official*

*** A COPY OF THIS CERTIFICATE MUST BE POSTED IN CLEAR VIEW NEAR ALL ENTRANCES ***

TOWN of BROOKLINE

Massachusetts

A-3

BUILDING DEPARTMENT

Michael Shepard
Building Commissioner
730-2100

APPLICATION FOR CERTIFICATE OF INSPECTION Waive ~~$100~~

Date 4/19/12

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS

LOCATION 65-2 436 Hammond St

USE OF PREMISES

NAME OF PREMISE Soule Gym - 200 persons

CERTIFICATE TO BE ISSUED TO (persons name) **Telephone**

ADDRESS Charlie Simmons

OWNER OF RECORD OF BUILDING **Telephone**

ADDRESS

NAME OF PRESENT HOLDER OF CERTIFICATE

NAME OF AGENT, IF ANY **Telephone**

SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

INSTRUCTIONS:

APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE $ 100 **RECEIPT#** N/A **CERTIFICATE #** CI-2012-0300 **ISSUED** 8.30.12

8.1.12

333 Washington Street, Brookline, Massachusetts 02146
Tel: (617) 730-2100 Fax: (617) 739-7542

FH

TOWN of BROOKLINE

Massachusetts

Michael Shepard
Building Commissioner
730-2100

BUILDING PERMIT

Please issue the permit!

APPLICATION

Date

IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR THE BUILDING PERMIT FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING LOCATION:

LOCATION 6052 Hammond

USE OF PREMISES Recreation

NAME OF PREMISE Soule Rec

CERTIFICATE TO BE ISSUED TO Recrea [illegible] **Telephone** 2069

ADDRESS 133 Eliot Street, Chestnut Hill, MA 02467

OWNER OF RECORD OF BUILDING Town of Brookline **Telephone** 2069

ADDRESS 133 Eliot Street

NAME OF PRESENT HOLDER OF CERTIFICATE Town of Brookline

NAME OF AGENT, IF ANY Lisa Paradis **Telephone** 2069

OK JL 6/12/09

SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT Gerald W. Kelly

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

INSTRUCTIONS:

APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE ~~$ 100~~ **RECEIPT#** **CERTIFICATE #** **ISSUED**

333 Washington Street, Brookline, Massachusetts 02146
Tel: (617) 730-2100 Fax: (617) 739-7542

FH

TOWN of BROOKLINE

Massachusetts

BUILDING DEPARTMENT

Michael Shepard
Building Commissioner
730-2100

APPLICATION FOR CERTIFICATE OF INSPECTION

Date 6/25/09 ~~$100~~

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS

LOCATION 652 Hammond Street

USE OF PREMISES Recreation Center

NAME OF PREMISE Soule Recreation Center

CERTIFICATE TO BE ISSUED TO Recreation **(persons name)** Lisa Paradis **Telephone** 2069

ADDRESS 133 Eliot Street, Chestnut Hill, MA 02467

OWNER OF RECORD OF BUILDING Town of Brookline **Telephone** 2069

ADDRESS 133 Eliot Street

NAME OF PRESENT HOLDER OF CERTIFICATE Town of Brookline

NAME OF AGENT, IF ANY Lisa Paradis **Telephone** 2069

OK JK 6/12/09

SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT Gerald W. Kelly

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

INSTRUCTIONS:

APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE ~~$ 100~~ **RECEIPT#** **CERTIFICATE #** **ISSUED**

333 Washington Street, Brookline, Massachusetts 02146
Tel: (617) 730-2100 Fax: (617) 739-7542

Gina Tzizik Wednesday, April 27, 2011 9:19:08 AM

Soule Inspections

Donna Martinez

Hi Donna-
Just checking in on the Soule Inspection for our re-licensing. Are they ready?
Thanks- so much!

Gina Tzizik
Early Childhood Director
Brookline Recreation
Soule Early Childhood Center
652 Hammond Street
Brookline, MA 02467
Phone: (617) 739-7598
Fax: (617) 739-7594

www.brooklinerec.com
gtzizik@brooklinema.gov

Melissa Battite

Wednesday, April 27, 2011 2:55:06 PM

Re: Age group

Grace Cheng

10

Grace Cheng writes:

Forgot another question, Frank Hitchcock wants to know how many kids under and over the age of 2.9. He need to update the info on the certificate. Thanks

Grace Cheng
Town of Brookline
Building Department
3rd Floor Town Hall
333 Washington Street
Brookline, MA 02445
(617)730-2100
http://www.townofbrooklinemass.com/Building/

Melissa Battite, CPRP
Asst. Director of Recreation
Brookline Recreation
Phone:617.730.2069
www.brooklinerec.com
http://www.facebook.com/brooklinerec

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 106.5 this

CERTIFICATE OF INSPECTION

is issued to CHARLES SIMMONS

I Certify that I have inspected the Town Owned Building *known as* SOULE GYM

located at 652 HAMMOND ST

State Building Code Use Group: 27 R-7 TOWN BLDGS, NOT SCHOOLS

in the Town of Brookline, County of Norfolk, Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:

STORY	ROOM	OCCUPANTS	STORY	ROOM	OCCUPANTS
1ST FLR	GYMNASIUM	200			

Comments: SOULE GYMNASIUM

Certificate No: BCI090254 *Issue Date:* 08/20/2009 *Date Certificate Expires:* 08/20/2010

Michael W. Shepard
Building Commissioner

The building commissioner shall be notified within (10) days of any changes in the above information.

Thursday, August 20, 2009

FH

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE: June 11, 2009

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION 652 ~~436~~ HAMMOND STREET

NAME OF PREMISES SOULE GYM

CERTIFICATE TO BE ISSUED TO Charles Simmons, Director of Public Buildings

ADDRESS 333 Washington Street, Town Hall, Brookline MA 02445

OWNER OF RECORD OF BUILDING The Town of Brookline TELEPHONE # 617-730-2420

ADDRESS Town Hall, 333 Washington Street, Brookline, MA 02445

NAME OF PRESENT HOLDER OF CERTIFICATE Town of Brookline

NAME OF AGENT, IF ANY TELEPHONE #

SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR AUTHORIZED AGENT

Charles A. Simmons
Director of Public Buildings

OK pl 6/12/09

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE. RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MA 02446.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE:_____ RECEIPT:_____ CERTIFICATE # BC 096254 ISSUED: 8/20/09

1st Gym 200

Gym

FH

TOWN of BROOKLINE
Massachusetts

BUILDING DEPARTMENT

Michael Shepard
Building Commissioner
730-2100

APPLICATION FOR CERTIFICATE OF INSPECTION

Date 6/25/09 **$100**

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS

LOCATION 654 Hammond Street

USE OF PREMISES Nature Programs and Camps

NAME OF PREMISE Brookline Environmental Education Ctr.

CERTIFICATE TO BE ISSUED TO Recreation **(persons name)** Lisa Paradis **Telephone** 2069

ADDRESS 133 Eliot Street, Chestnut Hill, MA 02467

OWNER OF RECORD OF BUILDING Town of Brookline **Telephone** 2069

ADDRESS 133 Eliot Street

NAME OF PRESENT HOLDER OF CERTIFICATE Town of Brookline

NAME OF AGENT, IF ANY Lisa Paradis **Telephone** 2069

OK JK 6/12/09

SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT Gerald W. Kelly

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

INSTRUCTIONS:

APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE $100 **RECEIPT#** **CERTIFICATE #** **ISSUED**

333 Washington Street, Brookline, Massachusetts 02146
Tel: (617) 730-2100 Fax: (617) 739-7542

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 106.5 this

CERTIFICATE OF INSPECTION

is issued to CHARLES SIMMONS

I Certify that I have inspected the Town Owned Building *known as* SOULE GYM

located at 652 HAMMOND ST

State Building Code Use Group: 27 R-7 TOWN BLDGS, NOT SCHOOLS

in the Town of Brookline, County of Norfolk, Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:

STORY	ROOM	OCCUPANTS	STORY	ROOM	OCCUPANTS
1ST FLR	GYMNASIUM	200			

Comments: SOULE GYMNASIUM

Certificate No: BCI090254 *Issue Date:* 08/20/2009 *Date Certificate Expires:* 08/20/2010

Michael W. Shepard
Building Commissioner

The building commissioner shall be notified within (10) days of any changes in the above information.

Thursday, August 20, 2009

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 106.5 thi

CERTIFICATE OF INSPECTION

is issued to SOULE RECREATION

I Certify that I have inspected the Recreation Center *known as* SOULE RECREATION

located at 652 HAMMOND ST

State Building Code Use Group: A-3 ASSEMBLY-LECTURE HALL/REC

in the Town of Brookline, County of Norfolk, Commonwealth of Massachusetts The means of egress are sufficient for the following number of persons:

STORY	ROOM	OCCUPANTS	STORY	ROOM	OCCUPANTS
FIRST FLOOR	GYMNASIUM	200 PERSONS			

GYM

Comments:

Certificate No: BCI070079 *Issue Date:* 08/23/2006 *Date Certificate Expires:* 08/23/2007

James J. Nickerson
Building Commissioner

The building commissioner shall be notified within (10) days of any changes in the above information.

Wednesday, August 23, 2006

gave F.H. appl's 6/25/07

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 106.5 thi

CERTIFICATE OF INSPECTION

is issued to SOULE TEEN CENTER

I Certify that I have inspected the Recreation Center *known as* SOULE TEEN CENTER

located at 652 HAMMOND ST

State Building Code Use Group: A-3 ASSEMBLY-LECTURE HALL/REC

in the Town of Brookline, County of Norfolk, Commonwealth of Massachusetts The means of egress are sufficient for the following number of persons:

STORY	ROOM	OCCUPANTS	STORY	ROOM	OCCUPANTS
FIRST FLOOR	DANCE ROOM	34 PERSONS	SECOND FLOOR	BILLIARD ROOM	38 PERSONS
	CERAMICS ROOM	12 PERSONS		GENERAL ROOM	40 PERSONS
	AIR HOCKEY ROOM	17 PERSONS		T.V. ROOM	12 PERSONS
	COMMUNITY ROOM	32 PERSONS			
	NOT TO EXCEED 95 PERSO TEEN CENTER			NOT TO EXCEED 90 PERSO	

Comments:

Certificate No: BCI070078 *Issue Date:* 08/23/2006 *Date Certificate Expires:* 08/23/2007

The building commissioner shall be notified within (10) days of any changes in the above information.

Wednesday, August 23, 2006

James J. Nickerson
Building Commissioner

The Commonwe th of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 106.5 thi

CERTIFICATE OF INSPECTION

is issued to CHARLES SIMMONS

I Certify that I have inspected the Recreation Center *known as* SOULE GYMNASIUM

located at 652 HAMMOND ST

State Building Code Use Group: A-3 ASSEMBLY-LECTURE HALL/REC

in the Town of Brookline, County of Norfolk, Commonwealth of Massachusetts The means of egress are sufficient for the following number of persons:

STORY	ROOM	OCCUPANTS	STORY	ROOM	OCCUPANTS
FIRST FLOOR	GYMNASIUM	200 PERSONS			

Comments:

Certificate No: BCI050189 *Issue Date:* 09/01/2005 *Date Certificate Expires:* 07/28/2006

The building commissioner shall be notified within (10) days of any changes in the above information.

Thursday, September 01, 2005

James J. Nickerson
Building Commissioner

POA

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to .....Brookline Recreation Dept., Robert T. Lynch, Director.....

I Certify *that I have inspected the*...premises.....*known as*.....Morning Play Program Soule Recreation Center

located at....652 Hammond Street.....*in the*....TOWN.....*of*....BROOKLINE.....

County of..NORFOLK.....*Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
Two Rooms	Fourteen Children	First Floor			

DC-6	May 1, 1997	May 1, 1998	James J. Dickerson
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Building Official*

The building official shall be notified within (10) days of any changes in the above information.

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to ....BROOKLINE RECREATION DEPT., ROBERT T. LYNCH, DIRECTOR.....

I Certify *that I have inspected the*.....premises.....*known as*..... MORNING PLAY PROGRAM SOULE RECREATION CENTER

located at.....652 HAMMOND STREET.....*in the*....TOWN.....*of*....BROOKLINE.....

County of..NORFOLK.....*Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
TWO ROOMS	FOURTEEN CHILDREN	FIRST FLOOR			

DC-9 6-27	MARCH 27, 1996	MARCH 27, 1997	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Building Official*

The building official shall be notified within (10) days of any changes in the above information.

TOWN of BROOKLINE
Massachusetts

James J. Nickerson
Building Commissioner

APPLICATION FOR MECHANICAL PERMIT

Date: 9/24/07

Address of Installation: Soule Rec. Ctr. 652 Hammond St.

Name of Installer: Richard A Lee License Number: 029046

Name of Installing Company: Industrial Burner Systems

Address: 97 Rawson Rd. Quincy Zip Code: 02170

Telephone Number: 617-847-8665

Type of Installation (check any or all that apply)

- ☑ Hot Water Boiler ☑ Gas Fired ☐ Oil Fired ☐ Other _____
- ☐ Hot Air Furnace ☐ Gas Fired ☐ Other _____
- ☐ Air Conditioning ☐ Split A.C. ☐ Packaged Unit
- ☐ Commercial Rooftop Unit ☐ Dimensions _____ ☐ Weight _____
- ☐ Emergency Generator ☐ Gas Fired ☐ Diesel Fired ☐ Manufacturer _____
  ☐ KW _____
- ☐ Commercial Kitchen Exhaust Hood
- ☐ Suppressed ☐ Exhaust Only _____ ☐ Source of Supply Air _____
- ☐ Manufacturer & Type of Suppression System _____
- ☐ Commercial Refrigeration System
  ☐ Walk-In Cooler ☐ Walk-In Freezer ☐ Other (Specify _____)

Location in Building

- ☐ Attic ☑ Basement ☐ Outdoors
- ☐ Rooftop ☐ Other (Specify) _____

Capacity Tons A.C. _____

☐ BTU Input (Fuel Fired) 855 mbh

☐ Interior Chimney ☐ Exterior Chimney ☑ Direct Vent ☐ Height of Chimney _____

Size of Flue _____ ☐ Lined

☐ Manufacturer & Type of Liner To Be Installed _____

Please specify manufacturer, model number and written description of all mechanical equipment installed under this permit.

3- Lochinvar ~~#KNB~~ # KBN285 High Eff. direct vent Boilers w/ 2 Taco circ. pumps.

Estimated Cost of Complete Installation ~~$5,000~~ Signature of Applicant Richard A Lee

Permit Number MC070132 Receipt Number _____ Permit Fee N/A

Hammond
le Rec 2/27/04

Soule Gym
Day Care - Three
Play Group
Teen Drop In
Center Moved
Which one has
office to

WN of BROOKLINE

Massachusetts

BUILDING DEPARTMENT

PLICATION FOR CERTIFICATE OF INSPECTION

Date January 28, 2004

OVISIONS OF THE MASSACHUSETTS STATE BUILDING
APPLY FOR A CERTIFICATE OF INSPECTION FOR THE
ATED AT THE FOLLOWING ADDRESS:

LOCATTION 652 Hammond Street

USE OF PREMISES

NAME OF PREMISES Soule Recreation

CERTIFICATE TO BE ISSUED TO

ADDRESS

OWNER OF RECORD OF BUILDING TELEPHONE

ADDRESS

NAME OF PRESENT HOLDER OF CERTIFICATE

NAME OF AGENT, IF ANY

SIGNATURE OF PERSON TO WHOM CERTIFICATE TITLE

IS ISSUED OR HIS AUTHORIZED AGENT Date

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

When was Gym renovated

INSTRUCTIONS: MAKE CHECK PA KLINE. RETURN THIS APPLICATION WITH YOUR CHECK T ENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE,

NOTE: APPLICATION FORM WITH T BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OF TIFIED. APPLICATION AND FEE MUST BE RECEIVED BE ILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOT S OF ANY CHANGE IN TION.

F.H & BR will measure Soule Gym Is There a cert for Gym

CERTIFICATE # ISSUED

3 Washington Street, Brookline, Massachusetts 02146
Tel: (617) 730-2100 Fax: (617) 739-7542

TOWN of BROOKLINE

Massachusetts

BUILDING DEPARTMENT

James J. Nickerson
Building Commissioner

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE: March 27, 2002

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION 652 **HAMMOND STREET**

NAME OF PREMISES **SOULE RECREATION CENTER**

CERTIFICATE TO BE ISSUED TO Charles Simmons, Director of Public B

ADDRESS 333 Washington Street, Town Hall, Br

OWNER OF RECORD OF BUILDING The Town of Brookline TI

ADDRESS Town Hall, 333 Washington Street, B

NAME OF PRESENT HOLDER OF CERTIFICATE Town of Brookline

NAME OF AGENT, IF ANY T

SIGNITURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR AUTH

Charles A. Simmons
Director of Public Buildings

Under construction start June may take till Sept

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENECIES:

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE. RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MA 02446.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE:_____ RECEIPT:_____ CERTIFICATE #_____ ISSUED:_____

Original F.H. 6/6/02

TOWN of BROOKLINE
Massachusetts

BUILDING DEPARTMENT

James J. Nickerson
Building Commissioner
730-2100

APPLICATION FOR CERTIFICATE OF INSPECTION

Date 6/21/07

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION 652 Hammond Street

USE OF PREMISES Recreation Center

NAME OF PREMISES Soule Recreation Center

CERTIFICATE TO BE ISSUED TO Brookline Recreation Department **Telephone** 617-730-2069

ADDRESS 133 Eliot Street, Brookline, MA 02467

OWNER OF RECORD OF BUILDING Town of Brookline **Telephone** 617 730-2069

ADDRESS 133 Eliot Street, Brookline, MA 02467

TIFICATE Brookline Recreation Dept

Gallentine **Telephone** 617-730-2069

Jerry from Recreation 6/26/07 Variety 08

ERTIFICATE

T **Title**

FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

PAYABLE TO TOWN OF BROOKLINE. RETURN THIS TO THE BUILDING DEPARTMENT, TOWN HALL, 333 MA. 02446.

ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH HEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE $_____ RECEIPT #_____ CERTIFICATE # _____ ISSUED _____

TOWN of BROOKLINE
Massachusetts

BUILDING DEPARTMENT

James J. Nickerson
Building Commissioner
730-2100

APPLICATION FOR CERTIFICATE OF INSPECTION

Date 6/21/07

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION 652 Hammond Street

USE OF PREMISES Recreation Center

NAME OF PREMISES Soule Recreation Center

CERTIFICATE TO BE ISSUED TO Brookline Recreation Department **Telephone** 617-730-2069

ADDRESS 133 Eliot Street, Brookline, MA 02467

OWNER OF RECORD OF BUILDING Town of Brookline **Telephone** 617 730-2069

ADDRESS 133 Eliot Street, Brookline, MA 02467

NAME OF PRESENT HOLDER OF CERTIFICATE Brookline Recreation Dept

NAME OF AGENT, IF ANY Erin Gallentine **Telephone** 617-730-2069

SIGNATURE OF PERSON TO WHOM CERTIFICATE

IS ISSUED OR HIS AUTHORIZED AGENT Erin Gallentine **Title**

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

INSTRUCTIONS: **MAKE CHECK PAYABLE TO TOWN OF BROOKLINE. RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MA. 02446.**

NOTE: **APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.**

FEE $_____ RECEIPT #_____ CERTIFICATE #_____ ISSUED _____

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to ...Brookline Recreation Dept.....

I Certify *that I have inspected the* ...Soule Center.....*known as* ...Teen Center.....

located at ...652 Hammond St.....*in the* ...TOWN.....*of* ...BROOKLINE.....

County of ...NORFOLK.....*Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity

Place of Assembly or Structure	Capacity	Location

Teencenter

200 kids
(TOPS)

Certificate Number *Date Ce* *e Expires* *Building Official*

The building official shall be notified within (10) days of any changes in the above information.

TOWN of BROOKLINE
Massachusetts

BUILDING DEPARTMENT

James J. Nickerson
Building Commissioner
730-2100

APPLICATION FOR CERTIFICATE OF INSPECTION

Date August , 2006

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

Location 652 Hammond St

Use of premises Gymnasium

Name of premises Soule Recreation

Certificate to be issued to Chales Simmons Director of Public Buildings

Address 333 Washington Street

Owner of record of building Town of Brookline

Address 333 Washington St

Name of present holder of certificate Town of Brookline

Name of agent, if any

Signature of person to whom certificate is issued or his authorized agent

License (s) or permit (s) required for the premises by other government agencies:

fl, ok 8-23-06

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE. RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET , BROOKLINE, MA 02446.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

Fee $. Town Bldg **RECEIPT#**_____ **CERTIFICATE#** BC1070079 **ISSUED** 8/23/06

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 106.5 thi

CERTIFICATE OF INSPECTION

is issued to SOULE RECREATION

I Certify that I have inspected the Recreation Center *known as* SOULE RECREATION

located at 652 HAMMOND ST

State Building Code Use Group: A-3 ASSEMBLY-LECTURE HALL/REC

in the Town of Brookline, County of Norfolk, Commonwealth of Massachusetts The means of egress are sufficient for the following number of persons:

STORY	ROOM	OCCUPANTS	STORY	ROOM	OCCUPANTS
FIRST FLOOR	GYMNASIUM	200 PERSONS			

GYM

Comments:

Certificate No: BCI070079 *Issue Date:* 08/23/2006 *Date Certificate Expires:* 08/23/2007

The building commissioner shall be notified within (10) days of any changes in the above information.

Wednesday, August 23, 2006

James J. Nickerson
Building Commissioner

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 106.5 this

CERTIFICATE OF INSPECTION

is issued to ROBERT LYNCH

I Certify that I have inspected the Recreation Center *known as* SOULE GYMNASIUM

located at 652 HAMMOND ST

State Building Code Use Group: A-3 ASSEMBLY-LECTURE HALL/REC

in the Town of Brookline, County of Norfolk, Commonwealth of Massachusetts The means of egress are sufficient for the following number of persons:

STORY	ROOM	OCCUPANTS	STORY	ROOM	OCCUPANTS
FIRST	GYMNASIUM	200 PERSONS			

Comments:

Certificate No: BCI040126 *Issue Date:* 08/16/2004 *Date Certificate Expires:* 06/29/2005

James J. Nickerson
Building Commissioner

The building commissioner shall be notified within (10) days of any changes in the above information.

Monday, August 16, 2004

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Brookline Recreation Dept, Robert T. Lynch, Director

I Certify *that I have inspected the* premises *known as* Soule Gymnasium

located at 652 Hammond Street *in the* TOWN *of* BROOKLINE

County of NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
Gymnasium	200 Persons	First Floor			

POA-12
Certificate Number

June 23, 1998
Date Certificate Issued

June 23, 1999
Date Certificate Expires

Building Official

The building official shall be notified within (10) days of any changes in the above information.

hand delivered

TOWN of BROOKLINE

Massachusetts

BUILDING DEPARTMENT

James J. Nickerson
Building Commissioner

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE: 6/10/04

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION 652 **HAMMOND STREET**

NAME OF PREMISES SOULE GYMNASIUM

CERTIFICATE TO BE ISSUED TO Charles Simmons, Director of Public Buildings

ADDRESS 333 Washington Street, Town Hall, Brookline MA 02445

OWNER OF RECORD OF BUILDING The Town of Brookline TELEPHONE # 617-730-2420

ADDRESS Town Hall, 333 Washington Street, Brookline, MA 02445

NAME OF PRESENT HOLDER OF CERTIFICATE Town of Brookline

NAME OF AGENT, IF ANY TELEPHONE #

SIGNITURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR AUTHORIZED AGENT

Charles A. Simmons
Director of Public Buildings

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENECIES:

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE. RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MA 02446.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE:_____ RECEIPT:_____ CERTIFICATE # BC1040126 ISSUED: 6/29/04

OK
BTT
6/15/4

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to BROOKLINE RECREATION DEPT., ROBERT T. LYNCH

I Certify *that I have inspected the* premises *known as* SOULE GYMNASIUM *located at* 652 HAMMOND STREET *in the* TOWN *of* BROOKLINE *County of* NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
Gymnasium	200 Persons	First Floor			

POA-54	June 15, 2000	June 15, 2001	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Building Official*

The building official shall be notified within (10) days of any changes in the above information.

TOWN of BROOKLINE
Massachusetts

BUILDING DEPARTMENT

James J. Nickerson
Building Commissioner
730-2100

APPLICATION FOR CERTIFICATE OF INSPECTION

Date May 11, 2000

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATTION 652 Hammond Street

USE OF PREMISES Recreation Activities

NAME OF PREMISES Soule Gymnasium

CERTIFICATE TO BE ISSUED TO Town of Brookline - Recreation

ADDRESS 652 Hammond St. 02467

OWNER OF RECORD OF BUILDING Robert T. Lynch Telephone 730-2069

ADDRESS 652 Hammond St. 02467

NAME OF PRESENT HOLDER OF CERTIFICATE Robert T. Lynch

NAME OF AGENT, IF ANY

* SIGNATURE OF PERSON TO WHOM CERTIFICATE Robert T. Lynch TITLE Director of Rec.

IS ISSUED OR HIS AUTHORIZED AGENT Date 5/15/00

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE. RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MA. 02146.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE N/A. _____ RECEIPT #_____ CERTIFICATE # _____ ISSUED _____

333 Washington Street, Brookline, Massachusetts 02146
Tel: (617) 730-2100 Fax: (617) 739-7542

OK 6/6/00

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Robert Lynch, Director

I Certify *that I have inspected the* premises *known as* Soule Gymnasium *located at* 652 Hammond Street *in the* TOWN *of* BROOKLINE *County of* NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
Gymnasium	200 Persons	1st. floor			

POA-3	February 25, 1998	February 25, 1999	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Building Official*

The building official shall be notified within (10) days of any changes in the above information.

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Brookline Recreation Dept, Robert T. Lynch, Director

I Certify *that I have inspected the* premises *known as* Soule Gymnasium

located at 652 Hammond Street *in the* TOWN *of* BROOKLINE

County of NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
Gymnasium	200 Persons	First Floor			

POA-12	June 23, 1998	June 23, 1999	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Building Official*

The building official shall be notified within (10) days of any changes in the above information.

TOWN of BROOKLINE
Massachusetts

LODGING HOMES

BUILDING DEPARTMENT
JAMES J. NICKERSON
BUILDING COMMISSIONER
730-2100

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE July 15, 1999 FEE: $ 0

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 108.5.1, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION 652 Hammond Street

USE OF PREMISES Gymnasium

NAME OF PREMISES Soule Gymnasium

CERTIFICATE TO BE ISSUED TO Brookline Recreation Department

ADDRESS 652 Hammond Street , Chestnut Hill, Ma. 02467

OWNER OF RECORD OF BUILDING Town of Brookline Telephone 730-2100

ADDRESS 333 Washington St

NAME OF PRESENT HOLDER OF CERTIFICATE Brookline Recreation Dept Telephone

NAME OF AGENT, IF ANY _____ Telephone

Robert T. Lynch
SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT

Director of Recreation
TITLE

July 15, 1999
DATE

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

Licensed by Office for Children

Licensed by Public Health Department

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE
RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MASSACHUSETTS 02445.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED.
APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED.
THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE 0 RECEIPT 0 CERTIFICATE # POA-33 ISSUED 7/16/99

OK 7-16-99 JK

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to BROOKLINE RECREATION DEPT, ROBERT T. LYNCH

I Certify *that I have inspected the* PREMISES *known as* SOULE GYMNASIUM *located at* 652 HAMMOND STREET *in the* TOWN *of* BROOKLINE *County of* NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
GYMNASIUM	200 Persons	First Floor			

POA-33
Certificate Number

July 16, 1999
Date Certificate Issued

July 16, 2000
Date Certificate Expires

Building Official

The building official shall be notified within (10) days of any changes in the above information.

TOWN of BROOKLINE

Massachusetts

BUILDING DEPARTMENT

James J. Nickerson
Building Commissioner

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE: June 29, 2005

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION 652 **HAMMOND STREET**

NAME OF PREMISES **SOULE GYM**

CERTIFICATE TO BE ISSUED TO Charles Simmons, Director of Public Buildings

ADDRESS 333 Washington Street, Town Hall, Brookline MA 02445

OWNER OF RECORD OF BUILDING The Town of Brookline TELEPHONE # 617-730-2420

ADDRESS Town Hall, 333 Washington Street, Brookline, MA 02445

NAME OF PRESENT HOLDER OF CERTIFICATE Town of Brookline

NAME OF AGENT, IF ANY TELEPHONE #

SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR AUTHORIZED AGENT

Charles A. Simmons
Director of Public Buildings

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENECIES:

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE. RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MA 02446.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE:_____ RECEIPT:_____ CERTIFICATE # BC1050189 ISSUED: 9/1/05

02467

OK JH 8/31/05

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 106.5 thi

CERTIFICATE OF INSPECTION

is issued to CHARLES SIMMONS

I Certify that I have inspected the Recreation Center *known as* SOULE GYMNASIUM

located at 652 HAMMOND ST

State Building Code Use Group: A-3 ASSEMBLY-LECTURE HALL/REC

in the Town of Brookline, County of Norfolk, Commonwealth of Massachusetts The means of egress are sufficient for the following number of persons:

STORY	ROOM	OCCUPANTS	STORY	ROOM	OCCUPANTS
FIRST FLOOR	GYMNASIUM	200 PERSONS			

Comments:

Certificate No: BCI050189 *Issue Date:* 09/01/2005 *Date Certificate Expires:* 07/28/2006

The building commissioner shall be notified within (10) days of any changes in the above information.

Thursday, September 01, 2005

James J. Nickerson
Building Commissioner

MASSACHUSETTS UNIFORM APPLICATION FOR PERMIT TO DO GASFITTING
(Print or Type)

G

Our Contract Amt $45,800-

Brookline, Mass.
City, Town

Date 3-28-2002

Permit # BG0200293

AT: Building Location 652 Hammond St.

Owner's Name Town of Brookline

Type of Occupancy: Recreation Center

New ☐ Renovation ☒ Replacement ☐

Plans Submitted Yes ☐ No ☒

	RANGES	HEATER RANGES	OVENS	GRILLES	HEATING BOILERS	FURNACES	UNIT HEATERS	WATER HEATERS	DRYERS	GAS GENERATORS	LABORATORY COCKS	CONVERSION BURNERS	ROOF TOP UNITS	VENTED ROOM HTRS.	DIRECT VENT HTRS.	POOL HEATERS	TESTS	OTHER	Relocate	Piping								
SUB-BSMT.																												
BASEMENT																			1									
1ST FLOOR																												
2ND FLOOR																												
3RD FLOOR																												
4TH FLOOR																												
5TH FLOOR																												
6TH FLOOR																												
7TH FLOOR																												
8TH FLOOR																												

(Print or Type)

Installing Company Name Robert W Irvine and Sons Inc.

Address 82 Alley St.
Lynn MA. 01902

Business Telephone (617) - 581-0464

Check One: Certificate

☑ Corp. 2046C

☐ Partnership

☐ Firm/Company

Name of Licensed Plumber or Gasfitter
Terrance M Desmond

I hereby certify that all of the details and information I have submitted (or entered) in above application are true and accurate to the best of my knowledge and that all plumbing work and installations performed under Permit issued for this application will be in compliance with all pertinent provisions of the Massachusetts State Gas Code and Chapter 142 of the General Laws.

I have informed the owner or his agent that I do not have liability insurance including completed operations coverage.

Signature of Owner/Agent

I have a current liability insurance policy to include completed operations coverage. ☑

By

Title

City/Town

APPROVED (OFFICE USE ONLY)

TYPE LICENSE: Terrance M Desmond
Signature of Licensed Plumber or Gasfitter

☑ Plumber
☐ Gasfitter
☑ Master
☐ Journeyman

10692
License Number

FORM 1243 HOBBS & WARREN, INC. 1989

BELOW FOR OFFICE USE ONLY

FINAL INSPECTION

SKETCHES

PROGRESS INSPECTION

FEE _____

NO. _____

APPLICATION FOR PERMIT TO DO GASFITTING

_____

_____

_____

NAME & TYPE OF BUILDING _____

_____

LOCATION OF BUILDING _____

_____

PLUMBER OR GASFITTER _____

_____

LIC. NO. _____

_____

_____

_____

_____

PERMIT GRANTED

DATE _____ 19 ____

_____

_____

_____

_____

GAS INSPECTOR

RECEIVED
02 APR -3 AM 8:01
BUILDING DEPT.
TOWN OF BROOKLINE

file

TOWN of BROOKLINE

Massachusetts

BUILDING DEPARTMENT

JAMES J. NICKERSON
BUILDING COMMISSIONER
730-2100

aNO. 199

May 2, 1990

Pat Gleason
Children's Theatre
652 Hammond Street
Brookline, Massachusetts 02167

Re: 652 Hammond Street

Inspections of the subject premises revealed that motor vehicles are illegally parking in violation of the Town's Zoning By-Laws: Section 6.13 (c) (1) illegal parking of cars.

Accordingly, as record owner, you are hereby directed to cease **illegally** parking motor vehicles on the premises within twenty (20) days of this notice.

Failure to comply will result in the issuance of a non-criminal ticket, issued on a daily basis (each day a violation continues shall constitute a separate violation). The penalty for each violation is $50.00.

Yours very truly,

James J. Nickerson
Building Commissioner

JJN:h

file

BROOKLINE

sachusetts

aNO. 199

2, 1990

652 Hammond Street
Brookline, Massachusetts 02167

Re: 652 Hammond Street

Inspections of the subject premises revealed that motor vehicles are illegally parking in violation of the Town's Zoning By-Laws: Section 6.13 (c) (1) illegal parking of cars.

Accordingly, as record owner, you are hereby directed to cease **illegally** parking motor vehicles on the premises within twenty (20) days of this notice.

Failure to comply will result in the issuance of a non-criminal ticket, issued on a daily basis (each day a violation continues shall constitute a separate violation). The penalty for each violation is $50.00.

Yours very truly,

James J. Nickerson
Building Commissioner

JJN:h

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Brookline Children's Cooperative School, Inc.

I Certify *that I have inspected the* premises *known as* Soule Recreation *located at* 654 Hammond Street *in the* TOWN *of* BROOKLINE *County of* NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
3 Rooms	60 Persons & Teachers	First Floor			

DC-9
Certificate Number

April 1, 1983
Date Certificate Issued

April 1, 1984
Date Certificate Expires

Building Official

The building official shall be notified within (10) days of any changes in the above information.

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Gail Eddy, Director Brookline Children's Cooperative School

I Certify *that I have inspected the* premises *known as*

located at Suole Rec., 652 Hammond Street *in the* TOWN *of* BROOKLINE

County of NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
3 Rooms	60 Persons	FirstFloor			

DC 7	July 13, 1990	July 13, 1991	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Building Official*

The building official shall be notified within (10) days of any changes in the above information.

TOWN of BROOKLINE

Massachusetts

COMMON VICTUALLER

BUILDING DEPARTMENT
JAMES J. NICKERSON
BUILDING COMMISSIONER
730-2100

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE 5/7/90 FEE: $100

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 108.5.1, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION 652 Hammond St, Brookline (Soule Rec Bldg)

USE OF PREMISES Preschool

NAME OF PREMISES Brookline Childrens Cooperative School, Inc.

CERTIFICATE TO BE ISSUED TO Gail Eddy - Director

ADDRESS as above 731-6812 Telephone

OWNER OF RECORD OF BUILDING Town of Brookline

ADDRESS

NAME OF PRESENT HOLDER OF CERTIFICATE Gail Eddy, Brookline Childrens Coop School Inc Telephone

NAME OF AGENT, IF ANY —

Telephone

Gail M. Eddy — Director

SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT — TITLE

5/7/90 DATE

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

#192 - issued by Brookline Health Dept

Valid through 6/27/91

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE
RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MASSACHUSETTS 02146.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED.
APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED.
THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE $ 100 RECEIPT 87607 CERTIFICATE # 007 ISSUED 7-13-90

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Gail Eddy, Director

I Certify *that I have inspected the* premises *known as* Brookline Childrens' Cooperative School *located at* Soule Recreation, 652 Hammond Street *in the* TOWN *of* BROOKLINE *County of* NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
3 Rooms	60 Persons	Lst. Floor			

DC 5
Certificate Number

April 21, 1988
Date Certificate Issued

April 21, 1989
Date Certificate Expires

Building Official

The building official shall be notified within (10) days of any changes in the above information.

COMMONWEALTH OF MASSACHUSETTS
TOWN OF BROOKLINE

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE: 5/25/88

( ) Fee Required (amount) $40.00
( ) No Fee Required

In accordance with the provisions of the Massachusetts State Building Code, Section 108.15, I hereby apply for a Certificate of Inspection for the below-named premises located at the following address:

Street and Number 652 Hammond St
Name of Premises Seule Recreation Center
Purpose for Which Premises is Used preschool program
License(s) or Permit(s) Required for the Premises by Other Governmental Agencies:

License or Permit	Agency
Preschool License	Health Dept

Certificate to be Issued to BROOKLINE CHILDREN'S COOPERATIVE SCHOOL - Telephone No. 731-6812
Address 1052 Hammond St Brookline MA
Owner of Record of Building Town of Brookline Telephone No.
Address
Name of Present Holder of Certificate Brookline Children's Cooperative School Telephone No.
Name of Agent, if any —

Gail M Eddy (GAIL EDDY)
SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT

DIRECTOR
TITLE

5/25/88
DATE

INSTRUCTIONS:

Make check payable to: Town of Brookline

Return this application with your check to: Building Department, Town Hall, 333 Washington Street, Brookline, Massachusetts 02146

PLEASE NOTE:

Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified.

Application and fee must be received before the certificate will be issue

The building official shall be notified within ten (10) days of any chang in the above information.

CERTIFICATE # DC-5

EXPIRATION DATE: April 21, 1989

FORM SBCC-3-74

JB OK
6/2/88

-78

80847

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Patricia Vonnegut, Director

I Certify *that I have inspected the* premises *known as* Brookline Children's Cooperative School

located at Soule Recreation, 652 Hammond St. *in the* TOWN *of* BROOKLINE

County of NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
3 Rooms	60 Persons	1st. Floor			

DC07	June 11, 1987	June 11, 1988	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Building Official*

The building official shall be notified within (10) days of any changes in the above information.

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Pat Vonnegut, Director

I Certify *that I have inspected the* premises *known as* Brookline Children's Cooperative School

located at SOULE RECREATION, 652 Hammond Street *in the* TOWN *of* BROOKLINE

County of NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
3 Rooms	60 Persons	1st. Floor			

DC 5
Certificate Number

April 21, 1988
Date Certificate Issued

April 21, 1989
Date Certificate Expires

Building Official

The building official shall be notified within (10) days of any changes in the above information.

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Gail Eddy - Director

Brookline Children's Coop. School

I Certify *that I have inspected the* premises *known as*

located at 652 Hammond Street *in the* TOWN *of* BROOKLINE

County of NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
Three Rooms	60 Persons	First Floor			

DC 8	March 24, 1992	March 24, 1993	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Building Official*

The building official shall be notified within (10) days of any changes in the above information.

TOWN of BROOKLINE

Massachusetts

RECEIVED
1992 MAR 11 AM 11:06

BUILDING DEPARTMENT
JAMES J. NICKERSON
BUILDING COMMISSIONER
730-2100

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE 3/6/92 FEE: $100

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 108.5.1, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION Soule Rec Bldg.

USE OF PREMISES Preschool

NAME OF PREMISES Brookline Childrens Coop School

CERTIFICATE TO BE ISSUED TO above

ADDRESS 652 Hammond St 7316812, 9692593
Telephone

OWNER OF RECORD OF BUILDING Town of Brookline

ADDRESS Washington St Brookline
Telephone

NAME OF PRESENT HOLDER OF CERTIFICATE Brookline Childrens Coop School

NAME OF AGENT, IF ANY GAIL EDDY - Dir of School 7316812
Telephone

Gail M Eddy — Director
SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT — TITLE

3/6/92
DATE

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

Health Dept #218

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE
RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MASSACHUSETTS 02146.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED.
APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED.
THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

OK $100 RECEIPT 24451 CERTIFICATE # 8 ISSUED 3-24-92

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Ms. Gial Eddy, Director — Brookline Childrens' Cooperative School

I Certify *that I have inspected the* premises *known as*

located at Soule Rec.; 652 Hammond Street *in the* TOWN *of* BROOKLINE

County of NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
3 Rooms	60 Persons	1st Floor			

DC 003 — *Certificate Number*

June 12, 1989 — *Date Certificate Issued*

June 12, 1990 — *Date Certificate Expires*

James B. Hahn — *Building Official*

The building official shall be notified within (10) days of any changes in the above information.

COMMONWEALTH OF MASSACHUSETTS
TOWN OF BROOKLINE

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE: 5/23/89

( ) Fee Required (amount) $45.00
( ) No Fee Required

In accordance with the provisions of the Massachusetts State Building Code, Section 108,15, I hereby apply for a Certificate of Inspection for the below-named premises located at the following address:

Street and Number Soule Rec Bldg - BCCS 1652 Hammond St Brookline
Name of Premises
Purpose for Which Premises is Used nursery school
License(s) or Permit(s) Required for the Premises by Other Governmental Agencies:

License or Permit	Agency

Certificate to be Issued to Brookline Childrens Cooperative School
Address 1652 Hammond St Telephone No. 731-6812
Owner of Record of Building Town of Brookline
Address Telephone No.
Name of Present Holder of Certificate Brookline Childrens Coop School Inc
Name of Agent if any Telephone No.

Gail M. Eddy
SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT

Director
TITLE

5/22/89
DATE

INSTRUCTIONS:

1) Make check payable to: TOWN OF BROOKLINE

2) Return this application with your check to: Building Department, Town Hall, 333 Washington Street, Brookline, MA 02146

PLEASE NOTE:

1) Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified.

2) Application and fee must be received before the certificate will be issued.

3) The building official shall be notified within ten (10) days of any change in the above information.

CERTIFICATE NUMBER: _____ EXPERATION DATE: _____

Current # DC5 Current 6/11/89

June 1, 1989 (? cert for 2 yrs) 84332.

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Barbara M. Senecal, President
The Boston Children's Theatre, Inc.

I Certify *that I have inspected the* premises *known as* The Boston Children's Theatre, Inc Rehersal Hall & Office

located at 652 Hammond Street *in the* TOWN *of* BROOKLINE

County of NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity
Second	100 Persons						

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location

THE10
Certificate Number

March 5, 1985
Date Certificate Issued

March 5, 1986
Date Certificate Expires

George E. Beatty
Building Official

The building official shall be notified within (10) days of any changes in the above information.

COMMONWEALTH OF MASSACHUSETTS

CITY/TOWN OF Brookline

SECOND NOTICE

APPLICATION FOR CERTIFICATE OF INSPECTION

Date 9/13/84

(x) Fee Required (Amount) $40.00

( ) No Fee Required

In accordance with the provisions of the Massachusetts State Building Code, Section 108,15, I hereby apply for a Certificate of Inspection for the below-named premises located at the following address:

Street and Number ~~124 Holland Road~~ 652 Hammond Street
Name of Premises The Boston Children's Theatre, Inc.
Purpose for Which Premises is Used classes, rehearsal, office
License(s) or Permit(s) Required for the Premises by Other Governmental Agencies:

License or Permit	Agency
NONE	NONE

Certificate to be Issued to The Boston Children's Theatre, Inc.
Address 652 Hammond Street Chestnut Hill, Mass. 02167 Telephone No. 277-3277
Owner of Record of Building Town of Brookline
Address 652 Hammond Street Chestnut Hill, Mass. 02167 Telephone No. 232-9000 x 225
Name of Present Holder of Certificate BCT
Name of Agent, if any NONE Telephone No. 277-3277

Lisa Federico for Barbara M. Senecal
SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT

President
TITLE

10/5/84
DATE

INSTRUCTIONS:

1) Make check payable to: Town of Brookline

2) Return this application with your check to: Building Department, Town Hall, 333 Washington Street, Brookline, Massachusetts 02146

PLEASE NOTE:

1) Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified.

2) Application and fee must be received before the certificate will be issued.

3) The building official shall be notified within ten (10) days of any change in the above information.

EXPIRATION DATE:

CERTIFICATE #

FORM SBCC-3-74

~~[illegible]~~ ok bar cert 3-5-85 J G Banner

70620

8-78

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Brookline Children's Cooperative School, Inc.

I Certify *that I have inspected the* premises *known as* Soule Recreation

located at 654 Hammond Street *in the* TOWN *of* BROOKLINE

County of NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
3 Rooms	60 Persons & teachers	First Floor			

DC-12
Certificate Number

April 1, 1982
Date Certificate Issued

April 1, 1983
Date Certificate Expires

Joyce E Beatty
Building Official

The building official shall be notified within (10) days of any changes in the above information.

COMMONWEALTH OF MASSACHUSETTS

CITY/TOWN OF **Brookline**

MAR 11 2 51 AM '82

APPLICATION FOR CERTIFICATE OF INSPECTION

Date February 17, 1982

(X) Fee Required (Amount) $40.00

( ) No Fee Required

In accordance with the provisions of the Massachusetts State Building Code, Section 108,15, I hereby apply for a Certificate of Inspection for the below-named premises located at the following address:

Street and Number 652 Hammond Street
Name of Premises Brookline Childrens Cooperative School, Inc.
Purpose for Which Premises is Used Day Care
License(s) or Permit(s) Required for the Premises by Other Governmental Agencies:

License or Permit	Agency

Certificate to be Issued to Brookline Children's Coop School
Address 652 Hammond Chestnut Hill 02167 Telephone No. 731-6512
Owner of Record of Building Town of Brookline
Address Dept of Recreation Telephone No.
Name of Present Holder of Certificate
Name of Agent, if any Telephone No.

Teacher director — Cathy R Rosenblum
SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT — TITLE

March 9 82
DATE

INSTRUCTIONS:

1) Make check payable to: **Town of Brookline**

2) Return this application with your check to: **Building Department, Town Hall, 333 Washington Street, Brookline, Massachusetts 02146**

PLEASE NOTE:

1) Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified.
2) Application and fee must be received before the certificate will be issued.
3) The building official shall be notified within ten (10) days of any change in the above information.

CERTIFICATE # EXPIRATION DATE:

FORM SBCC-3-74

ok for cert 3-31-82

8-78

63218

(1-58)

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Brookline Children's Cooperative School, Inc.

I Certify *that I have inspected the* premises *known as* Soule Recreation *located at* 652 Hammond Street *in the* TOWN *of* BROOKLINE *County of* NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
3 Rooms	60 Persons & Teachers	First Floor			

DC-8
Certificate Number

April 1, 1984
Date Certificate Issued

April 1, 1985
Date Certificate Expires

Joseph E. Beatty
Building Official

The building official shall be notified within (10) days of any changes in the above information.

COMMONWEALTH OF MASSACHUSETTS

CITY/TOWN OF Brookline

APPLICATION FOR CERTIFICATE OF INSPECTION

Date 2-29-84

(✓) Fee Required (Amount) $40.00

( ) No Fee Required

In accordance with the provisions of the Massachusetts State Building Code, Section 108,15, I hereby apply for a Certificate of Inspection for the below-named premises located at the following address:

Street and Number 652 Hammond Street
Name of Premises Brookline Children's Co-op
Purpose for Which Premises is Used Nursery School
License(s) or Permit(s) Required for the Premises by Other Governmental Agencies:

License or Permit	Agency

Certificate to be Issued to Brookline Childrens Coop School Telephone No. 731-6812
Address 652 Hammond St. Brookline
Owner of Record of Building Telephone No.
Address
Name of Present Holder of Certificate Brookline Children's Cooperative School, Inc.
Name of Agent, if any Telephone No.

Pat Vonnegut
SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT

Director
TITLE

March 26, 1984
DATE

INSTRUCTIONS:

1) Make check payable to: Town of Brookline

2) Return this application with your check to: Building Department, Town Hall, 333 Washington Street, Brookline, Massachusetts 02146

PLEASE NOTE:

1) Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified.

2) Application and fee must be received before the certificate will be issued.

3) The building official shall be notified within ten (10) days of any change in the above information.

EXPIRATION DATE: April 1, 1984

CERTIFICATE # DC-9

FORM SBCC-3-74

ok for cert 4-27-84
J S Brenner

69068

8-78

The Commonwealth of Massachusetts

ANNUAL CERTIFICATE

OF

STEAM BOILER INSPECTION

As required by Chapter 146, General Laws

THE EMPLOYERS' GROUP OF INSURANCE COMPANIES
BOSTON, MASSACHUSETTS

Owners No. #1 State Tag No. _____

Mass. STD. No. _____ Mass. Heat No. _____ Date of Inspection January 9, 1968

N. B. No. _____ ASME No. _____

This is to Certify that the herein-described steam boiler inspected by

The Employers' Liability Assurance Corp., Ltd.
(NAME OF INSURANCE COMPANY)

may be operated at a **Pressure not to exceed** 15 **Pounds per square inch.**

Name of user Town of Brookline Type of boiler C.I.S. BOILER

Location of boiler Soule Recreation Center, 652 Hammond Street, Brookline, Mass.

Year built 1966 Built by BURNHAM

Length of shell or drum _____ ft. 60 in. Width ~~Diameter~~ of shell or drum 40 in.

THE EMPLOYERS' LIABILITY ASSURANCE CORPORATION, LIMITED

Frank J. Carey
United States General Manager and Attorney

AMERICAN EMPLOYERS' INSURANCE COMPANY
THE EMPLOYERS' FIRE INSURANCE COMPANY
THE NORTHERN ASSURANCE COMPANY OF AMERICA

J. Marshall Boyden
Secretary

Frank J. Carey
President.

Signature David E. Swift
Boiler Inspector.

In accordance with Section 29, Chapter 146, General Laws, notify this Company at once if any defect is discovered.

POST UNDER GLASS IN CONSPICUOUS PLACE IN ENGINE OR BOILER ROOM

G12707-3

Boston Children's Theatre, Inc.

~~1 XXXXXXXXX XXXXX XXXXXXXXXX, XXXXXXXX XXXXX~~

617—277-3277

652 Hammond St., Chestnut Hill MA 02167

TRUSTEES

DAVID ADELSON — PRESIDENT
BARBARA SENECAL — EXECUTIVE VICE-PRESIDENT
GEORGE M. VROTSOS — VICE-PRESIDENT
GRACE H. BARNETT — VICE-PRESIDENT
CALVIN A. HILL — TREASURER
JOAN PITLOR — CLERK
PRISCILLA W. RAND — PRESIDENT EMERITUS

PHYLLIS ADELSON
JEANNE M. ARMIN
DEBORAH G. BROOKS
RUSTY BROWDER
M. CHRISTOPHER CANAVAN, JR.
PATRICIA A. HARPER
ELIZABETH JOHNSON
MR. AND MRS. HERBERT LERMAN
FRANCIS MANZELLI
MARY McISAAC
INABETH MILLER
SHAARI S. MITTEL
JOEL PITLOR
JUDITH SANDLER
PAUL SENECAL
VIVIAN M. SHOOLMAN
SUSAN P. VROTSOS
MRS. SUMNER WALDMAN
DAVID L. WELTMAN
LOIS H. WELTMAN

GEORGE ROLAND — EXECUTIVE DIRECTOR
ADELE THANE — ASSOCIATE DIRECTOR

November 23, 1983

BUILDING DEPT., TOWN HALL

TOWN OF BROOKLINE
333 Washington St.
Brookline MA 02146

Dear Sirs,

Enclosed is our fee for inspection. At the time that the inspectors were here there was discussion about correcting some plumbing problems on our premises. We would be very grateful to have these attended to.

Also we understand that you are trying to replace one of the outside lights for the building which would illuminate the parking area. We have a great many children who attend classes and rehearsals as late as 6:00 p.m. By this hour it is very dark outside the building especially in the parking area. Parents are uneasy about the safety for their children coming and going as are we. So we would especially appreciate your prompt attention to procuring this light. I believe Tom of the Recreation Dept. here at 652 Hammond St. has been in touch with you about this.

Thank you.

Sincerely,

Priscilla W. Rand

Priscilla W. Rand,
Executive Director

Encl.

TO: Brookline Board of Appeals

FROM: Brookline Planning Board

DATE: June 4, 1981

SUBJECT: Establishment of Day Care Center

LOCATION: 652 Hammond St. (Soule Recreation Center)

Atlas Sheet: 125 Case #
Block: 432 Zoning: T-6, S-25
Lot(s): 27-30

HEARING: June 24, 1981 at 7:00 p.m.

Site and Neighborhood

The Soule Recreation Center is a town operated facility which provides recreational programs such as nursery school and sports activities for Town youth. The property comprises a U-shaped recreation building, a gymnasium and a parking area on a large 9.6 acre lot. The lot abuts the Baldwin School and single-family residences. Two zoning districts T-6 and S-25 divides the property.

Applicant's Proposal

Applicant, Brookline Children's Cooperative School, is petitioning to use three rooms on the first floor and a gym on the second floor as a pre-school. The school would provide schooling for a macimum of 24 children which includes 17 children within 3 & 4 year old class and 7 children within the 2 year old class. The professional staff would include a teacher-director, a teacher, two parent helpers, and student assistants. The school is a non-profit, non sectarian, community based pre-school run by a parent cooperative.

Section 4.30, Use 15 requires a variance to locate a day nursery, nursery schools, kindergarten or other agency giving day care to children within an S-district, provided outdoor play area is such a distance and so screened from any lot line and from any residential structure on an adjoining lot as to avoid a noise nuisance.

Planning Board Comments

The Planning Board supports this proposal. The facility at present is engaged in similar children programs. The location of the recreation building on a 9.6 acre lot is ideally suited to provide an attractive play area which iswell removed from any residential properties. There are no houses which are close to this facility to be adversely impacted.

TOWN OF BROOKLINE
Board of Appeals

APPLICATION FOR A VARIANCE FROM THE ZONING BY-LAW
(File in Triplicate)

Date May 26, 1981

1. Name of record owner(s) Town of Brookline
Address _____ Telephone No. _____

2. Deed recorded in the Registry of Deeds, Book _____ Page _____
or registered in the Land Registration Office under Cert. No. _____

3. Location of property HEATH STREET 9-9 27-30-437
(Street No., Lot and Block No. from current Town Atlas)

4. Present use of property (give no. of dwelling units, if any) TOWN RECREATION FACILITY

5. Provision(s) of the Zoning By-Law from which a variance is requested (give Article & Section) SEC. 4.30 USE #15

6. Nature of variance requested (describe how the proposed use or building does not meet the requirements of the Zoning By-Law. Provide plans drawn to scale* where necessary for full explanation.) use of building zoned for single family dwelling for cooperative preschool

7. What are the special conditions affecting the land or building for which the variance is requested which do not affect generally the Zoning District in which the land or building is located? BUILDING LOCATED IN RESIDENTIAL AREA BUT ALREADY BUT TO A NON-RESIDENTIAL USE (another nursery school run by Town)

8. What is the substantial hardship which would result from a literal enforcement of the provisions of the Zoning By-Law? If enforced we would not be able to expand program and thus serve more and fewer town families. After a long and intensive search this is our best option.

TOWN OF BROOKLINE
Board of Appeals

APPLICATION FOR A VARIANCE FROM THE ZONING BY-LAW
(File in Triplicate)

Date May 28, 1981

1. Name of record owner(s) Town of Brookline
Address _____ Telephone No. _____

2. Deed recorded in the Registry of Deeds, Book _____ Page _____
or registered in the Land Registration Office under Cert. No. _____

3. Location of property HOWARD STREET 9-9 27-30-437
(Street No., Lot and Block No. from current Town Atlas)

4. Present use of property (give no. of dwelling units, if any) TOWN RECREATION FACILITY

5. Provision(s) of the Zoning By-Law from which a variance is requested (give Article & Section) SEC. 4.30 USE #15

6. Nature of variance requested (describe how the proposed use or building does not meet the requirements of the Zoning By-Law. Provide plans drawn to scale* where necessary for full explanation.) use of building Zoned for single-family dwelling for cooperative preschool

7. What are the special conditions affecting the land or building for which the variance is requested which do not affect generally the Zoning District in which the land or building is located? BUILDING LOCATED IN RESIDENTIAL AREA BUT ADJACENT BUT TO A NON-RESIDENTIAL USE (another preschool run by town)

8. What is the substantial hardship which would result from a literal enforcement of the provisions of the Zoning By-Law? If enforced we would not be able to expand program and thus serve more and fewer town families. After a long and intensive search this is our best option.

9. Why does the appellant believe that the variance requested may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent of the Zoning By-Law? We are a non-profit school serving Brookline families and would be using the building in a way in which it is presently being used by the town.

Cathy Rosenblatt
(Signature of record owner or appellant acting for record owner)

210 HARVARD ST. BROOKLINE
(Address)

731-1012 254-8257
(Telephone No.)

*Suggested scale is 1" = 20'

TOWN of BROOKLINE

Massachusetts

SELECTMEN'S OFFICE
RICHARD T. LEARY
EXECUTIVE SECRETARY

May 5, 1981

IN BOARD OF SELECTMEN

The Board considered the question of granting permission to the Brookline Children Co-Op Day Care Center to occupy space at the Soule Recreation Center Monday through Friday - 8:30 a.m. - 2:00 p.m. for the purpose of operating a day care center for pre-school children, subject to conditions recommended by the Park and Recreation Commission and preparation of an appropriate lease agreement by Town Counsel.

Gerry Mistretta and Kathy Rosenbloom were present on behalf of the Brookline Children Co-Op Day Care Center.

Building Commissioner Royce E. Beatty has reviewed the proposal to relocate the center to a Town owned facility, and advised that the proposed use is not permitted in a single family residential district under the Zoning Bylaw, Section 4.30, use 15. Accordingly, a variance will be required from the Board of Appeals.

In response to questions, Mr. Beatty stated that the morning play program currently in operation at the center is operated by a Town agency, and is thus a permitted accessory use under another category of the Zoning Bylaw. In a similar case a variance had been issued by the Board of Appeals. It was suggested that representatives of the Brookline Children Co-Op Day Care Center confer with Mr. Beatty in regard to filing for an appeal, in the hope that a variance can be issued in time for the fall program.

In response to questions, the Board was informed that the Brookline Children Co-Op Day Care Center is a non-profit organization with a board of directors, comprised of parents and staff; that the organization receives no public funds; and that the program is intended to serve 30-35 families, with no more than 17 3-4 year olds and 6 two year olds in attendance at any one time.

Attest:
Richard T. Leary
Executive Secretary

Park and Recreation Commission
Royce E. Beatty
Town Counsel

FRE w/ B of A. case

BUILDING DEPARTMENT, BROOKLINE, MASSACHUSETTS

MEMORANDUM

Date May 5, 1981

To · Richard T. Leary

From Royce E. Beatty

Re · 652 Hammond Street
Children's Cooperative Day Care Center
(Your memo dated May 4, 1981)

We have reviewed the proposal of the Children's Cooperative Day Care Center to relocate to the Soule Recreation Center, 652 Hammond Street, a Town owned facility.

The Zoning By-Law Section 4.30, Use 15, does not permit the proposed use in a single family Residence District.

Accordingly, a variance from this section by the Board of Appeals would be required.

An inspection of the building disclosed that the space being considered by the Center would comply with the applicable requirements of the Building Code.

Royce E. Beatty
Building Commissioner

REB:h

Brookline Children's
Cooperative School

A non-profit, non-sectarian nursery school

RECEIVED
[illegible]
[illegible]

MAY 19 7 20 PM '81

May 5, 1981

Dear Mr. Beatty:

The Brookline Children's Cooperative School requests permission to use and occupy space in the Soule Recreation Center for the purpose of conducting our pre-school program. As per our discussions with Dr. Kirrane and the Park and Recreation Commissioners, we plan to use three rooms on the first floor as classrooms and one room on the second floor as a gym.

The Brookline Children's Cooperative School is a non-profit, non-sectarian, community based pre-school. We are run by a parent cooperative board with a paid professional teaching-director and a paid professional teacher. At present, we have a membership of 27 families.

If we were to relocate to the Soule Recreation Center, our membership would expand to 35 families, and our staff would be increased by one paid professional teacher. On any given day, we would have a maximum of 24 children: 17 children in the 3 & 4-year-old class and 7 in the 2-year-old class. Each class would be assisted by one parent helper. At times we also have the assistance of a student from one of the near-by colleges or universities.

Enclosed you will find copies of plans for the property, the building and the parking lot in triplicate. If there is any additional information you need for this matter, please contact me at 738-8734.

Thank you for your consideration of this matter.

Sincerely,

Geri L. Mistretta

Geri Mistretta
Co-President

210 Harvard Street / Brookline, Mass. 02146 / (617) 731-6812

TOWN OF BROOKLINE
BUILDING DEPARTMENT

RECEIVED
MAY 19 7 20 PM '81

APPLICATION FOR BUILDING PERMIT

NO. _____ STREET _____

IMPORTANT – Applicant to complete all items in sections: I, II, III, IV, and V.

I. LOCATION OF BUILDING

AT (LOCATION) Lot 8-9 (NO.) HAMMOND STREET (SOULE REC.) (STREET) ZONING DISTRICT ~~T6~~ T6/S25

BETWEEN HEATH STREET (CROSS STREET) AND PINE ROAD (CROSS STREET)

SUBDIVISION PAGE 125 LOT 8-9 BLOCK 432 LOT SIZE 418,625

II. TYPE AND COST OF BUILDING – *All applicants complete Parts A – D*

A. TYPE OF IMPROVEMENT

1 ☐ New building
2 ☐ Addition *(If residential, enter number of new housing units added, if any, in Part D, 13)*
3 ☒ Alteration *(See 2 above)*
4 ☐ Repair, replacement
5 ☐ Wrecking *(If multifamily residential, enter number of units in building in Part D, 13)*
6 ☐ Moving (relocation)
7 ☐ Foundation only

B. OWNERSHIP

8 ☐ Private (individual, corporation, nonprofit institution, etc.)
9 ☐ Public (Federal, State, or local government)

D. PROPOSED USE – *For "Wrecking" most recent use*

Residential
12 ☐ One family
13 ☐ Two or more family – *Enter number of units* → _____
14 ☐ Transient hotel, motel, or dormitory – *Enter number of units* → _____
15 ☐ Garage
16 ☐ Carport
17 ☐ Other – *Specify* _____

Nonresidential
18 ☐ Amusement, recreational
19 ☐ Church, other religious
20 ☐ Industrial
21 ☐ Parking garage
22 ☐ Service station, repair garage
23 ☐ Hospital, institutional
24 ☐ Office, bank, professional
25 ☐ Public utility
26 ☒ School, library, other educational
27 ☐ Stores, mercantile
28 ☐ Tanks, towers
29 ☐ Other – *Specify* _____

Board of Appeals

C. COST

	(Omit cents)
10. Cost of improvement	$
To be installed but not included in the above cost	
a. Electrical	
b. Plumbing	
c. Heating, air conditioning	
d. Other (elevator, etc.)	
11. TOTAL COST OF IMPROVEMENT	$

DESCRIPTION – Describe in detail proposed use of buildings, e.g., food processing plant, machine shop, laundry building at hospital, elementary school, secondary school, college, parochial school, parking garage for department store, rental office building, office building at industrial plant. If use of existing building is being changed, enter proposed use.

use portion of existing recreation facility for Brookline Children's Cooperative School

III. SELECTED CHARACTERISTICS OF BUILDING – *For new buildings and additions, complete Parts E – L; for wrecking, complete only Part J, for all others skip to IV.*

E. PRINCIPAL TYPE OF FRAME

30 ☐ Masonry (wall bearing)
31 ☐ Wood frame
32 ☐ Structural steel
33 ☐ Reinforced concrete
34 ☐ Other – *Specify* _____

F. PRINCIPAL TYPE OF HEATING FUEL

35 ☐ Gas
36 ☐ Oil
37 ☐ Electricity
38 ☐ Coal
39 ☐ Other – *Specify* _____

G. TYPE OF SEWAGE DISPOSAL

40 ☐ Public or private company
41 ☐ Private (septic tank, etc.)

H. TYPE OF WATER SUPPLY

42 ☐ Public or private company
43 ☐ Private (well, cistern)

I. TYPE OF MECHANICAL

Will there be central air conditioning?
44 ☐ Yes 45 ☐ No

Will there be an elevator?
46 ☐ Yes 47 ☐ No

J. DIMENSIONS

48. Number of stories
49. Total square feet of floor area, all floors, based on exterior dimensions
50. Total land area, sq. ft.

K. NUMBER OF OFF-STREET PARKING SPACES

51. Enclosed
52. Outdoors

L. RESIDENTIAL BUILDINGS ONLY

53. Number of bedrooms
54. Number of bathrooms { Full / Partial

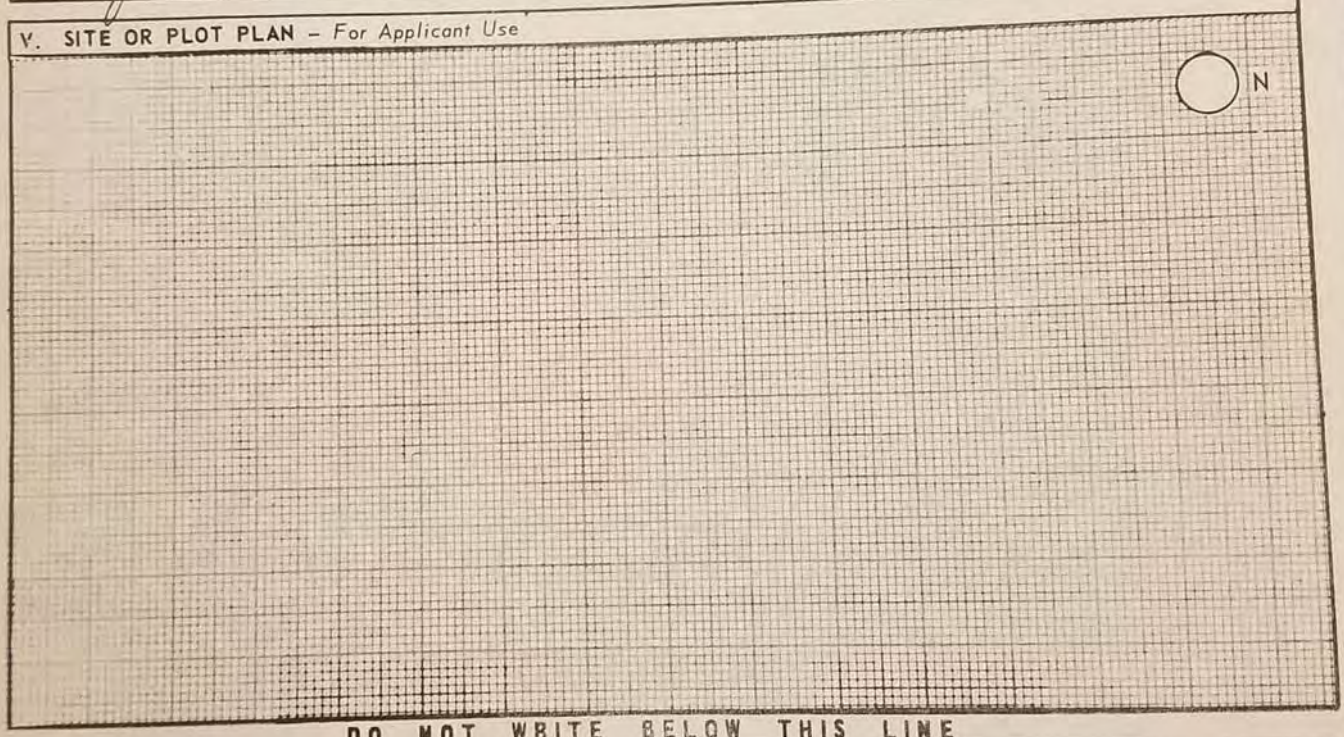
IV. IDENTIFICATION – *To be completed by all applicants*

	Name	Mailing address – Number, street, city, and State	ZIP code	Tel. No.
1. Owner or ~~Lessee~~	Town of Brookline PARK + REC. DEPT	Soule Playground HAMMOND ST. BROOKLINE MA		
2. ~~Lessee~~	BROOKLINE CHILDRENS COOPERATIVE SCHOOL	210 HARVARD ST BROOKLINE MASS	~~Builder's~~	731-6812
3. Architect or Engineer				

I hereby certify that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and we agree to conform to all applicable laws of this jurisdiction.

Signature of applicant	Address	Application date
Cathy R Rosenbloom director	210 HARVARD ST BROOKLINE 02146	MAY 18, 1981

V. SITE OR PLOT PLAN – *For Applicant Use*



DO NOT WRITE BELOW THIS LINE

VI. VALIDATION

Building Permit number _____

Building Permit issued _____ 19____

Building Permit Fee $_____

Certificate of Occupancy $_____

Drain Tile $_____

Plan Review Fee $_____

FOR DEPARTMENT USE ONLY

Use Group _____

Fire Grading _____

Live Loading _____

Occupancy Load _____

Approved by:

_____

_____
TITLE

Board of Appeal
Plan Review – $50.00 60946

on Children's Theatre, Inc.
652 HAMMOND STREET • CHESTNUT HILL, MA 02167
617-277-3277

TRUSTEES

DAVID ADELSON — PRESIDENT
BARBARA SENECAL — EXECUTIVE VICE-PRESIDENT
GEORGE M. VROTSOS — VICE-PRESIDENT
GRACE H. BARNETT — VICE-PRESIDENT
CALVIN A. HILL — TREASURER
ELLEN LERMAN — CLERK

PHYLLIS ADELSON
DWAYNE ANTHONY
JEANNE N. ARMIN
DEBORAH G. BROOKS
RUSTY BROWDER
MRS. THOMAS DALY
HERBERT LERMAN
FRANCIS MANZELLI
MARY McISAAC
INABETH MILLER
SHAARI S. MITTEL
SUZAN NYHAN
MIKE ODOM
MR. AND MRS. JOEL PITLOR
PAUL SENECAL
VIVIAN M. SHOOLMAN
SUSAN P. VROTSOS
MRS. SUMNER WALDMAN
DAVID L. WELTMAN
LOIS H. WELTMAN

PRISCILLA W. RAND — EXECUTIVE DIRECTOR
GEORGE ROLAND — ASSOCIATE DIRECTOR
ADELE THANE — ASSOCIATE DIRECTOR

Selectman's Office
6th Floor
333 Washington Street
Brookline, MA 02146

Attention: Patty

May 10, 1984

To The Board of Selectmen of Brookline:

On Saturday, May 19, The Boston Children's Theatre will hold a Flea Market Fair selling household items, toys, garden equipment, etcetera. The Fair will be held at the Brookline Recreation Center at 652 Hammond Street from 10:00am-2:00pm.

We are also selling cold drinks, ice cream and snacks.

If we need a license would you please issue one to The Boston Children's Theatre at 652 Hammond Street in Chestnut Hill, MA 02167.

Thank-you.

Sincerely,
Lisa Federico

Lisa Federico
Boston Children's Theatre

TRUSTEES PRESIDENT

Town of Brookline
Office of the Selectmen

MEMORANDUM

To Royce E. Beatty
Building Commissioner

Date 5/11/84 19

SUBJECT Flea Market

May I have a report regarding the attached letter from the Boston Children's Theatre to have a Flea Market on Saturday, May 19, 1984 from 10:00 a.m. - 2 p.m. at the Brookline Recareation Center at 652 Hammond Street

This matter will be before the Board on Tuesday, May 15, 1984.

We would appreciate your report as soon as possible.

RTL

RICHARD T. LEARY, *Executive Secretary*

Sincerely,
Lisa Federico

Lisa Federico
Boston Children's Theatre

May 28, 1981

Geri L. Mistretta, Co-President
Brookline Children's Cooperative School
210 Harvard Street
Brookline, Massachusetts 02146

Re: Soule Recreation Center, Hammond Street

Dear Ms. Mistretta:

Your request to use a portion of the existing structure at Soule Recreation Center for Brookline Children's Cooperative School as per plans is denied.

The premises are located in a S-25 (single family) and T-6 (two-family and attached single family) Residence District.

The plans titled "Soule Recreation Center" and dated May 18, 1981 and submitted by you do not conform to the following requirement of Town of Brookline Zoning By-Law:

1) Section 4.30, Use #15, Table of Use Regulations - variance required.

In accordance with the provisions of the Zoning By-Law, you may apply to the Board of Appeals for the above noted variance.

Yours very truly,

Royce E. Beatty, P.E.
Building Commissioner

cc: Board of Appeals
Planning

Enc:
REB:h

To: Geri L. Mistretta, Co. President
Brookline Children's Cooperative School
210 Harvard Street
Brookline, Ma. 02146

Date: May 28 1981

Re: Soule Recreation Center, Hammond Street

Dear Ms. Mistretta

Your request to use a portion of the existing structure at Soule Recreation Center for Brookline Children's Cooperative School as per plans is denied.

The premises are located in a S-25 (single family) & T-6 (Two-family and attached single family) district

The plans titled Soule Recreation Center and dated May 18, 1981 and ~~accompanying documentation~~ submitted by you do not conform to the following requirement~~(s)~~ of Town of Brookline Zoning By-Law ~~xxxxxxxxxx~~ case.

1) Section 4.30 use # 15 - Table of Use Regulations, Variance Required

2) _____

3) _____

4) _____

In accordance with the provisions of the Zoning By-Law, you may apply to the Board of Appeals for the above noted ~~special permit~~ (variance).

Yours very truly,

REB
BC

J. R Coates
Inspector

Duplicate

RECEIPT-NO: 32633

TOWN OF BROOKLINE
BUILDING DEPARTMENT

NO: 991472

PERMIT

DATE: 04/14/99

THIS CERTIFIES THAT ~~MARK MOROSO~~ has permission to Erect, Enlarge, Alter, Substantially Repair, Move, Demolish, or Change Occupancy of the Building or Structure located at;

652 HAMMOND ST **Block** 432 **Lot** 27 **Parcel** ____

All work performed under this permit shall, in every respect, conform to the terms of the application on file in this office and to the provisions of the State Building Code, Town of Brookline Zoning By-Laws, and all other Statute, By-Law, or Regulation relating to the Construction, Alteration, Maintenance, Use and Occupancy of Buildings in the Town of Brookline. This permit shall be deemed abandoned and invalid unless work authorized by it shall have been commenced within six (6) months after issuance. (111.7)

The granting of this permit does not authorize any work which would result in the violation of any Statue, By-Law or Regulation. This permit is not valid unless all fees under Section 114.0 of the State Building Code have been paid and you have been issued a Permit by the Building Commissioner. Only the work stated under the description below is authorized under this Permit. Any additional work will require another Permit.

WORK DESCRIPTION

INTERIOR PARTIONING, PAINTING, GYPSUM DRYWALL, CARPETING

HIP-NO: ~~HIP-COMPANY:~~ CONTRACTOR LICENSE: 043939

THIS CARD MUST BE DISPLAYED IN A CONSPICUOUS LOCATION ON THE PREMISES UNTIL THE FINAL INSPECTION. (111.14) AT THAT TIME THIS CARD MUST BE RETURNED TO THE BUILDING DEPARTMENT.

James J. Nickerson
Building Commissioner
Town of Brookline

SITE INSPECTIONS

Date	Building Inspectors Engineering Dept.	Type of Inspection
2/15/00	Final OK	

Date	Plumbing, Gas, and Mechanical Inspections	Type of Inspection
	1/27/00 Final OK	

Date	Electrical and Fire Department Inspections	Type of Inspection
1.2800		Final OK

IMPORTANT TELEPHONE NUMBERS

BUILDING, PLAN REVIEW, AND ZONING INSPECTORS: 730-2100
ELECTRICAL INSPECTORS: 730-2110
PLUMBING, GASFITTING, SPRINKLER INSPECTORS: 730-2105
FIRE DEPARTMENT INSPECTORS: 730-2270
ENGINEERING DEPARTMENT: 730-2139

ALL WORK SHALL CONFORM TO THE STAMPED OR ENDORSED APPLICATION AND PLANS FOR WHICH THIS PERMIT HAS BEEN ISSUED. (115.2)
THIS PERMIT WILL BECOME NULL AND VOID IF CONSTRUCTION IS NOT STARTED WITHIN SIX MONTHS OF THE DATE THE PERMIT WAS ISSUED. (114.3)
APPROVED PLANS MUST BE RETAINED ON THE JOB AND THIS CARD MUST BE DISPLAYED UNTIL FINAL INSPECTION. (114.6)
SEPARATE PERMITS ARE REQUIRED FOR; PLUMBING, GAS, ELECTRICAL, MECHANICAL AND SPRINKLER INSTALLATION.
THIS PERMIT CONVEYS NO RIGHT TO OCCUPY ANY STREET, ALLEY, SIDEWALK.
A REFUSE-DEBRIS DISPOSAL FORM AS REQUIRED BY THE STATE BUILDING CODE UNDER ARTICLE 1 SECTION 114.1.3 MUST BE ON FILE WITH THE PERMIT.

NOTICE

1. **INSPECTIONS ARE REQUIRED FOR:**
   - **A. EXCAVATION BEFORE THE POURING OF CONCRETE.**
     (24 hr notification before time of delivery)
   - **B. FOUNDATION BEFORE BACKFILLING.**
   - **C. TOWN ENGINEERING SIGN OFF FOR UTILITIES AND SITE DRAINAGE.**
   - **D. FRAMING - ROUGH WIRING - ROUGH PLUMBING**
     Must be inspected before insulation of walls.
   - **E. INSULATION.**
   - **F. FINISH WIRING, PLUMBING, and MECHANICAL.**
   - **G. FINAL INSPECTION.**

2. **BEFORE THE CERTIFICATE OF OCCUPANCY CAN BE ISSUED;**
   - **A. THIS PERMIT JOB CARD MUST BE RETURNED TO THE BUILDING DEPARTMENT WITH ALL SITE INSPECTION SIGNATURES ON IT.**
   - **B. THE HOUSE NUMBER MUST BE VISIBLY AFFIXED TO THE BUILDING.**
   - **C. ALL OUTSTANDING VIOLATIONS MUST BE CORRECTED.**
   - **D. ALL REQUIREMENTS OF THE TOWN OF BROOKLINE ZONING BY-LAWS MUST BE MET AS STATED UNDER ARTICLE 9 OF SUCH BY-LAWS.**
   - **E. AN APPLICATION FOR A CERTIFICATE OF USE AND OCCUPANCY FILED AND COMPLETED.**

TOWN of BROOKLINE
Massachusetts

BUILDING COMMISSION
(617) 730-2100
CHARLES HOWARD
Chairman
ELLEN GOLDMAN
GORDON HURWITZ
JOHN LOJEK
LOUIS WILGOREN
JOHN C. BULYGO
Coordinator
JAMES J. NICKERSON
Secretary

February 11, 1997

FEASIBILITY STUDY FOR SOULE RECREATION CENTER

REQUEST FOR QUALIFICATIONS

The Town of Brookline is seeking Architectural Services to perform a Feasibility Study at the Soule Recreation Center. This study will evaluate departmental program space needs, ADA requirements and the building enevelope.

Program Available	February 12, 1997
Proposal Deadline	February 27, 1997

Ten (10) copies of proposal must be submitted to the Brookline Building Commission, Town Hall - Third Floor. 333 Washington Street, Brookline, MA 02146, Mr. John Bulygo, Coordinator. Telephone, (617) 730-2104.

Yours very truly,

Charles Howard
Chairman

CH:b

REQUEST FOR ARCHITECTURAL SERVICES

FEASIBILITY STUDY SOULE RECREATION CENTER

PART I	Request for Qualifications
	1. Advertisement
	2. Services Required
PART II	Information Required from the Bidder
PART III	Criteria for Selection
PART IV	Attachments
	1. References
	2. Fair Employment Practices

CR1 CENTRAL REGISTER - DESIGNER SERVICES

Public projects when the construction cost is estimated to exceed $10,000. Published two weeks prior to application deadline.

AUTHORITY
agency, municipality or district; contact person, address and telephone

Building Commission
Town of Brookline
333 Washington Street
Brookline, MA 02146
John Bulygo (617) 730-2104

PROJECT

Feasibility Study
Soule Recreation Center

PROJECT PROGRAM AVAILABLE
where and when

February 12, 1997
Above Address

ESTIMATED CONSTRUCTION COST

TIME PERIOD FOR COMPLETED PROJECT

BRIEFING SESSION *where and when*

February 19, 1997 @ 10:00 A.M.
Soule Recreation Center
652 Hammond Street

SCOPE OF WORK

SPECIFIC DESIGNER SERVICES

X Architect	___Landscape Architect
X Engineer	___Land Surveyor
___Planner	___Programmer
___Space Planner	___Project Manager

DESIGNER'S FEE

___Set *specify amount*
X Negotiated

ADDITIONAL INFORMATION

Ten (10) copies of
submittal required

DEADLINE FOR APPLICATION FORM
date and time

February 27, 1997 @ 2:00 P.M.

CR1 CENTRAL REGISTER - DESIGNER SERVICES

Public projects when the construction cost is estimated to exceed $10,000. Published two weeks prior to application deadline.

AUTHORITY
agency, municipality or district; contact person, address and telephone

PROJECT

PROJECT PROGRAM AVAILABLE
where and when

ESTIMATED CONSTRUCTION COST

TIME PERIOD FOR COMPLETED PROJECT

BRIEFING SESSION *where and when*

SCOPE OF WORK

SPECIFIC DESIGNER SERVICES

___Architect	___Landscape Architect
___Engineer	___Land Surveyor
___Planner	___Programmer
___Space Planner	___Project Manager

DESIGNER'S FEE

___Set *specify amount*
___Negotiated

ADDITIONAL INFORMATION

DEADLINE FOR APPLICATION FORM
date and time

SOULE RECREATION CENTER

The Soule Recreation Center is housed in the John G. Wright Estate Carriage House. We have attached pertinent information as part of this Request for Qualifications.

This building houses the Recreation Department offices and various Recreation Department programs.

The Department wishes to perform a Feasibility Study to survey the space allocated for various programs in the department with possible office relocation.

The programs housed at this site are Dance Instruction, Ceramics, Recreation Activity For Teens (RAFT), Morning Play or Pre-School, After School Enrichment (Grades 1-5) and Day Camp during the Summer (Ages 4,5 and 6).

Other components of the study will be ADA (Handicap) accessibility - location of an elevator to meet these needs, Building Code Compliance, various mechanical, electrical and plumbing issues and code compliance and building envelope renovations.

The architect will meet with the Town Agencies involved for their input.

The Feasibility Study to include drawings and estimated costs of the building interior modifications and envelope repairs, ADA, mechanical, electrical and plumbing, code compliance and or repairs.

SOULE RECREATION CENTER
Documentation and Assessment Form
Level I - June 30, 1993

TOWN of BROOKLINE - BROOKLINE PRESERVATION COMMISSION
HISTORIC BUILDINGS PRESERVATION AND MAINTENANCE STUDY

Project Consultants:
Claude Emanuel Menders, Architects Inc.
59 Commercial Wharf, Boston, MA 02110

PART 1 - GENERAL INFORMATION

1. PROPERTY NAME

Historic:	John G. Wright Estate Carriage House
Current:	Soule Recreation Center

2. ADDRESS

Street Address:	652 Hammond Street, Brookline, MA, 02167
Location Description:	Chestnut Hill, at Soule Recreation Center

3. BUILDING USE

Historic:	John G. Wright Estate carriage house and stable.
Current:	Department of Recreation, formerly leased by Brookline Children's Cooperative School (day care center).
Town Department:	Parks and Recreation Commission

4. GEOGRAPHICAL DATA

Map Lot:	432/27-30
Lot Size:	418,625 s.f.
Approximate Building Area:	4075 s.f.
Assessed Value:	$725,000 as of 06-01-93

5. SURVEY DATA

Surveyor:	David Torrey, CEM and Claude Menders, CEM
Dates Recorded:	October 27, 1992, June 4, 1993

Representation in Existing Surveys and Other Source Material:

* Massachusetts Historical Commission Form #125/432-27-30 dated October 1979
* Built by Brookline, Brookline Preservation Commission, 1990.
* "Report on Town-Owned Buildings," Brookline Preservation Commission Subcommittee, March 1991.

Listings:

* Chestnut Hill Historic District, National Register District, dated October 17, 1985.
* Chestnut Hill Historic District, National Register Multiple Resource Area, dated October 17, 1985.

==========

PART 2 - HISTORICAL DATA

1. ORIGINAL CONSTRUCTION

Date: 1897, along with main estate house and gatehouse.

Style: Tudor (English Medieval Revival) with Shingle Style and Queen Anne Style characteristics.

Architect: Chapman, Frazier & Bliss

2. IMPORTANT DATES

1861: John G. Wright, Boston wool merchant of Walnut Street in Brookline, purchased land from Thomas Quimby, a farmer.

1897: House and carriage house built.

1942: Main house and carriage house purchased by the Rivers School and converted to classrooms and administrative offices.

1961: Property purchased by Town of Brookline for recreational use.

1963: Main house destroyed by fire.

1991: Brookline Preservation Commission Report on Town-Owned Buildings recommends emergency roof repairs, gutter repairs and repainting to halt accellerating deterioration.

3. HISTORICAL ASSESSMENT

Social History:

After a fire destroyed the John G. Wright house, only the carriage house and gatehouse (privately owned residence) remain as major evidence of the grand architectural style of this turn-of-the-century estate.

The Soule Recreation site is a large tract of land which was purchased from the farmer Thomas Quimby in 1861. Since it had not then and still has not today been subdivided into house lots, the site itself bears the memory of Brookline's agrarian past. When John G. Wright, a Walnut Street resident and prosperous Boston wool merchant hired the architects Chapman, Frazier and Bliss to design a walled estate in the vocabulary of an English Medieval manor he was following the late 19th Century fashion for eclectic European historical styles intended to evoke a simpler age.

Architectural Significance:

The carriage house and stable for the Wright Estate is a classic example of the eclectic movement of its time whose trend-setting models were landmark structures such as the Wright Estate; correctly-detailed historical reinterpretations of mostly European precedents. The 19th Century carriage house building type is also exemplified by this building's site plan configuration (courtyard with wings), massing (connected barns), and stylistic detailing (matching the main house yet more farm-like with cupolas and arched carriageways).

4. CHARACTER-DEFINING ARCHITECTURAL FEATURES

Original Fabric:

Converted to school use after 1942 by the Rivers School, the building's character essentially remained intact. Although threatened today by lack of maintenance, most of the original architectural details remain in reparable condition.

Shape:

The building's U-shaped plan is relatively simple, with its major end-gabled body and a pair of smaller intersecting wings forming an open courtyard. However, a complex asymmetrical image is created through the use of varied fenestration, dormers, bays, and roof forms. The imposing two-story west facade (now the most-used access route) is reduced in height visually by the use of a rustic boulder foundation for the full-height basement walls. Rectangular, octagonal and shed dormers interrupt the expanse of that roof and a large square cupola carries the eye toward the major south-facing gable end whose attic story is a symmetrical composition with a central window cluster and diagonal half-timbering. A wrapped eave roof projection bisects this facade and is continuous with the long carriage shed wing. The opposite wing adjoining the densely wooded hillside intersects the main barn shape for half its width giving the north-west corner a

casual feel. The east face is more formal, flanked by the symmetrical ends of the carriage sheds with their massive overhanging barge boards and boldly half-timbered gables. On the courtyard face, the casual medieval effect of additions over time is created, breaking the symmetry of the courtyard with a two-storied octagon bay squeezed against an oriel bay and a pair of large cantilevered gabled dormers. Varied dormers, chimneys and roof ventilators fill in what would have been the large barn roof of the main structure.

Fenestration: Original fenestration is generally clusters of diamond paned wooden double hung windows placed below gable centerlines or small squares individually spaced under eaves. New 6 over 6 windows and infill stucco have been inserted into shallow wood arched openings which were apparently either open or enclosed with doors similar to the arched paneled door which remains at the basement. It is unclear exactly which windows were added for school use; perhaps all the rectangular paned double hung windows were additions and the massive barn-like character was even more pronounced originally.

Wood Detailing: Equally important to the building's complex massing in defining its character is the exterior wood trim at gables, dormers and roof edges. The details and patterns of the dark stained wood composed of flat, carved and molded pieces, are highlighted against the uniform backdrop of the whitewashed roughcast stucco siding. Each of the varied types of gable ends receives a distinct treatment: the main barn ends are flat with no overhang in the manner of the Shingle Style. The paired overhung dormers at the courtyard and carriage shed wings have wide, projected barge-boards with raking moldings and turned pendants; one small dormer has scalloped barge-boards. Roof eaves are overhung, with molded wood gutters supported by exposed rafter tails with rounded ends. The asphalt roof was undoubtedly wood shingled originally.

Interiors: Interior rooms are generally panelled with painted beaded board characteristic of the period, and a trophy room off the courtyard retains its varnished dark oak paneling and boxed beams.

Part II

General Information

PURPOSE

This request for qualification (RFQ) provided interested submitters with information to enable them to prepare and submit proposals for consideration by the Town of Brookline. Massachusetts to prepare a Feasibility Study for the Soule Recreation Center.

ISSUING OFFICE

The RFQ is issued for the Town of Brookline. Massachusetts, by its Building Commission. The point of contact in the Town for this RFQ if further information is required is Mr. John Bulygo, Building Commission Coordinator at 617-730-2104.

SCOPE

This RFQ contains instructions governing the proposal to be submitted and the materials to be included therein: requirements which must be met to be eligible for consideration; general evaluation criteria; and other requirements to be met by Designer.

STATEMENT OF QUALIFICATIONS AND EXPERIENCE

Provide a statement of qualifications and experience.

PROVIDE REQUIRED REFERENCES

Submit required reference on enclosed form. (Attachment #1)

FINANCIAL DISCLOSURE

The final participants will be asked to submit a Modified Financial Statement at the time of their interview.

COMPARABLE WORK

The Town requires, as part of the resume/reference process, a copy or synopsis of a recent successful plan of like/comparable of similar scope; that the Designer has completed.

ADDENDA TO THE RFQ

If it becomes necessary to revise any part of this RFQ, addenda will be provided to all prospective bidders who receive the RFQ.

NON-DISCRIMINATION CLAUSE

The successful bidder will be required to adhere to the non-discrimination clause attached hereto as an exhibit within the proposed Agreement. See Attachment #2.

FORMAT FOR REQUIRED INFORMATION

Prospective designers must submit ten (10) copies of proposal. To be considered the proposal must respond to all requirements of this part if the RFQ. Any other information thought to be relevant, should be provided as an appendix to the proposal. Supporting documentation is required as proof of minimum qualifications. Failure to submit one or more required times may result in disqualification of proposal.

PRE-PROPOSAL/PREBID ON SITE WALK-THROUGH

The pre-proposal conference is for information only. Answers furnished during the conference is for information only. Answers furnished during the conference will not be official until verified in writing by the Town of Brookline. A walk through will be held on February 19, 1997 at 10:00 A.M. at the Soule Recreation Center, 652 Hammond Street.

RESPONSE DATE

To be considered proposals must arrive at the Building Department, Town of Brookline on or before 2:00 P.M. EST, February 27, 1997. Any proposal received after that time and date will not be considered. Prospective bidders mailing proposals should allow sufficient mail delivery time to insure timely receipt of their proposals.

ATTACHMENT NUMBER ONE

ARCHITECT AND ENGINEERING SERVICES

The architect will be required to show recent relevant experience on performing Feasibility Studies.. Of particular importance will be evidence of the proven ability to bring such project in on time and on budget. Firms shall provide the following information:

(1) Names and address of officers, directors and owners of the firm.

(2) The names of the individuals who will have a direct contact with the Building Commission throughout the project.

(3) A list of all public or institutional projects undertaken in Massachusetts within the past five years. This list shall include original budget amounts and actual final construction cost of the projects. Provide a list of references relating to those projects.

(4) A list of all current projects.

(5) If the proposal will involve a joint venture, a list of all participating firms or individuals.

(6) A description of the firm's current staffing and ability to undertake a project of this size in a timely fashion.

(7) The proposal shall also specify the names and backgrounds of all Consultants who will be involved in this study.

I certify that all information submitted in this proposal is correct under the penalties of perjury. (G.L. c.7.38E)

_____

Part III

CRITERIA FOR SELECTION

A. Review and Evaluation of Submittals. all Submittals received in conformance with the Submittal Requirements will be reviewed and evaluated by a "Committee of Seven" formed by the Town in accordance with Article 15A of the Town By-Laws.

The Committee will select a short list of those submitters which are believed best qualified to perform the required services from among the submittals received. The Committee will interview all submitters on the short list and will recommend to the Town's Board of Selectmen for approval one from that group that is believed will give the greatest benefit to the Town.

B. Each submittal will be evaluated based upon the submitter's capability to provide superior services to the Town, including:

1. Capability of the design team to handle the size and scope of the work.

    - o Current and projected workload
    - o Size of overall staff

2. Experience of the design team with similar and scope of projects.

3. Cost and Scheduling histories.

4. Reference Checks.

ANTI-DISCRIMINATION REQUIREMENTS. FAIR EMPLOYMENT PRACTICES RELATIVE TO TOWN CONTRACTS (ARTICLE XXIX OF THE TOWN BY-LAWS)

SECTION ONE - Subject to the exceptions hereinafter stated all contracts awarded by the Town and all agencies and departments thereof, shall include the following provisions:

During the performance of this Contract, the Contractor for himself, his assignees and successors in interest (hereinafter referred to as the "Contractor"), agrees as follows:

(A) The Contractor will comply with the provisions of Chapter 151B, and amended, of the General Laws of Massachusetts relative to non-discrimination which are incorporated herein by reference and made part of this Contract.

(B) In the performance of work under this Contract, the Contractor shall not discriminate in employment practices or in the selection or retention of subcontractors or in the procurement of materials or rental of equipment on the grounds of age or sex except when age or sex is a bona fide occupational qualification.

The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representative of the Contractor's commitments under this section, and shall post copies of such notice in conspicuous places available to employees and applicants for employment.

(C) In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract and for Th. procurement of materials or equipment potential subcontract or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this Contract relative to non-discrimination on grounds of race, color, religion, national origin, age or sex and his obligations to pursue an affirmative course of action as required by paragraph (D).

(D) The Contractor will pursue an affirmative course of action are required by affirmative guidelines adopted by the Human Relations Commission in effect on the effective date of the contract, or when call for proposals are made, whichever is sooner, which are herein incorporated by reference, attained hereto, and made part of this contract, reasonably pertaining to the work of the contract, and to the nature and size of his work force, to insure that the applicants are sought and employed, without regard to their race,

color, national origin or ancestry, or religion. No changes in affirmative action guidelines hereinafter adopted by the Commission shall be effective with respect to contract already in effect, without the express written consent of the Contractor.

(E) In the event the Contractor fails to comply with the foregoing non-discrimination provisions of this Contract, the contracting agency of the Town, upon advice and counsel of the Human Relations Commission, shall impose such contract sanctions as it may determine to be appropriate, including but not limited to:

(1) withhholding of payment due the Contractor under this contract until the Contract complies, and/or

(2) cancellation, termination or suspension of this Contract, in whole or in part.

For the purposes of this section the contracting agency of the Town shall accept as proof of non-compliance with the provision of Section 1(A), only final orders or decisions of the Massachusetts Commission Against Discrimination.

(F) The provisions of this section shall be deemed supplementary to, and not in lieu of, or in substitution for, the provisions of Massachusetts law relating to non-discrimination and other applicable Federal, State or Town. In the event of a conflict between the provisions of this contract, an applicable state or federal law, rule, regulation or directive, that conflicting provisions of the latter shall control.

TION TWO - The requirements of Section One shall not apply to the following Contracts:

(a) whenever work is to be or has been performed outside the state and no recruitment of workers within the state is involved;

(b) those involving standard commercial supplies or raw materials;

(c) when the Contractor is a club exclusively social, or a fraternal association or corporation, if such club, association or corporation is not organized for private profit;

(d) when the Contractor employs fewer than six persons;

(e) when the total value of the contract is less than $10,000.00;

(f) contracts involving joint purchases with the state under Article IV, Section V of the Town By-Laws;

(g) contracts with the Commonwealth for construction of public works;

(h) contracts for financial assistance with a government or governmental agency;

(i) notes and bonds of the Town;

(j) employment by the Town officers and employees of the Town;

(k) whenever it is deemed necessary or appropriate the Board of Selectmen, upon the advice and counsel of the Human Relations Commission, may exempt any contract not covered by the foregoing exemptions from the operation of this by-law in whole or in part.

TOWN OF BROOKLINE, MASSACHUSETTS

NOTICE TO BIDDERS AND CONTRACTORS

TOWN POLICY ON ARAB LEAGUE STATES BOYCOTT AGAINST THE STATE OF ISRAEL

The following Resolution was unanimously voted by the Board of Selectmen on July 12, 1976:

WHEREAS, the Town of Brookline has established an Affirmative Action Program in accordance with the provisions of Article XXIX of the Town By-Laws; and

WHEREAS, the Arab League States are enforcing a boycott against the sovereign state of Israel, an ally of the United States; and

WHEREAS, it is the stated policy of the United States of America to oppose economic sanctions used against out allies; and

WHEREAS, the Arab League States are enforcing a secondary boycott against American companies which are trading with or in Israel; and

WHEREAS, the Arab League States are inforcing a tertiary boycott which requires American companies to discriminate against other American companies; and

WHEREAS, certain Arab States require American companies to discriminate in employment against Jews, blacks and women; and

WHEREAS, these practices are contrary and violative of American democratic tration, morality and law and the policies if the Town of Brookline, and represent an imposition of foreign discriminatory practices on Americans;

NOW THEREFORE, it is hereby resolved as a matter of public policy that the Town of Brookline declares that it will not trade with any company or corporation which practices discrimination against persons of their friendly relations with our ally, the State of Israel, and it further hereby,

RESOLVED, that the Purchasing Agent for the Town of Brookline be and the same hereby is requested to informal contractors with the Town of this non-discriminatory policy and directed to enforce the above policy with respect to all goods, services and commodities purchased by the Town.

Form No. 4181 Rev. 2/90

BOSTON EDISON COMPANY

652 Hammond St.

WORK ORDER NUMBER 661092

Date 11/8/93

DO NOT WRITE IN THIS AREA

CUSTOMER CONSTRUCTION ORDER

(DEFERRED PAYMENT)

Customer Account No.

The undersigned requests the BOSTON EDISON COMPANY to install the described construction at the service address shown and in consideration thereof, agrees to pay upon receipt of bill the AMOUNT DUE.

TO

Name: Town of Brookline

Attn: Ted Stevenson

Billing Address: 333 Washington St

City/Town: Brookline State: MA Zip: 02146

Description	Amount
Customer Purchase Order Number	
Service Address: P169-4/5 Woodland Rd Soule Recreation	
City or Town: Brookline	
Type of Construction: ☐ Overhead ☐ Underground ☐ OH to UG	
Customer Engineering Requirements ☐ Yes ☐ No ☐ Sketch	
☐ Temporary Service In and Out $ ____ Meter $ ____ Less Salvage $ ____	
☐ Meter Cluster ☐ Transclosure	
☐ Transformer or other equipment (Specify): Install Pole	$605.87
INCOME TAX ADDER (if applicable)	
SALES TAX	
AMOUNT DUE	605.87

Sales Tax Exemption No.

IN THE EVENT THESE CHARGES REMAIN UNPAID AFTER DAYS FROM THE BILLING DATE, AN INTEREST CHARGE OF % PER MONTH WILL BE ASSESSED ON THE UNPAID BALANCE

PRIVATE PROPERTY CONSTRUCTION

CUSTOMER OWN AND MAINTAIN	BOSTON EDISON MAINTAIN AT CUSTOMER COST
☐ Primaries ☐ Secondary	☐ Primaries ☐ Secondary
☐ Conduit ☐ Pad ☐ Mat	☐ Other:
☐ Other:	

☐ PRIVATE WAY CONSTRUCTION ☐ PUBLIC WAY CONSTRUCTION

☐ BOSTON EDISON OWN & MAINTAIN ☐ EXCEPTION

CUSTOMER SIGNATURE

PRINT CUSTOMER SIGNATURE

DATE

TEL. NO.

BECo REPRESENTATIVE SIGNATURE: George Nixon

COPY OF FIRST BILL REQUESTED ☐

CUSTOMER COPY

APPLICATION FOR LICENSE

WEEKDAY

COIN-OPERATED AMUSEMENT DEVICE

December 8, 1993
DATE

TO THE BOARD OF SELECTMEN

The undersigned respectfully requests that he be granted license (renewal) for coin-operated amusement device or devices, and remits herewith $_____ therefore.

Petitioner Town of Brookline

Business Trade Name Recreation Department

Address 652 Hammond St. Brookline, Ma 02167

Proposed Location of machine/machines Soule Recreation Center - 652 Hammond St.

Type of Business conducted where machine is to be located Teen Center for Brookline students (grades 6-12

Type of machine or machines (specific name of each game) Operation Wolf, Pac-Man, NBA Jam, Dig-Dug, Big Event Golf, Gorgar, Juke Box.

To be placed on premises as follows All American Vending Will deliver and set up the video games.

Approved by the Bureau of Standards Yes

Number of Machines 7

Owner of machine (Name and address of Manufacturer)

New England Coin, 232 Vanderbilt Avenue, Norwood, Ma.

Agent's name from whom machine rented All American Vending

Agent's legal address in 1993 69 Norman St. Everett, Ma 02149

APPLICATION FOR LICENSE
COIN-OPERATED AMUSEMENT DEVICE

Agreement between applicant and owner for compensation or any other consideration to applicant for use of premises for machine (please state) The machines will be leased from All American Vending, with the entire proceeds to be split 50%-50% between the Recreation Department and All American Vending.

The person or persons who conduct the business under license petitioned for above must sign here:

NAME Thomas J. Lynch

HOME ADDRESS 652 Hammond St. Brookline, Ma 02167

NAME _____

HOME ADDRESS _____

PLEASE MAKE CHECK PAYABLE TO THE TOWN OF BROOKLINE

652 Hammond Street

TOWN of BROOKLINE

Massachusetts

BOARD OF SELECTMEN
RICHARD T. LEARY
Town Administrator

January 25, 1994
IN BOARD OF SELECTMEN

Chairman Merrill stated that it was his understanding that there would be no vote on this item until the public meeting which is scheduled for Thursday, January 27.

Selectwoman Kalikow agreed with the neighborhood's concerns and agreed there needed to be public discussion over the other types of recreation games that were proposed last week. However, a juke box is a mode of music for the kids. When she spoke to the young people about the Teen Center, 90% of them said they wanted food and music. She did not feel that a juke box would be detrimental to the neighborhood. She wanted this to be put on the agenda today so that they would have music at the Teen Center.

Selectman Hennessey stated he received some calls from some neighbors and when he indicated that the application today was for a juke box, he had no objections.

Dorothy Edinburg expressed concern on behalf of the neighbors over the type of records which would be installed in the juke box. The neighbors are concerned over the lyrics in some of the music today.

Melissa Termine stated that the recreation staff will monitor the music. It will be top 40, but if the lyrics are objectionable, then they would not allow it.

Mrs. Edinburg felt that everything should be heard at the public hearing. Bill Hurley, recreation department employee, stated that they wanted to open the club house this weekend and that is why they would like approval of this application for a juke box.

Chairman Merrill suggested that the vote be made contingent on the neighbors' input on Thursday night. If the outcome of that meeting is that the juke box is okay, then it can be installed.

Mrs. Edinburg made the point that from she has read in the papers, it appears that this is an elitist activity, the coin operated devices. Some of the neighbors feel that the kids should not be encouraged to spend money on these activities.

Chairman Merrill agreed with Mrs. Edinburg's thoughts and stated he would want to dispel any of those thoughts.

On motion, it was unanimously

VOTED: To grant a weekday coin-operated amusement device license, to the Brookline Recreation Department for the installation of a Juke Box at the Teen Center, Soule Recreation Center, 652 Hammond Street, contingent upon the approval of the neighbors who attend the meeting on Thursday, January 27, 1994.

Attest
Richard J. Leary
Town Administrator

Park and Recreation Commission
Human Relations
✓Building
Police

TOWN of BROOKLINE

Massachusetts

Brookline Preservation Commission

CERTIFICATE OF SIGNIFICANCE

TO: Town of Brookline Building Department
ADDRESS: 333 Washington Street 02146

RE: 652C Hammond Street

The Brookline Preservation Commission hereby certifies, pursuant to the Brookline Demolition By-law (Article XXIII-B), that the building known as the "gardener's workshop," located at 652C Hammond Street, was declared significant at the Public Hearing on September 22, 1992, and may not be demolished for one year from September 22, 1992, without written permission from the Preservation Commission.

10/5/92
Date

Chair of the Commission

copy to: Building Department
Town Clerk
Planning Department

Hammond St.

M E M O R A N D U M

To: George Driscoll, Town Counsel

From: James J. Nickerson

Date: July 6, 1992

Re: Soule Recreation Center

Attached is a letter received Monday, July 6, 1992 from Brookline Children's Cooperative School, they are a tenant at Soule Recreation Center.

Please take care of this matter.

Building Commissioner

JJN:s

Brookline Children's Cooperative School

A non-profit, non-sectarian nursery school

July 2, 1992

Ray Mareno
Building Department
Town of Brookline
333 Washington Street
Brookline, MA 02146

Re: Soule Building Maintenance

Dear Ray:

I have been advised by our attorney that he and George Driscoll have previously agreed that the Town may have access to the building for health, safety and maintenance and repair issues. Therefore, I am writing to you to request that the following items be taken care of as soon as possible.

Repair leak in roof to left of front door;
Repair electric fixture on second floor in antechamber to bathroom (damaged by leak);
Repair leaking upstairs single toilet;
Repair dripping upstairs sink;
Repair leaking hot water pipe in downstairs boys bath (we had to shut water off);
Repair broken floor tiles (about four) in front of girls bathroom and hallway which leads to it;
Clean out storm drain in courtyard (dig and filter) to avoid ponding during rain storms; and
Repair court yard wall, which is badly crumbling at front entry, and is a hazard.

If you have any questions with respect to anything on this list, please do not hesitate to call. Thank you.

Very truly yours,

BROOKLINE CHILDREN'S
COOPERATIVE SCHOOL,
INC.

Gail Eddy

Gail Eddy, Director

cc: Jon Levin

652 Hammond Street, Brookline, MA. 02146 / (617) 731-6812

Judy Haupin
Comptroller

January 26, 1995

James J. Nickerson

Contracts

We have attached two contracts as noted below for your files.

Main Library - Window Repair and Replacement
Freeman/Brigham/Hussey, Ltd.

Soule Recreation Center - Shingle Reroofing
Bay State Painting Company

bSA Newmond

Secretary

June 10, 1993

SOULE RECREATION CENTER

FY-91

Replace three broken windows	$41.72
Rewire hot water heater	88.55
Install new thermomstat on hot water heater	97.87
Replace hot water heater	712.51
Replace one broken window	46.54
Replace low water cut off on boiler	438.02
	$1,425.21

FY-92

Removal of security boarding	105.00
Repair PVC line for sprinkler	341.45
Repair service drop to building	1,829.45
Replace broken hall window	29.58
Replace one F40 T12 ballast	65.25
Service all fire extinguishers	108.80
Clear main drain	378.74
Replace all defective steam traps	602.73
Repair leak in sprinkler line	164.55
	$3,624.55

FY-93

Replace four broken windows	81.20
Replace stop and waste valve	28.56
Replace one broken window, bathroom	28.66
Treat entire building for pest control	220.00
Tighten up all mud drain nipples	271.81
Repair stone wall at entrance	335.00
Clean boiler	250.00
Replace twenty broken windows	318.00
	$1,533.23

Brookline Children's
Cooperative School

A non-profit, non-sectarian nursery school

Dear Sir,

We have recently been inspected by the Health Dept. to renew our license. We need a copy of the classroom plans, lead paint inspection and a diagram of the outdoor space on file at our school.

Would you please mail a copy to me or bring it when you do the inspection.

Sincerely,

Pat Vonnegut

652 Hammond Street, Brookline, MA. 02146 / (617) 731-6812

COMMONWEALTH OF MASSACHUSETTS

CITY/TOWN OF Brookline

APPLICATION FOR CERTIFICATE OF INSPECTION

Date 3/25/86

(XY) Fee Required (Amount) $40.00

( ) No Fee Required

In accordance with the provisions of the Massachusetts State Building Code, Section 108,15, I hereby apply for a Certificate of Inspection for the below-named premises located at the following address:

Street and Number 652 HAMMOND STREET
Name of Premises SOULE RECREATION BROOKLINE CHILDREN'S COOPERATIVE SCHOOL
Purpose for Which Premises is Used DAY CARE CENTER
License(s) or Permit(s) Required for the Premises by Other Governmental Agencies:

License or Permit	Agency
· liscence no. 142	Health Dept.

Certificate to be Issued to Brookline Children's Co-operative School
Address 652 Hammond Telephone No. 731-6812
Owner of Record of Building Town of Brooklin - Soule Recreatin
Address Telephone No.
Name of Present Holder of Certificate Brookline Children's Cooperative School
Name of Agent, if any Telephone No.

Pat Vonnegut
SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORICED AGENT

Director
TITLE

April 7, 1986
DATE

INSTRUCTIONS:

1) Make check payable to: Town of Brookline

2) Return this application with your check to: Building Department, Town Hall, 333 Washington Street, Brookline, Massachusetts 02146

PLEASE NOTE:

1) Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified.
2) Application and fee must be received before the certificate will be issued
3) The building official shall be notified within ten (10) days of any change in the above information.

CERTIFICATE # DC07

EXPIRATION DATE: 6/11/88

FORM SBCC-3-74

8-78

O.K. for Cert. F.M.D

4000 - 7466
DC07

The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to Brookline Childrens Co-op School, Inc.

I Certify *that I have inspected the* premises *known as* Brookline Childrens Co-op School, Inc.

located at 652 Hammond Street *in the* TOWN *of* BROOKLINE

County of NORFOLK *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
Two Right Wing Classrooms	10 Persons 10 Persons	First Floor	One Left Wing Classroom	22 Persons	First Floor

DC-15
Certificate Number

September 15, 1981
Date Certificate Issued

September 15, 1982
Date Certificate Expires

Joseph E. Beatty
Building Official

The building official shall be notified within (10) days of any changes in the above information.

COMMONWEALTH OF MASSACHUSETTS

CITY/TOWN OF Brookline

APPLICATION FOR CERTIFICATE OF INSPECTION

Date August 27

(✓) Fee Required (Amount) $40.00

( ) No Fee Required

In accordance with the provisions of the Massachusetts State Building Code, Section 108,15, I hereby apply for a Certificate of Inspection for the below-named premises located at the following address:

Street and Number (Soule Recreation Building) 652 Hammond St Brookline
Name of Premises (2 rooms on right wing + room adjacent to office) MASS
Purpose for Which Premises is Used Child care - preschool
License(s) or Permit(s) Required for the Premises by Other Governmental Agencies:

License or Permit	Agency

Certificate to be Issued to Brookline Childrens Cooperative School, Inc.
Address formerly 210 Harvard St. Brookline Mass 02146
Owner of Record of Building new building (Soule Rec) owned by town of Brookline
Address
Name of Present Holder of Certificate
Name of Agent, if any

Cathy R Rosenbloom
SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT TELEPHONE # 965-4316

Director
TITLE

August 27, 1981
DATE

INSTRUCTIONS:

1) Make check payable to: Town of Brookline

2) Return this application with your check to: Building Department, Town Hall, 333 Washington Street, Brookline, Massachusetts 02146

PLEASE NOTE:

1) Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified.
2) Application and fee must be received before the certificate will be issued.
3) The building official shall be notified within ten (10) days of any change in the above information.

CERTIFICATE #

EXPIRATION DATE:

FORM SBCC-3-74

ok for cert. 9 SB 8-28-81

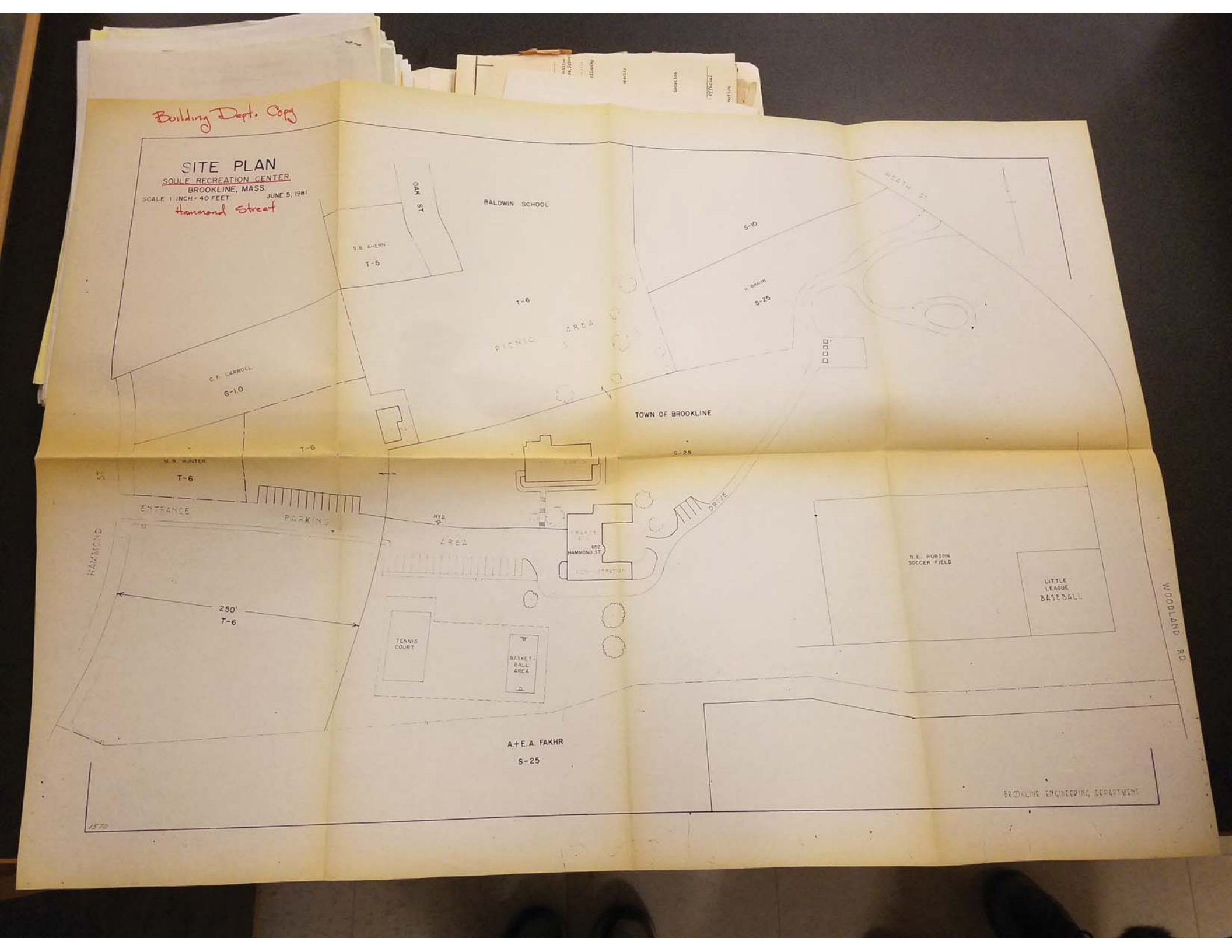
#61842

8-78

Building Dept. Copy

SITE PLAN

SOULE RECREATION CENTER
BROOKLINE, MASS.
SCALE 1 INCH = 40 FEET JUNE 5, 1981
Hammond Street



The Commonwealth of Massachusetts

TOWN OF BROOKLINE

In accordance with the Massachusetts State Building Code, Section 108.5.1, this

CERTIFICATE OF INSPECTION

is issued to ..... Patricia Vonnegut, Director .....

I Certify *that I have inspected the* ..... premises ..... *known as* Soule Recreation, Brookline Children's Cooperative School

located at ..... 652 Hammond Street ..... *in the* .... TOWN .... *of* .... BROOKLINE .....

County of .. NORFOLK ..... *Commonwealth of Massachusetts. The means of egress are sufficient for the following number of persons:*

BY STORY

Story	Capacity	Story	Capacity	Story	Capacity	Story	Capacity

BY PLACE OF ASSEMBLY OR STRUCTURE

Place of Assembly or Structure	Capacity	Location	Place of Assembly or Structure	Capacity	Location
3 Rooms	60 Persons	First Floor			

DC09	April 1, 1985	April 1, 1985	
Certificate Number	*Date Certificate Issued*	*Date Certificate Expires*	*Building Official*

The building official shall be notified within (10) days of any changes in the above information.

COMMONWEALTH OF MASSACHUSETTS

CITY/TOWN OF Brookline

APPLICATION FOR CERTIFICATE OF INSPECTION

(XX) Fee Required (Amount) $40.00

Date March 27, 1985

( ) No Fee Required

In accordance with the provisions of the Massachusetts State Building Code, Section 108,15, I hereby apply for a Certificate of Inspection for the below-named premises located at the following address:

Street and Number 652 Hammond Street

Name of Premises Soule Recreation - Brookline Children's Co-op. School, Inc.

Purpose for Which Premises is Used Pre-school

License(s) or Permit(s) Required for the Premises by Other Governmental Agencies:

License or Permit	Agency

Certificate to be Issued to Brookline Children's Cooperative School Inc. Telephone No. 731-6812

Address 652 Hammond St. Brookline

Owner of Record of Building Soule Recreation Building Telephone No.

Address 652 Hammond St.

Name of Present Holder of Certificate Brookline Children's Co-op School Telephone No. 731-6812

Name of Agent, if any

Pat Vonnegut
SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR HIS AUTHORIZED AGENT

Director
TITLE

April 1, 1985
DATE

INSTRUCTIONS:

1) Make check payable to: Town of Brookline

2) Return this application with your check to: Building Department, Town Hall, 333 Washington Street, Brookline, Massachusetts 02146

PLEASE NOTE:

1) Application form with accompanying fee must be submitted for each building or structure or part thereof to be certified.

2) Application and fee must be received before the certificate will be issued.

3) The building official shall be notified within ten (10) days of any change in the above information.

CERTIFICATE # DC-8 EXPIRATION DATE: April 1, 1985

FORM SBCC-3-74

ok bar cert 4-17-85

8-78

(2 SB)

71902

January 9, 1960

Mr. Frank J. O'Hearn

John Hennessey

Soule Recreation Building

MEMORIAL OFFICE - Mr. Lynch requests this room be put in condition. He is buying new furniture and is hanging a portrait of Mr. Soule on one wall.

He requests the following:

Wash and paint ceiling.
Wash and stain all interior woodwork
Apply one coat of varnish.
Sand the floor, apply a coat of filler and one coat of shellac.
Provide a lock set for the door to this room.
Remove existing ceiling lights, provide spot light for portrait and install two convenience outlets.

The painting will cost	$185.
Electric work will cost	60.
Lock set will cost	25.

April 21, 1960

Mr. James J. Lynch
Superintendent of Recreation
70 Tappan Street
Brookline, Massachusetts

Dear Mr. Lynch:

In reply to your letter of April 20th, please be advised that upon the acquisition of the property of the Rivers School by the Town, certain alterations will have to be taken into consideration and the heating system will be considered when the over-all plan is arranged.

Very truly yours,

Frank J. O'Hearn
Building Commissioner

FJO/h

TOWN of BROOKLINE
Massachusetts

RECREATION COMMISSION
70 TAPPAN STREET, BROOKLINE, MASS.

AUGUSTUS W. SOULE, CHAIRMAN
F. GREGG BEMIS
THOMAS P. KENDRICK, M.D.
FRANK T. LALLY
MILTON LINDEN

JAMES J. LYNCH,
SUPERINTENDENT OF RECREATION
REGENT 4-1160

April 20, 1960

Mr. Frank J. O'Hearn
Building Commissioner
Town Hall
Brookline, Massachusetts

Dear Mr. O'Hearn:

On Saturday, March 19th, members of the Board of Selectmen, School Committee, Park and Recreation Commissions inspected the Rivers School property, recently acquired by the Town. At that time the Headmaster, Mr. George Blackwell, notified the group that at present the lower school and the gymnasium are heated jointly which was both costly and inconvenient.

In order to heat the gymnasium, it is necessary to raise the heat to an excessive degree in the lower school. He recommended the installation of equipment which would make it possible to heat one facility independently of the other thus effecting a saving to the Town with respect to fuel and also making it more comfortable for those using the buildings.

To this end, the Recreation Commission would appreciate it if you would look into this matter as soon as possible and determine the cost of correcting this situation?

With many thanks for your consideration of this matter,

Sincerely yours,

James J. Lynch

James J. Lynch
Superintendent of Recreation

JJL:c

TOWN of BROOKLINE
Massachusetts

RECREATION COMMISSION
70 TAPPAN STREET, BROOKLINE, MASS.

AUGUSTUS W. SOULE, CHAIRMAN
F. GREGG BEMIS
THOMAS P. KENDRICK, M.D.
MILTON LINDEN

JAMES J. LYNCH,
SUPERINTENDENT OF RECREATION
REGENT 4-1160

July 5, 1960

Mr. Frank J. O'Hearn
Building Commissioner
Town Hall
329 Washington Street
Brookline, Massachusetts

Dear Frank:

There will be a special meeting of the Recreation Commission on Thursday, July 14, at 5:30 p.m. at the Rivers School, to discuss the proposed alterations to the lower school. I would appreciate it if you would let me know prior to that time, as to whether or not the walls which we discussed are bearing walls. Would you also submit an estimate of the cost of the alterations to this building as discussed by us, including the installation of a girls' and women's toilet facility, the installation of a door to the second floor, laying of the linoleum and painting?

Sincerely,

James J. Lynch

James J. Lynch
Superintendent of Recreation

JJL:cm

PLUMBING — HEATING — OIL BURNERS — GAS FITTING — ELECTRIC APPLIANCES — AIR CONDITIONING

ROBERT F. TROHON
COMPANY
Established 1925

Plumbing and Heating Contractors

SERVICE DEPARTMENT
501 HEATH STREET
CHESTNUT HILL 67, MASS.

Telephone LOngwood 6-4414

RESIDENCE
83 DUNSTER ROAD
CHESTNUT HILL 67, MASS.

July 11, 1960

Mr. John Hennessy,
Deputy Building Commissioner
Town Hall
Brookline 46, Mass.

Dear Mr. Hennessy:

Our estimate for installing 3-Cadet Closet Combinations with White Seats and 1-18"x20" Iron Enamel Washbowl with hot and cold water C.P. Faucets and with necessary waste and vent pipes and supplies for same, shall be the net sum of $975.00.

No doors or partitions have been included in this estimate.

No carpentry, masonry, painting or electrical work has been included in this estimate.

Plumbing shall be installed in accordance with the laws of the Town of Brookline.

Thanking you for the opportunity of quoting you and trusting we may receive your valued order, I am

Yours very truly,

R F T/MCB

Robert F. Trohon

July 14, 1960

Mr. Augustus W. Soule, Chairman
Recreation Commission
70 Tappan Street
Brookline, Massachusetts

Dear Mr. Lynch:

In reply to Mr. Soule's letter of June 8, 1960 and your letter of July 5, 1960 in regard to making changes at the Rivers School property to accommodate the Recreation program, kindly be advised as follows:

To provide zone controls so the lower school building and the gymnasium may be heated independent of each other..... done $ 950.00

To provide a womdn's toilet room, three cubicles and one lavatory (plumbing only..... 975.00

To create kitchen facilities in the building using existing sink, range, refrigerator and hot water unit from present Chestnut Hill Recreation Center..... 450.00

To remove partitions, enclose stairway, build toilet partitions, repair ceilings and other miscellaneous carpentry work...all interior.....$ 1,900.00

To make changes in the existing heating and ventilating duct work..... 300.00

Painting and Floors.

Large room right side of entrance - wash and paint one coat, ceiling, walls and all woodwork complete..... 240.00
Prepare floor and install linoleum in this room..... 864.00
Electric switches, etc..... 100.00

Large room left side of entrance, painting as above..... 240.00
Prepare and cover this area with linoleum..... 864.00
Electric changes..... 100.00

Two center rooms - paint one coat as above..... 250.00
Cover these rooms with linoleum..... 480.00

All other areas on the first floor, passageways, two toilets, kitchen, office etc., wash and paint one coat..... 480.00
To provide linoleum in these areas, except toilets..... 477.00

If I may be of any further assistance do not hesitate to call on me.

Replace wood gutters on Lower building & gymnasium = 1200
300' at 4

Very truly yours,

Frank J. O'Hearn
Building Commissioner

FJO-a Paint ext wood Trim Lower School & Gym 1400

TOWN of BROOKLINE
Massachusetts

RECREATION COMMISSION
70 TAPPAN STREET. BROOKLINE. MASS.

AUGUSTUS W. SOULE, CHAIRMAN
F. GREGG BEMIS
THOMAS P. KENDRICK, M.D.
FRANK T. LALLY
MILTON LINDEN

JAMES J. LYNCH,
SUPERINTENDENT OF RECREATION
REGENT 4-1160

August 15, 1960

Mr. Frank J. O'Hearn
Building Commissioner
329 Washington Street
Brookline, Massachusetts

Dear Mr. O'Hearn:

I wish to thank you for your estimate of alterations to be made at the Rivers lower school and gymnasium. A request will be made to have the amounts indicated inserted in your 1961 budget. However, in order for us to operate our Morning Play groups efficiently, it will be necessary to have two things done at this time:

(1) to provide zone controls so that the lower school building and gymnasium may be heated independently of each other--$950.00; Sent order Trahon 8/30

(2) to erect fifty wooden cubicles with three hooks in each to allow the Morning Play youngsters to hang up their clothing--? Sent order Brown 8/30/60

I realize that neither one of these items was earmarked for your 1960 budget, but if there is any possible way that they can be taken care of before October 3, 1960 it will be very much appreciated. We would be willing to forego other repairs and/or alterations earmarked for 1960 if the above work could be done now.

With many thanks for your co-operation,

Sincerely yours,

James J. Lynch

James J. Lynch
Superintendent of Recreation

8/30/60
- 580 account
OK for order
DJH

October 7, 1960

Mr. Frank J. O'Hearn

500 Heath Street

John J. Hennessey

The Recreation Department as of this date is finished with any use of this building for their program.

The water has been turned off, boiler drawn down and the building winterized.

Is there any further disposition to be made of the building?

October 21, 1960

Chief William A. Charlton

436 Heath Street

Frank J. O'Hearn

The Town of Brookline has taken possession of the property at 436 Heath Street (formerly Rivers School). We are presently boarding up the main house. Would you kindly arrange for the police to check on these buildings to avoid vandalism.

Very truly yours,

Frank J. O'Hearn
Building Commissioner

BUILDING DEPARTMENT, BROOKLINE, MASSACHUSETTS

MEMORANDUM

Date September 20, 1960

To · Mr. O'Hearn *From* John Hennessey

Re ·

I understand that the Rivers School property has been turned over to the Town of Brookline. We have been informed that the Recreation Department is about to start their program in what is called the lower school building and the gymnasium. Should we do anything about the main building? Is it going to be used or should we draw the water down and prepare the building for winter?

Miss Kirrane informed me that the Recreation Department has no further use for the Chestnut Hill Recreation Center. However Mr. Lynch previously told me that he would like to have the range, refrigerator and stove removed to the new Rivers School buildings. When this is done should we draw down the water and prepare the building for winter?

October 7, 1960

Mr. Frank J. O'Hearn

John J. Hennessey

Rivers School, 436 Heath Street

As of this date Miss Decker, Secretary at the Rivers School, has advised me that they have no further use for the main residence on this property. They have turned over the keys to the Recreation Department.

Should we draw down the water and prepare the building for the winter season?

TOWN of BROOKLINE
Massachusetts

RECREATION COMMISSION
70 TAPPAN STREET, BROOKLINE, MASS.

AUGUSTUS W. SOULE, CHAIRMAN
F. GREGG BEMIS
THOMAS P. KENDRICK, M.D.
FRANK T. LALLY
MILTON LINDEN

JAMES J. LYNCH,
SUPERINTENDENT OF RECREATION
REgent 4-1160

June 8, 1960

See Iver Fauseland
Mr Hunter

Mr. Frank J. O'Hearn
Building Commissioner
329 Washington Street
Brookline, Massachusetts

Dear Mr. O'Hearn:

I believe that your department has made an estimate of the cost of changing the heating system at the so-called lower school on the Rivers School property so that the gymnasium can be heated independently.

At the meeting of the Recreation Commission held last night, I was authorized to ask your department to proceed with this work any time after June 30, 1960 and prior to September 1, 1960 so that winter the work will be completed before we undertake our program on the Rivers School property.

We have a letter from Mr. George Blackwell, Headmaster of the Rivers School, saying that he has no objection to having the heating work done after June 30th.

Sincerely yours,

Augustus W. Soule

Augustus W. Soule, Chairman
Recreation Commission

cc: Board of Selectmen

November 7, 1960

Mr. Arthur A. O'Shea

436 Heath Street

Frank J. O'Hearn

The following information has been obtained from the Rivers Country Day School with reference to heating of the buildings at 436 Heath Street, now owned by the Town of Brookline.

Heating of the main building from September 1959 to June 1960 was $1,299.31.

The cost for heating the small building used as a shower room for the same period was $ 317.59.

For the lower school now in use by the Recreation Department, the fuel cost was $1,599.45 for the above mentioned period. This included heat for the gymnasium from the one boiler.

A zone system has recently been installed as a fuel saving device. Excessive heat occurred in the lower school building in order to provide sufficient heat in gymnasium.

Frank J. O'Hearn,
BUILDING COMMISSIONER

FJO-a

THE RIVERS COUNTRY DAY SCHOOL
436 HEATH STREET
CHESTNUT HILL 67, MASSACHUSETTS

GEORGE H. BLACKWELL, HEADMASTER

THE COUNTRY DAY SCHOOL
FOUNDED 1907

November 3, 1960

Mr. Frank J. O'Hearn
Town of Brookline
Massachusetts

Dear Mr. O'Hearn:

I think the figures given below will answer your question about the cost of heat at our former buildings in Chestnut Hill. Perhaps you can get a better price on oil than we did but these figures will guide you in any case.

	Upper School	Shower Building	Lower School
Sept.	$ 24.73	$ 5.09	$ 31.25
Oct.	15.55	5.47	24.04
Nov.	165.46	42.52	224.38
Dec.	178.19	43.23	227.82
Jan.	273.63	72.04	329.85
Feb.	245.21	60.02	306.16
Mar.	248.07	59.00	248.48
Apr.	109.86	22.85	136.69
May	38.61	7.37	70.78
June	- -	- -	- - -
	$1299.31	$317.59	$1599.45

Jim Lynch has already asked the Town for a credit to the school on account of the fuel oil remaining in the tanks of the Lower School building. He suggested that you could probably obtain a similar settlement for the oil in the tanks of the Upper School building and the "greenhouse locker room."

Very truly yours,

George H. Blackwell

GHB:a

Headmaster

November 1, 1960

Mr. George Blackwell, Headmaster
Rivers Country Day School
Weston, Massachusetts

Dear Mr. Blackwell:

I have been requested to obtain the cost of heating the recently vacated buildings on the old Rivers School property.

It occurred to me that perhaps in your records you would have the cost of fuel, used in each of the buildings. We are particularly interested in the main building.

Any information that you could forward would be much appreciated.

Very truly yours,

Frank J. O'Hearn
Building Commissioner

FJO/h

Brookline

Office of the Selectmen

MEMORANDUM

Frank J. O'Hearn, Building Commissioner Date November 1, 1960

SUBJECT

Would you be good enough to get for me, from the Rivers School Authorities, the figures for heating the plant, by building if possible; if not we are particularly interested in the big house that we went through recently.

ARTHUR A. O'SHEA, *Executive Secretary*

Executive Secretary

Frank J. O'Hearn
Arthur H. MacKinnon

TOWN of BROOKLINE

Massachusetts

SELECTMEN'S OFFICE
ARTHUR A. O'SHEA
EXECUTIVE SECRETARY

October 17, 1960

IN BOARD OF SELECTMEN

The Board having taken a view of the Rivers School property, it was on motion unanimously

VOTED: To instruct the Building Commissioner that appropriate steps be taken to drain the water and heating systems of the former Residence Building used as a school at 436 Heath Street, and to take the necessary measures to protect the building from vandalism at an estimated cost of from $700 to $800.

A t t e s t:

Executive Secretary

Frank J. O'Hearn
Arthur H. MacKinnon

October 7, 1960

Board of Selectmen
55 Prospect Street
Brookline, Massachusetts

Gentlemen:

Miss Decker, Secretary of the Rivers School, has advised that they have no further use for the former residence building used as a school at 436 Heath Street.

If building is not to be occupied for the winter, preparations should be made to drain water and heating systems, shut off existing sources and properly protect the building from vandalism if possible.

Would suggest immediate action be taken before cold weather sets in.

Respectfully submitted,

Frank J. O'Hearn,
BUILDING COMMISSIONER

FJO-a

BROOKLINE, MASSACHUSETTS

MEMORANDUM

Date October 7, 1960

To Mr. Frank J. O'Hearn *From* John J. Hennessey

Re - Rivers School, 436 Heath Street

As of this date Miss Decker, Secretary at the Rivers School, has advised me that they have no further use for the main residence on this property. They have turned over the keys to the Recreation Department.

Should we draw down the water and prepare the building for the winter season?

September 20, 1960

Mr. O'Hearn

John Hennessey

I understand that the Rivers School property has been turned over to the Town of Brookline. We have been informed that the Recreation Department is about to start their program in what is called the lower school building and the gymnasium. Should we do anything about the main building? Is it going to be used or should we draw the water down and prepare the building for winter?

Miss Kirrane informed me that the Recreation Department has no further use for the Chestnut Hill Recreation Center. However Mr. Lynch previously told me that he would like to have the range, refrigerator and stove removed to the new Rivers School buildings. When this is done should we draw down the water and prepare the building for winter?

BUILDING DEPARTMENT, BROOKLINE, MASSACHUSETTS

MEMORANDUM

Date January 9, 1960

To - Mr. Frank J. O'Hearn *From* John Hennessey

Re - Soule Recreation Building

MEMORIAL OFFICE - Mr. Lynch requests this room be put in condition. He is buying new furniture and is hanging a portrait of Mr. Soule on one wall.

He requests the following:

Wash and paint ceiling.
Wash and stain all interior woodwork
Apply one coat of varnish.
Sand the floor, apply a coat of filler and one coat of shellac.
Provide a lock set for the door to this room.
Remove existing ceiling lights, provide spot light for portrait and install two convenience outlets.

2 sws 1 for spot
1 for BP

The painting will cost	$185.
Electric work will cost	60.
Lock set will cost	25.

$230

Reluctantly approved upon appeal of Mr. Lynch

Jan. 13, 1961.

FJOH

1/18/61 J. Brown tel'd price for the work $230
He will confirm - ok to go ahead per FJO'H
JJH

BROOKLINE POLICE DEPARTMENT
BROOKLINE, MASS.

TIME:

DATE: August 24, 19-

CASE OF: Old Rivers School Building

ADDRESS: 460 Heath St.

OFFICER ASSIGNED:
Ptl. Thomas F. FAY

NATURE OF CASE: Malicious Damage

On August 20, 1962, on memo from Capt. Carroll, requesting this officer examine the Old Rivers School Building, relative to malicious damage of the building there.

Examination by this officer - I found about fifty windows broken, many windows boarded up by paper have been smashed thru with stones, the cement balustrade railing around the building had been damaged and tipped over. The inside was examined this spring by this officer and at that time the ceilings had fallen due to no heat in the building. The above damage has been previously reported & has happened over a long period of time.

Respectfully submitted,

Ptl. Thomas J. FAY

Ptl. Thomas J. Fay

Copy to Building and Recreation Dpts.

BROOKLINE ENGINEERING DEPARTMENT

January 9, 1963

To All Departments:

The following street number has been assigned as of to-day:

Soule Recreation Center
652 Hammond Street
Brookline, Mass.

(Postal Zone)
Chestnut Hill 67, Mass.

George L. Jackson

George L. Jackson
Asst. Town Engineer

Board of Selectmen
Assessors
Building
Comptroller
Engineering
Fire
Health
Highway
Library
Park and Forestry
Police
Purchasing
Recreation
School
Town Clerk
Treasury
Veterans' Services
Water
Welfare
Planning Board

Post Office

RECOMMENDED - James J. Brown & Son

Stock Room in Basement

1. Installation of shelves and counters; stain, shellac and varnish the same.

2. Install bars on 4 windows and door as security measure.

3. Install locks and bolts on 3 doors.

4. Install wall to prevent access from Park Department store room.

Estimated cost $1,600.00

Pazolt Sign Company

1. Resurface and relocate sign on front door of gym to Soule.

2. Construct and install:

   a. 2 double face signs "Brookline Recreation Department Office" plus arrow.

   b. 1 sign "Office" plus arrow.

Cost ..... $ 195.00

January 7, 1963

1965

EXPENSES INCURRED AND RECOMMENDED FOR ALTERATIONS TO THE SOULE RECREATION CENTER RELATIVE TO THE RELOCATION OF THE RECREATION DEPARTMENT OFFICES AND STOCK ROOM

file — This was done in connection with Gym Fire — Not charged to Bldg Dept

INCURRED

1. New England Telephone & Telegraph Company

   A. Installation of telephone poles ..... $ 300.00

2. James J. Brown & Son

   A. Alterations to recreation room for main office:

      1. Installation of wall and door to break one room into two; painting of same.

      2. Installation of shelves.

      3. Installation of counter and gate.

      4. Staining and varnishing of counter.

      5. Alterations to Morning Play room to provide office for Assistant Superintendent which includes installation of wall, door and transom and painting of same.

      Estimated cost $1,000.00

3. Ben Steverman

   A. Installation of electric outlets, switches, light and buzzer:

      1. 4 double plugs and one switch in main office.

      2. Wall plug, relocation of switches in Assistant Superintendent's office.

      3. Buzzer and overhead fluorescent light in Superintendent's office.

      Cost ..... $ 300.00

      4. Installation of emergency lights in gym stock room in order to relocate supplies from gym to Soule ..... $ 25.00

January 15, 1963

Robert J. Stewart

Mr. Arthur A. O'Shea

Soule Recreation Centre

In reference to the comments made by the contractor regarding the installation of urinals at the Soule Recreation Centre, it is advised the work was done at one-third the cost he submitted.

This contractor refused to install the urinals and flush valves which were taken from the old mansion at the Rivers School. There are probably a dozen of these fixtures in the building with their flush valves in usable condition, two of which were used on this job.

This work was ordered because it was practical and is permitted under the Plumbing Code, Article 21, Section 2101a.

Very truly yours,

Robert J. Stewart
Building Commissioner

RJS:n

PLUMBING and HEATING MATERIALS

ANTIQUE OLD PINE BOARDS, DOORS and MANTELS

MANTELS, MARBLE and WOOD

GARDEN CENTER

John J. Duane Co., Inc.

BUILDING WRECKING

All Kinds New SALVAGE BUILDING MATERIALS *For Sale*

Estimates Furnished Anywhere : References, Licensed, Bonded

600 SOUTHERN ARTERY
QUINCY, MASSACHUSETTS

Phone PResident 3-6030

IRON RODS - I BEAMS
GIRDERS - IRON PIPE
FITTINGS - STEPS
WINDOWS - LUMBER
FIREWOOD - DOORS
RADIATORS - VALVES
PANELLING - BRICK
STAIRS - SLATE

file

February 8, 1963

Town of Brookline
329 Washington Street
Brookline, Massachusetts

Attention: Mr. Stewart, Building Dept.

Gentlemen:

Following herewith our proposal relative the demolition work to be done at the River School, Hammond and Heath Streets, Brookline, Massachusetts.

We will demolish the large main building to ground level for the sum of four thousand two hundred fifty ($4,250.00) dollars.

We will demolish the greenhouse, adjacent to the large building, to ground level for the sum of six hundred seventy-five ($675.00) dollars.

Both basements will be filled to surrounding ground level. All tools, machinery, labor, and trucking necessary to properly execute the work will be supplied by our firm.

All salvaged materials obtained from the demolition work will become our property and will be removed from the site.

We are fully insured with the American Mutuel Liability Insurance Company of Boston, Massachusetts: ie: workmens' compensation, public liability and property damage. Certificates of said insurance will be furnished upon request.

Very truly yours,
JOHN J. DUANE COMPANY, INC.

Herbert T. Duane

Herbert T. Duane
President

HTD:jmd

March 27, 1963

Mr. James Lynch

Fire extinguishers - Eliot and Soule Recreation Buildings

Eliot Recreation Building - Provide one C. O. 2 foam type fire extinguisher in the kitchen and two - two and one half gallons soda and acid fire extinguishers, one on each side of the room.

Soule Recreation Building - Provide three additional two and one half gallon soda and acid fire extinguishers - one to be located in each room.

The extinguishers are to be purchased by the Recreation Department and installed by the Building Department.

Very truly yours,

Robert J. Stewart
Building Commissioner

RJS/GFC/h

BUILDING DEPARTMENT, BROOKLINE, MASSACHUSETTS

MEMORANDUM

Date March 19, 1963

To - Robert J. Stewart

From George F. Carlisle

Re - Soule Recreation Building

652 Hammond Street

Provide second means of egress between corridor and Soule Room #2 to outside. This would provide a second means of egress from this classroom and a connecting rear stairway from the second floor leading directly to the outside.

The above room is located one story above grade level.

Other classrooms are at grade level.

Provide three additional two and one half gallon soda and acid fire extinguishers.

Alternative: Sprinkler system.

GFC.

George F. Carlisle

LOngwood 6-4810

file

Michael Collins

Carpenter and House Builder

30 DAVIS AVENUE

BROOKLINE 46, MASSACHUSETTS

March 28, 1963

Mr. R.J, St ewart,
Building Commissioner,
Town Hall,
Brookline, Mass.

Dear Sir,

I am pleased to quote price for work at Soule Recreation Building

Build two new dry wells and dig trench by side of foundation 8o ft. long, 3 ft. deep, 2 ft. wide. Fill in with 18" gravel remainder with reinforced concrete pitching away from building. All excessive fill to be removed.

This work will cost $700.00

Very truly yours

Michael Collins

Michael Collins

1 Has Arch final plans Hider
2 Park Com ~~satisfied~~ on approval
3 Submission of plans to BC
with Arch present
for final approval

October 14, 1963

Robert J. Stewart

Mr. James J. Lynch

Soule Recreation Building

652 Hammond Street

Provide second means of egress between corridor and Soule Room #2 to outside. This would provide a second means of egress from this classroom and a connecting rear stairway from the second floor leading directly to the outside.

The above room is located one story above grade level.

Other classrooms are at grade level.

Provide three additional two and one half gallon soda and acid fire extinguishers.

Alternative: Sprinkler system.

Very truly yours,

Robert J. Stewart
Building Commissioner

RJS/h

Reinspected
Oct 23 63

October 23, 1963

Mr. James J. Lynch, Superintendent
Recreation Division
Brookline Park and Recreation Commission
652 Hammond Street
Chestnut Hill 67, Massachusetts

Dear Mr. Lynch:

After further inspection of the buildings at Soule Recreation Building, 652 Hammond Street; Recreation Building, 133 Eliot Street; Brookline Avenue Recreation Building, 599 Brookline Avenue; it is concluded that these buildings have sufficient and accessible egress for use as Day Care Centers and do not require sprinkler equipment.

The three memoranda to Mr. James Lynch dated October 14, 1963, are, therefore, rescinded.

Very truly yours,

Robert J. Stewart
Building Commissioner

RJS/h

Copy to:

Dr. Leon J. Taubenhaus

Mr. Arthur A. O'Shea

December 3, 1963

Augustus W. Soule, Chairman
Park and Recreation Commission
329 Washington Street
Brookline, Massachusetts

Dear Sir:

The letter of November 22, 1963 concerning low water pressure at the Soule Recreation Center has been received and noted.

It is factual that the water service at the above is inadequate both from a standpoint of fire protection and use of the building plumbing.

An item for providing a six-inch water main with a hydrant located near the building is included in the Repairs to Public Buildings budget for 1964.

Since Town Meeting approves the budget, it can not be expected that this work will proceed before May, 1964.

Yours very truly,

Robert J. Stewart
Building Commissioner

RJS/w

cc: Board of Selectmen

TOWN of BROOKLINE
Massachusetts

PARK and RECREATION COMMISSION

Augustus W. Soule, Chairman
William B. Hickey, Vice-Chairman
F. Gregg Bemis
Thomas P. Kendrick, M.D.
Frank T. Lally
Milton Linden
Henry W. Minot

Daniel W. Warren, Jr.
Superintendent of Parks
BE 2-9000

James J. Lynch
Superintendent of Recreation
RE 4-1160

November 22, 1963

Mr. Robert J. Stewart
Building Commissioner
329 Washington Street
Brookline, Massachusetts

Dear Mr. Stewart:

At a meeting of the Park and Recreation Commission held on November 19th, it was called to our attention that the water pressure at the Soule Recreation Center, both in the main building and in the gymnasium, is very low.

As you probably know, there are seven or eight shower heads at the gymnasium and if more than one is turned on there is only a trickle of water out of any of them which makes it necessary for us to limit the use of the gymnasium for any activities which require showers, both for men and women.

Because of the low pressure in the main building, although the toilets can be flushed once, it takes a very long time to fill the tank which is a great annoyance and probably a health factor.

Finally, because of the low pressure, we feel that the fire protection in both buildings is a serious situation and for this reason we would strongly urge the Building Department to take whatever steps as soon as possible which may be necessary to correct the situation.

Sincerely yours,

Augustus W. Soule

Augustus W. Soule, Chairman
Park and Recreation Commission

AWS:c
cc: Board of Selectmen

1 M-62

fill

PARK DEPARTMENT

Date June 21, 1963

INTER-DEPARTMENTAL MEMORANDUM

From Daniel W. Warren, Jr., Supt.

To Robert Stewart
Building Commissioner

I have understood from my discussion with you concerning the demolition of the buildings at Soule Recreation Center that nothing but solid material would be used in filling the areas in after the demolition of the building.

On June 19, 1963, I observed exceptionally poor quality material such as timbers and all kinds of wood and building materials which in my opinion are exceptionally poor to be used in any fill operation.

If this is allowed to bemain, it is going to cause considerable trouble for the use of the area for any purpose. All this material has been camouflaged by using existing loam on the playground for covering up the poor quality fill.

I do hope that something can be done about this before this demolition work will be accepted.

I also call to your attention as was reported by phone to your office, damage done to our chain link fence by the contractor. An estimate of repair will follow.

D. W. Warren

February 4, 1964

Walter Carroll

Mr. Robert J. Stewart

Nursery Schools

Eliot School - 137 Eliot Street - Inspection reveals two 30 amp fuses in 15 amp circuits. Recommend a new panel and fuses of type S on all circuits.

Soule Center - 652 Hammond Street - Receptacle plate needed in small office. Fluorescent light in hall and mail office should be wired with approved wiring and proper fitting be used entering fixtures.

WC:n

April 12, 1972

Frederick E. Wegner

The Health Department

Soule Recreation Center
652 Hammond Street

The building at 652 Hammond Street, Brookline, in which day care services for children are provided, complies with Section 49, Chapter 143 of the General Laws as having safe means of egress, adequate means of preventing the spread of fire and necessary equipment for extinguishing fire.

Frederick E. Wegner
Building Commissioner

FEW:WCB:m

April 12, 1972

Shephard N. Cohen, Acting
Director of Public Health
Brookline, Massachusetts

Dear Mr. Cohen:

Inspection has been made of the Soule Recreation Center, 652 Hammond Street, Brookline in regard to the application for a renewal of license to maintain a day care service for children.

The electrical installations were found to be safe and in operable condition.

Very truly yours,

Frederick E. Wegner
Building Commission

FEW:WFC:m

October 26, 1970

Henry M. Greenleaf, M. D.
Director of Public Health
11 Pierce Street
Brookline, Mass.

Dear Dr. Greenleaf:

Inspection has been made of the Soule Recreation Center, 652 Hammond Street, Brookline in regard to the application for a license to maintain a day care service for children.

The electrical installations were found to be safe and in operable condition.

Very truly yours,

Robert J. Stewart
Building Commissioner

RJS:WFC:m

October 26, 1970

Health Department

Robert J. Stewart

Soule Recreation Center
652 Hammond Street

The building at 652 Hammond Street, Brookline in which day care services for children are provided, complies with Section 49, Chapter 143 of the General Laws as having safe means of egress, adequate means of preventing the spread of fire and necessary equipment for extinguishing fire.

Robert J. Stewart
Building Commissioner

RJS:WCB:m

1 M-66

PARK DEPARTMENT

Date March 14, 1967

INTER-DEPARTMENTAL MEMORANDUM

To Mr. Robert Stewart
Building Commissioner

From Daniel W. Warren, Jr., Supt.

I am enclosing herewith copy of our Park Police report noting how vandals gained entrance to Soule Recreation Center.

May I request that this mail slot be removed and that the door be boarded properly to make it more difficult to gain entrance.

I hereby request that all locks be changed in all outside doors at the Eliot Recreation Center.

D. W. Warren

Superintendent of Parks and Forestry

March 17, 1967

Daniel W. Warren, Jr. Robert J. Stewart

Eliot and Soule Recreation Buildings

In reply to memorandum of March 14, 1967 it is advised arrangements have been made to remove mail slot on Soule Recreation Center office door, and to install metal shields on door slots to prevent "picking" of locks at the Eliot Recreation Center.

Not mentioned in the report is the fact that the rear gym railing at Soule Recreation was knocked down and used as a battering ram to cave in the windows and window frames in the rear of the gym. Entry was gained once before by using the rail of the ranch type fence to force the screening and windows of the Center.

Locks are not the final answer in securing these Recreation Centers.

Robert J. Stewart
Building Commissioner

RJS:JEM:C
C:JM

RECEIVED
PARK DEPARTMENT
MAR 13 2 34 PM '67

BROOKLINE PARK POLICE
BROOKLINE, MASSACHUSETTS

TO: DANIEL W. WARREN, JR.
SUPERINTENDENT OF PARKS & FORESTRY
TOWN OF BROOKLINE

S. C. and copy to Mr. Walter

COPY TO: Park

DATE: March 12, 1967

CASE OF: Soule Recreation Center

ADDRESS:

NATURE OF CASE: Vandalism

TIME: 12:00 noon on March 11 to 2:00 P M Mar. 12

OFFICER ASSIGNED: MacRae and T. Curtin

DETAILS:

Area was checked on both days and windows were noticed as to have been broken. Building was locked at 2:00 P M and checked at 9:30 P M by Officer Clancy. A call from Miss Kirrane on the Morning of the 13th proved that entry was gained by removing letter slot on the door and a hand reached in to unlock same. No damage in the building except muddy foot prints on top of Pool Tables. Windows that were broken were on the basement side. We have reguested the building department to cover these windows with some type of screening some time ago. We have also requested that mail slot on door be covered or filled and locks to be changed on this building and Eliot Recreation Center.

Respectfully submitted:

Edward D. MacRae

Edward D. MacRae PP

March 16, 1976

Commercial Union Assurance Companies
One Beacon Street
Boston, Massachusetts 02108

Att: Mr. Kenyon D. MacLeod

Gentlemen:

Thank you for your letter of March 16, 1976 concerning work recommendations in the boiler room at the Soule Recreation Center, 652 Hammond Street, Brookline.

This is to inform you that the leaks in the return line and some valve have been repaired.

Yours very truly,

Royce E. Beatty
Building Commissioner

REB:JMn

TRANSMITTAL SLIP

To Jim Date 3.10.76

- ☐ For your information
- ☐ For your comments
- ☒ Please handle
- ☐ For signature
- ☐ Please follow-up
- ☐ Please check
- ☐ Please return
- ☒ Please Phrase Response
- ☐ Please take up with me
- ☐ Please call me
- ☐ For your approval
- ☐ For your file
- ☐ Please return to file
- ☐ Please rush

(Signed) [signature]

DATE RETURNED

Companies

ETTS 02108

Brookline, Mass. 02146

March 10, 1976

Dear Mr. Wegner:

Location: Soule Recreation Ctr.
652 Hammond St.
Brookline, Mass.
#S8148 C.I.S. BOILER
Policy #: BMCB-J-5079-37

We, in the Commercial Union Assurance Companies, are presently affording you protection under the above numbered policy.

In our efforts to assist you in your responsibility toward accident prevention, we submit the following recommendations:

#76-1. The leaking overhead steam zone valve should be repaired or replaced.

#76-2. The leaking nipple on the 2" return line should be repaired or replaced.

Your compliance with the above and reply will be appreciated.

If we can be of further service in this matter, please feel free to call upon us.

Jim 3/10/76
Follows of correct.

Very truly yours,

Kenyon B. MacLeod
Assistant Manager
Boston Metropolitan
Loss Prevention Department

KBM:kd
cc: Deland, Gibson, Meade & Gale, Inc.

May 5, 1981

Royce E. Beatty

Richard T. Leary

652 Hammond Street
Children's Cooperstive Day Care Center
(Your memo dated May 4, 1981)

We have reviewed the proposal of the Children's Cooperative Day Care Center to relocate to the Soule Recreation Center, 652 Hammond Street, a Town owned facility.

The Zoning By-Law Section 4.30, Use 15, does not permit the proposed use in a single family Residence District.

Accordingly, a variance from this section by the Board of Appeals would be required.

An inspection of the building disclosed that the space being considered by the Center would comply with the applicable requirements of the Building Code.

Building Commissioner

REB:h

Commercial Union Assurance Companies

BOSTON METROPOLITAN BRANCH
ONE BEACON STREET, BOSTON, MASSACHUSETTS 02108

Mr. Frederick Wegner, Bldg. Commissioner
Town of Brookline
329 Washington Street
Brookline, Mass. 02146

April 12, 1976

Dear Mr. Wegner:

Location: Soule Recreation Ctr.
652 Hammond Street
Brookline, Mass.
#S8148 C.I.S. BOILER
Policy #: BMCB-J-5079-37

Please refer to our letter of March 10, 1976.

We would appreciate your advising this office as to what action has been taken relative to complying with our recommendations.

Very truly yours,

Kenyon B. MacLeod
Assistant Manager
Boston Metropolitan
Loss Prevention Department

KBM:kd
cc: Deland, Gibson, Meade & Gale, Inc.

File

Location, Ownership and detail must be complete and legible.
Seperate application required for every building.

No. 147

Application for a Permit for Alterations, etc.

Brookline, May 21, 19 63

To the BUILDING COMMISSIONER:

The undersigned applies for a permit to Tear down the following described building—

Location, 652 Hammond Street (Soule Recreation Buildings)

Name of owner, Town of Brookline Address, 329 Washington Street, Brookline

Name of mechanic, Robert Lazaro Address, 145 Prospect Street, Waltham

Name of architect, Address,

Estimated cost of alterations, etc., $ 3,660.00 Material,

Size of building, No. feet front, ; feet rear, ; feet deep, ; No. of stories,

Size of lot, feet long; feet wide; feet high; No. of stories ; roof,

No. of feet in height from sidewalk to highest point of roof,

Style of roof, Material of roofing,

Material of foundation, Distance from line of street, inches.

Thickness of external walls, inches; Thickness of party walls,

How is the building occupied? "The Mansion" & "The Skate House" For what purpose built? same

If a dwelling, by how many families? No. of stores in lower story?

Hoistways and elevators? How protected?

DETAIL OF PROPOSED ALTERATIONS, ETC.

Tear down "Mansion" and "Skate House"

IF EXTENDED ON ANY SIDE

Size of extension, No. of feet long ; No. of feet wide ; No. of feet above sidewalk

No. of stories high ; Style of roof ; Material of roofing

Of what material will the extension be built? Foundation,

If of brick, what will be the thickness of external walls? inches; and party walls inches.

Will the extension be placed within ten feet of the present, or proposed street line?

How will the extension be occupied? Connection with main building?

Distance from surrounding buildings:—

Front, feet; side feet; side, feet; rear, feet.

What distance from the lines of adjoining lots will it be placed?

Cubic contents of addition feet

IF MOVED, RAISED, OR BUILT UPON

No. of stories high of when moved, raised, or built upon Proposed foundation

No. of feet high from level of ground to highest part of roof?

Distance from surrounding buildings:—

Front, feet; side feet; side, feet; rear, feet.

Distance back from line of street, Distance from nearest line of lot,

Will the roof be flat, pitch, hip, or mansard? What will be material of roofing?

How many feet will the external wall be increased in height?

How many feet will the party walls be increased in height?

How will the building be occupied after alteration?

IF ANY OF THE EXTERNAL OR PARTY WALLS ARE REMOVED

Will an opening be made in the party or external walls? on story

What will be the size of the opening? feet wide; feet high.

How will the remaining portion of the wall be supported?

If by iron or stone lintels, give size, inches; and thickness of shell, inches.

If iron columns are used, give diameter,

If brick piers are used, give size,

(Over)

Fee NO FEE Receipt No. License No. H-Limited-#598

IF THE BUILDING IS TO BE OCCUPIED FOR A TENEMENT OR LODGING HOUSE

How many families will occupy each floor? .....Whole number? .....

What is the distance from surrounding buildings? .....feet front; .....feet side; .....feet rear

Number of water-closets provided? .....Where located? .....

Will all sleeping rooms open to the external air? .....Is the street 20 feet wide? .....

What will be the means of egress in case of fire? .....If by escape, where located? .....

.....

Is the lower story to be used for business purposes? .....Will the hall partition be built of brick? .....

Heights of each story in the clear:— 1st, ...; 2nd,.....; 3rd, ...; 4th, ...; 5th, ...; 6th,.....

.....

.....

.....

.....

.....

.....

.....

.....

WILL THE BUILDING CONFORM TO THE REQUIREMENTS OF LAW?

Name Robert Lazaro

Address 145 Dunstan St Wal

Tel. No. TW-3-1930

No. 147

APPLICATION FOR PERMIT FOR REPAIRS, ALTERATIONS, ETC.

LOCATION

No. 652 Hammond Street

Town of Brookline

Robert Lazaro

PERMIT GRANTED

May 22 19 63

3,660.

Unless building operations are started within six months, foundation walls are to be removed to grade and excavation filled.

MEMORANDA

5/22/63 W.C.B

Completed - 6-1963

NOTICE OF APPLICATION

SENT TO:

Assessors —

Engineering —

Fire —

Health —

Highway —

Police —

Town Clerk —

Water —

Planning Board —

Date May 22 63

LS
FH

APPLICATION FOR CERTIFICATE OF INSPECTION

DATE: July 1, 2010

IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS STATE BUILDING CODE, SECTION 106.5, I HEREBY APPLY FOR A CERTIFICATE OF INSPECTION FOR THE BELOW NAMED PREMISES LOCATED AT THE FOLLOWING ADDRESS:

LOCATION 652 Hammond Street

NAME OF PREMISES Soule Rec Center

CERTIFICATE TO BE ISSUED TO Charles Simmons, Director of Public Buildings

ADDRESS 333 Washington Street, Town Hall, Brookline MA 02445

OWNER OF RECORD OF BUILDING The Town of Brookline TELEPHONE # 617-730-2420

ADDRESS Town Hall, 333 Washington Street, Brookline, MA 02445

NAME OF PRESENT HOLDER OF CERTIFICATE Town of Brookline

NAME OF AGENT, IF ANY TELEPHONE #

SIGNATURE OF PERSON TO WHOM CERTIFICATE IS ISSUED OR AUTHORIZED AGENT

Charles A. Simmons
Director of Public Buildings

OK pk 6/8/10

LICENSE(S) OR PERMIT(S) REQUIRED FOR THE PREMISES BY OTHER GOVERNMENT AGENCIES:

INSTRUCTIONS: MAKE CHECK PAYABLE TO TOWN OF BROOKLINE. RETURN THIS APPLICATION WITH YOUR CHECK TO THE BUILDING DEPARTMENT, TOWN HALL, 333 WASHINGTON STREET, BROOKLINE, MA 02446.

NOTE: APPLICATION FORM WITH ACCOMPANYING FEE MUST BE SUBMITTED FOR EACH BUILDING OR STRUCTURE OR PART THEREOF TO BE CERTIFIED. APPLICATION AND FEE MUST BE RECEIVED BEFORE THE CERTIFICATE WILL BE ISSUED. THE BUILDING OFFICIAL SHALL BE NOTIFIED WITHIN TEN (10) DAYS OF ANY CHANGE IN THE ABOVE INFORMATION.

FEE:_____ RECEIPT:_____ CERTIFICATE #_____ ISSUED:_____

6/13/68
OKwo

No. 175

APPLICATION FOR PERMIT TO DO PLUMBING

LOCATION, ETC.

No. 652 Hammond Street

Owner Soule Recreation

Plumber Francis O'Boy

PERMIT GRANTED

June 14 1968

Brookline, 19

Approved,

Commissioner

Completed 19

Cost $ 2.00

RECEIVED
BUILDING DEPARTMENT
JUN 13 4 55 PM 1968
TOWN OF BROOKLINE

MEMORANDA

7/12 [illegible] OK

652 Hammond St.

All work hereafter performed must be tested by water pressure, and the Commissioner must be notified when soil, drain pipe, and all connections therewith are placed in position.

No. 175

#652

Application for Permit to do Plumbing

Brookline, May 10, 1968

PLUMBING INSPECTOR:

To the ~~BUILDING COMMISSIONER~~

The undersigned hereby applies for a permit to perform Plumbing work according to the following specifications:

1. Location, 675 Hammond St - Soule Recreation Centre
   Nearest cross street, Boylston
2. Name of Owner? Bkline Bldg Dept c/o Town Hall Address Wash St Bk
3. Name of Plumber? Francis J. O'Boy " 2 White Place Bk
4. Material of Building? Brick New or Old? Plumber's registered No. M 7055
5. What was building last used for? Same
6. How many families? — Number of stores? —
7. What is building to be occupied for? Recreation Center

NATURE OF PROPOSED PLUMBING IN DETAIL

	Waterclosets	Lavatories	Bath Tubs	Shower Baths	Sinks	Wash Trays	Pressure Boilers	Other Fixtures
Sub-Basement								
Basement								
First Story	Install service sink in boy's room							
Second Story								
Third Story								
Fourth Story								
Fifth Story								
Sixth Story								
Seventh Story								
Eighth Story								
Totals								

All pipes must be located at least three inches from electric wires

Location, ownership and detail must be complete and legible.
Separate application required for every building.

Note:

Note.— Mark here by X whether
New Plumbing
Alteration in Plumbing
Estimated Cost, $ 2.00 00

[Signature of Master Plumber.] Francis J O'Boy

[ADDRESS] 2 White Place Bkline

Plumber's Telephone No. 566-4465

PLUMBER MUST RECEIVE A PERMIT BEFORE COMMENCING WORK

Change of address must be recorded in this Department

Fee none Receipt No.

TOWN OF BROOKLINE

Building Department

Application for Electric Permit

No. 120

To the Inspector of Wires — Brookline, Mass. March 15, 19 71

The undersigned hereby applies for a permit to install electric wiring according to the following specifications:

1. Street and No.? 652 HAMMOND STREET, BROOKLINE, MASS.
2. Old or New Building? Old Purpose of Building? Single Res
3. Owner? City of Brookline Address?
4. Electrical Contractor: ATLAS ALARM CORPORATION Address 1239 Washington St., E.Weymouth, Mass.
5. How many families or other occupants? None
6. Are fixtures which are to be installed ADDITIONAL or REPLACEMENT

PROPOSED FIXTURES IN DETAIL

Location of Room	Light Outlets	Sw.	Plugs	Fixt.	Location of Room	Light Outlets	Sw.	Plugs	Fixt.

No. of Outlets	Air Cond. (Rating - Amperes)
No. of Fixtures	Range Name plate rate
No. of Motors H. P.	Water Heater Name plate rate
No. of signs Trans.	Clothes Dryer Name plate rate
Hot Air — Motors and Size	Total Load
Gas Motors and Size	Size of main Entrance Sw. New? Existing?
Electric — KW Connected Load	Size of S. E. conductors
Hot Water — Motors & Size	Misc. BURGLAR & FIRE ALARM SYSTEMS
Steam Motors & Size	

ALL WORK HEREAFTER PERFORMED MUST BE TESTED AND THE INSPECTOR MUST BE NOTIFIED IN WRITING WHEN ALL CONNECTIONS ARE PLACED IN POSITION FOR ROUGH INSPECTION, AND THE INSPECTOR ALSO MUST BE NOTIFIED IN WRITING WHEN THE JOB IS COMPLETED.

Application must be signed by an Electrician only.

Permit must be conspicuously posted on premises before work is commenced.

The above is subscribed to and executed by me under the penalties of perjury in accordance with G. L. 268, Section 1A, as most recently amended. Paul M Rich

Signature Paul M. Rich

Address 1239 Washington St., E.Weymouth, Mass.

Telephone Number 337-0440

Fee No Fee Receipt No. — License No. A47-76

Estimated Cost

No. 120

APPLICATION FOR PERMIT FOR ELECTRIC WORK

LOCATION

SOULE RECREATION CENTER & GYMNASIUM
652 Hammond Street
Brookline, Mass.

Atlas Alarm Corp.

PERMIT GRANTED

March 17 19 71

3,000

RECEIVED
BUILDING DEPARTMENT
TOWN OF BROOKLINE
MAR 17 10 20 AM '71

MEMORANDA

ok fpe
3/17/71

OK ww

No. 28

APPLICATION FOR PERMIT TO DO PLUMBING

LOCATION, ETC.

No. 652 Hammond Street

Owner Town of Brookline

Plumber W. MacQuoid

PERMIT GRANTED

Jan. 27 19 66

Brookline, 19

Approved,

Commissioner

Completed 19

Cost $

RECEIVED
BUILDING DEPARTMENT
JAN 26 9 39 AM 1966
BROOKLINE

MEMORANDA

2/22 Rec'd OK

All work hereafter performed must be tested by water pressure, and the Commissioner must be notified when soil, drain pipe, and all connections therewith are placed in position.

No. 28

Application for Permit to do Plumbing

Brookline, JAN. 21 1966

To the BUILDING COMMISSIONER:

The undersigned hereby applies for a permit to perform Plumbing work according to the following specifications:

1. Location, 652 HAMMOND ST
   Nearest cross street, BOYLSTON Address TOWN HALL
2. Name of Owner? SOULE REC. TOWR. " 28 ST. MARYS CT.
3. Name of Plumber? W. J. MAC QUAID Plumber's registered No. 4613
4. Material of Building? STUCCO New or Old? OLD
5. What was building last used for? SCHOOL
6. How many families? NONE Number of stores? NONE
7. What is building to be occupied for? TOWN FACILITY

NATURE OF PROPOSED PLUMBING IN DETAIL

	Waterclosets	Lavatories	Bath Tubs	Shower Baths	Sinks	Wash Trays	Pressure Boilers	Other Fixtures
Sub-Basement								
Basement								REPLACING LEAKY ELECTRIC WATER ~~STORAGE~~ HEATER WITH NEW 120 GALLON STONE LINED
First Story								
Second Story								
Third Story								
Fourth Story								
Fifth Story								
Sixth Story								
Seventh Story								
Eighth Story								
Totals								

Location, ownership and detail must be complete and legible. Separate application required for every building.

All pipes must be located at least three inches from electric wires

Note: .....

Note.— Mark here by X whether

New Plumbing .....

Alteration in Plumbing ..... X .....

Estimated Cost, $.....

[Signature of Master Plumber.] W. J. Mac Quaid

[ADDRESS] 28 St. Mary's Ct.

Plumber's Telephone No. AS 7-2730.

PLUMBER MUST RECEIVE A PERMIT BEFORE COMMENCING WORK

Change of address must be recorded in this Department

Fee ~~25~~ NO FEE Receipt No. .....

NO fee

MASSACHUSETTS UNIFORM APPLICATION FOR PERMIT TO DO PLUMBING

R 20435

(Print or Type)

Date APRIL 14 19 97

BROOKLINE ~~Needham~~, Mass.
City, Town

Permit # 971994

Owner's Name TOWN OF BROOK

AT: Building Location 652 HAMMOND ST

P

Type of Occupancy: REC. CENTER

New ☐ Renovation ☑ Replacement ☐

Plans Submitted: Yes ☐ No ☑

FIXTURES

	WATER CLOSETS	KITCHEN SINKS	LAVATORIES	BATHTUBS	SHOWER STALLS	DISHWASHERS	DISPOSERS	LAUNDRY TRAYS	WASH. MACH. CONN.	HOT WATER TANKS	TANKLESS	SLOP SINKS	FLOOR DRAINS	GAS TRAPS	URINALS	DRINKING FOUNTAIN	AREA DRAIN	WATER PIPING	ROOF DRAINS	BACKFLOW PREV.	OTHER FIXTURES:
SUB–BSMT.																		2			
BASEMENT																					
1ST FLOOR																					
2ND FLOOR																					
3RD FLOOR																					
4TH FLOOR																					
5TH FLOOR																					
6TH FLOOR																					
7TH FLOOR																					
8TH FLOOR																					

(Print or type)

Installing Company Name MCDONNELL OIL

Address 9 PROSPECT ST NEEDHAM MASS 02192

Check One: ☑ Corp. ☐ Partnership ☐ Firm/Company

Certificate _____

I have informed the owner or his agent that I do not have liability insurance, including completed operations coverage.

Signature of Owner/Agent _____

I have a current liability insurance policy to include completed operations coverage. ☑

I hereby certify that all of the details and information I have submitted (or entered) in above application are true and accurate to the best of my knowledge and that all plumbing work and installations performed under Permit issued for this application will be in compliance with all pertinent provisions of the Massachusetts State Plumbing Code and Chapter 142 of the General Laws.

Name of Licensed Plumber
FRANCIS MCDONNELL

Francis McDonnell
Signature of Licensed Plumber

Type of Plumbing License

7966
License Number

☐ Master ☐ Journeyman

Business Telephone 444-7045

NO fee

MASSACHUSETTS UNIFORM APPLICATION FOR PERMIT TO DO GASFITTING

R 20436

(Print or Type)

Date APRIL 14 19 97

BROOKLINE, Mass.
City, Town

Permit # 971995

Owner's Name TOWN OF BROOK

AT: Building Location 652 HAMMOND ST

Type of Occupancy: REC CENTER

G

New ☐ Renovation ☑ Replacement ☐

Plans Submitted Yes ☐ No ☑

	RANGES	HEATER RANGES	OVENS	GRILLES	HEATING BOILERS	FURNACES	UNIT HEATERS	WATER HEATERS	DRYERS	GAS GENERATORS	LABORATORY COCKS	CONVERSION BURNERS	ROOF TOP UNITS	VENTED ROOM HTRS.	DIRECT VENT HTRS.	POOL HEATERS	TESTS	OTHER
SUB—BSMT.					1													
BASEMENT																		
1ST FLOOR																		
2ND FLOOR																		
3RD FLOOR																		
4TH FLOOR																		
5TH FLOOR																		
6TH FLOOR																		
7TH FLOOR																		
8TH FLOOR																		

(Print or type)

Check One: Certificate

Installing Company Name MCDONNELL CO. ☑ Corp. _____

Address 9 PROSPECT ST. ☐ Partnership _____

NEEDHAM MASS. 02192 ☐ Firm/Company _____

I have informed the owner or his agent that I do not have liability insurance, including completed operations coverage.

Signature of Owner/Agent _____

I have a current liability insurance policy to include completed operations coverage. ☑

$50

I hereby certify that all of the details and information I have submitted (or entered) in above application are true and accurate to the best of my knowledge and that all plumbing work and installations performed under Permit issued for this application will be in compliance with all pertinent provisions of the Massachusetts State Plumbing Code and Chapter 142 of the General Laws.

Name of Licensed Plumber _____

Francis McDonnell
Signature of Licensed Plumber

Type of Plumbing License

7966 ☑ Master ☐ Journeyman

License Number

Business Telephone 444-7045

R 29865

The Commonwealth of Massachusetts

Department of Public Safety

BOARD OF FIRE PREVENTION REGULATIONS 527 CMR 12:00 3/90

Office Use Only

Permit No. 980327

Occupancy & Fee Checked _____ (leave blank)

APPLICATION FOR PERMIT TO PERFORM ELECTRICAL WORK

All work to be performed in accordance with the Massachusetts Electrical Code, 527 CMR 12:00

(A FIRE ALARM PERMIT MUST BE OBTAINED FROM THE FIRE DEPT) Date 1/28/98

To the Inspector of Wires:

City or Town of Brookline

The undersigned applies for a permit to perform the electrical work described below.

Location (Street & Number) 652 Hammond ST

Owner or Tenant Town of Brookline Soule Gym

Owner's Address _____

Is this permit in conjunction with a building permit: Yes ☒ No ☐ (Check Appropriate Box)

Purpose of Building _____ Utility Authorization NO. _____

Existing Service _____ Amps _____ / _____ Volts Overhead ☐ Undgrd ☐ No. of Meters _____

New Service _____ Amps _____ / _____ Volts Overhead ☐ Undgrd ☐ No. of Meters _____

Number of Feeders and Ampacity _____

Nature of Proposed Electrical Work wire control units ~~for~~ for HVAC

No. of Lighting Outlets	No. of Hot Tubs	No. of Transformers Total KVA
No. of Lighting Fixtures	[illegible] Above grnd. ☐ In-grnd. ☐	Generators KVA
No. of Receptacle Outlets	No. of Oil Burners	FIRE ALARMS PERMIT REQUIRED
No. of Switch Outlets	No. of Gas Burners	FIRE ALARMS No. of Zones
No. of Ranges	No. of Air Cond. Total Tons	No. of Detection and Initiating Devices
No. of Disposals	No. of Heat Pumps Total Tons Total KW	No. of Sounding Devices
No. of Dishwashers	Space/Area Heating KW	No. of Self Contained Detection/Sounding Devices
No. of Dryers	Heating Devices KW	Local ☐ Municipal Connection ☐ Other
No. of Water Heaters KW	No. of Signs No. of Ballasts	Low Voltage Wiring
No. Hydro Massage Tubs	No. of Motors Total HP	NO. OF EMERG. LIGHTING BATTERY UNITS
OTHER:		

INSURANCE COVERAGE: Pursuant to the requirements of Massachusetts General Laws I have a current Liability Insurance Policy including Completed Operations Coverage or its substantial equivalent. YES ☐ NO ☐ I have submitted valid proof of same to this office. YES ☐ NO ☐ If you have checked YES, please indicate the type of coverage by checking the appropriate box.

INSURANCE ☒ BOND ☐ OTHER ☐ (Please Specify) _____ (Expiration Date _____

Estimated Value of Electrical Work $ _____ $1000 No fee

Work to Start 1/28/98 INSPECTION NOTICES: MUST CALL

Signed under the penalties of perjury:

FIRM NAME J.P. Electric LIC. NO. E 29165

Licensee John Poirier Jr Signature John Poirier LIC. NO. _____

Address 132 Fowler st upton Bus. Tel. No. 508 [illegible]

Alt. Tel. No. 529-[illegible]

OWNER'S INSURANCE WAIVER: I am aware that the Licensee does not have the insurance coverage or its substantial equivalent as required by Massachusetts General Laws, and that my signature on this permit application waives this requirement. Owner Agent (Please check one)

PERMIT FEE $ _____

Telephone No. _____

(Signature of Owner or Agent)

MASSACHUSETTS UNIFORM APPLICATION FOR PERMIT TO DO PLUMBING

(Print or Type)

TOWN OF BROOKLINE, Mass. Date 2-11 19 91

Permit # 94

Building Location 652 HAMMOND ST

SOULE RES

Owner's Name TOWN OF BROOK

New ☐ Renovation ☐ Replacement ☑ Plans Submitted: Yes ☐ No ☑

P

FIXTURES

	WATER CLOSETS	KITCHEN SINKS	LAVATORIES	BATHTUBS	SHOWER STALLS	DISHWASHERS	DISPOSERS	LAUNDRY TRAYS	WASH. MACH. CONN.	HOT WATER TANKS	TANKLESS	SLOP SINKS	FLOOR DRAINS	GAS TRAPS	URINALS	DRINKING FOUNTAIN	AREA DRAIN	WATER PIPING	ROOF DRAINS	BACKFLOW PREV.	OTHER FIXTURES:						
SUB-BSMT.																											
BASEMENT																											
1ST FLOOR																											
2ND FLOOR																											
3RD FLOOR																											
4TH FLOOR																											
5TH FLOOR																											
6TH FLOOR																											
7TH FLOOR																											
8TH FLOOR																											

Installing Company Name McDONNELL PLUMBING LTD.

Address 9 PROSPECT ST

WEBSTER MASS 02192

Business Telephone 444-7045

Name of Licensed Plumber FRANCIS M McDONNELL

Check one: Certificate

☑ Corp. _____

☐ Partnership _____

☐ Firm/Co. _____

INSURANCE COVERAGE: Check one

I have a current liability insurance policy or its substantial equivalent. Yes ☐ No ☐

If you have checked yes, please indicate the type coverage by checking the appropriate box.

A liability insurance policy ☑ Other type of indemnity ☐ Bond ☐

OWNER'S INSURANCE WAIVER: I am aware that the licensee does not have the insurance coverage required by Chapter 142 of the Mass. General Laws, and that my signature on this permit application waives this requirement.

Check one: Owner ☐ Agent ☐

Signature of Owner or Owner's Agent

I hereby certify that all of the details and information I have submitted (or entered) in above application are true and accurate to the best of my knowledge and that all plumbing work and installations performed under the permit issued for this application will be in compliance with all pertinent provisions of the Massachusetts State Plumbing Code and Chapter 142 of the General Laws.

Francis McDonnell

Signature of Licensed Plumber

By _____

Title _____

City/Town _____

APPROVED (OFFICE USE ONLY)

License Number 7966

Type of Plumbing License: Master ☑ Journeyman ☐

1.000

1

fee waiv

011
N7
12

BELOW FOR OFFICE USE ONLY

ES

FEE _____

NO. 94

APPLICATION FOR PERMIT TO DO PLUMBING

652 Hammond St

NAME & TYPE OF BUILDING

LOCATION OF BUILDING

PLUMBER

McDonnell Plg.

PERMIT GRANTED

DATE 2/15/19 91

PLUMBING INSPECTOR

B3010

The Commonwealth of Massachusetts
Department of Public Safety
BOARD OF FIRE PREVENTION REGULATIONS 527 CMR 12:00

Office Use Only
Permit No. 991802
Occupancy & Fee Checked _____
3/90 (leave blank)

APPLICATION FOR PERMIT TO PERFORM ELECTRICAL WORK

All work to be performed in accordance with the Massachusetts Electrical Code, 527 CMR 12:00

(PLEASE PRINT IN INK OR TYPE ALL INFORMATION) Date 4-28-99

City or Town of Brookline To the Inspector of Wires:

The undersigned applies for a permit to perform the electrical work described below.

Location (Street & Number) Soule Recreation Center Oak St. - ~~Putterham School~~

Owner or Tenant ~~Town of Brookline~~ & Drummond St ~~Putterham School~~

Owner's Address _____

Is this permit in conjunction with a building permit: Yes ☒ No ☐ (Check Appropriate Box)

Purpose of Building Offices - Classroom - Rec Center Utility Authorization NO. _____

Existing Service _____ Amps 1 Volts Overhead ☐ Undgrd ☐ No. of Meters _____

New Service _____ Amps 1 Volts Overhead ☐ Undgrd ☐ No. of Meters _____

Number of Feeders and Ampacity Soule

Location and Nature of Proposed Electrical Work - 2nd Floor & Rec. Center Only - - Very minimal work @ 3 other Schools -

No. of Lighting Outlets	6	No. of Hot Tubs	—	No. of Transformers — Total KVA	—
No. of Lighting Fixtures	40	Swimming Pool Above grnd. ☐ In-grnd. ☐		Generators — KVA	—
No. of Receptacle Outlets	40	No. of Oil Burners	—	No. of Emergency Lighting Battery Units	2
No. of Switch Outlets	15	No. of Gas Burners	—	FIRE ALARMS No. of Zones	1
No. of Ranges	1	No. of Air Cond. — Total tons	—	No. of Detection and Initiating Devices	10
No. of Disposals	0	No. of Heat Pumps — Total Tons —	Total KW ~~00~~	No. of Sounding Devices	2
No. of Dishwashers	0	Space/Area Heating 1 KW	10	No. of Self Contained Detection/Sounding Devices	2
No. of Dryers	0	Heating Devices — KW	—	Local ☐ Municipal Connection ☐ Other	
No. of Water Heaters — KW	—	No. of Signs — No. of Ballasts	—	Low Voltage Wiring	1 - Telephone
No. Hydro Massage Tubs	0	No. of Motors — Total HP	—		1 - Cable T.V.

OTHER: —

INSURANCE COVERAGE: Pursuant to the requirements of Massachusetts General Laws I have a current Liability Insurance Policy including Completed Operations Coverage or its substantial equivalent. YES ☐ NO ☐ I have submitted valid proof of same to this office. YES ☐ NO ☐ If you have checked YES, please indicate the type of coverage by checking the appropriate box.

INSURANCE ☒ *BOND* ☐ *OTHER* ☐ (Please Specify) _____ (Expiration Date)

Estimated Value of Electrical Work $ 29,555

Work to Start 4-28-99 Inspection Date Requested: Rough _____ Final _____

Signed under the penalties of perjury:

FIRM NAME Richard T. Losordo Services LIC. NO. E38423

Licensee Richard T. Losordo Signature _____ LIC. NO. Same

Address 153 Stinson St. West Roxbury MA. 02132 Bus. Tel. No. 617 323-6448 Alt. Tel. No. 617 486-6862

OWNER'S INSURANCE WAIVER: I am aware that the Licensee does not have the insurance coverage or its substantial equivalent as required by Massachusetts General Laws, and that my signature on this permit application waives this requirement. Owner Agent (Please check one)

_____ Telephone No. _____ PERMIT FEE: $ 0

(Signature of Owner or Agent)

No. 99802

Location

652 Hammond St

Contractor:

Permit Granted:

5/4/99

No. 99/840

Location

652 Drummond St

Contractor:

Permit Granted:

5/6/99

R 33057

The Commonwealth of Massachusetts

Department of Public Safety

BOARD OF FIRE PREVENTION REGULATIONS 527 CMR 12:00

Office Use Only
Permit No. 99/840
Occupancy & Fee Checked
3/90 (leave blank)

APPLICATION FOR PERMIT TO PERFORM ELECTRICAL WORK

All work to be performed in accordance with the Massachusetts Electrical Code, 527 CMR 12:00

(PLEASE PRINT IN INK OR TYPE ALL INFORMATION) Date 5/5/99

City or Town of BROOKLINE, MA To the Inspector of Wires:

The undersigned applies for a permit to perform the electrical work described below.

Location (Street & Number) 652 HAMMOND STREET

Owner or Tenant TOWN OF BROOKLINE

Owner's Address TOWN OF BROOKLINE

Is this permit in conjunction with a building permit: Yes ☑ No ☐ (Check Appropriate Box)

Purpose of Building OFFICES + NURSERY Utility Authorization NO. _____

Existing Service _____ Amps _____ / _____ Volts Overhead ☐ Undgrd ☐ No. of Meters _____

New Service _____ Amps _____ / _____ Volts Overhead ☐ Undgrd ☐ No. of Meters _____

Number of Feeders and Ampacity _____

Location and Nature of Proposed Electrical Work ADD TWELVE (12) LOW VOLTAGE VOICE + DATA LOCATIONS

No. of Lighting Outlets	No. of Hot Tubs	No. of Transformers Total KVA
No. of Lighting Fixtures	Swimming Pool Above grnd. ☐ In-grnd. ☐	Generators KVA
No. of Receptacle Outlets	No. of Oil Burners	No. of Emergency Lighting Battery Units
No. of Switch Outlets	No. of Gas Burners	FIRE ALARMS No. of Zones
No. of Ranges	No. of Air Cond. Total tons	No. of Detection and Initiating Devices
No. of Disposals	No. of Heat Pumps Total Tons Total KW	No. of Sounding Devices
No. of Dishwashers	Space/Area Heating KW	No. of Self Contained Detection/Sounding Devices
No. of Dryers	Heating Devices KW	Local ☐ Municipal Connection ☐ Other
No. of Water Heaters KW	No. of Signs No. of Ballasts	Low Voltage Wiring 12 LOW VOLTAGE
No. Hydro Massage Tubs	No. of Motors Total HP	VOICE + DATA EQUIPMENT

OTHER: _____

INSURANCE COVERAGE: Pursuant to the requirements of Massachusetts General Laws I have a current Liability Insurance Policy including Completed Operations Coverage or its substantial equivalent. YES ☐ NO ☐ I have submitted valid proof of same to this office. YES ☐ NO ☐ If you have checked YES, please indicate the type of coverage by checking the appropriate box.

INSURANCE ☑ BOND ☐ OTHER ☐ (Please Specify) _____ (Expiration Date)

Estimated Value of Electrical Work $ 0

Work to Start 5/5/99 Inspection Date Requested: Rough 5/7/99 Final 5/30/99

Signed under the penalties of perjury:

FIRM NAME JCI COMMUNICATIONS LIC. NO. _____

Licensee Edward Stachelski Signature _____ LIC. NO. _____

Address 45 MILK STREET, BOSTON, MA 02109 Bus. Tel. No. 617-747-7400 Alt. Tel. No. 617-747-7416

OWNER'S INSURANCE WAIVER: I am aware that the Licensee does not have the insurance coverage or its substantial equivalent as required by Massachusetts General Laws, and that my signature on this permit application waives this requirement. Owner ☐ Agent ☐ (Please check one)

PERMIT FEE $ _____

_____ Telephone No. _____

(Signature of Owner or Agent)

BELOW FOR OFFICE USE ONLY

FEE 0

NO. 991822

APPLICATION FOR PERMIT TO DO PLUMBING

652 Hammond St

NAME & TYPE OF BUILDING

LOCATION OF BUILDING

PLUMBER

PERMIT GRANTED

DATE 5/5 19 91

PLUMBING INSPECTOR

MASSACHUSETTS UNIFORM APPLICATION FOR PERMIT TO DO PLUMBING

(Print or Type)

TOWN OF BROOKLINE Mass. Date 4-27 19 99 PC 33037

Building Location Soule Rec Center 652 - Hammond St

Permit # 991822

Owner's Name Town of Brookline

P

New ☐ Renovation ☒ Replacement ☐ Plans Submitted: Yes ☐ No ☐

FIXTURES

	WATER CLOSETS	KITCHEN SINKS	LAVATORIES	BATHTUBS	SHOWER STALLS	DISHWASHERS	DISPOSERS	LAUNDRY TRAYS	WASH. MACH. CONN.	HOT WATER TANKS	TANKLESS	SLOP SINKS	FLOOR DRAINS	GAS TRAPS	URINALS	DRINKING FOUNTAIN	AREA DRAIN	WATER PIPING	ROOF DRAINS	BACKFLOW PREV.	OTHER FIXTURES:						
SUB-BSMT.																											
BASEMENT																											
1ST FLOOR																											
2ND FLOOR	1																										
3RD FLOOR																											
4TH FLOOR																											
5TH FLOOR																											
6TH FLOOR																											
7TH FLOOR																											
8TH FLOOR																											

Installing Company Name NAPMS

Address 67 Carver St Lawrence Ma 01843

Business Telephone 978 687 3083

Name of Licensed Plumber Edward J Phelan

Check one: ☐ Corp. ☐ Partnership ☐ Firm/Co.

Certificate _____

INSURANCE COVERAGE:

I have a current liability insurance policy or its substantial equivalent. Check one Yes ☒ No ☐

If you have checked yes, please indicate the type coverage by checking the appropriate box.

A liability insurance policy ☒ Other type of indemnity ☐ Bond ☐

OWNER'S INSURANCE WAIVER: I am aware that the licensee does not have the insurance coverage required by Chapter 142 of the Mass. General Laws, and that my signature on this permit application waives this requirement.

Check one: Owner ☐ Agent ☐

Signature of Owner or Owner's Agent

I hereby certify that all of the details and information I have submitted (or entered) in above application are true and accurate to the best of my knowledge and that all plumbing work performed under the permit issued for this application will be in compliance with all pertinent provisions of the Massachusetts State Plumbing Code and Chapter 142 of the General Laws.

By _____

Title _____

City/Town _____

APPROVED (OFFICE USE ONLY)

Approx Cost $300.00

Signature of Licensed Plumber

License Number 10073

Type of Plumbing License: Master ☒ Journeyman ☐

652 Hammond St

No. 12-97-98

APPLICATION FOR PERMIT TO BUILD.

WOOD AND FRAME.

LOCATION.

No. Off Heath St

Architect, John G Wright

Builder, L. Martin & Co

PERMIT GRANTED

March 27 18 97

BROOKLINE, ... 18.....

Approved,

.....

Inspector.

STREET PERMIT APPLIED FOR.

.....*Sidewalk.*

.....*Feet of Street.*

} *Approved.*

15088

Plans must be submitted and approved by this Department before a permit for erection will be granted

No. .....

Application for Permit to Build.

(WOOD AND FRAME.)

Brookline, March 27 1897

TO THE

INSPECTOR OF BUILDINGS:

The undersigned hereby applies for a permit to build, according to the following specifications:—

1. Is the building in a block or separate? Separate Block of .....
2. Material, Wood
3. What is the name of Owner? John G Wright
4. " " " Architect? Chapman & Frazier
5. " " " Builder? L Martin & Co
6. " " Location? Off South St
7. " " nearest street? Woodland Road
8. " " purpose of building? Stable
9. If a dwelling, for how many families? .....
10. Is there to be a store in the lower story? .....
11. Size of lot, No. of feet front, ... ; No. of feet rear, ... ; No. of feet deep, ... feet.
12. The height the level of building lot above the grade of street is .....
13. Size of building, No. of feet front, 86 ; No. of feet rear 8 86 ; No. of feet deep, 86
14. No. of stories, One ½
15. No. of feet in height from level of ground to highest part of roof, 32 ft
16. Does the proposed structure stand within 18 inches of the lines of adjoining premises? No distance .....
If so, what is the thickness of the wall to be built? .....
17. Distance from surrounding buildings, front, ... feet; side, ... feet; side, ... feet; rear, ... feet.
18. Distance back from line of street, ...
19. What is the height of the nearest building? .....
20. Will the building be erected on solid or filled land? Solid
21. Will the foundation be laid on earth, rock, timber or piles? Earth
22. What is the material of foundation? Stone
23. Will the roof be flat, pitch or mansard? Pitch
24. Will the building be heated by steam, furnaces, stoves or grates? Stoves Thickness of flue 4 in x 8 in
25. Will the building conform to the requirements of the law? yes
26. Number of brick walls, ... and where placed? .....

Plans submitted? yes

Show by diagram the location of proposed building, with relation to distances from adjoining lots.

Location, ownership and detail must be complete and legible. Separate application required for every building.

Name. L Martin & Co

Address. Atlantic av 620 Boston

..... of sidewalk ..... cartway wanted.

Nov 652 Harvard

No. 215

Application For Permit To Build.

WOOD AND FRAME.

LOCATION

1 45

No. off Heath Street ~~400~~

Owner, Andrew Adie

Builder, Edward G. Malone

PERMIT GRANTED

November 24, 19 15

BROOKLINE, 19

Approved,

Inspector

4000

Plans must be submitted and approved by this Department before a permit for erection will be granted.

No.

Application for Permit to Build.

(WOOD AND FRAME)

Brookline, November 26, 1915

To the BUILDING COMMISSIONER:

The undersigned hereby applies for a permit to build according to the following Specificatinos:—

Location, ownership and detail must be complete and legible. Separate application required for every building.

1. Is the building in a block or separate? Separate Block of
2. Material concrete base frame
3. What is the name of Owner? Andrew Adie Address Brookline
4. What is the name of Architect?
5. What is the name of Builder? B. Malone Address Brookline
6. What is the location? off Heath St
7. What is the nearest street Woodland Road
8. What is the purpose of building? cow barn
9. If a dwelling, for how many families? —
10. Is there to be a store in the lower story? —
11. Size of Lot—No. of feet front, — ; No. of feet rear, — ; No. of feet deep,
12. The height the level of building lot above the grade of street is level feet
13. Size of building,—No. of feet front, 37 ; No. of feet rear, 37 ; No. of feet deep, 22
14. No. of stories, 1
15. No. of feet in height from level of ground to highest part of roof, 17
16. *How near lines of adjoining premises does proposed structure stand?* 50
17. *Distance from surrounding buildings,—front,* — feet; side — feet; side feet; rear, feet
18. *Distance back from line of street,*
19. *What is the height of the nearest building?*
20. *Will the building be erected on solid or filled land?* solid
21. *Will the foundation be laid on earth, rock, timber or piles?* earth
22. *What is the material of foundation?* concrete
23. *Will the roof be flat, pitch or mansard?* pitch Material of Roofing, approved roofing
24. *Will the building be heated by steam, furnaces, stoves or grates?* steam Thickness of flue
25. *Will the building conform to the requirments of the law?* Yes and where placed?
26. *No. of brick walls,*

Plans submitted? Yes

Show by diagram the location of proposed building, with relation to distances from adjoining lots.

4000

Name, Edward G. Malone

Address. 9 Bartlett Crescent

(C O P Y)

October 26, 1944

William H. Porter Co.,Inc.,
84 Arsenal Street,
Watertown, Mass.

Gentlemen;-

In connection with the work being done by your company for Rivers Country Day School at 436 Heath Street it is requested that you file a plot plan showing the location of the building in relation to street and lot boundaries.

If any plumbing is to be installed in said building it is requested that you submit plan, showing method of disposal from same.

Very truly yours,

Building Commissioner.

1-28-31

March 25, 1943

Mr. George Storer Baldwin
3 Spooner Road
Brookline, Mass.

Dear Sir:

I am advised that you are the responsible person to contact in relation to the property on Eliot Street, Brookline, formerly occupied by the Rivers School.

An inspection of the several buildings indicates a condition which is rapidly becoming dangerous due to apparent vandalism and promiscuous use of the property by trespassers with the invitation to set fires there evident.

Either the several buildings should be secured against entrance of unauthorized persons or they should be torn down if they have no further utility.

I would appreciate your early attention to these matters if they are your direct concern or advised from you as to the person who should be contacted.

Very truly yours,

BUILDING COMMISSIONER.

TJM/H

Copy to Fire Department

May 16, 1944

Mr. Marcien Jenckes
30 State Street
Boston, Mass.

Dear Mr. Jenckes:

As suggested by you I visited the former Rivers School property accompanied by Superintendent Sheehan of the Park Department.

We made an examination of the old barn, later apparently used as a gymnasium and the following obvious structural defects were noted:-

The entire frame of the building is warped and structurally distorted. There are definite sags in the roof. The understructure, which, with the exception of the old manure pit, is supported only on brick piers has deteriorated to a degree which would require complete renewal of members.

It is my considered opinion that the condition of the building would not warrant moving it to another location on the lot and that its value for salvage is negligible.

I would be pleased to give you any further information in relation to this structure you may wish.

Very truly yours,

BUILDING COMMISSIONER.

TJW/H

June 26, 1944 - 8:15 A.M.

NOTES ON INSPECTION OF LOG SIDING CABIN, FORMER RIVERS SCHOOL PROPERTY 290 DEAN ROAD, BROOKLINE.

Permit for its erection granted December 4, 1935.
Building is located approximately 500' from Eliot Street and 250' from Ackers Avenue.
Purpose of building - recreation room - size 18' x 24' one story high, asphalt shingle roof.
Flooring is close-layed flooring, approximately 2" stock.
Foundation is concrete block piers layed up on solid concrete footings. A beaver board ceiling is in place.
Fireplace and chimney are on concrete foundation.
Has interior electric wiring with ceiling and wall outlets.
End of B.X. electric cable from building now lying on ground adjoining.
Doors and windows are boarded up with exception of one window on south side.
The permit granted to City Building Wrecking Company on April 8, 1943 was to take down all temporary buildings.

June 19, 1944

Simon P. Townsend, Esq.,
Town Counsel,
30 State Street,
Boston, Mass.

Dear Sir:

Attached herewith is copy of application for permit for erection of a frame building to be occupied as a recreation room on the former Rivers School property at 290 Dean Road, Brookline. The subsequent permit was issued December 4, 1935.

I am also attaching a sketch showing the construction of the building prepared by Building Inspector A. John Halfenstine of this department, which shows the dimensions of the building and the location and sizes of the supporting piers.

Very truly yours,

TJM/H

BUILDING COMMISSIONER.

June 26, 1944 - 8:15 A.M.

NOTES ON INSPECTION OF LOG SIDING CABIN, FORMER RIVERS SCHOOL PROPERTY 290 DEAN ROAD, BROOKLINE.

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Purpose of building - recreation room - size 18' x 24' one story high, asphalt shingle roof.
Flooring is close-layed flooring, approximately 2" stock.
Foundation is concrete block piers layed up on solid concrete footings. A beaver board ceiling is in place.
Fireplace and chimney are on concrete foundation.
Has interior electric wiring with ceiling and wall outlets.
End of B.X. electric cable from building now lying on ground adjoining. Pipes coming from ground to building on north side may be supply line to radiator from central heating plant.
Doors and windows are boarded up with exception of one window on south side.
The permit granted to City Building Wrecking Company on April 8, 1943 was to take down all temporary buildings.

Building Department

Town Hall

Brookline, Mass.

THOMAS J. MORAN
BUILDING COMMISSIONER

June 27, 1944

Memo re- Rivers School

8.10 A.M.

Flooring is oak
B.X. electrical conduit can be seen in place above ceiling
Electrical switch boxes removed

HEATING

Cabin was heated from central heating plant which is still standing on Eliot St., frontage. Radiator supply pipe with valve attached, but with radiator removed, stillin place.

Water

Cabin had water supply terminating in a"T" which is still in place. There were no plumbing fixtures.

April 11/45 436 Heath Street. Rivers School. Nothing has been done to correct illegal installation of plumbing as reported during the past year. Plumbing

Rivers School - Heath Street. On April 11/45 I made an inspection of these buildings. Found conditions in locker room needing correction. Wiring

April 24/45 436 Heath Street. Rivers Country Day School. Accompanied John O'Hara, Investigator for Massachusetts State Board of Plumbing Examiners, and pointed several instances of illegal installation of plumbing by unlicensed mechanics. He will send written report to this office. Plumbing

5/2/45 Rivers Country Day School - Gymnasium. Insp. with V.Beaudr

May 25/45 436 Heath Street. Rivers Country Day School. Inspection shows no progress of connecting sanitary drain to sewer as ordered. Plumbing

September 25/45 436 Heath Street, Rivers School. A licensed plumber is completing plumbing at gymnasium and Principal Allen was again notified by letter to correct other conditions as ordered May 18, 1944. See copy of letter. Plumbing.

October 4/45 436 Heath Street. Rivers School. Supt. Charles Holsworth is having defective plumbing corrected as ordered. Plumbing.

May 3, 1944

Mr. C. E. Allen, Principal
Rivers School
436 Heath Street
Brookline, Mass.

Dear Sir:

Your attention is called to the illegal installation of a shower-stall bath, recently installed in one of the out buildings of your school property at 648 Hammond Street, Brookline.

Your attention is also called again to the illegal installation of a dish washing machine installed in your school building at 436 Heath Street, Brookline.

Both the above conditions will have to be corrected and work to be done in accordance with Chapter 142 of the General Laws relating to the installation of plumbing.

Please notify this department when these conditions are corrected.

Very truly yours,

JPM/H

INSPECTOR OF PLUMBING.

May 12, 1942

Mr. William N. McKenna
79 Chestnut Street
Boston, Mass.

Dear Sir:

Your attention is called to the unsafe condition of hot water tank, located in basement of building at 436 Heath Street, Brookline, to be occupied by the Rivers Country Day School.

Although your men did not work on this tank or are in no way accountable for its condition, it is required that it be made safe before I could approve of it for further use.

I would advise removing the 2-2" valves from circulating pipes between heater and tank and equip tank with suitable temperature relief valve and vacuum valve as required by the Massachusetts State Laws.

Very truly yours,

INSPECTOR OF PLUMBING.

May 12, 1942

Mr. William N. McKenna
79 Chestnut Street
Boston, Mass.

Dear Sir:

Your attention is called to the unsafe condition of hot water tank, located in basement of building at 436 Heath Street, Brookline, to be occupied by the Rivers Country Day School.

Although your men did not work on this tank or are in no way accountable for its condition, it is required that it be made safe before I could approve of it for further use.

I would advise removing the 2-2" valves from circulating pipes between heater and tank and equip tank with suitable temperature relief valve and vacuum valve as required by the Massachusetts State Laws.

Very truly yours,

INSPECTOR OF PLUMBING.

September 27, 1945

Mr. C. B. Allen, Principal
Rivers Country Day School
456 Heath Street
Brookline, Mass.

Dear Sir:

On May 3, 1944 a letter was sent to you regarding certain illegal installations of plumbing and it was understood that your superintendent would have proper corrections made.

Now that the plumbing at new gymnasium building is being completed I thought it would be an opportune time to have this work done to conform to our Plumbing Laws.

This work includes the proper installation of dish washing machine in main building and connecting of shower bath stall in locker building to sanitary sewer.

Trusting that this matter will be taken care of without further delay, I am

Very truly yours,

James P. Mahon
INSPECTOR OF PLUMBING.

Copy to:

Walter A. Devine

.... 6th..... 7th..... 9th..... Total... 12

ents, basement none ... 1s 2nd..... 3rd..... 4th....

.... 7th..... 8th..... .... Total

2nd--2.

d.... yes ..... Lighted ssary.. yes.... Unobstructed ye

ere necessary.... yes ..... approved hardware.. No.....

iled... yes ..... inflammable substances near

.....How is b tted? electric-adequate...

-central .....Protecti steam or hot air pipes yes

...Boiler or other heating yes.....

.....Location.. 1st an .....Condition.. good

s.... none .....Condition... l in which story none....

.....Is stan stalled?.....

.....Means for fire.. extinguishers

.....

.....194..... C .....

d..... none .....19..... Ba .. 1st..... 2nd.....

..... 5th..... 6th..... 8th..... 9th.....

Remarks.. Fire door from b found open and not

losing.

Morgan and Murray

11 - Woodland Road - Rivers School, Principal Allen has given orders to his plumber to properly connect dish washing machine which was illegally installed. He also agreed to correct other violations which were reported to him.

9/11/44

2 buildings

Name of building RIVERS COUNTRY DAY SCHOOL Date January 30 19 47

Street and Number 436 Heath Street Material brick

Purpose used School (lower)

Name of owner same Address same

Party to notify same Address same

Number of rooms per story, basement 0 1st 6 2nd 6 3rd --

4th 5th 6th 7th 8th 9th Total 12

Apartments or tenements, basement none 1st 2nd 3rd 4th

5th 6th 7th 8th 9th Total

Egresses 1st--5. 2nd--2.

Lawfully designated yes Lighted where necessary yes Unobstructed yes

Doors open out where necessary yes with approved hardware No

Stairs properly railed yes Are inflammable substances near

egresses? no How is building lighted? electric-adequate

How heated? steam-central Protection against steam or hot air pipes yes

Boiler or other heating apparatus yes

Sanitaries 2 Location 1st and 2nd Condition good

Number of elevators none Condition Hall in which story none

Purpose used Is standard booth installed?

Location Means for extinguishing fire extinguishers

Condition good

Orders issued 194 Complied

Certificate issued none 19 Basement 1st 2nd

3rd 4th 5th 6th 7th 8th 9th

Expires 194 Remarks Fire door from boiler room found open and not

self-closing.

Inspector Morgan and Murray

Name of building RIVERS COUNTRY DAY SCHOOL Date January 30, 47

Street and Number 436 Heath Street Material brick

Purpose used School (upper)

Name of owner same Address same

Party to notify same Address same

Number of rooms per story, basement none 1st 7 2nd 9 3rd 5

4th Sth 6th 7th 8th 9th Total 21

Apartments or tenements, basement none 1st 2nd 3rd 4th

5th 6th 7th 8th 9th Total

Egresses 1st--4. 2nd--5. 3rd--2.

Lawfully designated yes Lighted where necessary yes Unobstructed yes

Doors open out where necessary yes with approved hardware no

Stairs properly railed yes re inflammable substances near

egresses? no How is building lighted? electric-adequate

How heated? central-steam Protection against steam or hot air pipes yes

Boiler or other heating apparatus yes

Sanitaries 5 Located on 1st,2nd,3rd Condition good

Number of elevators none Condition Main in which story

Purpose used Is standard booth installed?

Location Drums for extinguishing fire extinguishers

Condition good

Orders issued 19 Complied

Certificate issued none 19 Basement 1st 2nd

3rd 4th 5th 6th 7th 8th 9th

Expires 19 Remarks Two fire doors found open and not self-closing.

3 holes approx. 9sq.ft. exposing wood laths in ceiling of coal bin.

Inspector Morgan and Murray

January 29, 1959

SCHOOLS

LOCATION: 436 Heath Street - Rivers School (upper school)

DATE BUILT: no record PURPOSE: residence

TYPE OF CONSTRUCTION: Type IV - brick

PRESENT OCCUPANCY: school

STATE CERTIFICATE OF INSPECTION POSTED: yes YEAR ISSUED:

NUMBER OF STUDENTS: 150

NUMBER EGRESSES FROM CLASSROOMS: 2

A. DOORS OPEN OUT: yes B. TYPE OF HARDWARE: approved

BASEMENT CEILINGS - HOW PROTECTED: yes

BOILER ROOM ENCLOSED: no

BASEMENT STAIRWAY: approved

A. TYPE: approved B. ENCLOSED: yes C. FIRE DOOR HEAD OF STAIRWAY yes

CORRIDORS PROTECTED: yes

EMERGENCY LIGHTING: no WORKING ORDER:

FIRE ALARM SYSTEM: yes ADEQUATE: yes

SPRINKLER SYSTEM: no FIRE DRILLS RECORDED: yes - monthly

WIRING: subject to approval wire inspector APPROVED:

MEANS OF EGRESS: interior & exterior

A. LOCATION: - - - -

B. WIDTH: 3'6"

C. TYPE: approved

D. HARDWARE: approved

TYPE OF DOOR: approved EXIT SIGNS POSTED: partial

DOOR LEADING TO FIRE ESCAPES: (plain glass) yes

OBSTRUCTIONS TO EXTERIOR WINDOWS: no

WORK ROOMS AND BASEMENT FREE FROM ACCUMULATED RUBBISH: no

HEATING UNITS AND SMOKE PIPES IN SATISFACTORY CONDITION: yes

PLASTER CEILING UNBROKEN: no

NEAREST FIRE ALARM BOX: see following page FIRE EXTINGUISHERS: yes

COMMENTS:

Screen door in dining room shall be made to open out

Approved hardware shall be installed in dining room leading to the outside

Ceiling in basement exposing wood laths shall be covered with incombustible material

Approved exit signs shall be installed on all egress doors

Boiler room shall be enclosed with masonry wall along the passageway

Boiler room shall be kept free from accumulated rubbish and storage of furniture -

door in basement leading to the exterior shall be made to open out

It is recommended that a fire hydrant be installed in a central location within the

grounds.

Sprinkler system shall be installed in accordance with Lodging House Regulations.

January 29, 1959

SCHOOLS

LOCATION: 436 Heath Street - Rivers School (lower school)

DATE BUILT: no record PURPOSE: stable

TYPE OF CONSTRUCTION: VI - stucco over wood

PRESENT OCCUPANCY: grammar school

STATE CERTIFICATE OF INSPECTION POSTED: yes YEAR ISSUED:

NUMBER OF STUDENTS: 50

NUMBER EGRESSES FROM CLASSROOMS: 2

A. DOORS OPEN OUT: no B. TYPE OF HARDWARE: locking type

BASEMENT CEILINGS - HOW PROTECTED: brick

BOILER ROOM ENCLOSED: no

BASEMENT STAIRWAY: interior

A. TYPE: wood B. ENCLOSED: no C. FIRE DOOR HEAD OF STAIRWAY no

CORRIDORS PROTECTED: no

EMERGENCY LIGHTING: no WORKING ORDER:

FIRE ALARM SYSTEM: no ADEQUATE:

SPRINKLER SYSTEM: no FIRE DRILLS RECORDED: yes

WIRING: appears hazardous APPROVED:

MEANS OF EGRESS: 2

A. LOCATION: interior & exterior

B. WIDTH: 3'6"

C. TYPE: metal and wood

D. HARDWARE: approved

TYPE OF DOOR: approved EXIT SIGNS POSTED: no

DOOR LEADING TO FIRE ESCAPES: yes

OBSTRUCTIONS TO EXTERIOR WINDOWS: no

WORK ROOMS AND BASEMENT FREE FROM ACCUMULATED RUBBISH: no

HEATING UNITS AND SMOKE PIPES IN SATISFACTORY CONDITION: yes

PLASTER CEILING UNBROKEN: yes

NEAREST FIRE ALARM BOX: see comment on upper school FIRE EXTINGUISHERS: partial

(1)

To the Board of Health
Mr. William J. Hickey Chairman
Gentlemen

The following is a report on the sanitary conditions at the River School 1134 Heath Street Brookline

This building was formally the residence of the late Andrew Ridler which was recently converted to the use for private school purposes.

It has an attendance of about one hundred and fifty boys of from ten to sixteen years of age.

In February 1942 when building was in process of alteration, four urinals and four water water closets were added to the plumbing already in use in the building.

I informed Mr. Bowditch architect and Mr. McKenna plumber that the building was not connected to the public sewer and it was understood at that time that provisions would be made to make such connections

As there was some doubt at the time, I conferred with Mr. Geo O Tapley of our Health dept and Town Engineine and others who were concerned and all concurred with my contention, that no sewer connection prevailed

After many examinations and inquiries from former employees as well as the plumber Mr. O'Neill, who originally installed the work, we learned that all the sewage from this building drains into a disposal system near the line of an old covered brook which runs through this property. We have reason to beleive that the overflow from this sewage disposal system leaches into this brook, which is used for a drain from a small pond in Mr Clark's estate and other surface water drainage.

This brook empties into our Saw Mill Brook which finds its outlet to Charles River.

No progress was made on this connection up this time on account of labor shortage and other conditions

BUILDINGS OCCUPIED AS FOLLOWS:

COMMENTS:

Boiler room shall be completely enclosed with a masonry wall

Door at head of basement stairway shall be fire-proofed on the inside

Fire door in boiler room shall be equipped with a heavy spring to sufficiently close door

Paints in basement shall be stored in approved metal lockers

If the Gymnasium is used as a place of public assembly emergency lighting shall be installed with approved exit signs over egress doors

It is our opinion that this building is of high hazard classification and we recommend that a complete sprinkler system be installed throughout the entire building

Boiler room shall be equipped with a foam type fire extinguisher

Carpenters
Painters
Plasterers
Masons
Roofers

JAMES J. BROWN & SON CO.

Licensed and Fully Insured

Fire Loss Adjusters

BUILDING CONTRACTORS

Complete Construction Service

63 HARVARD AVENUE ★ BROOKLINE 46, MASS.

Telephone LOngwood 6-4082

June 23, 1960

Mr. Frank J. O'Hearn, Building Commissioner
329 Washington Street
Brookline 46, Massachusetts

Dear Sir:

We propose to furnish all labor, tools and material necessary for the completion of renovations at the Rivers School Building, all as indicated on plans submitted to us, for a total price of ONE THOUSAND NINE HUNDRED DOLLARS ($1,900.00).

Thanking you for the opportunity to quote, we remain.

Respectfully yours,

JAMES J. BROWN & SON CO.

James M. Brown

James M. Brown

COPY

TOWN of BROOKLINE
Massachusetts

RECREATION COMMISSION
70 TAPPAN STREET, BROOKLINE, MASS.

AUGUSTUS W. SOULE, CHAIRMAN
F. GREGG BEMIS
THOMAS P. KENDRICK, M.D.
FRANK T. LALLY
MILTON LINDEN

JAMES J. LYNCH,
SUPERINTENDENT OF RECREATION
REGENT 4-1160

August 15, 1960

Mr. Frank J. O'Hearn
Building Commissioner
329 Washington Street
Brookline, Massachusetts

Dear Mr. O'Hearn:

I wish to thank you for your estimate of alterations to be made at the Rivers lower school and gymnasium. A request will be made to have the amounts indicated inserted in your 1961 budget. However, in order for us to operate our Morning Play groups efficiently, it will be necessary to have two things done at this time:

(1) to provide zone controls so that the lower school building and gymnasium may be heated independently of each other--$950.00;

Sent order Trohon 8/30

(2) to erect fifty wooden cubicles with three hooks in each to allow the Morning Play youngsters to hang up their clothing--?

Sent order Brown 8/30/60

I realize that neither one of these items was earmarked for your 1960 budget, but if there is any possible way that they can be taken care of before October 3, 1960 it will be very much appreciated. We would be willing to forego other repairs and/or alterations earmarked for 1960 if the above work could be done now.

With many thanks for your co-operation,

Sincerely yours,

James J. Lynch

James J. Lynch
Superintendent of Recreation

8/30/60
- 580 account
OK for order

Sewer and Drain Connection

No. HEATH ST (School & Library) (490) *Street*

Owner Town *Date* May 20, 192

Contractor L. Vassalotti *Permit No.* 2328
RAD

Inspector

Connection with sewer made 5/23 RAD

" " *drain* " 5/20

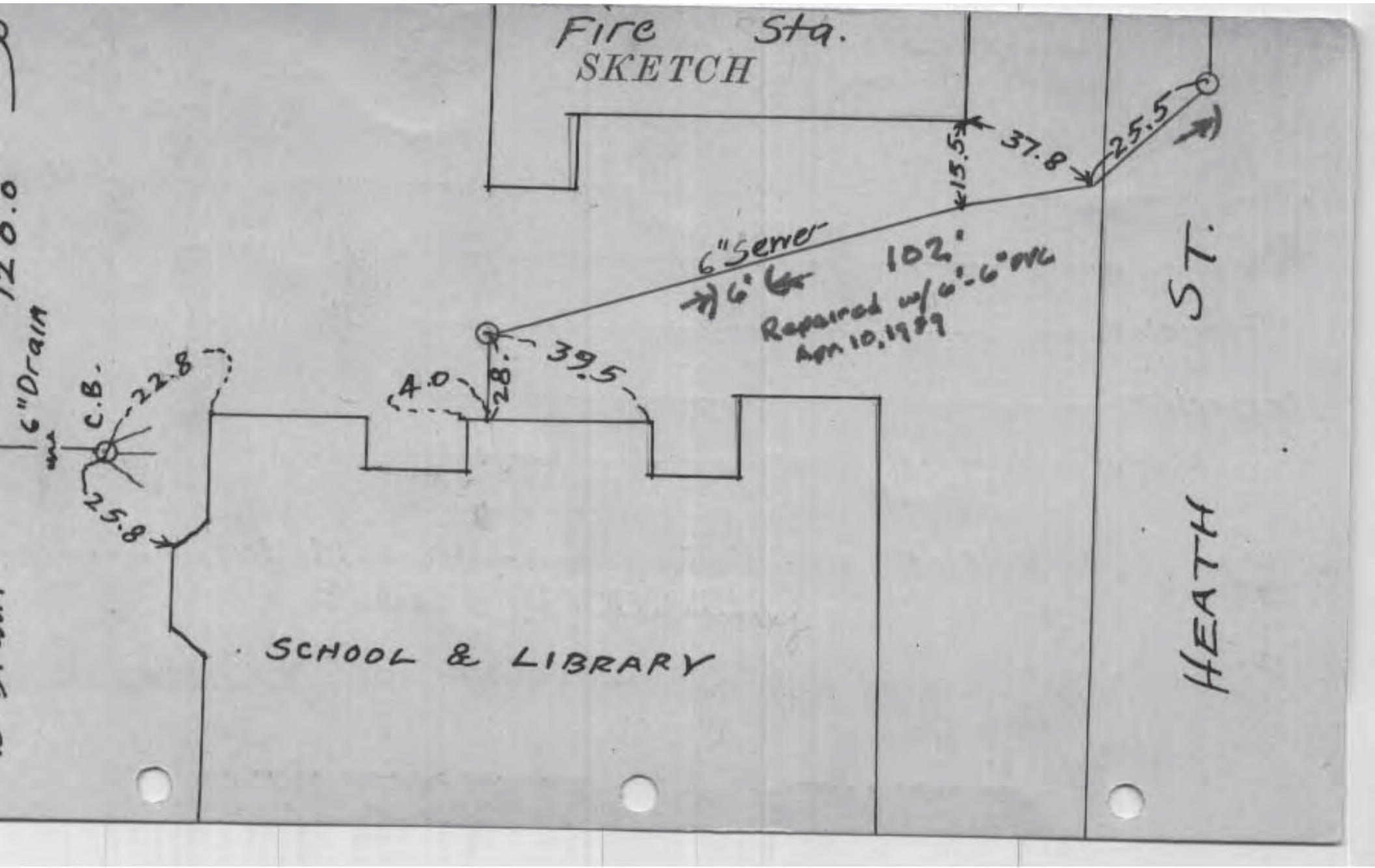
" " *building* " 5/27 *Plotted by* RAD

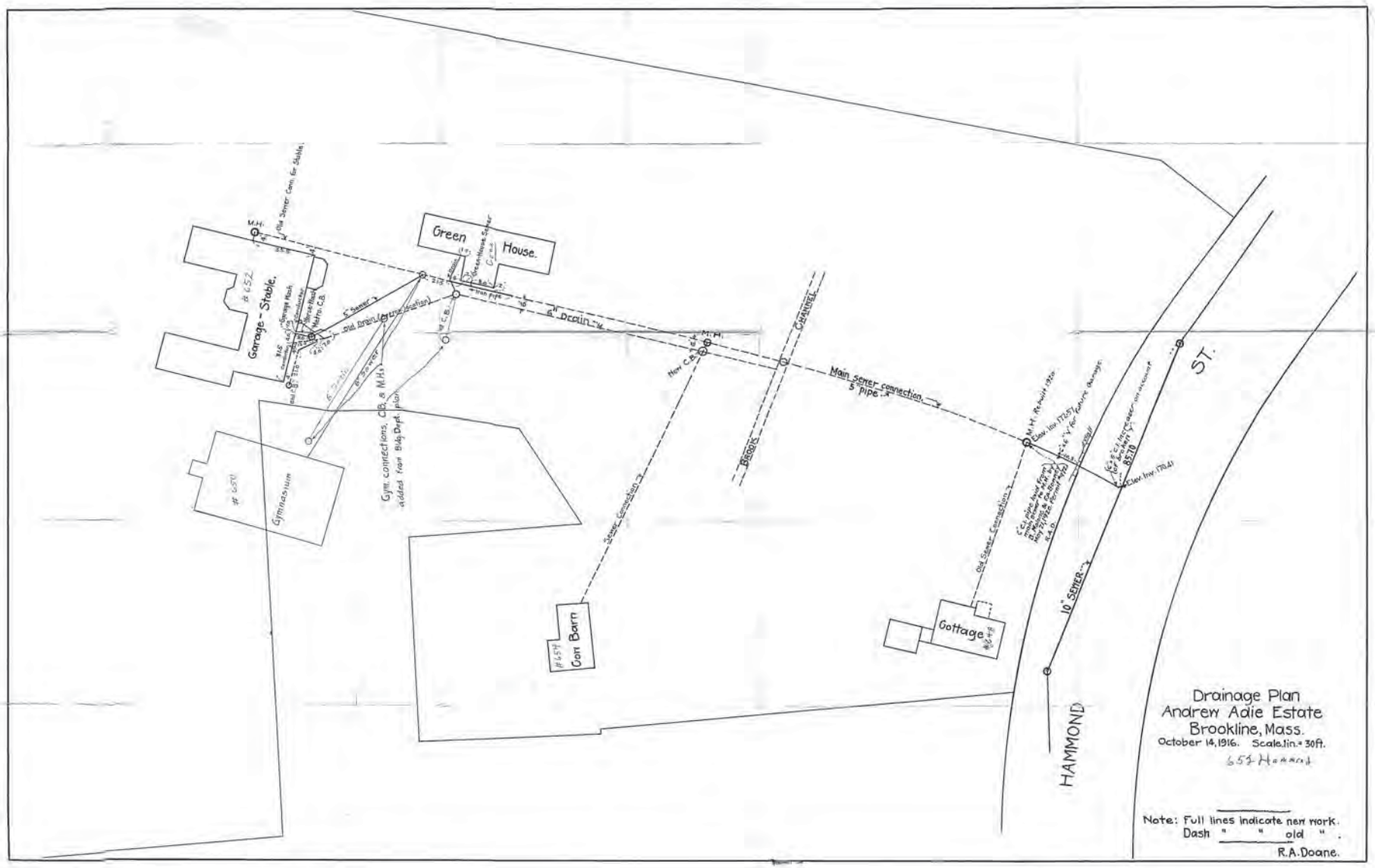
REMARKS

Repair Sewer - Broken pipe - 4/10/89 J. McNulty repaired w/6'-6" PVC w/collars JJ

SEE OVER FOR SKETCH

PROPERTY OF THE BROOKLINE ENG. DEPT


Fire Sta.
SKETCH
120.0
6" Drain
C.B.
22.8
25.8
4.0
28.
39.5
6" Sewer
6'
102'
Repaired w/ 6'-6" PVC
Apr 10, 1989
15.5
37.8
25.5
SCHOOL & LIBRARY
HEATH ST.


Drainage Plan
Andrew Adie Estate
Brookline, Mass.
October 14, 1916. Scale 1in. = 30ft.
652 Hammond
Note: Full lines indicate new work.
Dash " " old " .
R.A. Doane.
Green House.
Garage - Stable.
Gymnasium
Gow Barn
Gottage
Main sewer connection 5" pipe
Old Sewer Connection
Sewer Connection
Gym. connections, C.B. & M.H. added from Bldg. Dept. plan
6" Drain
10" SEWER
HAMMOND
ST.
BROOK
CHANNEL
M.H.
Metro. C.B.
Old Sewer Conn. for Stable.
Elev. Inv. 170.41
Elev. Inv. 172.57
R.A.D.

ENGINEERS & ENVIRONMENTAL PROFESSIONALS

APPENDIX F

Search Report of Standard Environmental Record Sources

2475-001 Levi Brookline Baldwin School
484 Heath Street
CHESTNUT HILL, MA 02467

Inquiry Number: 4795721.2s
December 02, 2016

EDR Summary Radius Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Map Findings	8
Orphan Summary	317
Government Records Searched/Data Currency Tracking	GR-1

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

484 HEATH STREET
CHESTNUT HILL, MA 02467

COORDINATES

Latitude (North):	42.3228940 - 42° 19' 22.41''
Longitude (West):	71.1614030 - 71° 9' 41.05''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	321896.6
UTM Y (Meters):	4687676.0
Elevation:	194 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	TP
Source:	U.S. Geological Survey

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140712
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
484 HEATH STREET
CHESTNUT HILL, MA 02467

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	NO LOCATION AID	640 HAMMOND ST	SHWS, RELEASE, SPILLS	Lower	30, 0.006, SW
A2	CARRIE F CARROLL	640 HAMMOND ST	UST	Lower	83, 0.016, SW
A3	MCNEILLY GARAGE	639 HAMMOND ST	SHWS, LUST, LAST, RELEASE, SPILLS, ENF	Lower	179, 0.034, WSW
A4	S J MCNEILLY OLDS	639 HAMMOND ST	UST	Lower	179, 0.034, WSW
A5		639 HAMMOND ST	EDR Hist Auto	Lower	179, 0.034, WSW
A6	MCNEILLY S J OLDSMOB	639 HAMMOND ST	RCRA NonGen / NLR, FINDS, ECHO	Lower	179, 0.034, WSW
A7		629 HAMMOND ST	EDR Hist Auto	Lower	185, 0.035, WSW
B8	CHESTNUT HILL INVEST	1180 BOYLSTON ST	UST	Lower	318, 0.060, WNW
B9	EXXON STATION #3-325	1180 BOYLSTON ST	SHWS, LUST, RELEASE, ENF	Lower	322, 0.061, WNW
B10		1180 BOYLSTON ST	EDR Hist Auto	Lower	322, 0.061, WNW
B11	EXXON DIV OF CFI 700	1180 BOYLSTON ST	RCRA-SQG	Lower	322, 0.061, WNW
B12	CUMBERLAND FARMS #70	1180 BOYLSTON ST	Financial Assurance, HW GEN	Lower	322, 0.061, WNW
B13	CENTRAL CLEANERS OF	621 HAMMOND ST	DRYCLEANERS, HW GEN	Lower	350, 0.066, West
B14	CENTRAL CLEANERS	621 HAMMOND STREET	RCRA-CESQG, ICIS, US AIRS, FINDS, ECHO	Lower	350, 0.066, West
B15		621 HAMMOND ST	EDR Hist Cleaner	Lower	350, 0.066, West
C16	S J MCNEILLY OLDS	14 SHEAFE ST	UST	Lower	425, 0.080, West
C17	S J MCNEILLY OLDS	14 SHEAFE ST	Financial Assurance, HW GEN	Lower	454, 0.086, West
C18		14 SHEAFE ST	EDR Hist Auto	Lower	459, 0.087, West
19	ROUTE 9	1075 BOYLSTON ST	SHWS, RELEASE	Higher	559, 0.106, NE
D20	CUMBERLAND FARMS 245	1195 BOYLSTON ST	RCRA-CESQG	Lower	689, 0.130, WNW
D21	CUMBERLAND FARMS 245	1195 BOYLSTON ST	Financial Assurance, HW GEN	Lower	689, 0.130, WNW
D22	CVS PHARMACY 1862	1195 BOYLSTON STREET	RCRA-LQG	Lower	689, 0.130, WNW
D23	CVS PHARMACY 1862	1195 BOYLSTON ST	HW GEN	Lower	689, 0.130, WNW
D24	CUMBERLAND FARMS #24	1195 BOYLSTON ST	UST	Lower	689, 0.130, WNW
25	PINE MANOR COLLEGE	400 HEATH ST	HW GEN	Higher	795, 0.151, East
26	RESIDENCE	17 GLENOE RD	SHWS, LAST, RELEASE	Lower	807, 0.153, South
27	BRIMMER & MAY SCHOOL	69 MIDDLESEX RD	HW GEN	Lower	942, 0.178, North
28	WIESCHHOFF RESIDENCE	30 NORFOLK RD	LUST, RELEASE	Higher	958, 0.181, NNE
E29	CHESTNUT HILL SHOPPI	9 BOYLSTON ST	SHWS, INST CONTROL, RELEASE	Lower	1092, 0.207, West
E30	COMMERCIAL PROPERTY	1244-1262 BOYLSTON S	SHWS, RELEASE	Lower	1094, 0.207, West
F31	NEW ENGLAND PODIATRY	1244 BOYLSTON ST	HW GEN	Lower	1129, 0.214, West
E32	CHESTNUT HILL SHOPPI	11 BOYLSTON ST	SHWS, RELEASE	Lower	1141, 0.216, West
E33	CHESTNUT HILL SHOPPI	13 BOYLSTON ST	LUST, INST CONTROL, RELEASE	Lower	1150, 0.218, West
34	RANDOLPH	375 HEATH ST	LUST, RELEASE	Higher	1239, 0.235, East
F35	1268 BOYLSTON ST NEA	BOYLSTON ST	SHWS, RELEASE	Lower	1272, 0.241, West
G36	GENERAL CINEMAS FMR	27 BOYLSTON ST	SHWS, LUST, RELEASE	Lower	1392, 0.264, West
G37	NO LOCATION AID	25 BOYLSTON ST	SHWS, LUST, RELEASE, HW GEN	Lower	1407, 0.266, West
G38	CHESTNUT HILL MEDICA	25 BOYLSTON ST	LUST, RELEASE, ENF	Lower	1407, 0.266, West
39	NO LOCATION AID	1280 AND 1290 BOYLST	SHWS, RELEASE	Lower	1580, 0.299, West

MAPPED SITES SUMMARY

Target Property Address:
484 HEATH STREET
CHESTNUT HILL, MA 02467

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
40	NO LOCATION AID	132 YARMOUTH RD	LUST, RELEASE	Lower	1643, 0.311, SE
41	CHESTNUT HILL BENEVO	910 BOYLSTON ST	SHWS, LUST, RELEASE, HW GEN	Higher	1713, 0.324, ENE
42	SHAWS SUPERMARKET	1 BOYLSTON ST	LUST, RELEASE	Lower	1842, 0.349, West
43	NO LOCATION AID	59 VALLEY RD	LUST, RELEASE	Lower	1985, 0.376, NE
44	SILBERT RESIDENCE	106 SPOONER RD	LUST, RELEASE	Lower	2172, 0.411, NNE
45	NO LOCATION AID	413 HAMMOND STREET	SHWS, LUST, RELEASE	Higher	2379, 0.451, NNW
46	OLD BROOKLINE ASH LA	870 HAMMOND ST	SWF/LF, HW GEN	Lower	2385, 0.452, South
47	CHESTNUT HILL	88 ESSEX RD	LUST, RELEASE, LEAD	Higher	2618, 0.496, NNW
48	PARK INN HOTEL	160 BOYLSTON ST	SHWS, RELEASE	Lower	2997, 0.568, WSW
49	VEHICLE ACCIDENT	BEACON STREET AND RE	SHWS, RELEASE	Lower	3056, 0.579, NNE
50	ASH LANDFILL FMR	HAMMOND ST	SHWS, INST CONTROL, RELEASE	Lower	3149, 0.596, South
51	RESERVOIR RD	830 BOYLSTON ST	SHWS, RELEASE	Higher	3195, 0.605, ENE
52	MILTONS	176 BOYLSTON ST	SHWS, RELEASE, ENF	Higher	3280, 0.621, WSW
53	CAROL POST	33 CHESTNUT HILL RD	SHWS, RELEASE	Lower	3303, 0.626, North
54	DERJAMI TEXACO	800 BOYLSTON ST	SHWS, RELEASE	Higher	3708, 0.702, ENE
55	MERKERT CHEMISTRY CE	2635 BEACON ST	SHWS, RELEASE, ENF	Lower	3784, 0.717, North
56	BOSTON COLLEGE - SIL	2601 BEACON ST	SHWS, RELEASE	Lower	3806, 0.721, NNW
57	NO LOCATION AID	10 HAMMOND POND PKWY	SHWS, LUST, SPILLS, RELEASE, LEAD	Lower	3855, 0.730, South
58	OMNI FOODS GROCERY S	200 BOYLSTON ST	SHWS, LUST, RELEASE	Higher	3935, 0.745, WSW
59	WARREN STREET PARCEL	80 HEATH ST	SHWS, RELEASE	Higher	3970, 0.752, East
60	THE COUNTRY CLUB STA	191 CLYDE STREET	SHWS, LUST, RELEASE, LEAD	Higher	4148, 0.786, SE
61	CHESTNUT HILL	12 LAGRANGE ST	SHWS, RELEASE	Higher	4235, 0.802, South
62	BOSTON COLLEGE	200 ST THOMAS MOORE	SHWS, LAST, RELEASE	Lower	4260, 0.807, North
63	NO LOCATION AID	HEATH HILL RD	SHWS, RELEASE	Lower	4332, 0.820, ENE
64	CUMBERLAND FARMS GUL	1195 BOYLSTON ST	SHWS, LUST, RELEASE	Lower	4439, 0.841, ENE
H65	BROOKLINE/NEWTON LIN	39 KENSINGTON CIR	SHWS, RELEASE	Lower	4509, 0.854, SSW
66	HAMPTON PLACE CONDOM	77 FLORENCE ST	SHWS, RELEASE	Lower	4549, 0.862, WSW
H67	BROOKLINE/NEWTON LIN	31 KENSINGTON CIR	SHWS, RELEASE	Lower	4596, 0.870, SSW
68	NO LOCATION AID	375 CHESTNUT HILL AV	SHWS, LUST, RELEASE	Lower	4660, 0.883, NNE
I69	BROOKLINE/NEWTON LIN	45 MARTHAS LN	SHWS, RELEASE	Lower	4742, 0.898, SSW
I70	BROOKLINE/NEWTON (CH	33 MARTHAS LN	SHWS, RELEASE, ENF	Lower	4868, 0.922, SSW
71	SUNOCO SERVICE STATI	325 BOYLSTON ST	SHWS, LUST, UST, AST, RELEASE, RCRA NonGen / NLR,...	Higher	5026, 0.952, WSW
J72	BOSTON COLLEGE/SERVI	140 COMMONWEALTH AVE	SHWS, INST CONTROL, RELEASE, Financial Assurance,...	Lower	5032, 0.953, NNW
J73	BOSTON COLLEGE MAIN	140 COMMONWEALTH AVE	SHWS, LUST, RELEASE, AIRS, HW GEN, LEAD, TIER 2	Lower	5032, 0.953, NNW
74	RESIDENTIAL PROPERTY	42 FISHER AVE	SHWS, RELEASE, LEAD	Lower	5112, 0.968, ENE
75	TRACKMANS LOBBY	400 CHESTNUT HILL AV	SHWS, LAST, INST CONTROL, RELEASE, ENF	Lower	5145, 0.974, NE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: A review of the RCRA-LQG list, as provided by EDR, and dated 06/21/2016 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CVS PHARMACY 1862	1195 BOYLSTON STREET	WNW 1/8 - 1/4 (0.130 mi.)	D22	14

RCRA-SQG: A review of the RCRA-SQG list, as provided by EDR, and dated 06/21/2016 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
EXXON DIV OF CFI 700	1180 BOYLSTON ST	WNW 0 - 1/8 (0.061 mi.)	B11	11

RCRA-CESQG: A review of the RCRA-CESQG list, as provided by EDR, and dated 06/21/2016 has revealed that there are 2 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CENTRAL CLEANERS	***621 HAMMOND STREET***	***W 0 - 1/8 (0.066 mi.)***	***B14***	***12***
CUMBERLAND FARMS 245	1195 BOYLSTON ST	WNW 1/8 - 1/4 (0.130 mi.)	D20	13

EXECUTIVE SUMMARY

State- and tribal - equivalent CERCLIS

SHWS: A review of the SHWS list, as provided by EDR, and dated 06/28/2016 has revealed that there are 42 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ROUTE 9	***1075 BOYLSTON ST***	***NE 0 - 1/8 (0.106 mi.)***	***19***	***13***
Release Tracking Number / Current Status: 3-0023648 / RAO				
CHESTNUT HILL BENEVO	***910 BOYLSTON ST***	***ENE 1/4 - 1/2 (0.324 mi.)***	***41***	***20***
Release Tracking Number / Current Status: 3-0024837 / RAO				
NO LOCATION AID	***413 HAMMOND STREET***	***NNW 1/4 - 1/2 (0.451 mi.)***	***45***	***21***
Release Tracking Number / Current Status: 3-0032719 / PSNC				
RESERVOIR RD	***830 BOYLSTON ST***	***ENE 1/2 - 1 (0.605 mi.)***	***51***	***24***
Release Tracking Number / Current Status: 3-0022088 / RAO				
MILTONS	***176 BOYLSTON ST***	***WSW 1/2 - 1 (0.621 mi.)***	***52***	***24***
Release Tracking Number / Current Status: 3-0028976 / DPS				
DERJAMI TEXACO	***800 BOYLSTON ST***	***ENE 1/2 - 1 (0.702 mi.)***	***54***	***25***
Release Tracking Number / Current Status: 3-0002245 / PENNFA				
OMNI FOODS GROCERY S	***200 BOYLSTON ST***	***WSW 1/2 - 1 (0.745 mi.)***	***58***	***26***
Release Tracking Number / Current Status: 3-0025099 / RAO				
WARREN STREET PARCEL	***80 HEATH ST***	***E 1/2 - 1 (0.752 mi.)***	***59***	***27***
Release Tracking Number / Current Status: 3-0029516 / RAO				
THE COUNTRY CLUB STA	***191 CLYDE STREET***	***SE 1/2 - 1 (0.786 mi.)***	***60***	***27***
Release Tracking Number / Current Status: 3-0033554 / UNCLSS				
Release Tracking Number / Current Status: 3-0033455 / UNCLSS				
CHESTNUT HILL	***12 LAGRANGE ST***	***S 1/2 - 1 (0.802 mi.)***	***61***	***27***
Release Tracking Number / Current Status: 3-0019536 / RAO				
SUNOCO SERVICE STATI	***325 BOYLSTON ST***	***WSW 1/2 - 1 (0.952 mi.)***	***71***	***31***
Release Tracking Number / Current Status: 3-0019998 / RAONR				
Release Tracking Number / Current Status: 3-0016895 / RAO				

Lower Elevation	Address	Direction / Distance	Map ID	Page
NO LOCATION AID	***640 HAMMOND ST***	***SW 0 - 1/8 (0.006 mi.)***	***A1***	***8***
Release Tracking Number / Current Status: 3-0020733 / RAO				
Release Tracking Number / Current Status: 3-0003009 / DEPNDS				
MCNEILLY GARAGE	***639 HAMMOND ST***	***WSW 0 - 1/8 (0.034 mi.)***	***A3***	***8***
Release Tracking Number / Current Status: 3-0019556 / RAONR				
Release Tracking Number / Current Status: 3-0017343 / RAONR				
Release Tracking Number / Current Status: 3-0002320 / RAO				
Release Tracking Number / Current Status: 3-0026526 / RAONR				
Release Tracking Number / Current Status: 3-0026468 / RAONR				
**Additional key fields are available in the Map Findings section*				
EXXON STATION #3-325	***1180 BOYLSTON ST***	***WNW 0 - 1/8 (0.061 mi.)***	***B9***	***10***
Release Tracking Number / Current Status: 3-0020511 / RAONR				
Release Tracking Number / Current Status: 3-0013540 / RAO				
Release Tracking Number / Current Status: 3-0032314 / PSNC				
Release Tracking Number / Current Status: 3-0032394 / RAONR				
Release Tracking Number / Current Status: 3-0019813 / REMOPS				
RESIDENCE	***17 GLENOE RD***	***S 1/8 - 1/4 (0.153 mi.)***	***26***	***15***

Release Tracking Number / Current Status: 3-0028316 / RAO				
CHESTNUT HILL SHOPPI	***9 BOYLSTON ST***	***W 1/8 - 1/4 (0.207 mi.)***	***E29***	***16***
Release Tracking Number / Current Status: 3-0013293 / RAO				
COMMERCIAL PROPERTY	***1244-1262 BOYLSTON S***	***W 1/8 - 1/4 (0.207 mi.)***	***E30***	***16***
Release Tracking Number / Current Status: 3-0002125 / DEPNFA				
CHESTNUT HILL SHOPPI	***11 BOYLSTON ST***	***W 1/8 - 1/4 (0.216 mi.)***	***E32***	***17***
Release Tracking Number / Current Status: 3-0021391 / RAO				
1268 BOYLSTON ST NEA	***BOYLSTON ST***	***W 1/8 - 1/4 (0.241 mi.)***	***F35***	***18***
Release Tracking Number / Current Status: 3-0011162 / RAO				
GENERAL CINEMAS FMR	***27 BOYLSTON ST***	***W 1/4 - 1/2 (0.264 mi.)***	***G36***	***18***
Release Tracking Number / Current Status: 3-0001261 / REMOPS				
NO LOCATION AID	***25 BOYLSTON ST***	***W 1/4 - 1/2 (0.266 mi.)***	***G37***	***18***
Release Tracking Number / Current Status: 3-0028099 / URAM				
NO LOCATION AID	***1280 AND 1290 BOYLST***	***W 1/4 - 1/2 (0.299 mi.)***	***39***	***19***
Release Tracking Number / Current Status: 3-0015680 / RAO				
PARK INN HOTEL	***160 BOYLSTON ST***	***WSW 1/2 - 1 (0.568 mi.)***	***48***	***23***
Release Tracking Number / Current Status: 3-0023265 / RAO				
VEHICLE ACCIDENT	***BEACON STREET AND RE***	***NNE 1/2 - 1 (0.579 mi.)***	***49***	***23***
Release Tracking Number / Current Status: 3-0023873 / RAO				
ASH LANDFILL FMR	***HAMMOND ST***	***S 1/2 - 1 (0.596 mi.)***	***50***	***23***
Release Tracking Number / Current Status: 3-0000939 / RAO				
CAROL POST	***33 CHESTNUT HILL RD***	***N 1/2 - 1 (0.626 mi.)***	***53***	***24***
Release Tracking Number / Current Status: 3-0023917 / RAO				
MERKERT CHEMISTRY CE	***2635 BEACON ST***	***N 1/2 - 1 (0.717 mi.)***	***55***	***25***
Release Tracking Number / Current Status: 3-0029276 / RAO				
BOSTON COLLEGE - SIL	***2601 BEACON ST***	***NNW 1/2 - 1 (0.721 mi.)***	***56***	***25***
Release Tracking Number / Current Status: 3-0029202 / RAO				
NO LOCATION AID	***10 HAMMOND POND PKWY***	***S 1/2 - 1 (0.730 mi.)***	***57***	***26***
Release Tracking Number / Current Status: 3-0013381 / RAONR				
BOSTON COLLEGE	***200 ST THOMAS MOORE***	***N 1/2 - 1 (0.807 mi.)***	***62***	***28***
Release Tracking Number / Current Status: 3-0016890 / RAO				
NO LOCATION AID	***HEATH HILL RD***	***ENE 1/2 - 1 (0.820 mi.)***	***63***	***28***
Release Tracking Number / Current Status: 3-0014221 / URAM				
CUMBERLAND FARMS GUL	***1195 BOYLSTON ST***	***ENE 1/2 - 1 (0.841 mi.)***	***64***	***29***
Release Tracking Number / Current Status: 3-0023609 / RAO				
Release Tracking Number / Current Status: 3-0014010 / RAONR				
Release Tracking Number / Current Status: 3-0011189 / RAONR				
Release Tracking Number / Current Status: 3-0004823 / RAO				
BROOKLINE/NEWTON LIN	***39 KENSINGTON CIR***	***SSW 1/2 - 1 (0.854 mi.)***	***H65***	***29***
Release Tracking Number / Current Status: 3-0026416 / RAO				
HAMPTON PLACE CONDOM	***77 FLORENCE ST***	***WSW 1/2 - 1 (0.862 mi.)***	***66***	***30***
Release Tracking Number / Current Status: 3-0024494 / RAO				
BROOKLINE/NEWTON LIN	***31 KENSINGTON CIR***	***SSW 1/2 - 1 (0.870 mi.)***	***H67***	***30***
Release Tracking Number / Current Status: 3-0026418 / RAO				
NO LOCATION AID	***375 CHESTNUT HILL AV***	***NNE 1/2 - 1 (0.883 mi.)***	***68***	***30***
Release Tracking Number / Current Status: 3-0033550 / UNCLSS				
BROOKLINE/NEWTON LIN	***45 MARTHAS LN***	***SSW 1/2 - 1 (0.898 mi.)***	***I69***	***31***

Release Tracking Number / Current Status: 3-0026417 / RAO

BROOKLINE/NEWTON (CH	***33 MARTHAS LN***	***SSW 1/2 - 1 (0.922 mi.)***	***I70***	***31***

Release Tracking Number / Current Status: 3-0025862 / RAO

BOSTON COLLEGE/SERVI	***140 COMMONWEALTH AVE***	***NNW 1/2 - 1 (0.953 mi.)***	***J72***	***32***

Release Tracking Number / Current Status: 3-0030690 / RAO
Release Tracking Number / Current Status: 3-0016681 / RAO
Release Tracking Number / Current Status: 3-0010103 / RAO
Release Tracking Number / Current Status: 3-0025465 / RAO

BOSTON COLLEGE MAIN	***140 COMMONWEALTH AVE***	***NNW 1/2 - 1 (0.953 mi.)***	***J73***	***33***

Release Tracking Number / Current Status: 3-0023101 / RAO

RESIDENTIAL PROPERTY	***42 FISHER AVE***	***ENE 1/2 - 1 (0.968 mi.)***	***74***	***34***

Release Tracking Number / Current Status: 3-0030508 / RAO

TRACKMANS LOBBY	***400 CHESTNUT HILL AV***	***NE 1/2 - 1 (0.974 mi.)***	***75***	***34***

Release Tracking Number / Current Status: 3-0026609 / RAO

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: A review of the SWF/LF list, as provided by EDR, has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
OLD BROOKLINE ASH LA	***870 HAMMOND ST***	***S 1/4 - 1/2 (0.452 mi.)***	***46***	***22***

Database: SWF/LF, Date of Government Version: 01/31/2016
Current Operational Status: Inactive
Current Operational Status: Closed

State and tribal leaking storage tank lists

LAST: A review of the LAST list, as provided by EDR, and dated 06/28/2016 has revealed that there are 2 LAST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MCNEILLY GARAGE	***639 HAMMOND ST***	***WSW 0 - 1/8 (0.034 mi.)***	***A3***	***8***

Release Tracking Number / Current Status: 3-0016950 / RAO

RESIDENCE	***17 GLENOE RD***	***S 1/8 - 1/4 (0.153 mi.)***	***26***	***15***

Release Tracking Number / Current Status: 3-0028316 / RAO

LUST: A review of the LUST list, as provided by EDR, and dated 06/28/2016 has revealed that there are 15 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WIESCHHOFF RESIDENCE	***30 NORFOLK RD***	***NNE 1/8 - 1/4 (0.181 mi.)***	***28***	***15***

Release Tracking Number / Current Status: 3-0015731 / RAO

RANDOLPH	***375 HEATH ST***	***E 1/8 - 1/4 (0.235 mi.)***	***34***	***17***
Release Tracking Number / Current Status: 3-0012797 / RAO				
CHESTNUT HILL BENEVO	***910 BOYLSTON ST***	***ENE 1/4 - 1/2 (0.324 mi.)***	***41***	***20***
Release Tracking Number / Current Status: 3-0025358 / RAO				
NO LOCATION AID	***413 HAMMOND STREET***	***NNW 1/4 - 1/2 (0.451 mi.)***	***45***	***21***
Release Tracking Number / Current Status: 3-0032719 / PSNC				
CHESTNUT HILL	***88 ESSEX RD***	***NNW 1/4 - 1/2 (0.496 mi.)***	***47***	***22***
Release Tracking Number / Current Status: 3-0011951 / RAO				

Lower Elevation	Address	Direction / Distance	Map ID	Page
MCNEILLY GARAGE	***639 HAMMOND ST***	***WSW 0 - 1/8 (0.034 mi.)***	***A3***	***8***
Release Tracking Number / Current Status: 3-0016950 / RAO				
Release Tracking Number / Current Status: 3-0023538 / RAONR				
EXXON STATION #3-325	***1180 BOYLSTON ST***	***WNW 0 - 1/8 (0.061 mi.)***	***B9***	***10***
Release Tracking Number / Current Status: 3-0013540 / RAO				
Release Tracking Number / Current Status: 3-0019813 / REMOPS				
Release Tracking Number / Current Status: 3-0032394 / RAONR				
CHESTNUT HILL SHOPPI	***13 BOYLSTON ST***	***W 1/8 - 1/4 (0.218 mi.)***	***E33***	***17***
Release Tracking Number / Current Status: 3-0012843 / RAO				
GENERAL CINEMAS FMR	***27 BOYLSTON ST***	***W 1/4 - 1/2 (0.264 mi.)***	***G36***	***18***
Release Tracking Number / Current Status: 3-0001261 / REMOPS				
NO LOCATION AID	***25 BOYLSTON ST***	***W 1/4 - 1/2 (0.266 mi.)***	***G37***	***18***
Release Tracking Number / Current Status: 3-0028099 / URAM				
CHESTNUT HILL MEDICA	***25 BOYLSTON ST***	***W 1/4 - 1/2 (0.266 mi.)***	***G38***	***19***
Release Tracking Number / Current Status: 3-0024881 / RAO				
NO LOCATION AID	***132 YARMOUTH RD***	***SE 1/4 - 1/2 (0.311 mi.)***	***40***	***20***
Release Tracking Number / Current Status: 3-0024451 / RAO				
SHAWS SUPERMARKET	***1 BOYLSTON ST***	***W 1/4 - 1/2 (0.349 mi.)***	***42***	***20***
Release Tracking Number / Current Status: 3-0028137 / RAO				
NO LOCATION AID	***59 VALLEY RD***	***NE 1/4 - 1/2 (0.376 mi.)***	***43***	***21***
Release Tracking Number / Current Status: 3-0017161 / RAO				
SILBERT RESIDENCE	***106 SPOONER RD***	***NNE 1/4 - 1/2 (0.411 mi.)***	***44***	***21***
Release Tracking Number / Current Status: 3-0020035 / RAO				

State and tribal registered storage tank lists

UST: A review of the UST list, as provided by EDR, and dated 08/22/2016 has revealed that there are 5 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CARRIE F CARROLL	640 HAMMOND ST	SW 0 - 1/8 (0.016 mi.)	A2	8
Tank Status: Tank Removed				
Facility Id: 11645				
S J MCNEILLY OLDS	639 HAMMOND ST	WSW 0 - 1/8 (0.034 mi.)	A4	9

Tank Status: Tank Removed Facility Id: 11658				
CHESTNUT HILL INVEST Tank Status: Tank Removed Facility Id: 11655	1180 BOYLSTON ST	WNW 0 - 1/8 (0.060 mi.)	B8	10
S J MCNEILLY OLDS Tank Status: Tank Removed Facility Id: 11636	14 SHEAFE ST	W 0 - 1/8 (0.080 mi.)	C16	12
CUMBERLAND FARMS #24 Tank Status: Tank Removed Tank Status: In Use Facility Id: 11657	1195 BOYLSTON ST	WNW 1/8 - 1/4 (0.130 mi.)	D24	14

State and tribal institutional control / engineering control registries

INST CONTROL: A review of the INST CONTROL list, as provided by EDR, and dated 06/28/2016 has revealed that there are 2 INST CONTROL sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CHESTNUT HILL SHOPPI Release Tracking Number: 3-0013293	***9 BOYLSTON ST***	***W 1/8 - 1/4 (0.207 mi.)***	***E29***	***16***
CHESTNUT HILL SHOPPI Release Tracking Number: 3-0012843	***13 BOYLSTON ST***	***W 1/8 - 1/4 (0.218 mi.)***	***E33***	***17***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/21/2016 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MCNEILLY S J OLDSMOB	***639 HAMMOND ST***	***WSW 0 - 1/8 (0.034 mi.)***	***A6***	***10***

DRYCLEANERS: A review of the DRYCLEANERS list, as provided by EDR, and dated 07/07/2016 has revealed that there is 1 DRYCLEANERS site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CENTRAL CLEANERS OF Facility Id: 53011	***621 HAMMOND ST***	***W 0 - 1/8 (0.066 mi.)***	***B13***	***12***

HW GEN: A review of the HW GEN list, as provided by EDR, and dated 06/21/2016 has revealed that there are 8 HW GEN sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PINE MANOR COLLEGE EPA Id: MV6177317033	400 HEATH ST	E 1/8 - 1/4 (0.151 mi.)	25	14

Lower Elevation	Address	Direction / Distance	Map ID	Page
CUMBERLAND FARMS #70 State Generator Status: SQG-MA State Generator Status: VQG-MA EPA Id: MV6175668000 EPA Id: MAD985288703	***1180 BOYLSTON ST***	***WNW 0 - 1/8 (0.061 mi.)***	***B12***	***11***
CENTRAL CLEANERS OF EPA Id: MAD980734503	***621 HAMMOND ST***	***W 0 - 1/8 (0.066 mi.)***	***B13***	***12***
S J MCNEILLY OLDS State Generator Status: VQG-MA State Generator Status: SQG-MA EPA Id: MV6177319994 EPA Id: MA5000005256	***14 SHEAFE ST***	***W 0 - 1/8 (0.086 mi.)***	***C17***	***13***
CUMBERLAND FARMS 245 State Generator Status: VQG-MA EPA Id: MAC300002557	***1195 BOYLSTON ST***	***WNW 1/8 - 1/4 (0.130 mi.)***	***D21***	***14***
CVS PHARMACY 1862 EPA Id: MAC300019684	1195 BOYLSTON ST	WNW 1/8 - 1/4 (0.130 mi.)	D23	14
BRIMMER & MAY SCHOOL State Generator Status: VQG-MA EPA Id: MV6175667462	69 MIDDLESEX RD	N 1/8 - 1/4 (0.178 mi.)	27	15
NEW ENGLAND PODIATRY EPA Id: MV6176308280	1244 BOYLSTON ST	W 1/8 - 1/4 (0.214 mi.)	F31	16

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 4 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	639 HAMMOND ST	WSW 0 - 1/8 (0.034 mi.)	A5	9
Not reported	629 HAMMOND ST	WSW 0 - 1/8 (0.035 mi.)	A7	10
Not reported	1180 BOYLSTON ST	WNW 0 - 1/8 (0.061 mi.)	B10	11
Not reported	14 SHEAFE ST	W 0 - 1/8 (0.087 mi.)	C18	13

EXECUTIVE SUMMARY

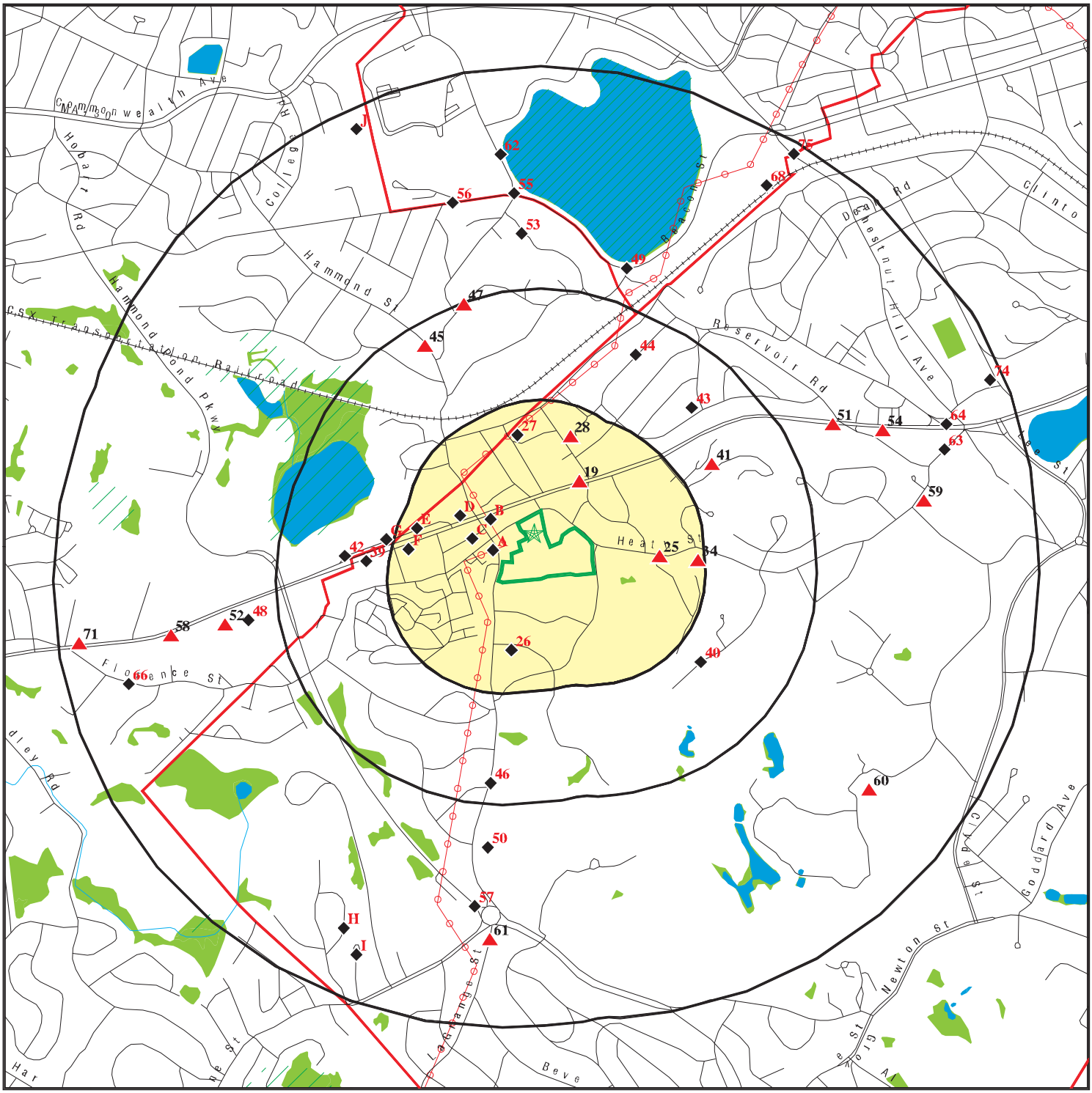
EDR Hist Cleaner: A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there is 1 EDR Hist Cleaner site within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	621 HAMMOND ST	W 0 - 1/8 (0.066 mi.)	B15	12

Count: 9 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BRIGHTON	S113882724	ALLSTON/BRIGHTON POOL	NORTH BEACON STREET	02135	SHWS, RELEASE
BRIGHTON	S106512462	32 AND 38 EVERETT ST	61-69 NORTH BEACON ST	02135	SHWS, RELEASE, ENF
BRIGHTON	S118643365	NO LOCATION AID	NORTH BEACON STREET	02135	SHWS, RELEASE
BRIGHTON	S106512769	FLYNN RECREATION CTR & ALUMINI	BOSTON COLLEGE CAMPUS	02135	SHWS, RELEASE
BROOKLINE	S108476911	AT CENTER STREET	BEACON ST		SHWS, RELEASE
BROOKLINE	S110055591	INTERSECTION OF BOYLSTON AND WARRE	BOYLSTON ST	02445	SHWS, RELEASE
BROOKLINE	S117277493	111 BOYLSTON ST & 10-12 KERRIGAN P	111 BOYLSTON ST & 10-12 KERRIG	02445	SHWS, LUST, RELEASE
BROOKLINE	S113805076	NO LOCATION AID	61 SHAW ROAD		SHWS, RELEASE
NEWTON	S113411735	CONGREGATION MISHKAN TEFILA	300 HAMMOND POND PARKWAY	02467	SHWS, LUST, RELEASE

OVERVIEW MAP - 4795721.2S



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 2475-001 Levi Brookline Baldwin School ADDRESS: 484 Heath Street CHESTNUT HILL MA 02467 LAT/LONG: 42.322894 / 71.161403	CLIENT: Endpoint, LLC CONTACT: Katie Snyder INQUIRY #: 4795721.2s DATE: December 02, 2016 11:35 am

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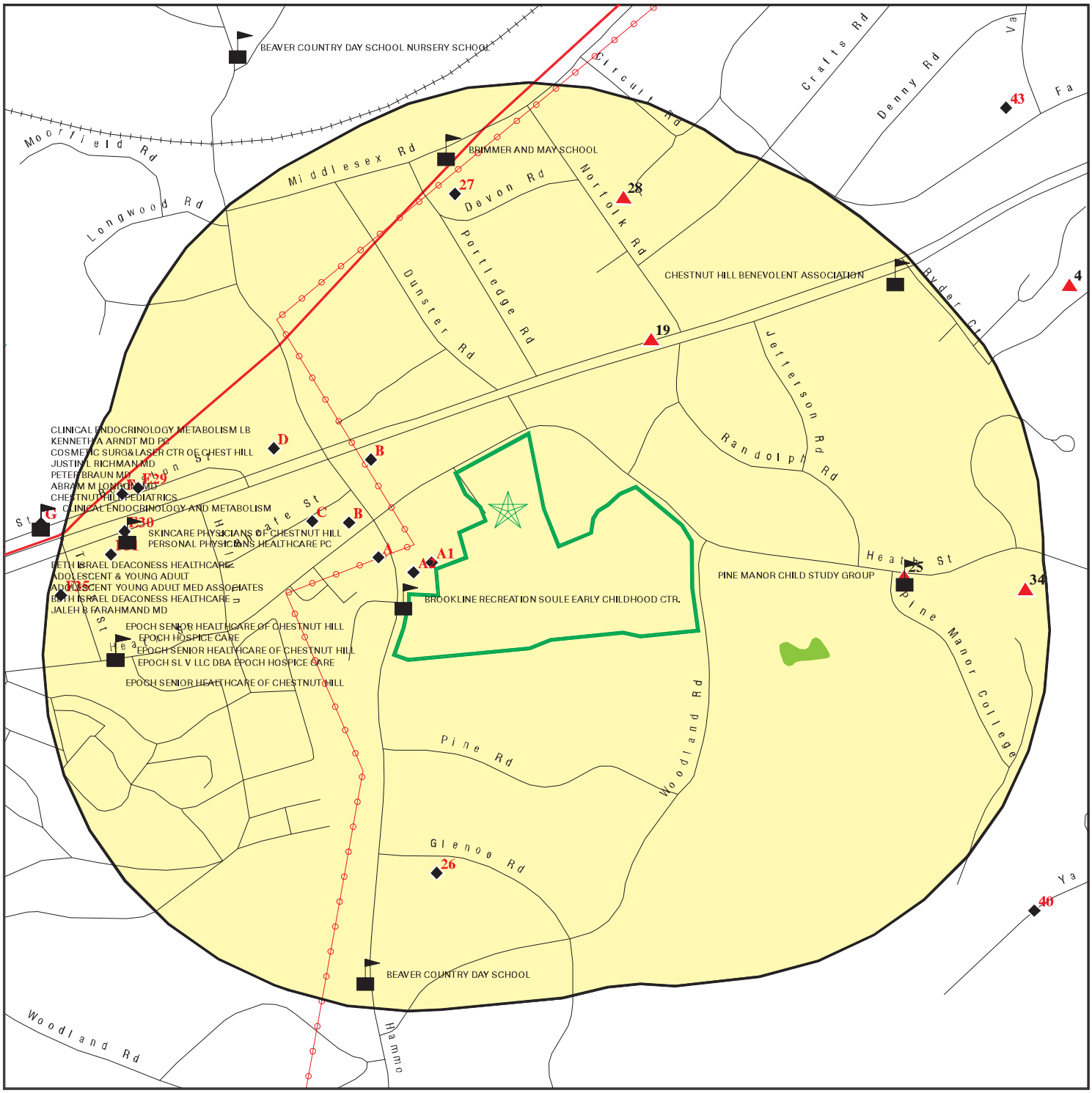
DETAIL MAP - 4795721.2S



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 2475-001 Levi Brookline Baldwin School	CLIENT: Endpoint, LLC
ADDRESS: 484 Heath Street	CONTACT: Katie Snyder
CHESTNUT HILL MA 02467	INQUIRY #: 4795721.2s
LAT/LONG: 42.322894 / 71.161403	DATE: December 02, 2016 11:36 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	1	NR	NR	NR	1
RCRA-SQG	0.250		1	0	NR	NR	NR	1
RCRA-CESQG	0.250		1	1	NR	NR	NR	2
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		4	5	5	28	NR	42
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	1	NR	NR	1
State and tribal leaking storage tank lists								
LAST	0.500		1	1	0	NR	NR	2
LUST	0.500		2	3	10	NR	NR	15
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250		4	1	NR	NR	NR	5
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	2	0	NR	NR	2
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
RELEASE	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
SPILLS 80	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	0	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		1	0	NR	NR	NR	1
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
GWDP	TP		NR	NR	NR	NR	NR	0
HW GEN	0.250		3	5	NR	NR	NR	8
LEAD	TP		NR	NR	NR	NR	NR	0
MERCURY	0.500		0	0	0	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
TSD	0.500		0	0	0	NR	NR	0
ABANDONED MINES	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		4	NR	NR	NR	NR	4
EDR Hist Cleaner	0.125		1	NR	NR	NR	NR	1
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	23	19	16	28	0	86

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
SW
< 1/8
0.006 mi.
30 ft.

Relative:
Lower

NO LOCATION AID
640 HAMMOND ST
BROOKLINE, MA 02445

SHWS
RELEASE
SPILLS

S101025231
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0020733 / RAO
Release Tracking Number / Current Status: 3-0003009 / DEPNDS

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0003009 / DEPNDS
Release Tracking Number / Current Status: 3-0020733 / RAO

Click here to access the MA DEP site for this facility

SPILLS
Facility Id: 3-3009
Case Closed: YES
Spill ID: N89-1728

A2
SW
< 1/8
0.016 mi.
83 ft.

Relative:
Lower

CARRIE F CARROLL
640 HAMMOND ST
BROOKLINE, MA 02467

UST

U004246666
N/A

Click here for full text details

UST
Facility Id: 11645
Tank Status: Tank Removed

A3
WSW
< 1/8
0.034 mi.
179 ft.

Relative:
Lower

MCNEILLY GARAGE
639 HAMMOND ST
BROOKLINE, MA 02146

SHWS
LUST
LAST
RELEASE
SPILLS
ENF

S101017033
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0019556 / RAONR
Release Tracking Number / Current Status: 3-0017343 / RAONR
Release Tracking Number / Current Status: 3-0002320 / RAO
Release Tracking Number / Current Status: 3-0026526 / RAONR
Release Tracking Number / Current Status: 3-0026468 / RAONR
Release Tracking Number / Current Status: 3-0016950 / RAO

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0016950 / RAO

MCNEILLY GARAGE (Continued) **S101017033**

Release Tracking Number / Current Status: 3-0023538 / RAONR

Click here to access the MA DEP site for this facility

LAST
Release Tracking Number / Current Status: 3-0016950 / RAO

RELEASE
Release Tracking Number / Current Status: 3-0002320 / RAO
Release Tracking Number / Current Status: 3-0016950 / RAO
Release Tracking Number / Current Status: 3-0017343 / RAONR
Release Tracking Number / Current Status: 3-0019556 / RAONR
Release Tracking Number / Current Status: 3-0023538 / RAONR
Release Tracking Number / Current Status: 3-0026468 / RAONR
Release Tracking Number / Current Status: 3-0026526 / RAONR

Click here to access the MA DEP site for this facility

SPILLS
Facility Id: 3-2320
Case Closed: YES
Spill ID: N87-0373

ENF
Program Id: 3-0016950

A4
WSW
< 1/8
0.034 mi.
179 ft.

Relative:
Lower

S J MCNEILLY OLDS **UST** **U004246671**
639 HAMMOND ST **N/A**
BROOKLINE, MA 02467

Click here for full text details

UST
Facility Id: 11658
Tank Status: Tank Removed

A5
WSW
< 1/8
0.034 mi.
179 ft.

Relative:
Lower

EDR Hist Auto **1015586709**
N/A

639 HAMMOND ST
CHESTNUT HILL, MA 02467

Click here for full text details

A6
WSW
< 1/8
0.034 mi.
179 ft.

Relative:
Lower

MCNEILLY S J OLDSMOBILE INC
639 HAMMOND ST
NEWTON, MA 02467

RCRA NonGen / NLR / FINDS / ECHO

1000203039
MAD981893795

Click here for full text details

RCRA NonGen / NLR
EPA Id: MAD981893795

FINDS
Registry ID:: 110008413582

A7
WSW
< 1/8
0.035 mi.
185 ft.

Relative:
Lower

629 HAMMOND ST
CHESTNUT HILL, MA 02467

EDR Hist Auto

1015583017
N/A

Click here for full text details

B8
WNW
< 1/8
0.060 mi.
318 ft.

Relative:
Lower

CHESTNUT HILL INVESTMENTS LLC
1180 BOYLSTON ST
BROOKLINE, MA 02467

UST

U004246669
N/A

Click here for full text details

UST
Facility Id: 11655
Tank Status: Tank Removed

B9
WNW
< 1/8
0.061 mi.
322 ft.

Relative:
Lower

EXXON STATION #3-3258
1180 BOYLSTON ST
BROOKLINE, MA 02146

SHWS / LUST / RELEASE / ENF

S104545565
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0020511 / RAONR
Release Tracking Number / Current Status: 3-0013540 / RAO
Release Tracking Number / Current Status: 3-0032314 / PSNC
Release Tracking Number / Current Status: 3-0032394 / RAONR
Release Tracking Number / Current Status: 3-0019813 / REMOPS

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0013540 / RAO
Release Tracking Number / Current Status: 3-0019813 / REMOPS
Release Tracking Number / Current Status: 3-0032394 / RAONR

Click here to access the MA DEP site for this facility

EXXON STATION #3-3258 (Continued) **S104545565**

RELEASE
Release Tracking Number / Current Status: 3-0013540 / RAO
Release Tracking Number / Current Status: 3-0019813 / REMOPS
Release Tracking Number / Current Status: 3-0020511 / RAONR
Release Tracking Number / Current Status: 3-0032314 / PSNC
Release Tracking Number / Current Status: 3-0032394 / RAONR

Click here to access the MA DEP site for this facility

ENF
Program Id: 3-0019813

B10
WNW
< 1/8
0.061 mi.
322 ft.

Relative:
Lower

1180 BOYLSTON ST
CHESTNUT HILL, MA 02467

EDR Hist Auto **1015174289**
N/A

Click here for full text details

B11
WNW
< 1/8
0.061 mi.
322 ft.

Relative:
Lower

EXXON DIV OF CFI 70011
1180 BOYLSTON ST
NEWTON, MA 02467

RCRA-SQG **1004717941**
MAD985288703

Click here for full text details

RCRA-SQG
EPA Id: MAD985288703

B12
WNW
< 1/8
0.061 mi.
322 ft.

Relative:
Lower

CUMBERLAND FARMS #70011
1180 BOYLSTON ST
CHESTNUT HILL, MA 02467

Financial Assurance **U002008865**
HW GEN **N/A**

Click here for full text details

Financial Assurance
Facility Id: 11655

HW GEN
State Generator Status: SQG-MA
State Generator Status: VQG-MA
EPA Id: MV6175668000
EPA Id: MAD985288703

B13
West
< 1/8
0.066 mi.
350 ft.

Relative:
Lower

CENTRAL CLEANERS OF BROOKLINE INC
621 HAMMOND ST
BROOKLINE, MA 02467

Click here for full text details

DRYCLEANERS
Facility Id: 53011

HW GEN
EPA Id: MAD980734503

DRYCLEANERS
HW GEN

S106488664
N/A

B14
West
< 1/8
0.066 mi.
350 ft.

Relative:
Lower

CENTRAL CLEANERS
621 HAMMOND STREET
BROOKLINE, MA 02467

Click here for full text details

RCRA-CESQG
EPA Id: MAD980734503

ICIS
FRS ID:: 110002464119

US AIRS
EPA plant ID:: 110002464119

FINDS
Registry ID:: 110002464119

RCRA-CESQG
ICIS
US AIRS
FINDS
ECHO

1004518477
MAD980734503

B15
West
< 1/8
0.066 mi.
350 ft.

Relative:
Lower

621 HAMMOND ST
CHESTNUT HILL, MA 02467

Click here for full text details

EDR Hist Cleaner

1015082036
N/A

C16
West
< 1/8
0.080 mi.
425 ft.

Relative:
Lower

S J MCNEILLY OLDS
14 SHEAFE ST
BROOKLINE, MA 02467

Click here for full text details

UST
Facility Id: 11636
Tank Status: Tank Removed

UST

U004246662
N/A

C17
West
< 1/8
0.086 mi.
454 ft.

Relative:
Lower

S J MCNEILLY OLDS — **Financial Assurance** — **U003655126**
14 SHEAFE ST — **HW GEN** — **N/A**
CHESTNUT HILL, MA 02467

Click here for full text details

Financial Assurance
Facility Id: 11636

HW GEN
State Generator Status: VQG-MA
State Generator Status: SQG-MA
EPA Id: MV6177319994
EPA Id: MA5000005256

C18
West
< 1/8
0.087 mi.
459 ft.

Relative:
Lower

EDR Hist Auto — **1015218764**

14 SHEAFE ST — **N/A**
CHESTNUT HILL, MA 02467

Click here for full text details

19
NE
< 1/8
0.106 mi.
559 ft.

Relative:
Higher

ROUTE 9 — **SHWS** — **S106344199**
1075 BOYLSTON ST — **RELEASE** — **N/A**
BROOKLINE, MA

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0023648 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0023648 / RAO

Click here to access the MA DEP site for this facility

D20
WNW
1/8-1/4
0.130 mi.
689 ft.

Relative:
Lower

CUMBERLAND FARMS 2456 — **RCRA-CESQG** — **1008403171**
1195 BOYLSTON ST — **MAC300002557**
NEWTON, MA 02467

Click here for full text details

RCRA-CESQG
EPA Id: MAC300002557

D21
WNW
1/8-1/4
0.130 mi.
689 ft.

Relative:
Lower

CUMBERLAND FARMS 2456
1195 BOYLSTON ST
CHESTNUT HILL, MA 02467

Financial Assurance
HW GEN

U002008870
N/A

Click here for full text details

Financial Assurance
Facility Id: 11657

HW GEN
State Generator Status: VQG-MA
EPA Id: MAC300002557

D22
WNW
1/8-1/4
0.130 mi.
689 ft.

Relative:
Lower

CVS PHARMACY 1862
1195 BOYLSTON STREET & HAMMOND
CHESTNUT HILL, MA 02467

RCRA-LQG

1014954037
MAC300019684

Click here for full text details

RCRA-LQG
EPA Id: MAC300019684

D23
WNW
1/8-1/4
0.130 mi.
689 ft.

Relative:
Lower

CVS PHARMACY 1862
1195 BOYLSTON ST
CHESTNUT HILL, MA 02467

HW GEN

S113409398
N/A

Click here for full text details

HW GEN
EPA Id: MAC300019684

D24
WNW
1/8-1/4
0.130 mi.
689 ft.

Relative:
Lower

CUMBERLAND FARMS #2456
1195 BOYLSTON ST
BROOKLINE, MA 02467

UST

U004246670
N/A

Click here for full text details

UST
Facility Id: 11657
Tank Status: Tank Removed
Tank Status: In Use

25
East
1/8-1/4
0.151 mi.
795 ft.

Relative:
Higher

PINE MANOR COLLEGE
400 HEATH ST
NEWTON, MA 02467

HW GEN

S112558779
N/A

Click here for full text details

HW GEN
EPA Id: MV6177317033

26
South
1/8-1/4
0.153 mi.
807 ft.

Relative:
Lower

RESIDENCE
17 GLENOE RD
BROOKLINE, MA 02467

SHWS
LAST
RELEASE

S109546243
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0028316 / RAO

Click here to access the MA DEP site for this facility

LAST
Release Tracking Number / Current Status: 3-0028316 / RAO

RELEASE
Release Tracking Number / Current Status: 3-0028316 / RAO

Click here to access the MA DEP site for this facility

27
North
1/8-1/4
0.178 mi.
942 ft.

Relative:
Lower

BRIMMER & MAY SCHOOL
69 MIDDLESEX RD
CHESTNUT HILL, MA 02467

HW GEN

S116687554
N/A

Click here for full text details

HW GEN
State Generator Status: VQG-MA
EPA Id: MV6175667462

28
NNE
1/8-1/4
0.181 mi.
958 ft.

Relative:
Higher

WIESCHHOFF RESIDENCE
30 NORFOLK RD
BROOKLINE, MA 02146

LUST
RELEASE

S102967418
N/A

Click here for full text details

LUST
Release Tracking Number / Current Status: 3-0015731 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0015731 / RAO

Click here to access the MA DEP site for this facility

E29
West
1/8-1/4
0.207 mi.
1092 ft.

Relative:
Lower

CHESTNUT HILL SHOPPING CENTER
9 BOYLSTON ST
CHESTNUT HILL, MA 02167

SHWS
INST CONTROL
RELEASE

S106511285
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0013293 / RAO

Click here to access the MA DEP site for this facility

INST CONTROL
Release Tracking Number: 3-0013293

RELEASE
Release Tracking Number / Current Status: 3-0013293 / RAO

Click here to access the MA DEP site for this facility

E30
West
1/8-1/4
0.207 mi.
1094 ft.

Relative:
Lower

COMMERCIAL PROPERTY
1244-1262 BOYLSTON ST
BROOKLINE, MA 02146

SHWS
RELEASE

S100362879
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0002125 / DEPNFA

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0002125 / DEPNFA

Click here to access the MA DEP site for this facility

F31
West
1/8-1/4
0.214 mi.
1129 ft.

Relative:
Lower

NEW ENGLAND PODIATRY
1244 BOYLSTON ST
CHESTNUT HILL, MA 02467

HW GEN

S112558726
N/A

Click here for full text details

HW GEN
EPA Id: MV6176308280

E32
West
1/8-1/4
0.216 mi.
1141 ft.

Relative:
Lower

CHESTNUT HILL SHOPPING CTR
11 BOYLSTON ST
NEWTON, MA 02467

SHWS
RELEASE

S105309362
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0021391 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0021391 / RAO

Click here to access the MA DEP site for this facility

E33
West
1/8-1/4
0.218 mi.
1150 ft.

Relative:
Lower

CHESTNUT HILL SHOPPING CENTER
13 BOYLSTON ST
NEWTON, MA

LUST
INST CONTROL
RELEASE

S102086954
N/A

Click here for full text details

LUST
Release Tracking Number / Current Status: 3-0012843 / RAO

Click here to access the MA DEP site for this facility

INST CONTROL
Release Tracking Number: 3-0012843

RELEASE
Release Tracking Number / Current Status: 3-0012843 / RAO

Click here to access the MA DEP site for this facility

34
East
1/8-1/4
0.235 mi.
1239 ft.

Relative:
Higher

RANDOLPH
375 HEATH ST
BROOKLINE, MA

LUST
RELEASE

S104545420
N/A

Click here for full text details

LUST
Release Tracking Number / Current Status: 3-0012797 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0012797 / RAO

Click here to access the MA DEP site for this facility

F35
West
1/8-1/4
0.241 mi.
1272 ft.

Relative:
Lower

1268 BOYLSTON ST NEAR RTE 9 EAST
BOYLSTON ST
BROOKLINE, MA 02146

SHWS **S103545736**
RELEASE **N/A**

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0011162 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0011162 / RAO

Click here to access the MA DEP site for this facility

G36
West
1/4-1/2
0.264 mi.
1392 ft.

Relative:
Lower

GENERAL CINEMAS FMR
27 BOYLSTON ST
NEWTON, MA 02158

SHWS **S105199353**
LUST **N/A**
RELEASE

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0001261 / REMOPS

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0001261 / REMOPS

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0001261 / REMOPS

Click here to access the MA DEP site for this facility

G37
West
1/4-1/2
0.266 mi.
1407 ft.

Relative:
Lower

NO LOCATION AID
25 BOYLSTON ST
CHESTNUT HILL, MA 02467

SHWS **S109489589**
LUST **N/A**
RELEASE
HW GEN

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0028099 / URAM

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0028099 / URAM

NO LOCATION AID (Continued) **S109489589**

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0028099 / URAM

Click here to access the MA DEP site for this facility

HW GEN
EPA Id: MV6175666900
EPA Id: MV6177540400

G38
West
1/4-1/2
0.266 mi.
1407 ft.

Relative:
Lower

CHESTNUT HILL MEDICAL CENTER **LUST** **S106954469**
25 BOYLSTON ST **RELEASE** **N/A**
NEWTON, MA 02467 **ENF**

Click here for full text details

LUST
Release Tracking Number / Current Status: 3-0024881 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0024881 / RAO

Click here to access the MA DEP site for this facility

ENF
Program Id: 3-0024881

39
West
1/4-1/2
0.299 mi.
1580 ft.

Relative:
Lower

NO LOCATION AID **SHWS** **S102967387**
1280 AND 1290 BOYLSTON ST **RELEASE** **N/A**
BROOKLINE, MA 02146

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0015680 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0015680 / RAO

Click here to access the MA DEP site for this facility

40
SE
1/4-1/2
0.311 mi.
1643 ft.

Relative:
Lower

NO LOCATION AID — **LUST** — **S106776105**
132 YARMOUTH RD — **RELEASE** — **N/A**
BROOKLINE, MA

Click here for full text details

LUST
Release Tracking Number / Current Status: 3-0024451 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0024451 / RAO

Click here to access the MA DEP site for this facility

41
ENE
1/4-1/2
0.324 mi.
1713 ft.

Relative:
Higher

CHESTNUT HILL BENEVOLENT ASSOC — **SHWS** — **S106953985**
910 BOYLSTON ST — **LUST** — **N/A**
CHESTNUT HILL, MA 02467 — **RELEASE**
HW GEN

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0024837 / RAO

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0025358 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0024837 / RAO
Release Tracking Number / Current Status: 3-0025358 / RAO

Click here to access the MA DEP site for this facility

HW GEN
State Generator Status: VQG-MA
EPA Id: MV6177345600

42
West
1/4-1/2
0.349 mi.
1842 ft.

Relative:
Lower

SHAWS SUPERMARKET — **LUST** — **S109489851**
1 BOYLSTON ST — **RELEASE** — **N/A**
NEWTON, MA 02458

Click here for full text details

LUST
Release Tracking Number / Current Status: 3-0028137 / RAO

SHAWS SUPERMARKET (Continued) **S109489851**

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0028137 / RAO

Click here to access the MA DEP site for this facility

43
NE
1/4-1/2
0.376 mi.
1985 ft.

Relative:
Lower

NO LOCATION AID **LUST** **S103383804**
59 VALLEY RD **RELEASE** **N/A**
BROOKLINE, MA 02146

Click here for full text details

LUST
Release Tracking Number / Current Status: 3-0017161 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0017161 / RAO

Click here to access the MA DEP site for this facility

44
NNE
1/4-1/2
0.411 mi.
2172 ft.

Relative:
Lower

SILBERT RESIDENCE **LUST** **S104847431**
106 SPOONER RD **RELEASE** **N/A**
BROOKLINE, MA 02146

Click here for full text details

LUST
Release Tracking Number / Current Status: 3-0020035 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0020035 / RAO

Click here to access the MA DEP site for this facility

45
NNW
1/4-1/2
0.451 mi.
2379 ft.

Relative:
Higher

NO LOCATION AID **SHWS** **S117552821**
413 HAMMOND STREET **LUST** **N/A**
NEWTON, MA 02467 **RELEASE**

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0032719 / PSNC

NO LOCATION AID (Continued) **S117552821**

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0032719 / PSNC

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0032719 / PSNC

Click here to access the MA DEP site for this facility

46
South
1/4-1/2
0.452 mi.
2385 ft.

Relative:
Lower

OLD BROOKLINE ASH LANDFILL **SWF/LF** **S102687632**
870 HAMMOND ST **HW GEN** **N/A**
BROOKLINE, MA 02146

Click here for full text details

SWF/LF
Current Operational Status: Inactive
Current Operational Status: Closed

HW GEN
State Generator Status: SQG-MA
EPA Id: MV6176462400

47
NNW
1/4-1/2
0.496 mi.
2618 ft.

Relative:
Higher

CHESTNUT HILL **LUST** **S107395354**
88 ESSEX RD **RELEASE** **N/A**
NEWTON, MA 02165 **LEAD**

Click here for full text details

LUST
Release Tracking Number / Current Status: 3-0011951 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0011951 / RAO

Click here to access the MA DEP site for this facility

LEAD
Inspector License Number: 1981

48
WSW
1/2-1
0.568 mi.
2997 ft.

Relative:
Lower

PARK INN HOTEL
160 BOYLSTON ST
NEWTON, MA 02159

SHWS
RELEASE

S106132260
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0023265 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0023265 / RAO

Click here to access the MA DEP site for this facility

49
NNE
1/2-1
0.579 mi.
3056 ft.

Relative:
Lower

VEHICLE ACCIDENT
BEACON STREET AND RESERVOIR RD
BOSTON, MA 02135

SHWS
RELEASE

S106512936
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0023873 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0023873 / RAO

Click here to access the MA DEP site for this facility

50
South
1/2-1
0.596 mi.
3149 ft.

Relative:
Lower

ASH LANDFILL FMR
HAMMOND ST
BROOKLINE, MA 02146

SHWS
INST CONTROL
RELEASE

S105199317
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0000939 / RAO

Click here to access the MA DEP site for this facility

INST CONTROL
Release Tracking Number: 3-0000939

RELEASE
Release Tracking Number / Current Status: 3-0000939 / RAO

Click here to access the MA DEP site for this facility

51
ENE
1/2-1
0.605 mi.
3195 ft.

Relative:
Higher

RESERVOIR RD
830 BOYLSTON ST
BROOKLINE, MA 02146

SHWS
RELEASE

S105596765
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0022088 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0022088 / RAO

Click here to access the MA DEP site for this facility

52
WSW
1/2-1
0.621 mi.
3280 ft.

Relative:
Higher

MILTONS
176 BOYLSTON ST
NEWTON, MA 02467

SHWS
RELEASE
ENF

S110115148
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0028976 / DPS

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0028976 / DPS

Click here to access the MA DEP site for this facility

ENF
Program Id: 3-0028976

53
North
1/2-1
0.626 mi.
3303 ft.

Relative:
Lower

CAROL POST
33 CHESTNUT HILL RD
NEWTON, MA 02467

SHWS
RELEASE

S106512960
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0023917 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0023917 / RAO

Click here to access the MA DEP site for this facility

54
ENE
1/2-1
0.702 mi.
3708 ft.

Relative:
Higher

DERJAMI TEXACO — **SHWS** **S100830408**
800 BOYLSTON ST — **RELEASE** **N/A**
BROOKLINE, MA 02146

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0002245 / PENNFA

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0002245 / PENNFA

Click here to access the MA DEP site for this facility

55
North
1/2-1
0.717 mi.
3784 ft.

Relative:
Lower

MERKERT CHEMISTRY CENTER — **SHWS** **S110361000**
2635 BEACON ST — **RELEASE** **N/A**
BRIGHTON, MA 02467 — **ENF**

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0029276 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0029276 / RAO

Click here to access the MA DEP site for this facility

ENF
Program Id: 3-0029276

56
NNW
1/2-1
0.721 mi.
3806 ft.

Relative:
Lower

BOSTON COLLEGE - SILVIO O CONTE FORUM — **SHWS** **S110303400**
2601 BEACON ST — **RELEASE** **N/A**
BOSTON, MA

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0029202 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0029202 / RAO

Click here to access the MA DEP site for this facility

57
South
1/2-1
0.730 mi.
3855 ft.

Relative:
Lower

NO LOCATION AID
10 HAMMOND POND PKWY
NEWTON, MA

SHWS **S101035793**
LUST **N/A**
SPILLS
RELEASE
LEAD

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0013381 / RAONR

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0013381 / RAONR

Click here to access the MA DEP site for this facility

SPILLS
Facility Id: 0000
Case Closed: YES
Spill ID: N90-1654

RELEASE
Release Tracking Number / Current Status: 3-0013381 / RAONR

Click here to access the MA DEP site for this facility

LEAD
Inspector License Number: 1377

58
WSW
1/2-1
0.745 mi.
3935 ft.

Relative:
Higher

OMNI FOODS GROCERY STORE
200 BOYLSTON ST
NEWTON, MA 02467

SHWS **S106343868**
LUST **N/A**
RELEASE

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0025099 / RAO

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0023714 / RAO
Release Tracking Number / Current Status: 3-0025099 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0023714 / RAO
Release Tracking Number / Current Status: 3-0025099 / RAO

Click here to access the MA DEP site for this facility

59
East
1/2-1
0.752 mi.
3970 ft.

Relative:
Higher

WARREN STREET PARCEL
80 HEATH ST
BROOKLINE, MA 02445

SHWS
RELEASE

S110526358
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0029516 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0029516 / RAO

Click here to access the MA DEP site for this facility

60
SE
1/2-1
0.786 mi.
4148 ft.

Relative:
Higher

THE COUNTRY CLUB STABLES BUILDING
191 CLYDE STREET
CHESTNUT HILL, MA 02467

SHWS
LUST
RELEASE
LEAD

S107305732
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0033554 / UNCLSS
Release Tracking Number / Current Status: 3-0033455 / UNCLSS

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0033455 / UNCLSS

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0033455 / UNCLSS
Release Tracking Number / Current Status: 3-0033554 / UNCLSS

Click here to access the MA DEP site for this facility

LEAD
Inspector License Number: 2753

61
South
1/2-1
0.802 mi.
4235 ft.

Relative:
Higher

CHESTNUT HILL
12 LAGRANGE ST
BROOKLINE, MA

SHWS
RELEASE

S109029220
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0019536 / RAO

CHESTNUT HILL (Continued) **S109029220**

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0019536 / RAO

Click here to access the MA DEP site for this facility

62
North
1/2-1
0.807 mi.
4260 ft.

Relative:
Lower

BOSTON COLLEGE **SHWS** **S106511782**
200 ST THOMAS MOORE DR **LAST** **N/A**
BRIGHTON, MA 02135 **RELEASE**

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0016890 / RAO

Click here to access the MA DEP site for this facility

LAST
Release Tracking Number / Current Status: 3-0016890 / RAO

RELEASE
Release Tracking Number / Current Status: 3-0016890 / RAO

Click here to access the MA DEP site for this facility

63
ENE
1/2-1
0.820 mi.
4332 ft.

Relative:
Lower

NO LOCATION AID **SHWS** **S104545697**
HEATH HILL RD **RELEASE** **N/A**
BROOKLINE, MA 02146

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0014221 / URAM

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0014221 / URAM

Click here to access the MA DEP site for this facility

64
ENE
1/2-1
0.841 mi.
4439 ft.

Relative:
Lower

CUMBERLAND FARMS GULF
1195 BOYLSTON ST
BROOKLINE, MA 02146

SHWS
LUST
RELEASE

S100831629
N/A

Click here for full text details

SHWS

Release Tracking Number / Current Status: 3-0023609 / RAO
Release Tracking Number / Current Status: 3-0014010 / RAONR
Release Tracking Number / Current Status: 3-0011189 / RAONR
Release Tracking Number / Current Status: 3-0004823 / RAO

Click here to access the MA DEP site for this facility

LUST

Release Tracking Number / Current Status: 3-0004823 / RAO
Release Tracking Number / Current Status: 3-0012565 / RAONR

Click here to access the MA DEP site for this facility

RELEASE

Release Tracking Number / Current Status: 3-0004823 / RAO
Release Tracking Number / Current Status: 3-0011189 / RAONR
Release Tracking Number / Current Status: 3-0012565 / RAONR
Release Tracking Number / Current Status: 3-0014010 / RAONR
Release Tracking Number / Current Status: 3-0023609 / RAO

Click here to access the MA DEP site for this facility

H65
SSW
1/2-1
0.854 mi.
4509 ft.

Relative:
Lower

BROOKLINE/NEWTON LINE CHESTNUT HILL02467
39 KENSINGTON CIR
BROOKLINE, MA

SHWS
RELEASE

S108347864
N/A

Click here for full text details

SHWS

Release Tracking Number / Current Status: 3-0026416 / RAO

Click here to access the MA DEP site for this facility

RELEASE

Release Tracking Number / Current Status: 3-0026416 / RAO

Click here to access the MA DEP site for this facility

66
WSW
1/2-1
0.862 mi.
4549 ft.

Relative:
Lower

HAMPTON PLACE CONDOMINIUMS
77 FLORENCE ST
NEWTON, MA 02467

SHWS
RELEASE

S106775982
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0024494 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0024494 / RAO

Click here to access the MA DEP site for this facility

H67
SSW
1/2-1
0.870 mi.
4596 ft.

Relative:
Lower

BROOKLINE/NEWTON LINECHESTNUTHILL02467
31 KENSINGTON CIR
BROOKLINE, MA

SHWS
RELEASE

S108348086
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0026418 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0026418 / RAO

Click here to access the MA DEP site for this facility

68
NNE
1/2-1
0.883 mi.
4660 ft.

Relative:
Lower

NO LOCATION AID
375 CHESTNUT HILL AVENUE
BRIGHTON, MA 02135

SHWS
LUST
RELEASE

S118643369
N/A

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0033550 / UNCLSS

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0033550 / UNCLSS

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0033550 / UNCLSS

NO LOCATION AID (Continued) **S118643369**

Click here to access the MA DEP site for this facility

I69
SSW
1/2-1
0.898 mi.
4742 ft.

Relative: Lower

BROOKLINE/NEWTON LINE CHESTNUTHILL02467 **SHWS** **S108348098**
45 MARTHAS LN **RELEASE** **N/A**
BROOKLINE, MA

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0026417 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0026417 / RAO

Click here to access the MA DEP site for this facility

I70
SSW
1/2-1
0.922 mi.
4868 ft.

Relative: Lower

BROOKLINE/NEWTON (CHESTNUT HILL) LINE **SHWS** **S108117203**
33 MARTHAS LN **RELEASE** **N/A**
BROOKLINE, MA **ENF**

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0025862 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0025862 / RAO

Click here to access the MA DEP site for this facility

ENF
Program Id: 3-0025862

71
WSW
1/2-1
0.952 mi.
5026 ft.

Relative: Higher

SUNOCO SERVICE STATION **SHWS** **1000690310**
325 BOYLSTON ST **LUST** **MAD000637363**
NEWTON, MA 02159 **UST**
AST
RELEASE
RCRA NonGen / NLR
Financial Assurance

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0019998 / RAONR
Release Tracking Number / Current Status: 3-0016895 / RAO

SUNOCO SERVICE STATION (Continued) **1000690310**

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0017193 / RAONR

Click here to access the MA DEP site for this facility

UST
Facility Id: 10687
Tank Status: Tank Removed
Tank Status: In Use

AST
Release Tracking Number: 10687

RELEASE
Release Tracking Number / Current Status: 3-0016895 / RAO
Release Tracking Number / Current Status: 3-0017193 / RAONR
Release Tracking Number / Current Status: 3-0019998 / RAONR

Click here to access the MA DEP site for this facility

RCRA NonGen / NLR
EPA Id: MAD000637363

Financial Assurance
Facility Id: 10687

J72 **BOSTON COLLEGE/SERVICE BLDG** **SHWS** **U003001464**
NNW **140 COMMONWEALTH AVE** **INST CONTROL** **N/A**
1/2-1 **CHESTNUT HILL, MA 02167** **RELEASE**
0.953 mi. **Financial Assurance**
5032 ft. **TIER 2**

Click here for full text details

Relative: Lower

SHWS
Release Tracking Number / Current Status: 3-0030690 / RAO
Release Tracking Number / Current Status: 3-0016681 / RAO
Release Tracking Number / Current Status: 3-0010103 / RAO
Release Tracking Number / Current Status: 3-0025465 / RAO

Click here to access the MA DEP site for this facility

INST CONTROL
Release Tracking Number: 3-0010103

RELEASE
Release Tracking Number / Current Status: 3-0010103 / RAO

BOSTON COLLEGE/SERVICE BLDG (Continued) **U003001464**

Release Tracking Number / Current Status: 3-0016681 / RAO
Release Tracking Number / Current Status: 3-0025465 / RAO
Release Tracking Number / Current Status: 3-0030690 / RAO

Click here to access the MA DEP site for this facility

Financial Assurance
Facility Id: 527

TIER 2
Facility Id: FATR2015000000009993

J73 **BOSTON COLLEGE MAIN CAMPUS** **SHWS** **S106030083**
NNW **140 COMMONWEALTH AVENUE** **LUST** **N/A**
1/2-1 **CHESTNUT HILL, MA 02467** **RELEASE**
0.953 mi. **AIRS**
5032 ft. **HW GEN**
LEAD
Relative: **TIER 2**
Lower

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0023101 / RAO

Click here to access the MA DEP site for this facility

LUST
Release Tracking Number / Current Status: 3-0023101 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0023101 / RAO

Click here to access the MA DEP site for this facility

AIRS
Facility Status: APPROV
Facility Status: WITHD
Facility Status: NOTREQ
Date Closed: 04/24/1998
Date Closed: 04/08/2000
Date Closed: 04/17/2007
Date Closed: 11/06/2006
Date Closed: 01/12/2006
Date Closed: 04/01/2009
Date Closed: 08/05/2008
Date Closed: 07/20/2009
Date Closed: 09/13/2002
Date Closed: 12/07/1999

HW GEN

BOSTON COLLEGE MAIN CAMPUS (Continued) **S106030083**

State Generator Status: VQG-MA
EPA Id: MAD045896339

LEAD
Inspector License Number: 3561

TIER 2
Facility Id: FATR20125K2XMX002P9H
Facility Id: FATR20125K54YW01VPWB

74
ENE
1/2-1
0.968 mi.
5112 ft.

Relative:
Lower

RESIDENTIAL PROPERTY **SHWS** **S109160963**
42 FISHER AVE **RELEASE** **N/A**
BROOKLINE, MA 02445 **LEAD**

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0030508 / RAO

Click here to access the MA DEP site for this facility

RELEASE
Release Tracking Number / Current Status: 3-0030508 / RAO

Click here to access the MA DEP site for this facility

LEAD
Inspector License Number: 1950

75
NE
1/2-1
0.974 mi.
5145 ft.

Relative:
Lower

TRACKMANS LOBBY **SHWS** **S108476791**
400 CHESTNUT HILL AVE **LAST** **N/A**
BRIGHTON, MA 02135 **INST CONTROL**
RELEASE
ENF

Click here for full text details

SHWS
Release Tracking Number / Current Status: 3-0026609 / RAO

Click here to access the MA DEP site for this facility

LAST
Release Tracking Number / Current Status: 3-0026609 / RAO

INST CONTROL
Release Tracking Number: 3-0026609

RELEASE

TRACKMANS LOBBY (Continued) **S108476791**

Release Tracking Number / Current Status: 3-0026609 / RAO

Click here to access the MA DEP site for this facility

ENF

Program Id: 3-0026609

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
MA	AIRS	Permitted Facilities Listing	Department of Environmental Protection	07/19/2016	07/25/2016	10/04/2016
MA	AST	Aboveground Storage Tank Database	Department of Public Safety	10/22/2009	10/28/2009	11/06/2009
MA	BROWNFIELDS	Completed Brownfields Covenants Listing	Office of the Attorney General	12/31/2015	02/04/2016	04/01/2016
MA	BROWNFIELDS 2	Potential Brownfields Listing	Department of Environmental Protection	05/13/2016	05/24/2016	07/19/2016
MA	DRYCLEANERS	Regulated Drycleaning Facilities	Department of Environmental Protection	07/07/2016	07/12/2016	07/19/2016
MA	ENFORCEMENT	Enforcement Action Cases	Department of Environmental Quality	08/12/2016	08/22/2016	10/04/2016
MA	Financial Assurance 1	Financial Assurance Information Listing	Department of Environmental Protection	12/01/2010	12/23/2010	02/03/2011
MA	Financial Assurance 2	Financial Assurance Information Listing	Office of State Fire Marshal	10/21/2011	10/25/2011	11/18/2011
MA	Financial Assurance 3	Financial Assurance Information listing	Department of Environmental Protection	10/01/2014	10/30/2014	11/10/2014
MA	GWDP	Ground Water Discharge Permits	MassGIS	03/10/2016	08/02/2016	10/04/2016
MA	HW GEN	List of Massachusetts Hazardous Waste Generators	Department of Environmental Protection	06/21/2016	06/28/2016	07/19/2016
MA	INST CONTROL	Sites With Activity and Use Limitation	Department of Environmental Protection	06/28/2016	07/13/2016	07/19/2016
MA	LAST	Leaking Aboveground Storage Tank Sites	Department of Environmental Protection	06/28/2016	07/13/2016	07/19/2016
MA	LEAD	Lead Inspection Database	Department of Health & Human Services, Childh	07/09/2015	07/15/2015	08/04/2015
MA	LF PROFILES	Landfill Profiles Listing	Department of Environmental Protection	07/01/2015	10/27/2015	12/14/2015
MA	LIENS	Liens Information Listing	Department of Environmental Protection	02/24/2014	02/27/2014	03/14/2014
MA	LUST	Leaking Underground Storage Tank Listing	Department of Environmental Protection	06/28/2016	07/13/2016	07/19/2016
MA	MA SPILLS	Historical Spill List	Department of Environmental Protection	09/30/1993	12/03/2003	12/31/2003
MA	MERCURY	Mercury Product Recyling Drop-Off Locations Listing	Department of Environmental Protection	06/06/2016	06/09/2016	07/19/2016
MA	NPDES	NPDES Permit Listing	Department of Environmental Protection	06/22/2016	08/17/2016	10/04/2016
MA	RELEASE	Reportable Releases	Department of Environmental Protection	06/28/2016	07/13/2016	07/19/2016
MA	RGA HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Environmental Protection		07/01/2013	12/24/2013
MA	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	Department of Environmental Protection		07/01/2013	12/24/2013
MA	SHWS	Site Transition List	Department of Environmental Protection	06/28/2016	07/13/2016	07/19/2016
MA	SPILLS 80	SPILLS80 data from FirstSearch	FirstSearch	03/10/1998	01/03/2013	03/05/2013
MA	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	12/11/2012	01/03/2013	02/08/2013
MA	SWF/LF	Solid Waste Facility Database/Transfer Stations	Department of Environmental Protection	01/31/2016	04/07/2016	04/21/2016
MA	TIER 2	Tier 2 Information Listing	Massachusetts Emergency Management Agency	12/31/2015	05/26/2016	07/19/2016
MA	TSD	TSD Facility	Department of Environmental Protection	04/01/2015	06/30/2015	07/10/2015
MA	UST	Summary Listing of all the Tanks Registered in the State of	Department of Fire Services, Office of the Pu	08/22/2016	08/23/2016	10/04/2016
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	04/22/2013	03/03/2015	03/09/2015
US	ABANDONED MINES	Abandoned Mines	Department of Interior	06/09/2016	06/13/2016	09/02/2016
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2013	02/24/2015	09/30/2015
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2005	08/07/2009	10/22/2009
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	07/01/2014	09/10/2014	10/20/2014
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	03/31/2016	08/01/2016	09/23/2016
US	CORRACTS	Corrective Action Report	EPA	06/27/2016	06/30/2016	09/02/2016
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	06/02/2016	06/03/2016	09/02/2016
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	07/31/2012	08/07/2012	09/18/2012
US	Delisted NPL	National Priority List Deletions	EPA	03/07/2016	04/05/2016	04/15/2016
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	09/18/2016	09/20/2016	10/21/2016
US	EDR Hist Auto	EDR Exclusive Historic Gas Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historic Dry Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	09/26/2016	09/29/2016	11/11/2016
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	09/14/2016	10/04/2016	10/21/2016
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	12/31/2005	02/06/2006	01/11/2007
US	FEMA UST	Underground Storage Tank Listing	FEMA	01/01/2010	02/16/2010	04/12/2010
US	FINDS	Facility Index System/Facility Registry System	EPA	07/15/2016	09/07/2016	11/11/2016
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	01/31/2015	07/08/2015	10/13/2015
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	08/22/2016	08/23/2016	10/21/2016
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	07/21/2016	07/26/2016	09/23/2016
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	06/27/2016	06/28/2016	09/23/2016
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	07/27/2016	08/05/2016	10/21/2016
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	10/27/2015	10/29/2015	01/04/2016
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	01/07/2016	01/08/2016	02/18/2016
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	02/05/2016	04/29/2016	06/03/2016
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	02/17/2016	04/27/2016	06/03/2016
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	12/11/2015	02/19/2016	06/03/2016
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	10/09/2015	02/12/2016	06/03/2016
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/13/2015	10/23/2015	02/18/2016
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	02/25/2016	04/27/2016	06/03/2016
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2005	12/08/2006	01/11/2007
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/20/2015	10/29/2015	01/04/2016
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	01/07/2016	01/08/2016	02/18/2016
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	02/05/2016	04/29/2016	06/03/2016
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	11/05/2015	11/13/2015	01/04/2016
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	12/03/2015	02/04/2016	06/03/2016
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	09/23/2014	11/25/2014	01/29/2015
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	01/26/2016	02/05/2016	06/03/2016
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	02/25/2016	04/27/2016	06/03/2016
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	03/07/2016	04/07/2016	09/02/2016
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	02/18/2014	03/18/2014	04/24/2014
US	LUCIS	Land Use Control Information System	Department of the Navy	05/28/2015	05/29/2015	06/11/2015
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	08/30/2016	09/08/2016	10/21/2016
US	NPL	National Priority List	EPA	03/07/2016	04/05/2016	04/15/2016
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	01/20/2016	04/28/2016	09/02/2016
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	02/01/2011	10/19/2011	01/10/2012
US	PRP	Potentially Responsible Parties	EPA	10/25/2013	10/17/2014	10/20/2014
US	Proposed NPL	Proposed National Priority List Sites	EPA	03/07/2016	04/05/2016	04/15/2016

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	10/03/2016	10/05/2016	10/21/2016
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	06/21/2016	06/30/2016	09/02/2016
US	RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generators	Environmental Protection Agency	06/21/2016	06/30/2016	09/02/2016
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	06/21/2016	06/30/2016	09/02/2016
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	06/21/2016	06/30/2016	09/02/2016
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	06/21/2016	06/30/2016	09/02/2016
US	RMP	Risk Management Plans	Environmental Protection Agency	08/01/2016	08/22/2016	11/11/2016
US	ROD	Records Of Decision	EPA	11/25/2013	12/12/2013	02/24/2014
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	03/07/2011	03/09/2011	05/02/2011
US	SEMS	Superfund Enterprise Management System	EPA	03/07/2016	04/05/2016	04/15/2016
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	03/07/2016	04/05/2016	04/15/2016
US	SSTS	Section 7 Tracking Systems	EPA	12/31/2009	12/10/2010	02/25/2011
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2014	11/24/2015	04/05/2016
US	TSCA	Toxic Substances Control Act	EPA	12/31/2012	01/15/2015	01/29/2015
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	09/14/2010	10/07/2011	03/01/2012
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	06/30/2016	07/25/2016	10/21/2016
US	US AIRS MINOR	Air Facility System Data	EPA	06/30/2016	07/25/2016	10/21/2016
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	09/20/2016	09/21/2016	11/11/2016
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	08/30/2016	09/06/2016	09/23/2016
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	05/09/2016	06/01/2016	09/02/2016
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	07/12/2016	08/17/2016	10/21/2016
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	08/31/2016	09/06/2016	09/23/2016
US	US INST CONTROL	Sites with Institutional Controls	Environmental Protection Agency	05/09/2016	06/01/2016	09/02/2016
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	08/05/2016	09/01/2016	09/23/2016
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	12/05/2005	02/29/2008	04/18/2008
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	10/25/2015	01/29/2016	04/05/2016

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

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GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
MA	State Wetlands	Wetland Inventory	MassDEP			
US	Topographic Map		U.S. Geological Survey			

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

2475-001 LEVI BROOKLINE BALDWIN SCHOOL
484 HEATH STREET
CHESTNUT HILL, MA 02467

TARGET PROPERTY COORDINATES

Latitude (North):	42.322894 - 42° 19' 22.42''
Longitude (West):	71.161403 - 71° 9' 41.05''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	321896.6
UTM Y (Meters):	4687676.0
Elevation:	194 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5646211 NEWTON, MA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

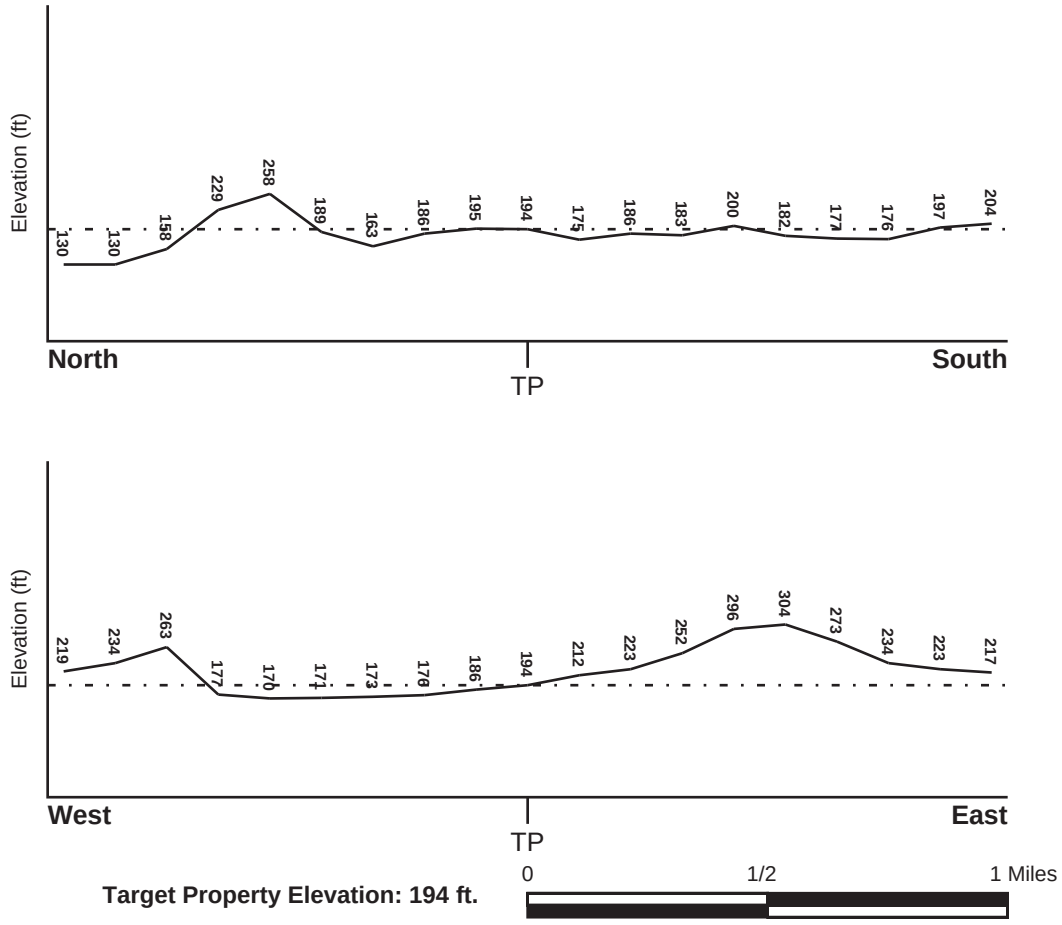
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General West

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 194 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
25017C0558E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
25025C0059G	FEMA FIRM Flood data
25025C0058G	FEMA FIRM Flood data
25025C0066G	FEMA FIRM Flood data
25025C0067G	FEMA FIRM Flood data
25017C0566E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NEWTON	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
1	1/2 - 1 Mile WSW	Varies
2	1/2 - 1 Mile ENE	N

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

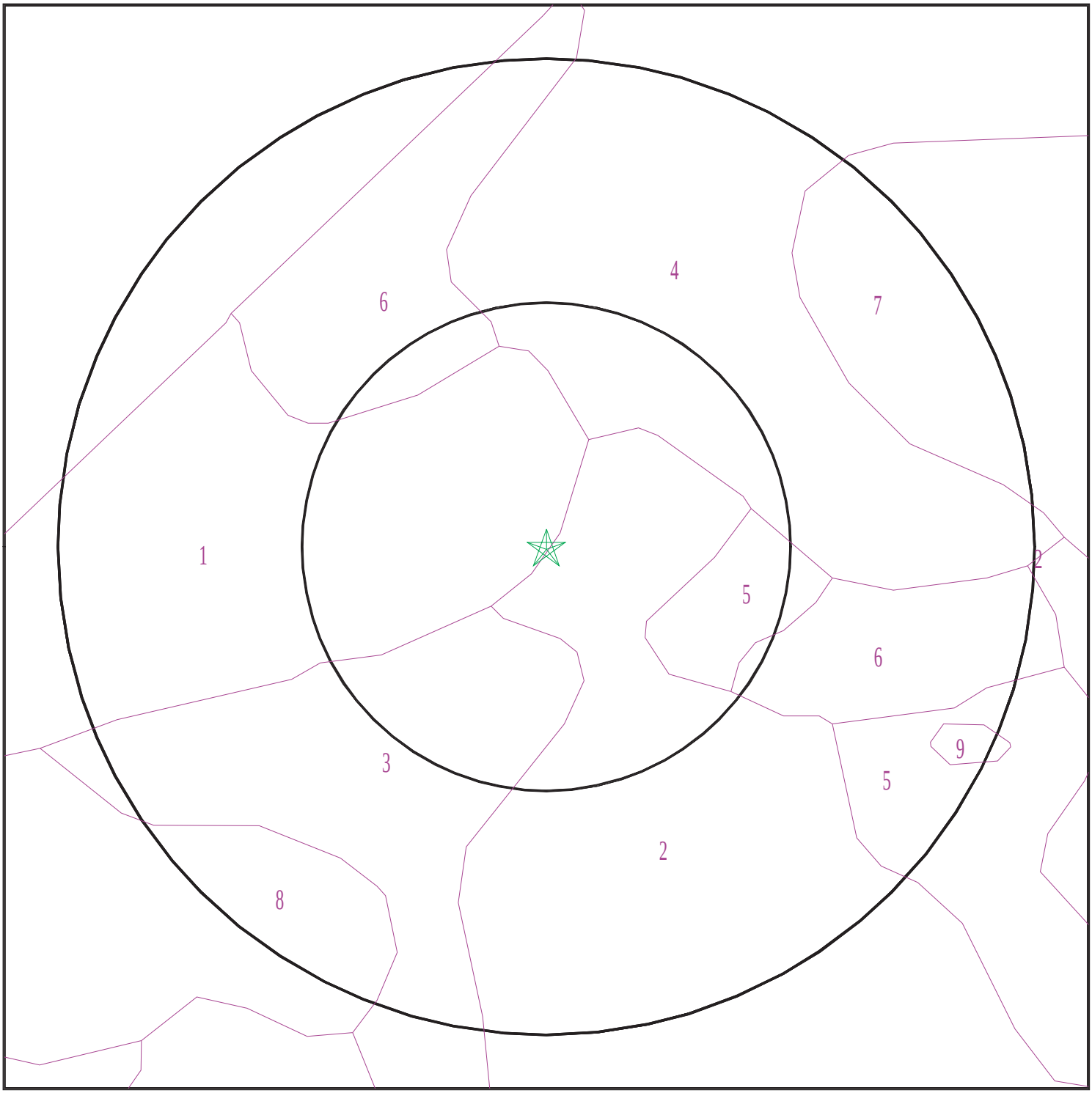
Era:	Paleozoic
System:	Cambrian
Series:	Cambrian
Code:	Ce *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4795721.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	2475-001 Levi Brookline Baldwin School	CLIENT:	Endpoint, LLC
ADDRESS:	484 Heath Street CHESTNUT HILL MA 02467	CONTACT:	Katie Snyder
LAT/LONG:	42.322894 / 71.161403	INQUIRY #:	4795721.2s
		DATE:	December 02, 2016 11:36 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Urban land

Soil Surface Texture:
Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 2

Soil Component Name: Charlton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Not reported

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 38 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	5 inches	35 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	35 inches	59 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

Soil Map ID: 3

Soil Component Name: Merrimac

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 14.11	Max: 6 Min: 3.6
2	18 inches	22 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 14.11	Max: 6 Min: 3.6
3	22 inches	59 inches	sr to sand to very gravelly coarse sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 4

Soil Component Name: Newport

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	9 inches	25 inches	channery silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	25 inches	59 inches	channery silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 5

Soil Component Name: Hollis

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C/D - Drained/undrained hydrology class of soils that can be drained and classified.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	3 inches	14 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	14 inches	18 inches	unweathered bedrock	Not reported	Not reported	Max: 0.9999 Min: 0	Max: Min:

Soil Map ID: 6

Soil Component Name: Udorthents

Soil Surface Texture: variable

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	variable	Not reported	Not reported	Max: 141.14 Min: 0.42	Max: Min:
2	5 inches	59 inches	variable	Not reported	Not reported	Max: 141.14 Min: 0.42	Max: Min:

Soil Map ID: 7

Soil Component Name: Newport

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	9 inches	25 inches	channery silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	25 inches	59 inches	channery silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 8

Soil Component Name: Charlton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	5 inches	35 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	35 inches	59 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

Soil Map ID: 9

Soil Component Name: Water

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
3	USGS40000472233	1/2 - 1 Mile NW
4	USGS40000471943	1/2 - 1 Mile SSE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

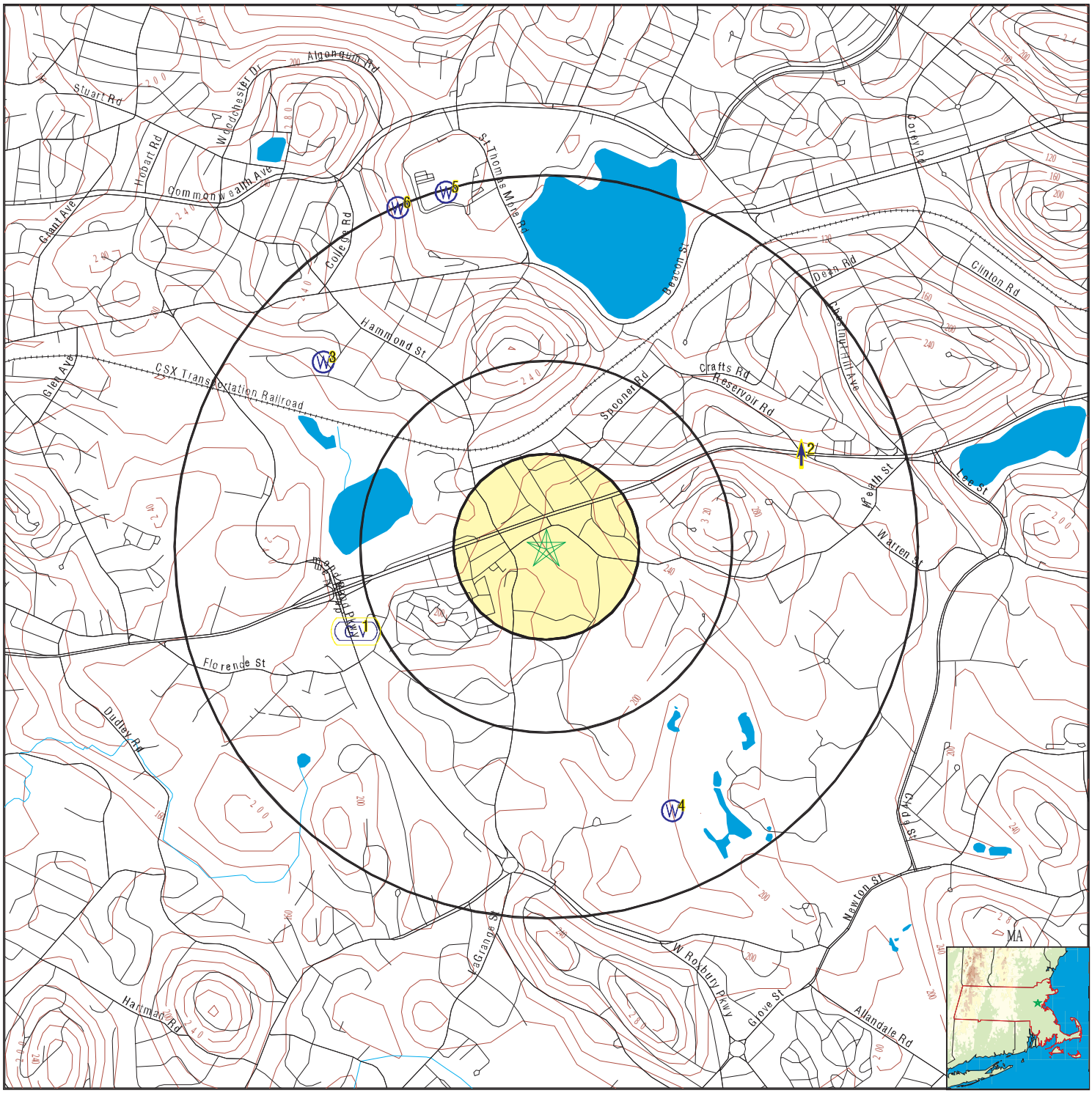
No PWS System Found

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
5	MA8000000000471	1/2 - 1 Mile NNW
6	MA8000000000114	1/2 - 1 Mile NNW

PHYSICAL SETTING SOURCE MAP - 4795721.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

- Potentially Productive Aquifers
- Not Potentially Productive Aquifers
- DEP Approved Zone IIs
- EPA Designated Sole Src. Aq.

SITE NAME: 2475-001 Levi Brookline Baldwin School	CLIENT: Endpoint, LLC
ADDRESS: 484 Heath Street CHESTNUT HILL MA 02467	CONTACT: Katie Snyder
LAT/LONG: 42.322894 / 71.161403	INQUIRY #: 4795721.2s DATE: December 02, 2016 11:36 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
1 **WSW** **1/2 - 1 Mile** **Lower**	Click here for full text details	**AQUIFLOW**	**45978**
2 **ENE** **1/2 - 1 Mile** **Higher**	Click here for full text details	**AQUIFLOW**	**4881**
3 **NW** **1/2 - 1 Mile** **Lower**	Click here for full text details	**FED USGS**	**USGS40000472233**
4 **SSE** **1/2 - 1 Mile** **Lower**	Click here for full text details	**FED USGS**	**USGS40000471943**
5 **NNW** **1/2 - 1 Mile** **Lower**	Click here for full text details	**MA WELLS**	**MA8000000000471**
6 **NNW** **1/2 - 1 Mile** **Lower**	Click here for full text details	**MA WELLS**	**MA8000000000114**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: MA Radon

Radon Test Results

County	% of sites>4 pCi/L	Median
NORFOLK	21	1.9

Federal EPA Radon Zone for NORFOLK County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for NORFOLK COUNTY, MA

Number of sites tested: 146

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	2.522 pCi/L	89%	11%	0%
Living Area - 2nd Floor	0.500 pCi/L	100%	0%	0%
Basement	2.907 pCi/L	82%	18%	1%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Massachusetts Geographic Information System (MassGIS) Datalayers
Source: Executive Office of Environmental Affairs

Public Water Supply Database: The Public Water Supply datalayer contains the locations of public community surface and groundwater supply sources and public non-community supply sources as defined in 310 CMR 22.00.

OTHER STATE DATABASE INFORMATION

Areas of Critical Environmental Concern Datalayer: The Areas of Critical Environmental Concern (ACEC) datalayer shows the location of areas that have been designated ACECs by the Secretary of Environmental Affairs. ACEC designation requires greater environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries. The ACEC Program is administered by the Department of Environmental Management (DEM) on behalf of the Secretary of Environmental Affairs. The Massachusetts Coastal Zone Management (MCZM) Office managed the original Coastal ACEC Program from 1978 to 1993, and continues to play a key role in monitoring coastal ACECs. Procedures for ACEC designation and the general policies governing the effects of designation are contained in the ACEC regulations (301 CMR 12.00). The ACEC datalayer has been compiled by MCZM and DEM and includes both coastal and inland areas.

EPA Designated Sole Source Aquifers Datalayer: The Sole Source Aquifer datalayer was compiled by the Department of Environmental Protection (DEP) Division of Water Supply (DWS). Seven Sole Source Aquifers have been designated by the US Environmental Protection Agency (EPA) for Massachusetts. A Sole Source Aquifer (SSA) is an aquifer designated by US EPA as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should that aquifer become contaminated. The aquifers were defined by a EPA hydrogeologist.

Aquifers Datalayer: MassGIS produced an aquifer datalayer composed of 20 individual panels, generally based on the boundaries of the major drainage basins. Areas of high and medium yield were mapped. This datalayer includes polygon attribute coding to help in the identification of areas in which cleanup of hazardous waste sites must meet drinking water standards, as defined in the Massachusetts Contingency Plan (MCP) (310 CMR 40.00000).

Non-Potential Drinking Water Source Areas: Non-Potential Drinking Water Source Areas (NPDWSA) are regulatory in nature, representing one of many considerations used in determining the standards to which ground water must be cleaned in the event of a release of oil or hazardous material. NPDWSAs are not based on existing water quality and do not indicate poor ambient conditions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

DEP Approved Zone IIs Datalayer: The Department of Environmental Protection (DEP) approved Zone IIs datalayer was compiled by the DEP Division of Water Supply (DWS). The database contains 281 approved Zone IIs statewide. As stated in 310 CMR 22.02, a Zone II is "that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation.) It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary)." These data are used in association with the Public Water Supplies datalayer. The following describes certain unique features of this association.

- Any proposed new well which will pump at least 100,000 gallons per day must have a Zone II delineation completed and approved by DEP prior to the well coming on line.
- Additionally, a new source may not be on-line yet, but other, older wells may fall within its Zone II boundary.
- Further, existing wells must have a Zone II delineated as a condition of receiving a water withdrawal permit under the Water Management Act.

RADON

State Database: MA Radon
Source: Department of Health
Telephone: 413-586-7525
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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2475-001 Levi Brookline Baldwin School

484 Heath Street

CHESTNUT HILL, MA 02467

Inquiry Number: 4795721.3

December 02, 2016

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/02/16

Site Name:

2475-001 Levi Brookline Baldv
484 Heath Street
CHESTNUT HILL, MA 02467
EDR Inquiry # 4795721.3

Client Name:

Endpoint, LLC
25 Buttrick Road
Londonderry, NH 03053
Contact: Katie Snyder

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Certified Sanborn Results:

Certification # ECA1-47D2-AFB2

PO # 2475-001

Project Levi Brookline Baldwin School

Maps Provided:

1969
1965
1957
1950
1925

Sanborn® Library search results

Certification #: ECA1-47D2-AFB2

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- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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Sanborn Sheet Key

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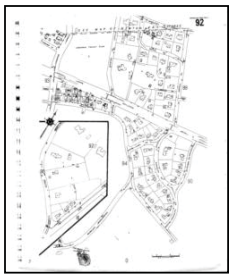
1969 Source Sheets



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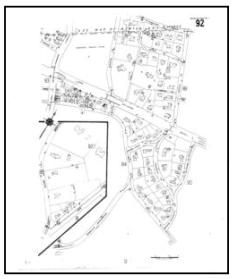
1969

Volume 2, Sheet 94
1969

1965 Source Sheets



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Volume 2, Sheet 94
1965

1957 Source Sheets

Volume 2, Sheet 92
1957

Volume 2, Sheet 94
1957

1950 Source Sheets

Volume 1, Sheet 92
1950

Volume 1, Sheet 94
1950

Sanborn Sheet Key

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1925 Source Sheets

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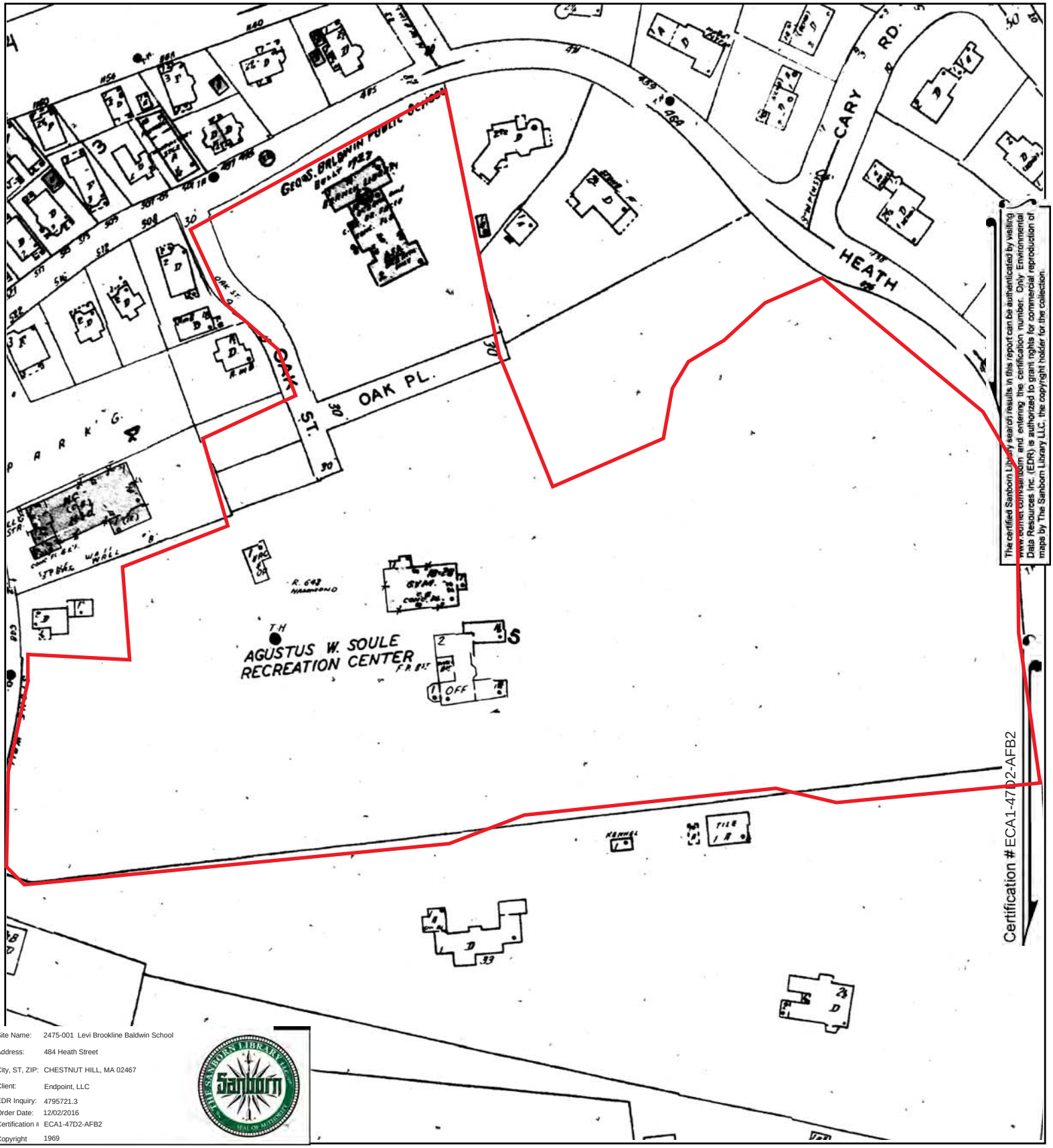
1925

Volume 1, Sheet 94
1925



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Certification #ECA1-47D2-AFB2

Site Name: 2475-001 Levi Brookline Baldwin School
Address: 484 Heath Street
City, ST, ZIP: CHESTNUT HILL, MA 02467
Client: Endpoint, LLC
EDR Inquiry: 4795721.3
Order Date: 12/02/2016
Certification #: ECA1-47D2-AFB2
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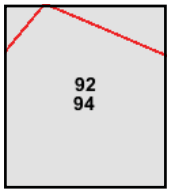

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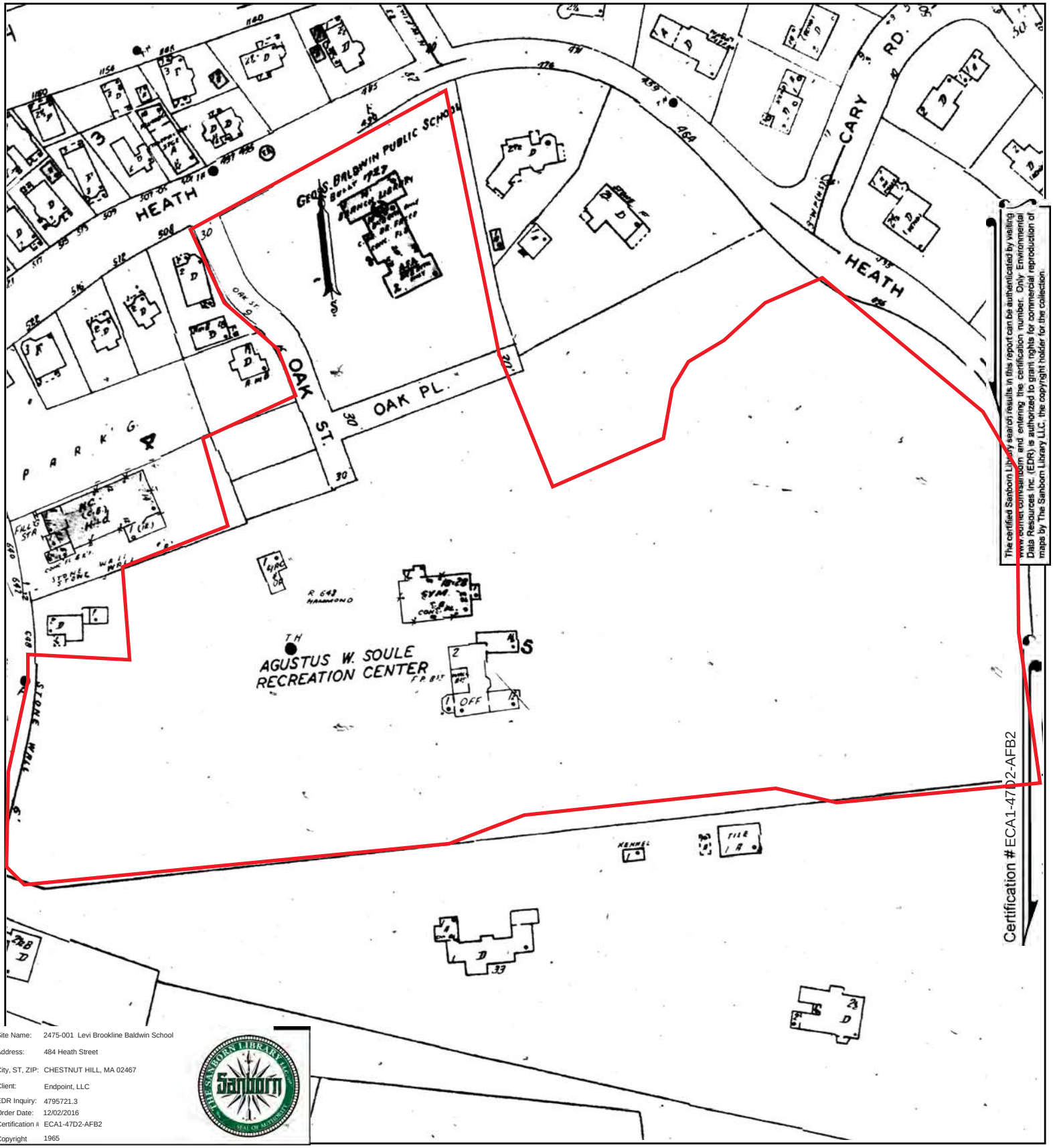
N



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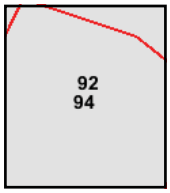

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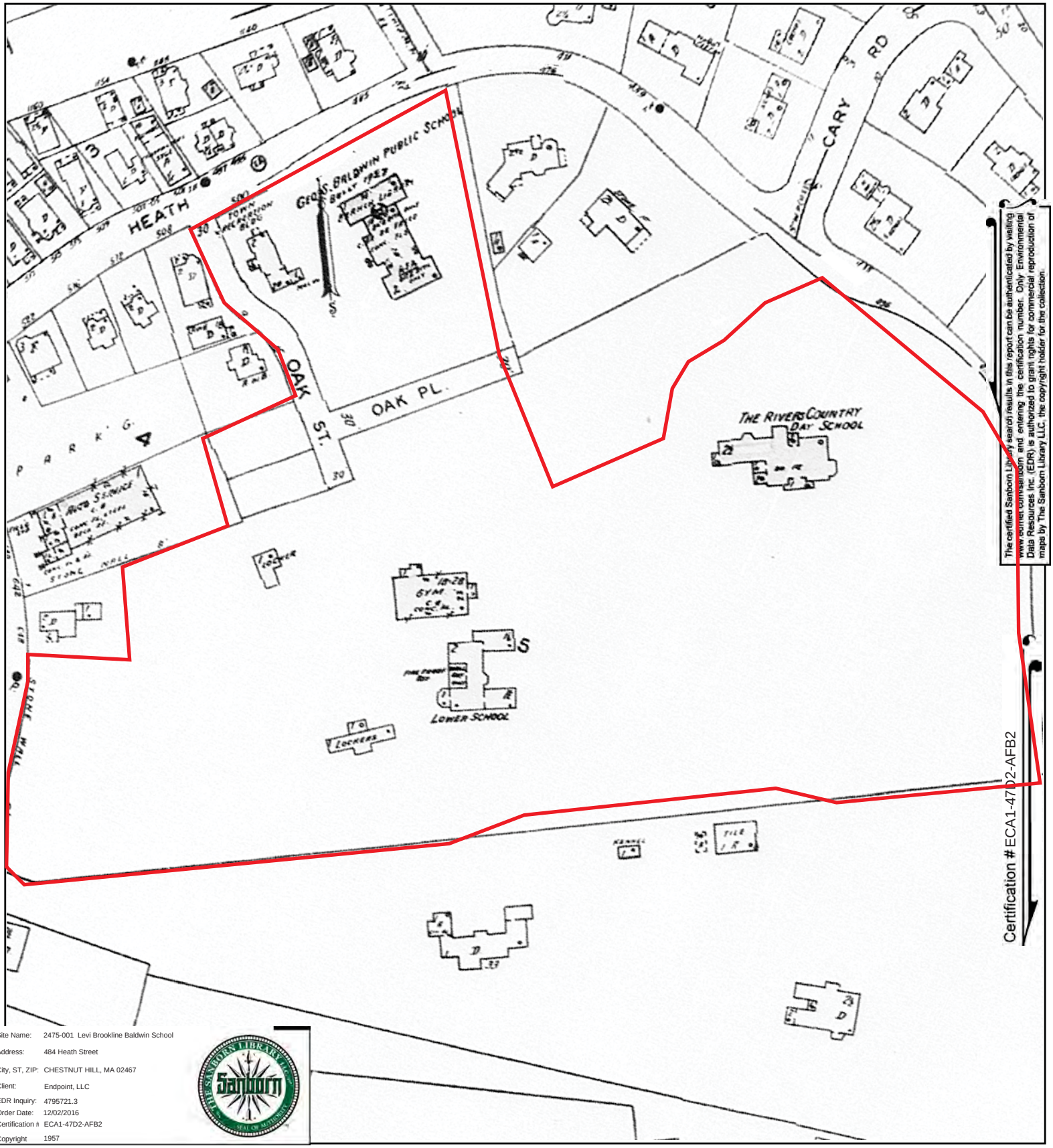

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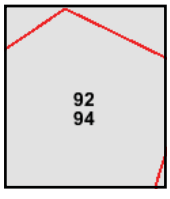

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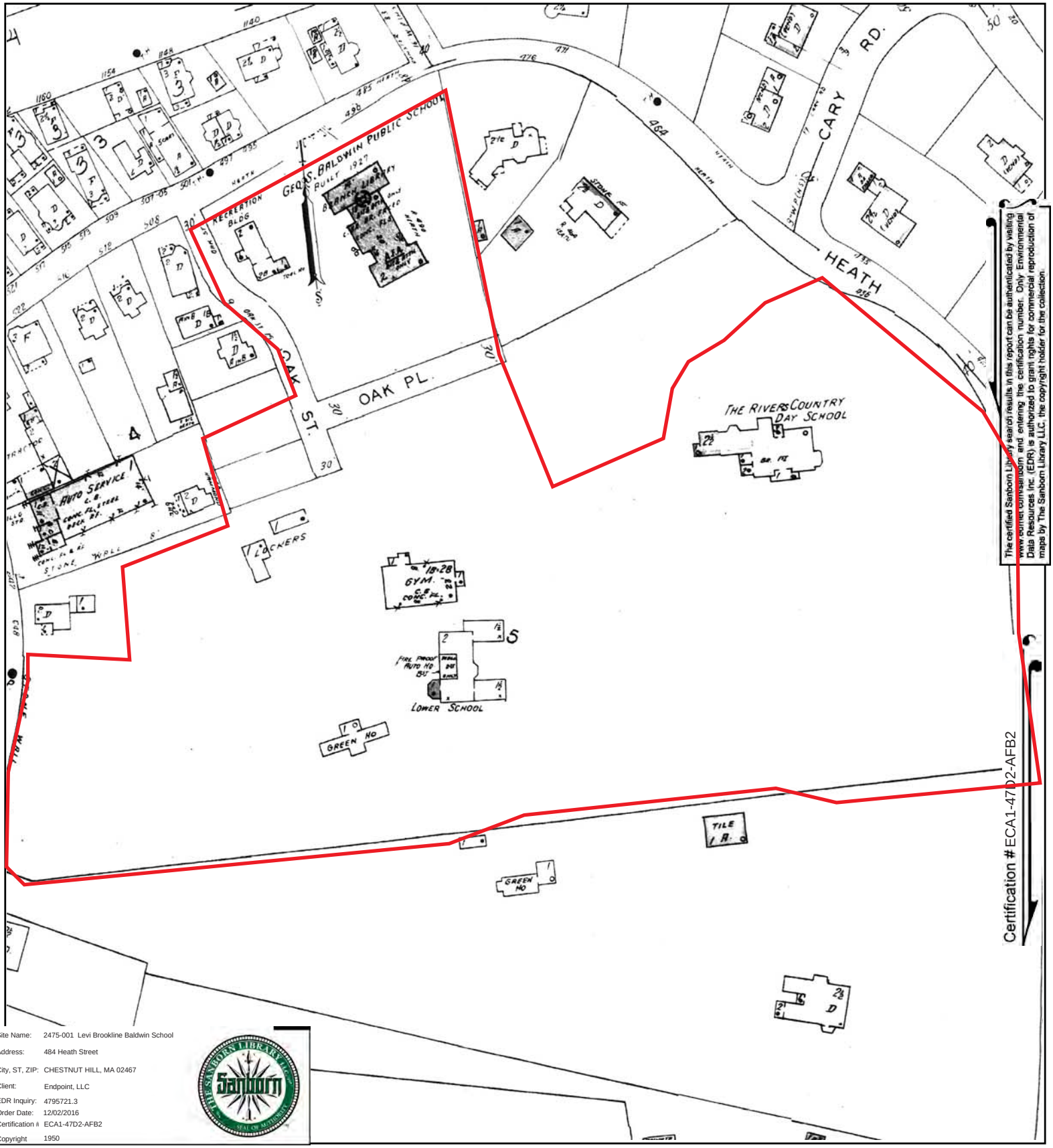

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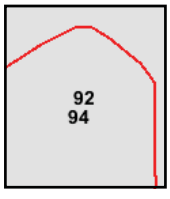

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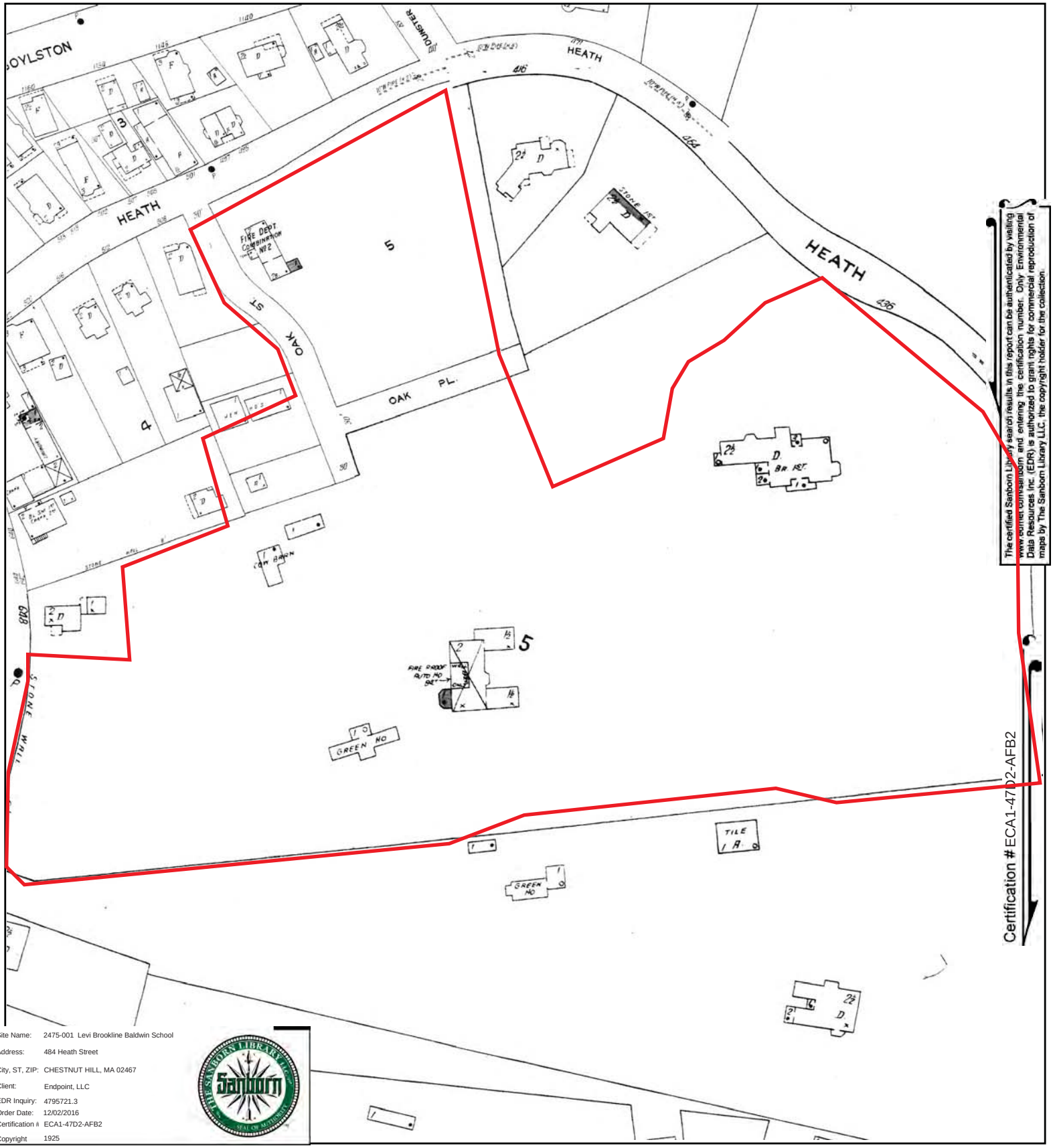

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City, ST, ZIP: CHESTNUT HILL, MA 02467
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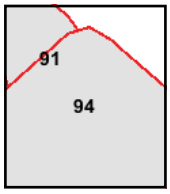

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N

ENGINEERS & ENVIRONMENTAL PROFESSIONALS

APPENDIX G

Tier 1 VES

2475-001 Levi Brookline Baldwin School
484 Heath Street
CHESTNUT HILL, MA 02467

Inquiry Number: 4795721.8s
February 6, 2017

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600).

STANDARD ENVIRONMENTAL RECORDS	Maximum Search Distance*	Summary: property	1/10	1/10 - 1/3
Federal NPL	0.333	0	0	0
Federal CERCLIS	0.333	0	0	0
Federal RCRA CORRACTS facilities list	0.333	0	0	0
Federal RCRA TSD facilities list	0.333	0	0	0
Federal RCRA generators list	property	0	-	-
Federal institutional controls / engineering controls registries	0.333	0	0	0
Federal ERNS list	property	0	-	-
State and tribal - equivalent NPL	not searched	-	-	-
State and tribal - equivalent CERCLIS	0.333	0	3	10
State and tribal landfill / solid waste disposal	0.333	0	0	0
State and tribal leaking storage tank lists	0.333	0	2	9
State and tribal registered storage tank lists	property	0	-	-
State and tribal institutional control / engineering control registries	property	0	-	-
State and tribal voluntary cleanup sites	property	0	-	-
State and tribal Brownfields sites	0.333	0	0	0
Other Standard Environmental Records	0.333	0	6	20

HISTORICAL USE RECORDS				
Former manufactured Gas Plants	0.333	0	0	0
Historical Gas Stations	0.125	0	4	0
Historical Dry Cleaners	0.125	0	1	0
Exclusive Recovered Govt. Archives	property	0	-	-

*Each category may include several separate databases, each having a different search distance. For each category, the table reports the maximum search distance applied. See the section 'Record Sources and Currency' for information on individual databases.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

2475-001 LEVI BROOKLINE BALDWIN SCHOOL
484 HEATH STREET
CHESTNUT HILL, MA 02467

COORDINATES

Latitude (North):	42.322894 - 42° 19′ 22.42218″
Longitude (West):	71.161403 - 71° 9′ 41.03943″
Elevation:	194 ft. above sea level

EXECUTIVE SUMMARY

PHYSICAL SETTING INFORMATION

Flood Zone:	Available
NWI Wetlands:	Available

AQUIFLOW®

Search Radius: 0.333 Mile.

No Aquiflow sites reported.

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name:	Urban land
Soil Surface Texture:	
Hydrologic Group:	Not reported
Soil Drainage Class:	
Hydric Status:	Unknown
Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

No Layer Information available.

Soil Map ID: 2

Soil Component Name:	Scarboro
Soil Surface Texture:	mucky fine sandy loam
Hydrologic Group:	Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.
Soil Drainage Class:	Very poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	mucky fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 4.5
2	9 inches	59 inches	sr to loamy fine sand to gravelly coarse sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 4.5

Soil Map ID: 3

Soil Component Name: Charlton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 38 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	5 inches	35 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	35 inches	59 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

Soil Map ID: 4

Soil Component Name: Merrimac

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 14.11	Max: 6 Min: 3.6
2	18 inches	22 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 14.11	Max: 6 Min: 3.6
3	22 inches	59 inches	sr to sand to very gravelly coarse sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 5

Soil Component Name: Newport

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

EXECUTIVE SUMMARY

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	9 inches	25 inches	channery silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	25 inches	59 inches	channery silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 6

Soil Component Name: Hollis

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C/D - Drained/undrained hydrology class of soils that can be drained and classified.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	3 inches	14 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	14 inches	18 inches	unweathered bedrock	Not reported	Not reported	Max: 0.9999 Min: 0	Max: Min:

Soil Map ID: 7

Soil Component Name: Udorthents

Soil Surface Texture: variable

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	variable	Not reported	Not reported	Max: 141.14 Min: 0.42	Max: Min:
2	5 inches	59 inches	variable	Not reported	Not reported	Max: 141.14 Min: 0.42	Max: Min:

Soil Map ID: 8

Soil Component Name: Newport

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

EXECUTIVE SUMMARY

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	9 inches	25 inches	channery silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	25 inches	59 inches	channery silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 9

Soil Component Name: Charlton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

EXECUTIVE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	5 inches	35 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	35 inches	59 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

Soil Map ID: 10

Soil Component Name: Water

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 11

Soil Component Name: Montauk

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 68 inches

EXECUTIVE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 3.6
2	9 inches	29 inches	fine sandy loam	Not reported	Not reported	Max: 4.23 Min: 0.42	Max: 6 Min: 3.6
3	29 inches	59 inches	loamy sand	Not reported	Not reported	Max: 0.42 Min: 0.14	Max: 6 Min: 3.6

Soil Map ID: 12

Soil Component Name: Merrimac

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 14.11	Max: 6 Min: 3.6
2	18 inches	22 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 14.11	Max: 6 Min: 3.6
3	22 inches	59 inches	sr to sand to very gravelly coarse sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 13

Soil Component Name: Newport

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	9 inches	25 inches	channery silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	25 inches	59 inches	channery silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 14

Soil Component Name: Newport

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	9 inches	25 inches	channery silt loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	25 inches	59 inches	channery silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 15

Soil Component Name: Charlton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	5 inches	35 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	35 inches	59 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

EXECUTIVE SUMMARY

Soil Map ID: 16

Soil Component Name: Sudbury

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 69 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Not reported	Not reported	Max: 42.34 Min: 14.11	Max: 6 Min: 3.6
2	11 inches	22 inches	sandy loam	Not reported	Not reported	Max: 42.34 Min: 14.11	Max: 6 Min: 3.6
3	22 inches	59 inches	gravelly coarse sand	Not reported	Not reported	Max: 141.14 Min: 14.11	Max: 6 Min: 3.6

EXECUTIVE SUMMARY

SEARCH RESULTS

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
NO LOCATION AID SHWS: State and tribal - equivalent CERCLIS SPILLS: Other Standard Environmental Records RELEASE: Other Standard Environmental Records	640 HAMMOND ST	<1/10 SW	▼ A1	21
MCNEILLY GARAGE SHWS: State and tribal - equivalent CERCLIS ENF: Other Standard Environmental Records LUST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records SPILLS: Other Standard Environmental Records LAST: State and tribal leaking storage tank lists	639 HAMMOND ST	<1/10 WSW	▼ A3	26
CUMBERLAND FARMS #70011 HW GEN: Other Standard Environmental Records	1180 BOYLSTON ST	<1/10 WNW	▼ B5	57
EXXON STATION #3-3258 SHWS: State and tribal - equivalent CERCLIS ENF: Other Standard Environmental Records LUST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records	1180 BOYLSTON ST	<1/10 WNW	▼ B6	58
CENTRAL CLEANERS OF BROOKLINE INC HW GEN: Other Standard Environmental Records DRYCLEANERS: Other Standard Environmental Records	621 HAMMOND ST	<1/10 W	▼ B9	89
S J MCNEILLY OLDS HW GEN: Other Standard Environmental Records	14 SHEAFE ST	<1/10 W	▼ C10	90
ROUTE 9 SHWS: State and tribal - equivalent CERCLIS RELEASE: Other Standard Environmental Records	1075 BOYLSTON ST	1/10 - 1/3 NE	▲ 12	93
CUMBERLAND FARMS 2456 HW GEN: Other Standard Environmental Records	1195 BOYLSTON ST	1/10 - 1/3 WNW	▼ D13	95
CVS PHARMACY 1862 HW GEN: Other Standard Environmental Records	1195 BOYLSTON ST	1/10 - 1/3 WNW	▼ D14	96
PINE MANOR COLLEGE HW GEN: Other Standard Environmental Records	400 HEATH ST	1/10 - 1/3 E	▲ 15	97
RESIDENCE SHWS: State and tribal - equivalent CERCLIS LAST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records	17 GLENOE RD	1/10 - 1/3 S	▼ 16	98
BRIMMER & MAY SCHOOL	69 MIDDLESEX RD	1/10 - 1/3 N	▼ 17	102

EXECUTIVE SUMMARY

Name	Address	Dist/Dir	Map ID	Page
HW GEN: Other Standard Environmental Records				
WIESCHHOFF RESIDENCE	30 NORFOLK RD	1/10 - 1/3 NNE	▲ 18	103
LUST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records				
CHESTNUT HILL SHOPPING CENTER	9 BOYLSTON ST	1/10 - 1/3 W	▼ E19	106
SHWS: State and tribal - equivalent CERCLIS RELEASE: Other Standard Environmental Records INST CONTROL: State and tribal institutional control / engineering control registries				
COMMERCIAL PROPERTY	1244-1262 BOYLSTON ST	1/10 - 1/3 W	▼ E20	110
SHWS: State and tribal - equivalent CERCLIS RELEASE: Other Standard Environmental Records				
NEW ENGLAND PODIATRY	1244 BOYLSTON ST	1/10 - 1/3 W	▼ F21	112
HW GEN: Other Standard Environmental Records				
CHESTNUT HILL SHOPPING CTR	11 BOYLSTON ST	1/10 - 1/3 W	▼ E22	113
SHWS: State and tribal - equivalent CERCLIS RELEASE: Other Standard Environmental Records				
CHESTNUT HILL SHOPPING CENTER	13 BOYLSTON ST	1/10 - 1/3 W	▼ E23	115
LUST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records INST CONTROL: State and tribal institutional control / engineering control registries				
RANDOLPH	375 HEATH ST	1/10 - 1/3 E	▲ 24	120
LUST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records				
1268 BOYLSTON ST NEAR RTE 9 EAST	BOYLSTON ST	1/10 - 1/3 W	▼ F25	122
SHWS: State and tribal - equivalent CERCLIS RELEASE: Other Standard Environmental Records				
GENERAL CINEMAS FMR	27 BOYLSTON ST	1/10 - 1/3 W	▼ G26	124
SHWS: State and tribal - equivalent CERCLIS LUST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records				
NO LOCATION AID	25 BOYLSTON ST	1/10 - 1/3 W	▼ G27	143
SHWS: State and tribal - equivalent CERCLIS LUST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records HW GEN: Other Standard Environmental Records				
CHESTNUT HILL MEDICAL CENTER	25 BOYLSTON ST	1/10 - 1/3 W	▼ G28	147
ENF: Other Standard Environmental Records LUST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records				
NO LOCATION AID	1280 AND 1290 BOYLSTON ST	1/10 - 1/3 W	▼ 29	152
SHWS: State and tribal - equivalent CERCLIS RELEASE: Other Standard Environmental Records				

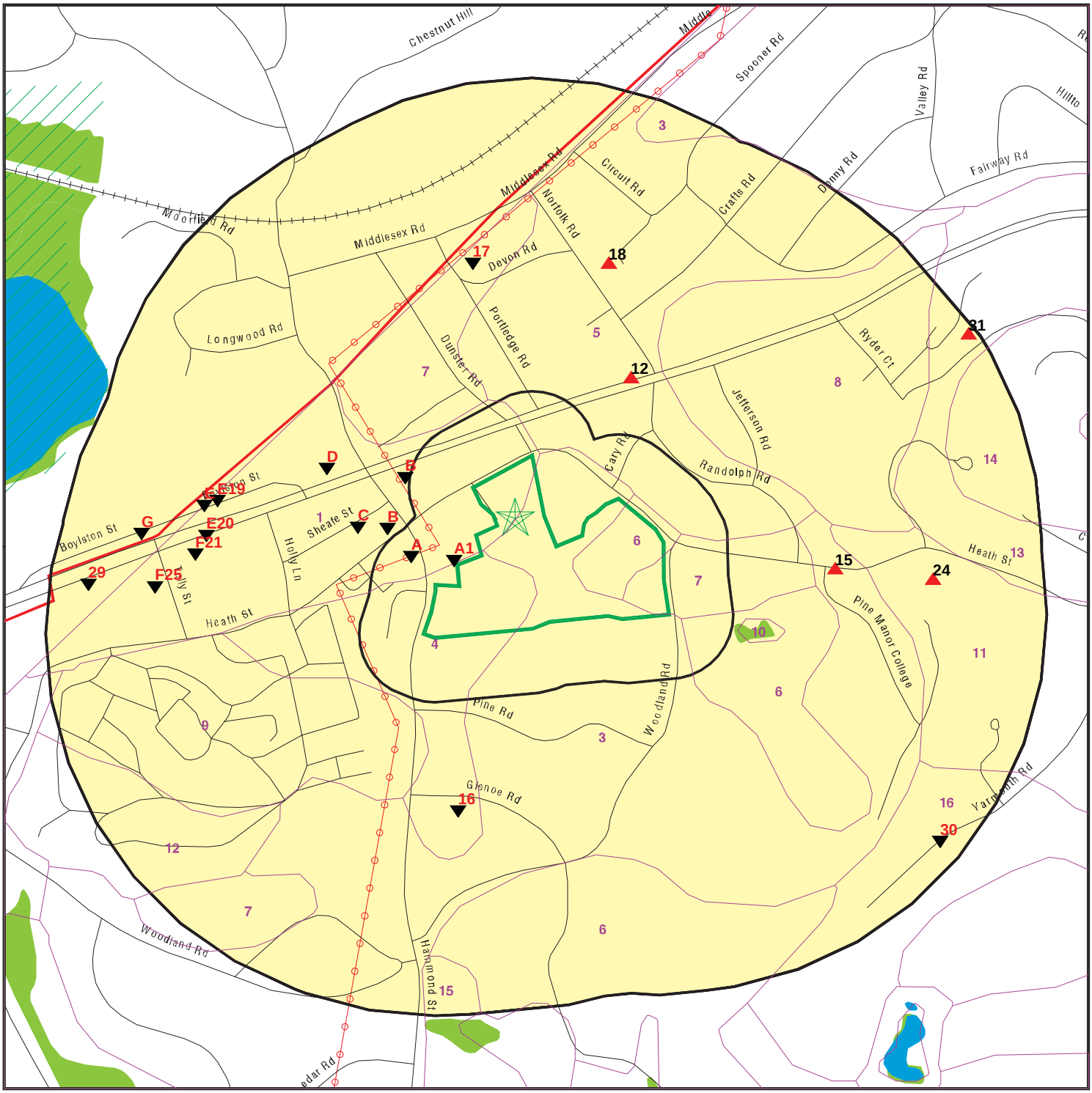
EXECUTIVE SUMMARY

Name	Address	Dist/Dir	Map ID	Page
NO LOCATION AID	132 YARMOUTH RD	1/10 - 1/3 SE	▼ 30	154
LUST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records				
CHESTNUT HILL BENEVOLENT ASSOC	910 BOYLSTON ST	1/10 - 1/3 ENE	▲ 31	156
SHWS: State and tribal - equivalent CERCLIS LUST: State and tribal leaking storage tank lists RELEASE: Other Standard Environmental Records HW GEN: Other Standard Environmental Records				

HISTORICAL USE RECORDS

Name	Address	Dist/Dir	Map ID	Page
639 HAMMOND ST	639 HAMMOND ST	<1/10 WSW	▼ A2	25
EDR Hist Auto: Historical Gas Stations				
629 HAMMOND ST	629 HAMMOND ST	<1/10 WSW	▼ A4	56
EDR Hist Auto: Historical Gas Stations				
1180 BOYLSTON ST	1180 BOYLSTON ST	<1/10 WNW	▼ B7	86
EDR Hist Auto: Historical Gas Stations				
621 HAMMOND ST	621 HAMMOND ST	<1/10 W	▼ B8	87
EDR Hist Cleaner: Historical Dry Cleaners				
14 SHEAFE ST	14 SHEAFE ST	<1/10 W	▼ C11	91
EDR Hist Auto: Historical Gas Stations				

PRIMARY MAP - 4795721.8S



0 300 1/3 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- SSURGO Soil
- Areas of Critical Environmental Concern

SITE NAME: 2475-001 Levi Brookline Baldwin School ADDRESS: 484 Heath Street CHESTNUT HILL MA 02467 LAT/LONG: 42.322894 / 71.161403	CLIENT: Endpoint, LLC CONTACT: Katie Snyder INQUIRY #: 4795721.8s DATE: December 02, 2016 12:38 pm

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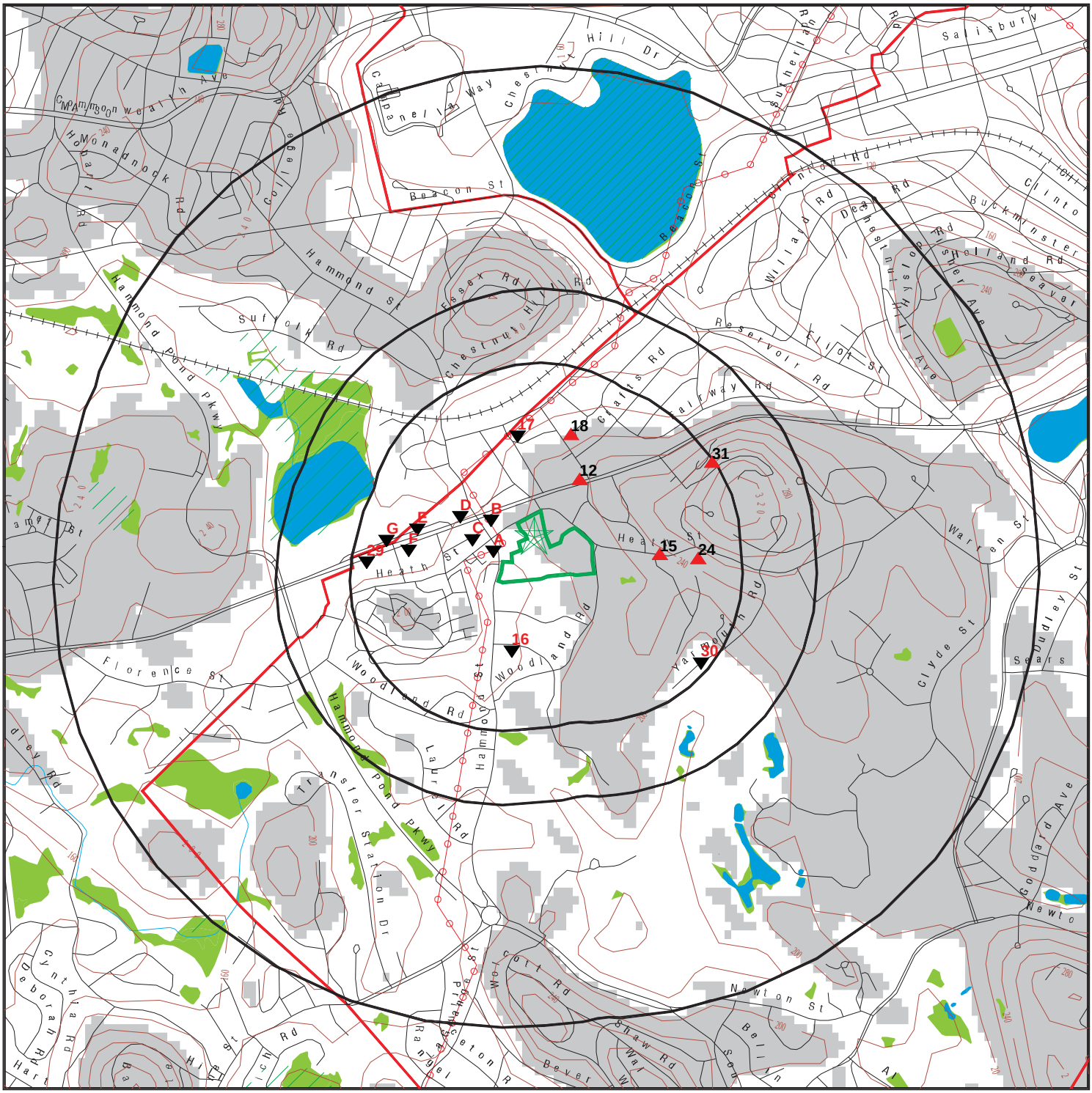
SECONDARY MAP - 4795721.8S



0 1/3 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Contour Lines
- County Boundary
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Upgradient Area
- Areas of Critical Environmental Concern

SITE NAME: 2475-001 Levi Brookline Baldwin School	CLIENT: Endpoint, LLC
ADDRESS: 484 Heath Street	CONTACT: Katie Snyder
CHESTNUT HILL MA 02467	INQUIRY #: 4795721.8s
LAT/LONG: 42.322894 / 71.161403	DATE: December 02, 2016 12:37 pm

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AERIAL PHOTOGRAPHY - 4795721.8s

SITE NAME:	2475-001 Levi Brookline Baldwin School	CLIENT:	Endpoint, LLC
ADDRESS:	484 Heath Street CHESTNUT HILL MA 02467	CONTACT:	Katie Snyder
		INQUIRY #:	4795721.8s
LAT/LONG:	42.322894 / 71.161403	DATE:	December 02, 2016 12:39 pm

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MAP FINDINGS

LEGEND

FACILITY NAME **FACILITY ADDRESS, CITY, ST, ZIP**		EDR SITE ID NUMBER
▼ MAP ID#	Direction Distance Range (Distance feet / miles) Relative Elevation Feet Above Sea Level	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, see the section of the report Records Searched and Currency.

Worksheet:

Comments:
Comments may be added on the online Vapor Encroachment Worksheet.

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

NO LOCATION AID 640 HAMMOND ST, BROOKLINE, MA, 02445-0000			S101025231
▼ A1	SW <1/10	(30 ft. / 0.006 mi.)	State and tribal - equivalent CERCLIS Other Standard Environmental Records
	12 ft. Lower Elevation	182 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: Soil characteristics would make vapor migration from the source or plume unlikely.

Conditions:

Chemicals of Concern: YES

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0020733 / RAO
Release Town:	BROOKLINE
Notification Date:	05/17/2001
Category:	120 DY
Associated ID:	Not Reported
Current Status:	**Response Action Outcome**
Status Date:	09/14/2001
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil and Hazardous Material
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0020733

NO LOCATION AID, 640 HAMMOND ST, BROOKLINE, MA 02445-0000 (Continued)

Chemicals:

Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	375 milligrams per kilogram
Chemical:	LEAD
Quantity:	618 milligrams per kilogram
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	1180 milligrams per kilogram

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/17/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/17/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	5/17/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	5/29/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/6/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	9/14/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release Tracking Number/Current Status:	3-0003009 / DEPNDS
Release Town:	BROOKLINE
Notification Date:	01/15/1990
Category:	NONE
Associated ID:	Not Reported
Current Status:	**Not a Disposal Site (DEP)**
Status Date:	04/24/1996
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	BUS DEPOT
Source:	PIPE

NO LOCATION AID, 640 HAMMOND ST, BROOKLINE, MA 02445-0000 (Continued)

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0003009

Chemicals:

Chemical:	WASTE OIL
Quantity:	Not Reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1990
Response Action Outcome:	Not Reported
Action Type:	TREGS
Action Status:	DEPNDS
Action Date:	4/24/1996
Response Action Outcome:	Not Reported

MA Spills: Other Standard Environmental Records

Facility ID:	3-3009
Spill ID:	N89-1728
Staff Lead:	OTTENHEIMER, D
Date Entered:	19891116
Last Entered:	19931213
First Response:	19891016
Spill Date:	19891016
Spill Time:	Not Reported
Report Date:	19891016
Report Time:	09:40AM
Case Closed:	YES
Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN
Contam Soil:	Not Reported
Env Impact:	SOIL
Other Impact:	Not Reported
Material:	DIESEL FUEL
Other Material:	Not Reported
Qty Reported:	UNKNOWN
Qty Actual:	UNKNOWN
Qty Reported:	----------
Qty Actual:	----------
CAS No:	Not Reported
PCB Lev (ppm):	NONE
Source:	U.S.T.
Other Source:	Not Reported
Incident:	TANK REMOVAL
Other Incdnt:	Not Reported
Cleanup Type:	---
Contractor:	NOT USED

NO LOCATION AID, 640 HAMMOND ST, BROOKLINE, MA 02445-0000 (Continued)

Referral:	SA
LUST Elig:	YES
Report Prep:	Not Reported
Category:	Not Reported
Notifier:	BOB WAAS
Notif Tel:	Not Reported
Days/Close:	0

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0003009 / DEPNDS
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	01/15/1990
Category:	NONE
Status Date:	04/24/1996
Phase:	Not Reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0003009
Release Tracking Number/Current Status:	3-0020733 / RAO
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	05/17/2001
Category:	120 DY
Status Date:	09/14/2001
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil and Hazardous Material
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0020733

MAP FINDINGS

639 HAMMOND ST 639 HAMMOND ST, CHESTNUT HILL, MA, 02467			1015586709
▼ A2	WSW <1/10	(179 ft. / 0.034 mi.)	Historical Gas Stations
	13 ft. Lower Elevation	181 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Downgradient: YES

EDR Historical Auto Stations: Historical Gas Stations

Name:	INTERNATIONAL AUTO
Year:	1999
Address:	639 HAMMOND ST
Name:	INTERNATIONAL AUTO
Year:	2000
Address:	639 HAMMOND ST
Name:	MICHAEL J HAYNES AUTO REPAIR
Year:	2002
Address:	639 HAMMOND ST
Name:	ARMENDS AUTO BODY INC
Year:	2003
Address:	639 HAMMOND ST

MCNEILLY GARAGE 639 HAMMOND ST, BROOKLINE, MA, 02146			S101017033
▼ A3	WSW <1/10	(179 ft. / 0.034 mi.)	State and tribal - equivalent CERCLIS State and tribal leaking storage tank lists Other Standard Environmental Records
	13 ft. Lower Elevation	181 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: The source is downgradient and beyond the critical distance.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0019556 / RAONR
Release Town:	BROOKLINE
Notification Date:	05/18/2000
Category:	72 HR
Associated ID:	3-0016950
Current Status:	**Response Action Outcome Not Required**
Status Date:	05/04/2001
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UNKNOWN
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0019556

Chemicals:

Chemical:	WASTE OIL
Quantity:	4 inches
Chemical:	NAPL
Quantity:	4 inches

Actions:

Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/27/2000
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	10/27/2000
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	11/1/2000
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/14/2007
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Revised Statement or Transmittal Received
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	5/18/2000
Response Action Outcome:	Not Reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/18/2000
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	5/4/2001
Response Action Outcome:	Not Reported
Action Type:	RAO Not Required

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Status:	Linked to a Tier Classified Site
Action Date:	5/4/2001
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/20/2000
Response Action Outcome:	Not Reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	6/7/2000
Response Action Outcome:	Not Reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	8/20/2001
Response Action Outcome:	Not Reported
Release Tracking Number/Current Status:	3-0017343 / RAONR
Release Town:	BROOKLINE
Notification Date:	09/23/1998
Category:	120 DY
Associated ID:	3-0016950
Current Status:	**Response Action Outcome Not Required**
Status Date:	12/22/2003
Phase:	PHASE II
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0017343

Chemicals:

Chemical:	WASTE OIL
Quantity:	Not Reported

Actions:

Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	10/2/2006
Response Action Outcome:	Not Reported

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	10/27/2000
Response Action Outcome:	Not Reported
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	10/27/2000
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/27/2000
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/14/2007
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Revised Statement or Transmittal Received
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/9/1999
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	5/4/2001
Response Action Outcome:	Not Reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	8/17/2000
Response Action Outcome:	Not Reported

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	9/23/1998
Response Action Outcome:	Not Reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	9/23/1998
Response Action Outcome:	Not Reported
Release Tracking Number/Current Status:	3-0002320 / RAO
Release Town:	BROOKLINE
Notification Date:	03/09/1988
Category:	NONE
Associated ID:	Not Reported
Current Status:	**Response Action Outcome**
Status Date:	11/01/2000
Phase:	PHASE IV
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not Reported
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0002320

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not Reported

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	11/1/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	11/12/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	11/17/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	11/17/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Completion Statement Received

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Date:	11/17/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	11/5/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	3/24/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	3/9/1988
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/9/1988
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	TREGS
Action Status:	LSPFA
Action Date:	8/8/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	8/9/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/9/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	9/22/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Release Tracking Number/Current Status:	3-0026526 / RAONR
Release Town:	BROOKLINE
Notification Date:	01/10/2007
Category:	120 DY
Associated ID:	3-0016950
Current Status:	**Response Action Outcome Not Required**
Status Date:	12/14/2007
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Source: UNKNOWN

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0026526

Chemicals:

Chemical: WASTE OIL
Quantity: 939 milligrams per kilogram

Actions:

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/10/2007
Response Action Outcome: Not Reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/10/2007
Response Action Outcome: Not Reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 1/17/2007
Response Action Outcome: Not Reported

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 1/19/2007
Response Action Outcome: Not Reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/24/2007
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 10/2/2006
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 10/2/2006
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 10/2/2006
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/27/2000
Response Action Outcome: Not Reported

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/27/2000
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/21/2007
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	12/11/2007
Response Action Outcome:	Not Reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	12/14/2007
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/14/2007
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Revised Statement or Transmittal Received
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	5/4/2001
Response Action Outcome:	Not Reported
Release Tracking Number/Current Status:	3-0026468 / RAONR
Release Town:	BROOKLINE
Notification Date:	12/13/2006
Category:	120 DY
Associated ID:	3-0016950
Current Status:	**Response Action Outcome Not Required**
Status Date:	12/14/2007
Phase:	Not Reported

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Source:	UNKNOWN
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0026468

Chemicals:

Chemical:	BENZO[A]ANTHRACENE
Quantity:	9.4 milligrams per kilogram
Chemical:	BENZO[A]PYRENE
Quantity:	8.45 milligrams per kilogram
Chemical:	CADMIUM
Quantity:	2.07 milligrams per kilogram
Chemical:	LEAD
Quantity:	4280 milligrams per kilogram
Chemical:	CHRYSENE
Quantity:	8.56 milligrams per kilogram
Chemical:	BENZO[B]FLUORANTHENE
Quantity:	9.89 milligrams per kilogram
Chemical:	PETROLEUM HYDROCARBONS
Quantity:	392 milligrams per kilogram
Chemical:	URBAN FILL
Quantity:	Not Reported

Actions:

Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received
Action Date:	1/31/2007
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/27/2000
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Date:	10/27/2000
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/20/2007
Response Action Outcome:	Not Reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/13/2006
Response Action Outcome:	Not Reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/13/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/14/2007
Response Action Outcome:	Not Reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	12/14/2007
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	12/18/2006
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	12/20/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Revised Statement or Transmittal Received
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Date:	5/31/2007
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	5/4/2001
Response Action Outcome:	Not Reported
Release Tracking Number/Current Status:	3-0016950 / RAO
Release Town:	BROOKLINE
Notification Date:	06/22/1998
Category:	72 HR
Associated ID:	3-0016950
Current Status:	**Response Action Outcome**
Status Date:	03/28/2008
Phase:	PHASE IV
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UNKNOWN
Source:	AST
Source:	UST
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0016950

Chemicals:

Chemical:	GASOLINE
Quantity:	140 parts per million

Actions:

Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	10/1/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Denial of Plan
Action Date:	10/23/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/23/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	10/23/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	10/27/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	10/27/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/27/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	10/7/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	10/8/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	11/17/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	11/24/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	11/24/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/14/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Revised Statement or Transmittal Received
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	ACO
Action Date:	12/28/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received
Action Date:	2/1/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	2/1/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	2/15/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	3/28/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/28/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	4/21/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	4/5/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Enforcement Conference
Action Date:	5/25/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	5/4/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/22/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/22/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/27/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	7/3/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	7/9/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/9/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	8/2/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/3/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	9/22/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	9/22/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	9/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	9/8/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

ENFORCEMENT: Other Standard Environmental Records

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not Reported
Program Id:	3-0016950
High Or Low Level Enforcement:	HLE
FMF #:	Not Reported
Comptroller Billing Name:	Not Reported
Town Where Violation Occurred:	Not Reported
Date Executed:	12/28/2006
ENF #:	ACO-NE-06-3A029
Document Type:	ACO
AG Ref (Y/N):	Not Reported
Doc Archived (Y/N):	Not Reported
EJ Community (Y/N):	Not Reported

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Regional Comment:	Not Reported
Final Payment Due Date:	Not Reported
ACOP $:	Not Reported
PAN $:	Not Reported
EMS (Y/N):	Not Reported
EMS$:	Not Reported
SEP (Y/N):	Not Reported
SEP $:	Not Reported
Demand $:	Not Reported
Suspended $:	Not Reported
Ownership:	Commercially Owned

LUST: State and tribal leaking storage tank lists

Facility:

Release Tracking Number/Current Status:	3-0016950 / RAO
Status Date:	03/28/2008
Source Type:	UST
Release Town:	BROOKLINE
Notification Date:	06/22/1998
Category:	72 HR
Associated ID:	3-0016950
Phase:	PHASE IV
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UNKNOWN
Source:	AST
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0016950

Chemicals:

Chemical:	GASOLINE
Quantity:	140 parts per million

Actions:

Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	10/1/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Denial of Plan
Action Date:	10/23/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/23/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	10/23/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	10/27/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	10/27/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/27/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	10/7/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	10/8/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	11/17/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	11/24/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	11/24/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/14/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Revised Statement or Transmittal Received
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	ACO
Action Date:	12/28/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received
Action Date:	2/1/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	2/1/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	2/15/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	3/28/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/28/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	4/21/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	4/5/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Enforcement Conference
Action Date:	5/25/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	5/4/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/22/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/22/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/27/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	7/3/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	7/9/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/9/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	8/2/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/3/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	9/22/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	9/22/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	9/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	9/8/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Facility:

Release Tracking Number/Current Status:	3-0023538 / RAONR
Status Date:	10/02/2006
Source Type:	UST
Release Town:	BROOKLINE
Notification Date:	01/23/2004
Category:	72 HR

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Associated ID:	3-0016950
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0023538

Chemicals:

Chemical:	GASOLINE
Quantity:	166 parts per million
Chemical:	GASOLINE
Quantity:	100 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	IRA Assessment Only
Action Date:	1/23/2004
Response Action Outcome:	Not Reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/23/2004
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	10/12/2004
Response Action Outcome:	Not Reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	10/12/2004
Response Action Outcome:	Not Reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/14/2004
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	RAO Not Required

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Status:	Linked to a Tier Classified Site
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	10/2/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	10/27/2000
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/27/2000
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/14/2007
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Revised Statement or Transmittal Received
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	12/22/2003
Response Action Outcome:	Not Reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	4/14/2005
Response Action Outcome:	Not Reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	4/16/2004
Response Action Outcome:	Not Reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Enforcement Conference
Action Date:	5/25/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	5/4/2001
Response Action Outcome:	Not Reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	7/9/2006
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/9/2006
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	9/22/2004
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	9/22/2004
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	9/7/2006
Response Action Outcome:	Not Reported

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0002320 / RAO
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	03/09/1988
Category:	NONE
Status Date:	11/01/2000
Phase:	PHASE IV
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not Reported

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0002320

Release Tracking Number/Current Status:	3-0016950 / RAO
Primary ID:	3-0016950
Official City:	BROOKLINE
Notification:	06/22/1998
Category:	72 HR
Status Date:	03/28/2008
Phase:	PHASE IV

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0016950
Release Tracking Number/Current Status:	3-0017343 / RAONR
Primary ID:	3-0016950
Official City:	BROOKLINE
Notification:	09/23/1998
Category:	120 DY
Status Date:	12/22/2003
Phase:	PHASE II
Response Action Outcome:	-
Oil / Haz Material Type:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0017343
Release Tracking Number/Current Status:	3-0019556 / RAONR
Primary ID:	3-0016950
Official City:	BROOKLINE
Notification:	05/18/2000
Category:	72 HR
Status Date:	05/04/2001
Phase:	Not Reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0019556
Release Tracking Number/Current Status:	3-0023538 / RAONR
Primary ID:	3-0016950
Official City:	BROOKLINE
Notification:	01/23/2004
Category:	72 HR
Status Date:	10/02/2006
Phase:	Not Reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0023538
Release Tracking Number/Current Status:	3-0026468 / RAONR
Primary ID:	3-0016950
Official City:	BROOKLINE
Notification:	12/13/2006
Category:	120 DY
Status Date:	12/14/2007
Phase:	Not Reported

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0026468
Release Tracking Number/Current Status:	3-0026526 / RAONR
Primary ID:	3-0016950
Official City:	BROOKLINE
Notification:	01/10/2007
Category:	120 DY
Status Date:	12/14/2007
Phase:	Not Reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0026526

MA Spills: Other Standard Environmental Records

Facility ID:	3-2320
Spill ID:	N87-0373
Staff Lead:	OTHER
Date Entered:	19881227
Last Entered:	19930804
First Response:	19891129
Spill Date:	Not Reported
Spill Time:	Not Reported
Report Date:	19870326
Report Time:	Not Reported
Case Closed:	YES
Mat Type:	PETROLEUM
Virgin Waste:	WASTE
Contam Soil:	Not Reported
Env Impact:	SOIL
Other Impact:	Not Reported
Material:	WASTE OIL
Other Material:	Not Reported
Qty Reported:	----------
Qty Actual:	----------
Qty Reported:	----------
Qty Actual:	----------
CAS No:	Not Reported
PCB Lev (ppm):	NONE
Source:	A.S.T.
Other Source:	Not Reported
Incident:	SPILL
Other Incdnt:	Not Reported
Cleanup Type:	---
Contractor:	NOT USED
Referral:	SA

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

LUST Elig:	NO
Report Prep:	Not Reported
Category:	Not Reported
Notifier:	Not Reported
Notif Tel:	Not Reported
Days/Close:	0

LAST: State and tribal leaking storage tank lists

Release Tracking Number/Current Status:	3-0016950 / RAO
Source Type:	AST
Release Town:	BROOKLINE
Notification Date:	06/22/1998
Category:	72 HR
Associated ID:	3-0016950
Status Date:	03/28/2008
Phase:	PHASE IV
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Chemicals:

Chemical:	GASOLINE
Quantity:	140 parts per million
Location Type:	COMMERCIAL
Source:	UNKNOWN
Source:	AST
Source:	UST

Actions:

Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	10/1/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	10/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Denial of Plan
Action Date:	10/23/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/23/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	10/23/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	10/27/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	10/27/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/27/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	10/7/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	10/8/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	11/17/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Date:	11/24/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	11/24/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/14/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Revised Statement or Transmittal Received
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	12/22/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	ACO
Action Date:	12/28/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received
Action Date:	2/1/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	2/1/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	2/15/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Date:	3/28/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/28/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	4/21/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	4/5/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Enforcement Conference
Action Date:	5/25/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	5/4/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/22/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/22/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/27/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	7/3/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	7/9/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.

MCNEILLY GARAGE, 639 HAMMOND ST, BROOKLINE, MA 02146 (Continued)

Action Date:	7/9/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	8/2/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/3/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	9/22/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	9/22/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	9/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	9/8/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

629 HAMMOND ST 629 HAMMOND ST, CHESTNUT HILL, MA, 02467			1015583017
▼ A4	WSW <1/10	(185 ft. / 0.035 mi.)	Historical Gas Stations
	13 ft. Lower Elevation	181 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Downgradient: YES

EDR Historical Auto Stations: Historical Gas Stations

Name:	MICHAEL HYNES AUTO REPAIR
Year:	2003
Address:	629 HAMMOND ST
Name:	MICHAEL HYNES AUTO REPAIR
Year:	2005
Address:	629 HAMMOND ST
Name:	MICHAEL J HYNES AUTO BODY
Year:	2010
Address:	629 HAMMOND ST
Name:	MICHAEL HYNES AUTO REPAIR
Year:	2011
Address:	629 HAMMOND ST
Name:	MICHAEL HYNES AUTO REPAIR
Year:	2012
Address:	629 HAMMOND ST

CUMBERLAND FARMS #70011 1180 BOYLSTON ST, CHESTNUT HILL, MA, 02467			U002008865
▼ B5	WNW <1/10	(322 ft. / 0.061 mi.)	Other Standard Environmental Records
	8 ft. Lower Elevation	186 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

HW GEN: Other Standard Environmental Records

EPA Id:	MV6175668000
RCRA Generator Status:	Not Reported
State Generator Status:	SQG-MA
EPA Id:	MAD985288703
RCRA Generator Status:	SQG
State Generator Status:	VQG-MA

EXXON STATION #3-3258 1180 BOYLSTON ST, BROOKLINE, MA, 02146-0000			S104545565
▼ B6	WNW <1/10	(322 ft. / 0.061 mi.)	State and tribal - equivalent CERCLIS State and tribal leaking storage tank lists Other Standard Environmental Records
	8 ft. Lower Elevation	186 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: The source is downgradient and beyond the critical distance.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0020511 / RAONR
Release Town:	BROOKLINE
Notification Date:	03/23/2001
Category:	72 HR
Associated ID:	3-0019813
Current Status:	**Response Action Outcome Not Required**
Status Date:	08/01/2001
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UNKNOWN
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0020511

Chemicals:

Chemical:	GASOLINE
Quantity:	24 inches
Chemical:	GASOLINE
Quantity:	.6 inches

Actions:

Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/3/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	10/31/2014
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Status:	Status or Interim Report Received
Action Date:	11/6/2001
Response Action Outcome:	Not Reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/5/2001
Response Action Outcome:	Not Reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/23/2001
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/23/2001
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/6/2001
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	5/30/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/17/2008
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Written Denial of Plan
Action Date:	6/20/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/21/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/22/2007
Response Action Outcome:	Not Reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	6/27/2001
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Status:	Completion Statement Received
Action Date:	6/28/2002
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/18/2001
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	7/5/2001
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	7/5/2001
Response Action Outcome:	Not Reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	8/16/2001
Response Action Outcome:	Not Reported
Release Tracking Number/Current Status:	3-0013540 / RAO
Release Town:	BROOKLINE
Notification Date:	03/08/1996
Category:	72 HR
Associated ID:	Not Reported

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Current Status:	**Response Action Outcome**
Status Date:	06/26/1996
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	PIPE
Source:	UST
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0013540

Chemicals:

Chemical:	UNKNOWN CHEMICAL OF TYPE - OIL
Quantity:	100 parts per million

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/18/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/8/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/8/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	5/13/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/20/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	6/10/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	6/26/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Status:	RAO Statement Received
Action Date:	6/26/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Release Tracking Number/Current Status:	3-0032314 / PSNC
Release Town:	BROOKLINE
Notification Date:	07/18/2014
Category:	120 DY
Associated ID:	Not Reported
Current Status:	**PSNC**
Status Date:	07/22/2015
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Source:	UNKNOWN
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0032314

Chemicals:

Chemical:	LEAD
Quantity:	230 milligrams per kilogram

Actions:

Action Type:	BOL
Action Status:	SHPFAC
Action Date:	10/17/2014
Response Action Outcome:	Not Reported
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/3/2014
Response Action Outcome:	Not Reported
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/8/2014
Response Action Outcome:	Not Reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSCREV
Action Date:	12/10/2015
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	12/16/2005
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	5/1/2015

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	5/5/2015
Response Action Outcome:	Not Reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	7/18/2014
Response Action Outcome:	Not Reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	7/18/2014
Response Action Outcome:	Not Reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	7/18/2014
Response Action Outcome:	Not Reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	7/22/2015
Response Action Outcome:	Not Reported
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	7/27/2015
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	8/1/2014
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	8/15/2005
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	8/19/2014
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	8/20/2014
Response Action Outcome:	Not Reported
Release Tracking Number/Current Status:	3-0032394 / RAONR
Release Town:	BROOKLINE

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Notification Date:	08/27/2014
Category:	72 HR
Associated ID:	3-0019813
Current Status:	**Response Action Outcome Not Required**
Status Date:	10/31/2014
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	3 GASOLINE
Source:	TANK
Source:	UST
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0032394

Chemicals:

Chemical:	GASOLINE
Quantity:	2700 parts per million

Actions:

Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/29/2014
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/3/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	10/31/2014
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	10/31/2014
Response Action Outcome:	Not Reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	10/31/2014
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/17/2008
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Date:	6/21/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/22/2007
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/27/2014
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	8/27/2014
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	9/11/2014
Response Action Outcome:	Not Reported
Release Tracking Number/Current Status:	3-0019813 / REMOPS
Release Town:	BROOKLINE
Notification Date:	08/01/2000
Category:	120 DY
Associated ID:	3-0019813
Current Status:	**Remedy Operation Status**
Status Date:	03/22/2016
Phase:	PHASE V
Response Action Outcome:	-
Oil Or Haz Material:	Oil and Hazardous Material

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Source:	TANK
Source:	UST
Source:	UNKNOWN
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0019813

Chemicals:

Chemical:	C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity:	6600 micrograms per liter
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	350 milligrams per kilogram
Chemical:	NAPHTHALENE
Quantity:	8.8 milligrams per kilogram
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	6500 micrograms per liter
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	2140 micrograms per liter
Chemical:	TOTAL XYLENES
Quantity:	6200 micrograms per liter

Actions:

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	10/15/2004
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/17/2000
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	10/17/2002
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	10/21/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/3/2003
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	10/3/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Status:	RMRINT
Action Date:	10/3/2007
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	10/31/2014
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	12/16/2005
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/13/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	3/13/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/17/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	3/17/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	3/21/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/21/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/22/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	3/22/2016
Response Action Outcome:	Not Reported
Action Type:	Phase 5

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Status:	RMRINT
Action Date:	3/22/2016
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/24/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	3/24/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	3/26/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/26/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/26/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	3/26/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/28/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	3/28/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	3/30/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/30/2009
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Status:	Status or Interim Report Received
Action Date:	4/18/2003
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	4/2/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	4/2/2015
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	4/20/2004
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	5/1/2015
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/17/2008
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/21/2006
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/22/2007
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	6/28/2002
Response Action Outcome:	Not Reported
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	7/17/2003
Response Action Outcome:	Not Reported
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	7/17/2003
Response Action Outcome:	Not Reported
Action Type:	Phase 4

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Status:	Written Plan Received
Action Date:	7/30/2004
Response Action Outcome:	Not Reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/1/2000
Response Action Outcome:	Not Reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/1/2000
Response Action Outcome:	Not Reported
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	8/14/2007
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	8/15/2005
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Status:	Written Plan Received
Action Date:	8/19/2014
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	8/20/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	8/6/2008
Response Action Outcome:	Not Reported
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	9/1/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/26/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/26/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/26/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/26/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 4
Action Status:	As-Built Construction Report Received
Action Date:	9/27/2005
Response Action Outcome:	Not Reported
Action Type:	Phase 4
Action Status:	Completion Statement Received
Action Date:	9/27/2005
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/27/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Status:	RMRINT
Action Date:	9/27/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/28/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/28/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/28/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/28/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	9/29/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINI
Action Date:	9/29/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/29/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/29/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/29/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/29/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Status:	RMRINT
Action Date:	9/30/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	9/30/2014
Response Action Outcome:	Not Reported
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	9/30/2014
Response Action Outcome:	Not Reported

ENFORCEMENT: Other Standard Environmental Records

Region:	NERO
DEP Region:	NERO
DEP Program:	3C
DEP Bureau:	BWSC
Program:	Not Reported
Program Id:	3-0019813
High Or Low Level Enforcement:	LLE
FMF #:	Not Reported
Comptroller Billing Name:	Not Reported
Town Where Violation Occurred:	Not Reported
Date Executed:	08/14/2007
ENF #:	NON-NE-07-3C023
Document Type:	NON
AG Ref (Y/N):	Not Reported
Doc Archived (Y/N):	Not Reported
EJ Community (Y/N):	Not Reported
Regional Comment:	Not Reported
Final Payment Due Date:	Not Reported
ACOP $:	Not Reported
PAN $:	Not Reported
EMS (Y/N):	Not Reported
EMS$:	Not Reported
SEP (Y/N):	Not Reported
SEP $:	Not Reported
Demand $:	Not Reported
Suspended $:	Not Reported
Ownership:	Commercially Owned

LUST: State and tribal leaking storage tank lists

Facility:

Release Tracking Number/Current Status:	3-0013540 / RAO
Status Date:	06/26/1996

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Source Type:	UST
Release Town:	BROOKLINE
Notification Date:	03/08/1996
Category:	72 HR
Associated ID:	Not Reported
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	PIPE
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0013540

Chemicals:

Chemical:	UNKNOWN CHEMICAL OF TYPE - OIL
Quantity:	100 parts per million

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/18/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/8/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/8/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	5/13/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/20/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	6/10/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Date:	6/26/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	6/26/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Facility:

Release Tracking Number/Current Status:	3-0019813 / REMOPS
Status Date:	03/22/2016
Source Type:	UST
Release Town:	BROOKLINE
Notification Date:	08/01/2000
Category:	120 DY
Associated ID:	3-0019813
Phase:	PHASE V
Response Action Outcome:	-
Oil Or Haz Material:	Oil and Hazardous Material
Source:	TANK
Source:	UST
Source:	UNKNOWN

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0019813

Chemicals:

Chemical:	C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity:	6600 micrograms per liter
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	350 milligrams per kilogram
Chemical:	NAPHTHALENE
Quantity:	8.8 milligrams per kilogram
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	6500 micrograms per liter
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	2140 micrograms per liter
Chemical:	TOTAL XYLENES
Quantity:	6200 micrograms per liter

Actions:

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	10/15/2004
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/17/2000

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Response Action Outcome: Not Reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/17/2002
Response Action Outcome: Not Reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/21/2003
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 10/3/2003
Response Action Outcome: Not Reported

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 10/3/2007
Response Action Outcome: Not Reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 10/3/2007
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 10/31/2014
Response Action Outcome: Not Reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/16/2005
Response Action Outcome: Not Reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 3/13/2012
Response Action Outcome: Not Reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 3/13/2012
Response Action Outcome: Not Reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 3/17/2010
Response Action Outcome: Not Reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 3/17/2010

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	3/21/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/21/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/22/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	3/22/2016
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/22/2016
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/24/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	3/24/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	3/26/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/26/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/26/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	3/26/2013

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/28/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	3/28/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	3/30/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	3/30/2009
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	4/18/2003
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	4/2/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	4/2/2015
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	4/20/2004
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	5/1/2015
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/17/2008
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/21/2006

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/22/2007
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	6/28/2002
Response Action Outcome:	Not Reported
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	7/17/2003
Response Action Outcome:	Not Reported
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	7/17/2003
Response Action Outcome:	Not Reported
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	7/30/2004
Response Action Outcome:	Not Reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/1/2000
Response Action Outcome:	Not Reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/1/2000
Response Action Outcome:	Not Reported
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	8/1/2001

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	8/14/2007
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	8/15/2005
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	8/19/2014
Response Action Outcome:	Not Reported
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	8/20/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	8/6/2008
Response Action Outcome:	Not Reported
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	9/1/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/26/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/26/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/26/2012

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/26/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 4
Action Status:	As-Built Construction Report Received
Action Date:	9/27/2005
Response Action Outcome:	Not Reported
Action Type:	Phase 4
Action Status:	Completion Statement Received
Action Date:	9/27/2005
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/27/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/27/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/28/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/28/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/28/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/28/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	9/29/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINI
Action Date:	9/29/2006

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/29/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/29/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/29/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/29/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	9/30/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	9/30/2014
Response Action Outcome:	Not Reported
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	9/30/2014
Response Action Outcome:	Not Reported

Facility:

Release Tracking Number/Current Status:	3-0032394 / RAONR
Status Date:	10/31/2014
Source Type:	UST
Release Town:	BROOKLINE
Notification Date:	08/27/2014
Category:	72 HR
Associated ID:	3-0019813
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	3 GASOLINE
Source:	TANK

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Source: UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0032394

Chemicals:

Chemical: GASOLINE
Quantity: 2700 parts per million

Actions:

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/29/2014
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 10/3/2003
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 10/31/2014
Response Action Outcome: Not Reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/31/2014
Response Action Outcome: Not Reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 10/31/2014
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/17/2008
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/21/2006
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/22/2007
Response Action Outcome: Not Reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 8/1/2001
Response Action Outcome: Not Reported

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/1/2001
Response Action Outcome:	Not Reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/27/2014
Response Action Outcome:	Not Reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	8/27/2014
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	9/11/2014
Response Action Outcome:	Not Reported

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0013540 / RAO
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	03/08/1996
Category:	72 HR
Status Date:	06/26/1996
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0013540

Release Tracking Number/Current Status:	3-0019813 / REMOPS
Primary ID:	3-0019813
Official City:	BROOKLINE
Notification:	08/01/2000
Category:	120 DY
Status Date:	03/22/2016

EXXON STATION #3-3258, 1180 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Phase:	PHASE V
Response Action Outcome:	-
Oil / Haz Material Type:	Oil and Hazardous Material
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0019813
Release Tracking Number/Current Status:	3-0020511 / RAONR
Primary ID:	3-0019813
Official City:	BROOKLINE
Notification:	03/23/2001
Category:	72 HR
Status Date:	08/01/2001
Phase:	Not Reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0020511
Release Tracking Number/Current Status:	3-0032314 / PSNC
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	07/18/2014
Category:	120 DY
Status Date:	07/22/2015
Phase:	Not Reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0032314
Release Tracking Number/Current Status:	3-0032394 / RAONR
Primary ID:	3-0019813
Official City:	BROOKLINE
Notification:	08/27/2014
Category:	72 HR
Status Date:	10/31/2014
Phase:	Not Reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0032394

1180 BOYLSTON ST 1180 BOYLSTON ST, CHESTNUT HILL, MA, 02467			1015174289
▼ B7	WNW <1/10	(322 ft. / 0.061 mi.)	Historical Gas Stations
	8 ft. Lower Elevation	186 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Crossgradient: YES

EDR Historical Auto Stations: Historical Gas Stations

Name:	TANNOUS TURNPIKE EXXON SERVICE
Year:	2002
Address:	1180 BOYLSTON ST
Name:	TURNPIKE EXXON
Year:	2003
Address:	1180 BOYLSTON ST
Name:	TANNOUS TURNPIKE EXXON SERVICE
Year:	2004
Address:	1180 BOYLSTON ST
Name:	TANNOUS TURNPIKE EXXON SERVICE
Year:	2005
Address:	1180 BOYLSTON ST
Name:	TURNPIKE EXXON
Year:	2006
Address:	1180 BOYLSTON ST
Name:	TURNPIKE EXXON
Year:	2007
Address:	1180 BOYLSTON ST
Name:	CHESTNUT MOTORS
Year:	2008
Address:	1180 BOYLSTON ST
Name:	TANNOUS TURNPIKE EXXON SERVICE
Year:	2009
Address:	1180 BOYLSTON ST
Name:	CHESTNUT MOTORS
Year:	2010
Address:	1180 BOYLSTON ST
Name:	CHESTNUT MOTORS
Year:	2012
Address:	1180 BOYLSTON ST

621 HAMMOND ST 621 HAMMOND ST, CHESTNUT HILL, MA, 02467			1015082036
▼ B8	W <1/10	(350 ft. / 0.066 mi.)	Historical Dry Cleaners
	8 ft. Lower Elevation	186 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Downgradient: YES

EDR Historical Cleaners: Historical Dry Cleaners

Name:	CENTRAL CLEANERS INC
Year:	2001
Address:	621 HAMMOND ST
Name:	CENTRAL CLEANERS INC
Year:	2002
Address:	621 HAMMOND ST
Name:	CENTRAL CLEANERS INC
Year:	2003
Address:	621 HAMMOND ST
Name:	CENTRAL CLEANERS INC
Year:	2004
Address:	621 HAMMOND ST
Name:	CENTRAL CLEANERS INC
Year:	2005
Address:	621 HAMMOND ST
Name:	CENTRAL CLEANERS INC
Year:	2006
Address:	621 HAMMOND ST
Name:	CENTRAL CLEANERS INC
Year:	2007
Address:	621 HAMMOND ST
Name:	CENTRAL CLEANERS INC
Year:	2008
Address:	621 HAMMOND ST
Name:	CENTRAL CLEANERS INC
Year:	2010
Address:	621 HAMMOND ST
Name:	CENTRAL CLEANERS INC
Year:	2011
Address:	621 HAMMOND ST

621 HAMMOND ST, 621 HAMMOND ST, CHESTNUT HILL, MA 02467 (Continued)

Name:	CENTRAL CLEANERS INC
Year:	2012
Address:	621 HAMMOND ST

CENTRAL CLEANERS OF BROOKLINE INC 621 HAMMOND ST, BROOKLINE, MA, 02467			S106488664
▼ B9	W <1/10	(350 ft. / 0.066 mi.)	Other Standard Environmental Records
	8 ft. Lower Elevation	186 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Downgradient: YES

HW GEN: Other Standard Environmental Records

EPA Id:	MAD980734503
RCRA Generator Status:	VSQG
State Generator Status:	Not Reported

DRYCLEANERS: Other Standard Environmental Records

Facility ID:	53011
Classification Type:	Non-applicability classification--still in business but not using perc
Reg Obj Contact:	BARRY BERNARD
Reg Obj Mail Address:	621 HAMMOND ST
Mail Town Name:	NEWTON
Mail Zip Code:	024670000
DEP Region Code:	NE
Mailing State:	MA
Reg Obj Phone:	6172324477

S J MCNEILLY OLDS 14 SHEAFE ST, CHESTNUT HILL, MA, 02467			U003655126
▼ C10	W <1/10	(454 ft. / 0.086 mi.)	Other Standard Environmental Records
	6 ft. Lower Elevation	188 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Downgradient: YES

HW GEN: Other Standard Environmental Records

EPA Id:	MV6177319994
RCRA Generator Status:	VSQG
State Generator Status:	VQG-MA
EPA Id:	MA5000005256
RCRA Generator Status:	Not Reported
State Generator Status:	SQG-MA

14 SHEAFE ST 14 SHEAFE ST, CHESTNUT HILL, MA, 02467			1015218764
▼ C11	W <1/10	(459 ft. / 0.087 mi.)	Historical Gas Stations
	6 ft. Lower Elevation	188 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Downgradient: YES

EDR Historical Auto Stations: Historical Gas Stations

Name:	RPM AUTOMOTIVE INC
Year:	2002
Address:	14 SHEAFE ST
Name:	RPM AUTOMOTIVE INC
Year:	2003
Address:	14 SHEAFE ST
Name:	RPM AUTOMOTIVE INC
Year:	2004
Address:	14 SHEAFE ST
Name:	MICHAEL HYNES AUTO REPAIR
Year:	2005
Address:	14 SHEAFE ST
Name:	MICHAEL HYNES AUTO REPAIR
Year:	2006
Address:	14 SHEAFE ST
Name:	HYNES AUTO BODY
Year:	2007
Address:	14 SHEAFE ST
Name:	MICHAEL HYNES AUTO REPAIR
Year:	2008
Address:	14 SHEAFE ST
Name:	MICHAEL HYNES AUTO REPAIR
Year:	2009
Address:	14 SHEAFE ST
Name:	HYNES AUTO BODY
Year:	2010
Address:	14 SHEAFE ST
Name:	HYNES AUTO BODY
Year:	2011
Address:	14 SHEAFE ST

14 SHEAFE ST, 14 SHEAFE ST, CHESTNUT HILL, MA 02467 (Continued)

Name:	HYNES AUTO BODY
Year:	2012
Address:	14 SHEAFE ST

ROUTE 9 1075 BOYLSTON ST, BROOKLINE, MA,			S106344199
▲ 12	NE 1/10 - 1/3	(559 ft. / 0.106 mi.)	State and tribal - equivalent CERCLIS Other Standard Environmental Records
	18 ft. Higher Elevation	212 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: Soil characteristics would make vapor migration from the source or plume unlikely.

Conditions:

Chemicals of Concern: YES

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Upgradient or Indeterminate: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0023648 / RAO
Release Town:	BROOKLINE
Notification Date:	03/02/2004
Category:	120 DY
Associated ID:	Not Reported
Current Status:	**Response Action Outcome**
Status Date:	10/28/2004
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil and Hazardous Material
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0023648

Chemicals:

Chemical:	AROCLOR 1242
Quantity:	8.72 milligrams per kilogram
Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	3940 milligrams per kilogram
Chemical:	TPH
Quantity:	14000 milligrams per kilogram
Chemical:	EPH C9-C18
Quantity:	6340 milligrams per kilogram

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/28/2004

ROUTE 9, 1075 BOYLSTON ST, BROOKLINE, MA (Continued)

Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	10/29/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/15/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/2/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/2/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0023648 / RAO
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	03/02/2004
Category:	120 DY
Status Date:	10/28/2004
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil and Hazardous Material

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0023648

CUMBERLAND FARMS 2456 1195 BOYLSTON ST, CHESTNUT HILL, MA, 02467			U002008870
▼ D13	WNW 1/10 - 1/3	(689 ft. / 0.13 mi.)	Other Standard Environmental Records
	14 ft. Lower Elevation	180 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Crossgradient: YES

HW GEN: Other Standard Environmental Records

EPA Id:	MAC300002557
RCRA Generator Status:	VSQG
State Generator Status:	VQG-MA

CVS PHARMACY 1862 1195 BOYLSTON ST, CHESTNUT HILL, MA, 02467			S113409398
▼ D14	WNW 1/10 - 1/3	(689 ft. / 0.13 mi.)	Other Standard Environmental Records
	14 ft. Lower Elevation	180 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Crossgradient: YES

HW GEN: Other Standard Environmental Records

EPA Id:	MAC300019684
RCRA Generator Status:	LQG
State Generator Status:	Not Reported

PINE MANOR COLLEGE 400 HEATH ST, NEWTON, MA, 02467			S112558779
▲ 15	E 1/10 - 1/3	(795 ft. / 0.151 mi.)	Other Standard Environmental Records
	37 ft. Higher Elevation	231 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Upgradient or Indeterminate: YES

HW GEN: Other Standard Environmental Records

EPA Id:	MV6177317033
RCRA Generator Status:	VSQG
State Generator Status:	Not Reported

RESIDENCE 17 GLENOE RD, BROOKLINE, MA, 02467-0000			S109546243
▼ 16	S 1/10 - 1/3	(807 ft. / 0.153 mi.)	State and tribal - equivalent CERCLIS State and tribal leaking storage tank lists Other Standard Environmental Records
	19 ft. Lower Elevation	175 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: Soil characteristics would make vapor migration from the source or plume unlikely.

The source is downgradient and beyond the critical distance.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0028316 / RAO
Release Town:	BROOKLINE
Notification Date:	02/12/2009
Category:	120 DY
Associated ID:	Not Reported
Current Status:	**Response Action Outcome**
Status Date:	07/06/2009
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Source:	AST
Source:	PIPE
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0028316

Chemicals:

Chemical:	OIL
Quantity:	.25 inches

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	11/3/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	2/12/2009

RESIDENCE, 17 GLENOE RD, BROOKLINE, MA 02467-0000 (Continued)

Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/12/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	2/13/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	2/13/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	2/19/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/4/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	4/4/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	7/10/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	7/6/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	7/6/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

LAST: State and tribal leaking storage tank lists

Release Tracking Number/Current Status:	3-0028316 / RAO
Source Type:	AST
Release Town:	BROOKLINE
Notification Date:	02/12/2009
Category:	120 DY

RESIDENCE, 17 GLENOE RD, BROOKLINE, MA 02467-0000 (Continued)

Associated ID:	Not Reported
Status Date:	07/06/2009
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Chemicals:

Chemical:	OIL
Quantity:	.25 inches
Source:	AST
Source:	PIPE

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	11/3/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	2/12/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/12/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	2/13/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	2/13/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	2/19/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/4/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	4/4/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

RESIDENCE, 17 GLENOE RD, BROOKLINE, MA 02467-0000 (Continued)

Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	7/10/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	7/6/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	7/6/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0028316 / RAO
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	02/12/2009
Category:	120 DY
Status Date:	07/06/2009
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0028316

BRIMMER & MAY SCHOOL 69 MIDDLESEX RD, CHESTNUT HILL, MA, 02467			S116687554
▼ 17	N 1/10 - 1/3	(942 ft. / 0.179 mi.)	Other Standard Environmental Records
	16 ft. Lower Elevation	178 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Crossgradient: YES

HW GEN: Other Standard Environmental Records

EPA Id:	MV6175667462
RCRA Generator Status:	VSQG
State Generator Status:	VQG-MA

WIESCHHOFF RESIDENCE 30 NORFOLK RD, BROOKLINE, MA, 02146-0000		S102967418
▲ 18	NNE 1/10 - 1/3 (958 ft. / 0.181 mi.) 1 ft. Higher Elevation 195 ft. Above Sea Level	State and tribal leaking storage tank lists Other Standard Environmental Records

Worksheet:

Impact on Target Property: VEC does not exist

Comments: Soil characteristics would make vapor migration from the source or plume unlikely.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Upgradient or Indeterminate: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

LUST: State and tribal leaking storage tank lists

Facility:

Release Tracking Number/Current Status:	3-0015731 / RAO
Status Date:	11/23/1998
Source Type:	UST
Release Town:	BROOKLINE
Notification Date:	11/20/1997
Category:	72 HR
Associated ID:	Not Reported
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0015731

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	100 parts per million
Chemical:	FUEL OIL #2
Quantity:	210 parts per million

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/2/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

WIESCHHOFF RESIDENCE, 30 NORFOLK RD, BROOKLINE, MA 02146-0000 (Continued)

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	1/22/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	1/22/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	10/2/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/20/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	11/20/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of a Modified Plan
Action Date:	11/21/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	11/23/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	11/24/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/20/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	3/25/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0015731 / RAO

WIESCHHOFF RESIDENCE, 30 NORFOLK RD, BROOKLINE, MA 02146-0000 (Continued)

Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	11/20/1997
Category:	72 HR
Status Date:	11/23/1998
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0015731

CHESTNUT HILL SHOPPING CENTER 9 BOYLSTON ST, CHESTNUT HILL, MA, 02167-0000			S106511285
▼ E19	W 1/10 - 1/3	(1092 ft. / 0.207 mi.)	State and tribal - equivalent CERCLIS State and tribal institutional control / engineering control registries Other Standard Environmental Records
	21 ft. Lower Elevation	173 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: The source is downgradient and beyond the critical distance.

Soil characteristics would make vapor migration from the source or plume unlikely.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0013293 / RAO
Release Town:	NEWTON
Notification Date:	12/22/1995
Category:	120 DY
Associated ID:	Not Reported
Current Status:	**Response Action Outcome**
Status Date:	10/18/1996
Phase:	Not Reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0013293

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	2300 milligrams per kilogram

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/18/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/18/1996

CHESTNUT HILL SHOPPING CENTER, 9 BOYLSTON ST, CHESTNUT HILL, MA 02167-0000 (Continued)

Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	10/21/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/22/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/22/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	12/26/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/29/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	NOA
Action Date:	4/20/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	6/14/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Legal Notice Published
Action Date:	6/17/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	6/18/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation

CHESTNUT HILL SHOPPING CENTER, 9 BOYLSTON ST, CHESTNUT HILL, MA 02167-0000 (Continued)

Action Status:	Amendment Received or Issued
Action Date:	6/18/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection
Action Date:	6/3/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	6/3/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0013293 / RAO
Primary ID:	Not Reported
Official City:	NEWTON
Notification:	12/22/1995
Category:	120 DY
Status Date:	10/18/1996
Phase:	Not Reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0013293

INST CONTROL: State and tribal institutional control / engineering control registries

Release Tracking Number:	3-0013293
Action Type:	AUL
Action Stat:	AMEND
Action Date:	06/18/2002
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Release Tracking Number:	3-0013293
Action Type:	AUL
Action Stat:	LEGNOT
Action Date:	06/17/2002
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Release Tracking Number:	3-0013293
Action Type:	AUL
Action Stat:	RECPT
Action Date:	10/18/1996
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

CHESTNUT HILL SHOPPING CENTER, 9 BOYLSTON ST, CHESTNUT HILL, MA 02167-0000 (Continued)

Release Tracking Number:	3-0013293
Action Type:	AUL
Action Stat:	SNAUDI
Action Date:	06/03/2010
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

COMMERCIAL PROPERTY 1244-1262 BOYLSTON ST, BROOKLINE, MA, 02146			S100362879
▼ E20	W 1/10 - 1/3	(1094 ft. / 0.207 mi.)	State and tribal - equivalent CERCLIS Other Standard Environmental Records
	20 ft. Lower Elevation	174 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Downgradient: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0002125 / DEPNFA
Release Town:	BROOKLINE
Notification Date:	04/15/1989
Category:	NONE
Associated ID:	Not Reported
Current Status:	**No Further Action (DEP Determined)**
Status Date:	04/23/1996
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Not Reported
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0002125

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not Reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	4/15/1989
Response Action Outcome:	Not Reported
Action Type:	TREGS
Action Status:	DEPNFA
Action Date:	4/23/1996
Response Action Outcome:	Not Reported

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0002125 / DEPNFA
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	04/15/1989

COMMERCIAL PROPERTY, 1244-1262 BOYLSTON ST, BROOKLINE, MA 02146 (Continued)

Category:	NONE
Status Date:	04/23/1996
Phase:	Not Reported
Response Action Outcome:	-
Oil / Haz Material Type:	Not Reported

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0002125

NEW ENGLAND PODIATRY 1244 BOYLSTON ST, CHESTNUT HILL, MA, 02467			S112558726
▼ F21	W 1/10 - 1/3	(1129 ft. / 0.214 mi.)	Other Standard Environmental Records
	20 ft. Lower Elevation	174 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Downgradient: YES

HW GEN: Other Standard Environmental Records

EPA Id:	MV6176308280
RCRA Generator Status:	VSQG
State Generator Status:	Not Reported

CHESTNUT HILL SHOPPING CTR 11 BOYLSTON ST, NEWTON, MA, 02467-1719			S105309362
▼ E22	W 1/10 - 1/3	(1141 ft. / 0.216 mi.)	State and tribal - equivalent CERCLIS Other Standard Environmental Records
	21 ft. Lower Elevation	173 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: Soil characteristics would make vapor migration from the source or plume unlikely.

The source is downgradient and beyond the critical distance.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0021391 / RAO
Release Town:	NEWTON
Notification Date:	01/04/2002
Category:	120 DY
Associated ID:	Not Reported
Current Status:	**Response Action Outcome**
Status Date:	01/10/2003
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0021391

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	.36 inches
Chemical:	C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity:	5400 micrograms per liter

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	1/10/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	1/13/2003

CHESTNUT HILL SHOPPING CTR, 11 BOYLSTON ST, NEWTON, MA 02467-1719 (Continued)

Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	1/4/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/4/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/3/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0021391 / RAO
Primary ID:	Not Reported
Official City:	NEWTON
Notification:	01/04/2002
Category:	120 DY
Status Date:	01/10/2003
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0021391

CHESTNUT HILL SHOPPING CENTER 13 BOYLSTON ST, NEWTON, MA,		S102086954	
▼ E23	W 1/10 - 1/3	(1150 ft. / 0.218 mi.)	State and tribal leaking storage tank lists State and tribal institutional control / engineering control registries Other Standard Environmental Records
	21 ft. Lower Elevation	173 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: The source is downgradient and beyond the critical distance.

Soil characteristics would make vapor migration from the source or plume unlikely.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

LUST: State and tribal leaking storage tank lists

Facility:

Release Tracking Number/Current Status:	3-0012843 / RAO
Status Date:	09/03/1996
Source Type:	UST
Release Town:	NEWTON
Notification Date:	08/24/1995
Category:	72 HR
Associated ID:	Not Reported
Phase:	Not Reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0012843

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	3400 milligrams per kilogram

Actions:

Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	1/25/2002

CHESTNUT HILL SHOPPING CENTER, 13 BOYLSTON ST, NEWTON, MA (Continued)

Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/23/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	10/23/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	11/7/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	12/22/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/27/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	AFUPLN
Action Date:	2/27/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	Notice of Non-compliance related to an Audit
Action Date:	2/29/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	Interim Deadline Letter Issued
Action Date:	2/29/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	4/11/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit

CHESTNUT HILL SHOPPING CENTER, 13 BOYLSTON ST, NEWTON, MA (Continued)

Action Status:	NOA
Action Date:	4/20/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	6/14/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Amendment Received or Issued
Action Date:	6/27/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection
Action Date:	6/3/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	6/3/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	7/10/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Legal Notice Published
Action Date:	7/2/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	8/23/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	8/24/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/24/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

CHESTNUT HILL SHOPPING CENTER, 13 BOYLSTON ST, NEWTON, MA (Continued)

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	9/12/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	9/3/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	9/3/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	9/3/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0012843 / RAO
Primary ID:	Not Reported
Official City:	NEWTON
Notification:	08/24/1995
Category:	72 HR
Status Date:	09/03/1996
Phase:	Not Reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0012843

INST CONTROL: State and tribal institutional control / engineering control registries

Release Tracking Number:	3-0012843
Action Type:	AUL
Action Stat:	AMEND
Action Date:	06/27/2001
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Release Tracking Number:	3-0012843
Action Type:	AUL
Action Stat:	LEGNOT
Action Date:	07/02/2001

CHESTNUT HILL SHOPPING CENTER, 13 BOYLSTON ST, NEWTON, MA (Continued)

Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Release Tracking Number:	3-0012843
Action Type:	AUL
Action Stat:	RECPT
Action Date:	09/03/1996
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Release Tracking Number:	3-0012843
Action Type:	AUL
Action Stat:	SNAUDI
Action Date:	06/03/2010
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

RANDOLPH 375 HEATH ST, BROOKLINE, MA,			S104545420
▲ 24	E 1/10 - 1/3	(1239 ft. / 0.235 mi.)	State and tribal leaking storage tank lists Other Standard Environmental Records
	44 ft. Higher Elevation	238 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Upgradient or Indeterminate: YES

LUST: State and tribal leaking storage tank lists

Facility:

Release Tracking Number/Current Status:	3-0012797 / RAO
Status Date:	10/31/1995
Source Type:	UST
Release Town:	BROOKLINE
Notification Date:	08/11/1995
Category:	72 HR
Associated ID:	Not Reported
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0012797

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	849 parts per million
Chemical:	TPH
Quantity:	750000 micrograms per gallon

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/31/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/11/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

RANDOLPH, 375 HEATH ST, BROOKLINE, MA (Continued)

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	8/11/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	8/30/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	9/18/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0012797 / RAO
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	08/11/1995
Category:	72 HR
Status Date:	10/31/1995
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0012797

1268 BOYLSTON ST NEAR RTE 9 EAST BOYLSTON ST, BROOKLINE, MA, 02146		S103545736	
▼ F25	W 1/10 - 1/3	(1272 ft. / 0.241 mi.)	State and tribal - equivalent CERCLIS Other Standard Environmental Records
	19 ft. Lower Elevation	175 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: Soil characteristics would make vapor migration from the source or plume unlikely.

The source is downgradient and beyond the critical distance.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0011162 / RAO
Release Town:	BROOKLINE
Notification Date:	06/18/1994
Category:	TWO HR
Associated ID:	Not Reported
Current Status:	**Response Action Outcome**
Status Date:	08/17/1994
Phase:	Not Reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Oil
Location Type:	ROADWAY
Source:	FUELTANK
Source:	VEHICLE
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0011162

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	30 gallons

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/18/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RLFA

1268 BOYLSTON ST NEAR RTE 9 EAST, BOYLSTON ST, BROOKLINE, MA 02146 (Continued)

Action Status:	FOLFLD
Action Date:	6/18/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/18/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	6/20/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/23/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	8/17/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/17/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0011162 / RAO
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	06/18/1994
Category:	TWO HR
Status Date:	08/17/1994
Phase:	Not Reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0011162

MAP FINDINGS

GENERAL CINEMAS FMR 27 BOYLSTON ST, NEWTON, MA, 02158			S105199353
▼ G26	W 1/10 - 1/3	(1392 ft. / 0.264 mi.)	State and tribal - equivalent CERCLIS State and tribal leaking storage tank lists Other Standard Environmental Records
	21 ft. Lower Elevation	173 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Downgradient: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0001261 / REMOPS
Release Town:	NEWTON
Notification Date:	01/15/1990
Category:	NONE
Associated ID:	Not Reported
Current Status:	**Remedy Operation Status**
Status Date:	08/19/2004
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Not Reported
Location Type:	COMMERCIAL
Source:	UNKNOWN
Source:	UST
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0001261

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not Reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1990
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/4/1994
Response Action Outcome:	Not Reported
Action Type:	TREGS
Action Status:	WAVACC
Action Date:	1/4/1994
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	1/4/1999
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	10/16/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Revised Statement or Transmittal Received
Action Date:	10/16/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/16/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	10/16/2003
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Action Status or AUL Terminated
Action Date:	10/16/2003
Response Action Outcome:	Not Reported
Action Type:	TREGS
Action Status:	WAVSIG
Action Date:	11/10/1993
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	11/4/1998
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	11/4/1998
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Completion Statement Received
Action Date:	11/4/1998
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	11/4/1999
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	11/6/2000
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/14/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/14/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/14/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/14/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/14/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/14/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/15/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/15/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/15/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/16/2011
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/16/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/16/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/16/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/16/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/16/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/17/2004
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/19/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/19/2008
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/19/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/19/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/19/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/19/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/20/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/20/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/20/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/21/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/21/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/21/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/23/2005
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	2/6/1995
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/12/2002
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	5/10/2000
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	5/11/2001
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	5/4/1999
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/11/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/11/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/11/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/13/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/13/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/13/2012
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/14/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/14/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/14/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/15/2016
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/15/2016
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/15/2016
Response Action Outcome:	Not Reported
Action Type:	Phase 4
Action Status:	Modified Revised or Updated Plan Received
Action Date:	6/16/2004
Response Action Outcome:	Not Reported
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	6/16/2004
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	6/16/2004
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/17/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/17/2010
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/17/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/17/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/17/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/17/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/19/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/19/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/19/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/20/2005
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/20/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/20/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/20/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/21/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/21/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/21/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/21/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/21/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	7/15/2002
Response Action Outcome:	Not Reported
Action Type:	TREGS
Action Status:	WAVREC
Action Date:	7/9/1993
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	8/19/2004
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/14/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	9/27/1999
Response Action Outcome:	Not Reported
Action Type:	Phase 3
Action Status:	Written Plan Received
Action Date:	9/29/1997
Response Action Outcome:	Not Reported

LUST: State and tribal leaking storage tank lists

Facility:

Release Tracking Number/Current Status:	3-0001261 / REMOPS
Status Date:	08/19/2004
Source Type:	UST
Release Town:	NEWTON
Notification Date:	01/15/1990
Category:	NONE
Associated ID:	Not Reported
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Not Reported
Location Type:	COMMERCIAL
Source:	UNKNOWN
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0001261

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not Reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1990
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/4/1994
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	TREGS
Action Status:	WAVACC
Action Date:	1/4/1994
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	1/4/1999
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	10/16/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Revised Statement or Transmittal Received
Action Date:	10/16/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/16/2003
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	10/16/2003
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Action Status or AUL Terminated
Action Date:	10/16/2003
Response Action Outcome:	Not Reported
Action Type:	TREGS
Action Status:	WAVSIG
Action Date:	11/10/1993
Response Action Outcome:	Not Reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	11/4/1998
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	11/4/1998
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Completion Statement Received
Action Date:	11/4/1998
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	11/4/1999
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	11/6/2000
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/14/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/14/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/14/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/14/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/14/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/14/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/15/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/15/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/15/2012
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/16/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/16/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/16/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/16/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/16/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/16/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/17/2004
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/19/2008
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/19/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/19/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/19/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/19/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/19/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/20/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/20/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/20/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/21/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	12/21/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	12/21/2006
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	12/23/2005
Response Action Outcome:	Not Reported
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	2/6/1995
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/12/2002
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	5/10/2000
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	5/11/2001
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	5/4/1999
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/11/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/11/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/11/2009
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/13/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/13/2012
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/13/2012
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/14/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/14/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/14/2013
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/15/2016
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/15/2016
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/15/2016
Response Action Outcome:	Not Reported
Action Type:	Phase 4
Action Status:	Modified Revised or Updated Plan Received
Action Date:	6/16/2004
Response Action Outcome:	Not Reported
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	6/16/2004
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	6/16/2004
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/17/2010
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/17/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/17/2010
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/17/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/17/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/17/2011
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/17/2015
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/19/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/19/2014
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/19/2014
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/20/2005
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/20/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/20/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/20/2008
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/21/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/21/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	6/21/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	6/21/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/21/2007
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	7/15/2002
Response Action Outcome:	Not Reported
Action Type:	TREGS
Action Status:	WAVREC
Action Date:	7/9/1993
Response Action Outcome:	Not Reported

GENERAL CINEMAS FMR, 27 BOYLSTON ST, NEWTON, MA 02158 (Continued)

Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	8/19/2004
Response Action Outcome:	Not Reported
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	9/14/2006
Response Action Outcome:	Not Reported
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	9/27/1999
Response Action Outcome:	Not Reported
Action Type:	Phase 3
Action Status:	Written Plan Received
Action Date:	9/29/1997
Response Action Outcome:	Not Reported

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0001261 / REMOPS
Primary ID:	Not Reported
Official City:	NEWTON
Notification:	01/15/1990
Category:	NONE
Status Date:	08/19/2004
Phase:	Not Reported
Response Action Outcome:	-
Oil / Haz Material Type:	Not Reported

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0001261

NO LOCATION AID 25 BOYLSTON ST, CHESTNUT HILL, MA, 02467-1715			S109489589
▼ G27	W 1/10 - 1/3	(1407 ft. / 0.267 mi.)	State and tribal - equivalent CERCLIS State and tribal leaking storage tank lists Other Standard Environmental Records
	21 ft. Lower Elevation	173 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: The source is downgradient and beyond the critical distance.

Soil characteristics would make vapor migration from the source or plume unlikely.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0028099 / URAM
Release Town:	NEWTON
Notification Date:	10/23/2008
Category:	120 DY
Associated ID:	Not Reported
Current Status:	**URAM**
Status Date:	10/29/2008
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	ROADWAY
Source:	3-24881
Source:	RTN
Source:	UST
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0028099

Chemicals:

Chemical:	C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity:	1000 milligrams per kilogram

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/23/2008
Response Action Outcome:	Not Reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notice of Intent to Conduct a URAM

NO LOCATION AID, 25 BOYLSTON ST, CHESTNUT HILL, MA 02467-1715 (Continued)

Action Date:	10/23/2008
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	URAMLR
Action Date:	10/27/2008
Response Action Outcome:	Not Reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notification of URAM Received
Action Date:	10/29/2008
Response Action Outcome:	Not Reported
Action Type:	Utility-related Abatement Measure
Action Status:	Completion Statement Received
Action Date:	10/29/2008
Response Action Outcome:	Not Reported
Action Type:	Utility-related Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	2/3/2009
Response Action Outcome:	Not Reported

LUST: State and tribal leaking storage tank lists

Facility:

Release Tracking Number/Current Status:	3-0028099 / URAM
Status Date:	10/29/2008
Source Type:	UST
Release Town:	NEWTON
Notification Date:	10/23/2008
Category:	120 DY
Associated ID:	Not Reported
Phase:	Not Reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	ROADWAY
Source:	3-24881
Source:	RTN
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0028099

Chemicals:

Chemical:	C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity:	1000 milligrams per kilogram

Actions:

NO LOCATION AID, 25 BOYLSTON ST, CHESTNUT HILL, MA 02467-1715 (Continued)

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/23/2008
Response Action Outcome:	Not Reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notice of Intent to Conduct a URAM
Action Date:	10/23/2008
Response Action Outcome:	Not Reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	URAMLR
Action Date:	10/27/2008
Response Action Outcome:	Not Reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notification of URAM Received
Action Date:	10/29/2008
Response Action Outcome:	Not Reported
Action Type:	Utility-related Abatement Measure
Action Status:	Completion Statement Received
Action Date:	10/29/2008
Response Action Outcome:	Not Reported
Action Type:	Utility-related Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	2/3/2009
Response Action Outcome:	Not Reported

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0028099 / URAM
Primary ID:	Not Reported
Official City:	NEWTON
Notification:	10/23/2008
Category:	120 DY
Status Date:	10/29/2008
Phase:	Not Reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0028099

HW GEN: Other Standard Environmental Records

EPA Id:	MV6175666900
RCRA Generator Status:	VSQG
State Generator Status:	Not Reported
EPA Id:	MV6177540400
RCRA Generator Status:	VSQG

NO LOCATION AID, 25 BOYLSTON ST, CHESTNUT HILL, MA 02467-1715 (Continued)

State Generator Status: Not Reported

CHESTNUT HILL MEDICAL CENTER 25 BOYLSTON ST, NEWTON, MA, 02467-0000			S106954469
▼ G28	W 1/10 - 1/3	(1407 ft. / 0.267 mi.)	State and tribal leaking storage tank lists Other Standard Environmental Records
	21 ft. Lower Elevation	173 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Conditions:

Not Applicable: YES

Groundwater Flow Gradient:

Downgradient: YES

ENFORCEMENT: Other Standard Environmental Records

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not Reported
Program Id:	3-0024881
High Or Low Level Enforcement:	LLE
FMF #:	Not Reported
Comptroller Billing Name:	Not Reported
Town Where Violation Occurred:	Not Reported
Date Executed:	05/10/2010
ENF #:	NON-NE-10-3A036
Document Type:	NON
AG Ref (Y/N):	Not Reported
Doc Archived (Y/N):	Not Reported
EJ Community (Y/N):	Not Reported
Regional Comment:	Not Reported
Final Payment Due Date:	Not Reported
ACOP $:	Not Reported
PAN $:	Not Reported
EMS (Y/N):	Not Reported
EMS$:	Not Reported
SEP (Y/N):	Not Reported
SEP $:	Not Reported
Demand $:	Not Reported
Suspended $:	Not Reported
Ownership:	Commercially Owned

LUST: State and tribal leaking storage tank lists

Facility:

Release Tracking Number/Current Status:	3-0024881 / RAO
Status Date:	05/14/2010
Source Type:	UST

CHESTNUT HILL MEDICAL CENTER, 25 BOYLSTON ST, NEWTON, MA 02467-0000 (Continued)

Release Town:	NEWTON
Notification Date:	05/19/2005
Category:	72 HR
Associated ID:	Not Reported
Phase:	PHASE II
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0024881

Chemicals:

Chemical:	TOTAL VOCS
Quantity:	125 parts per million
Chemical:	FUEL OIL #2
Quantity:	120 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	10/21/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	11/29/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	11/29/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	12/16/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	3/1/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	3/26/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 3
Action Status:	Notice of Delay in Meeting RA Deadline Received

CHESTNUT HILL MEDICAL CENTER, 25 BOYLSTON ST, NEWTON, MA 02467-0000 (Continued)

Action Date:	4/1/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	4/1/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	4/24/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	4/6/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	4/8/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	5/10/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	5/14/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	5/19/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/19/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	5/19/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/10/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification

CHESTNUT HILL MEDICAL CENTER, 25 BOYLSTON ST, NEWTON, MA 02467-0000 (Continued)

Action Date:	6/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	6/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	6/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	7/16/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	7/26/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	7/26/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	9/19/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	9/25/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	9/26/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0024881 / RAO
Primary ID:	Not Reported
Official City:	NEWTON
Notification:	05/19/2005

CHESTNUT HILL MEDICAL CENTER, 25 BOYLSTON ST, NEWTON, MA 02467-0000 (Continued)

Category:	72 HR
Status Date:	05/14/2010
Phase:	PHASE II
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0024881

NO LOCATION AID 1280 AND 1290 BOYLSTON ST, BROOKLINE, MA, 02146-0000			S102967387
▼ 29	W 1/10 - 1/3	(1580 ft. / 0.299 mi.)	State and tribal - equivalent CERCLIS Other Standard Environmental Records
	19 ft. Lower Elevation	175 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: Soil characteristics would make vapor migration from the source or plume unlikely.

The source is downgradient and beyond the critical distance.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0015680 / RAO
Release Town:	BROOKLINE
Notification Date:	11/01/1997
Category:	TWO HR
Associated ID:	Not Reported
Current Status:	**Response Action Outcome**
Status Date:	12/18/1997
Phase:	Not Reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Oil
Location Type:	ROADWAY
Location Type:	COMMERCIAL
Source:	PIPE
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0015680

Chemicals:

Chemical:	HYDRAULIC FLUID
Quantity:	30 gallons
Chemical:	HYDRAULIC FLUID
Quantity:	15 gallons

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/1/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

NO LOCATION AID, 1280 AND 1290 BOYLSTON ST, BROOKLINE, MA 02146-0000 (Continued)

Action Type:	RLFA
Action Status:	FLDD1U
Action Date:	11/1/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	11/12/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/28/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	12/12/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/18/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/18/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0015680 / RAO
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	11/01/1997
Category:	TWO HR
Status Date:	12/18/1997
Phase:	Not Reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0015680

NO LOCATION AID 132 YARMOUTH RD, BROOKLINE, MA,			S106776105
▼ 30	SE 1/10 - 1/3	(1643 ft. / 0.311 mi.)	State and tribal leaking storage tank lists Other Standard Environmental Records
	5 ft. Lower Elevation	189 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

Comments: Soil characteristics would make vapor migration from the source or plume unlikely.

The source is crossgradient. The distance between the source and the target property is greater than the critical distance plus a factor to account for plume width.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Crossgradient: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

LUST: State and tribal leaking storage tank lists

Facility:

Release Tracking Number/Current Status:	3-0024451 / RAO
Status Date:	03/31/2005
Source Type:	UST
Release Town:	BROOKLINE
Notification Date:	12/01/2004
Category:	72 HR
Associated ID:	Not Reported
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0024451

Chemicals:

Chemical:	TOTAL VOCS
Quantity:	100 parts per million
Chemical:	FUEL OIL #2
Quantity:	263 parts per million

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.

NO LOCATION AID, 132 YARMOUTH RD, BROOKLINE, MA (Continued)

Action Date:	1/10/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	1/31/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/1/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	12/1/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	12/1/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	2/10/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	2/7/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/31/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0024451 / RAO
Primary ID:	Not Reported
Official City:	BROOKLINE
Notification:	12/01/2004
Category:	72 HR
Status Date:	03/31/2005
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0024451

CHESTNUT HILL BENEVOLENT ASSOC 910 BOYLSTON ST, CHESTNUT HILL, MA, 02467-2404		S106953985
▲ 31	ENE 1/10 - 1/3 (1713 ft. / 0.324 mi.) 90 ft. Higher Elevation 284 ft. Above Sea Level	State and tribal - equivalent CERCLIS State and tribal leaking storage tank lists Other Standard Environmental Records

Worksheet:

Impact on Target Property: VEC does not exist

Comments: Soil characteristics would make vapor migration from the source or plume unlikely.

Conditions:

Chemicals of Concern: YES

Groundwater Flow Gradient:

Upgradient or Indeterminate: YES

Topographically: YES

Geological Attributes - Soil Geology:

Silty-clay, low-permeability soil: YES

SHWS: State and tribal - equivalent CERCLIS

Release Tracking Number/Current Status:	3-0024837 / RAO
Release Town:	NEWTON
Notification Date:	05/06/2005
Category:	120 DY
Associated ID:	Not Reported
Current Status:	**Response Action Outcome**
Status Date:	05/06/2005
Phase:	Not Reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Hazardous Material
Click here to access the MA DEP site for this facility:	http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0024837

Chemicals:

Chemical:	NAPHTHALENE
Quantity:	7.2 milligrams per kilogram

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	5/18/2005
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/6/2005
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received

CHESTNUT HILL BENEVOLENT ASSOC, 910 BOYLSTON ST, CHESTNUT HILL, MA 02467-2404 (Continued)

Action Date:	5/6/2005
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/6/2005
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

LUST: State and tribal leaking storage tank lists

Facility:

Release Tracking Number/Current Status:	3-0025358 / RAO
Status Date:	09/06/2006
Source Type:	UST
Release Town:	NEWTON
Notification Date:	10/27/2005
Category:	72 HR
Associated ID:	Not Reported
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL
Source:	UST

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0025358

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	100 parts per million
Chemical:	TOTAL VOCS
Quantity:	110 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Modified Revised or Updated Plan Received
Action Date:	1/6/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/27/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/27/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

CHESTNUT HILL BENEVOLENT ASSOC, 910 BOYLSTON ST, CHESTNUT HILL, MA 02467-2404 (Continued)

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/27/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	11/1/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of a Modified Plan
Action Date:	11/14/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	11/14/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	11/21/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	12/30/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	3/2/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	9/6/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	9/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	9/8/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release: Other Standard Environmental Records

Release Tracking Number/Current Status:	3-0024837 / RAO
Primary ID:	Not Reported

CHESTNUT HILL BENEVOLENT ASSOC, 910 BOYLSTON ST, CHESTNUT HILL, MA 02467-2404 (Continued)

Official City:	NEWTON
Notification:	05/06/2005
Category:	120 DY
Status Date:	05/06/2005
Phase:	Not Reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0024837

Release Tracking Number/Current Status:	3-0025358 / RAO
Primary ID:	Not Reported
Official City:	NEWTON
Notification:	10/27/2005
Category:	72 HR
Status Date:	09/06/2006
Phase:	Not Reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility: http://www.web.edrnet.com/ordering/switchboard/redirect.aspx?s=GRR_MA_DEP&facid=3-0025358

HW GEN: Other Standard Environmental Records

EPA Id:	MV6177345600
RCRA Generator Status:	VSQG
State Generator Status:	VQG-MA

RECORD SOURCES AND CURRENCY

To maintain currency of the following databases, EDR contacts the appropriate agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

PRP: Potentially Responsible Parties
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Number of Days to Update: 3
Last EDR Contact :11/07/2016

Source: EPA
Telephone: 202-564-6023

RMP: Risk Management Plans
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2016
Number of Days to Update: 81
Last EDR Contact :11/18/2016

Source: Environmental Protection Agency
Telephone: 202-564-8600

AIRS: Permitted Facilities Listing
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of Air Quality permit applications.

Date of Government Version: 07/19/2016
Number of Days to Update: 71
Last EDR Contact :10/17/2016

Source: Department of Environmental Protection
Telephone: 617-292-5789

AST: Aboveground Storage Tank Database
Standard Environmental Record Source: State and tribal registered storage tank lists
Search Distance: Property

Registered Aboveground Storage Tanks.

Date of Government Version: 10/22/2009
Number of Days to Update: 9
Last EDR Contact :10/17/2016

Source: Department of Public Safety
Telephone: 617-556-1035

BROWNFIELDS: Completed Brownfields Covenants Listing
Standard Environmental Record Source: State and tribal Brownfields sites

Search Distance: 0.333 Mile

Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E.

Date of Government Version: 12/31/2015
Number of Days to Update: 57
Last EDR Contact :11/04/2016

Source: Office of the Attorney General
Telephone: 617-963-2423

BROWNFIELDS 2: Potential Brownfields Listing

Standard Environmental Record Source: State and tribal Brownfields sites

A listing of potential brownfields site locations in the state.

Date of Government Version: 05/13/2016
Number of Days to Update: 56
Last EDR Contact :11/04/2016

Source: Department of Environmental Protection
Telephone: 617-556-1007

DRYCLEANERS: Regulated Drycleaning Facilities

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.25 Mile

A listing of Department of Environmental Protection regulated drycleaning facilities that use perchloroethylene under the Environmental Results Program.

Date of Government Version: 07/07/2016
Number of Days to Update: 7
Last EDR Contact :10/31/2016

Source: Department of Environmental Protection
Telephone: 617-292-5633

ENFORCEMENT: Enforcement Action Cases

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

A listing of enforcement action cases tracked by Department of Environmental Protection programs, including Solid Waste and Hazardous Waste.

Date of Government Version: 08/12/2016
Number of Days to Update: 43
Last EDR Contact :11/11/2016

Source: Department of Environmental Quality
Telephone: 617-292-5979

GWDP: Ground Water Discharge Permits

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

The Ground Water Discharge Permits datalayer (formerly known as Groundwater Discharge Points) is a statewide point dataset containing approximate locations of permitted discharges to groundwater.

Date of Government Version: 03/10/2016
Number of Days to Update: 63
Last EDR Contact :11/03/2016

Source: MassGIS
Telephone: 617-556-1150

HW GEN: List of Massachusetts Hazardous Waste Generators

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.25 Mile

Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

Date of Government Version: 06/21/2016
Number of Days to Update: 21
Last EDR Contact :09/27/2016
Source: Department of Environmental Protection
Telephone: 617-292-5500

INST CONTROL: Sites With Activity and Use Limitation

Standard Environmental Record Source: State and tribal institutional control / engineering control registries
Search Distance: Property

Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

Date of Government Version: 06/28/2016
Number of Days to Update: 6
Last EDR Contact :10/13/2016
Source: Department of Environmental Protection
Telephone: 617-292-5990

LAST: Leaking Aboveground Storage Tank Sites

Standard Environmental Record Source: State and tribal leaking storage tank lists
Search Distance: 0.333 Mile

Sites within the Releases Database that have a AST listed as its source.

Date of Government Version: 06/28/2016
Number of Days to Update: 6
Last EDR Contact :10/13/2016
Source: Department of Environmental Protection
Telephone: 617-292-5500

LEAD: Lead Inspection Database

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

The Massachusetts Childhood Lead Poisoning Prevention Program data of lead inspection for the state.

Date of Government Version: 07/09/2015
Number of Days to Update: 20
Last EDR Contact :09/26/2016
Source: Department of Health & Human Services, Childhood Lead Poisoning Prevention Progr
Telephone: 617-624-5757

LF PROFILES: Landfill Profiles Listing

Standard Environmental Record Source: State and tribal landfill / solid waste disposal

This spreadsheet describes landfills that have actively accepted waste or have closed under MassDEP Solid Waste Regulations first adopted in 1971 (310 CMR 16.00 and 310 CMR 19.00). The list does not include landfills that closed before 1971 (and which never had a MassDEP permit or approval), or for which agency data is incomplete.

Date of Government Version: 07/01/2015
Number of Days to Update: 48
Last EDR Contact :10/07/2016
Source: Department of Environmental Protection
Telephone: 617-292-5868

LIENS: Liens Information Listing

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of environmental liens.

Date of Government Version: 02/24/2014
Number of Days to Update: 15
Source: Department of Environmental Protection
Telephone: 617-292-5628

Last EDR Contact :11/17/2016

LUST: Leaking Underground Storage Tank Listing

Standard Environmental Record Source: State and tribal leaking storage tank lists

Search Distance: 0.333 Mile

Sites within the Leaking Underground Storage Tank Listing that have a UST listed as its source.

Date of Government Version: 06/28/2016
Source: Department of Environmental Protection
Number of Days to Update: 6
Telephone: 617-292-5990
Last EDR Contact :10/13/2016

MA SPILLS: Historical Spill List

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

The Spills Database was the release notification tracking system for spills that occurred prior to October 1, 1993. This information should be considered to be primarily of historical interest since all of the listed spills have either been cleaned up or assigned new tracking numbers and moved to the Reportable Releases or Sites Transition List databases.

Date of Government Version: 09/30/1993
Source: Department of Environmental Protection
Number of Days to Update: 28
Telephone: 617-292-5720
Last EDR Contact :12/03/2003

MERCURY: Mercury Product Recyling Drop-Off Locations Listing

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

Date of Government Version: 06/06/2016
Source: Department of Environmental Protection
Number of Days to Update: 40
Telephone: 617-292-5632
Last EDR Contact :11/17/2016

NPDES: NPDES Permit Listing

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

Listing of treatment plants in Massachusetts that hold permits to discharge to groundwater.

Date of Government Version: 06/22/2016
Source: Department of Environmental Protection
Number of Days to Update: 48
Telephone: 508-767-2781
Last EDR Contact :11/18/2016

RELEASE: Reportable Releases

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

Contains information on all releases of oil and hazardous materials that have been reported to DEP

Date of Government Version: 06/28/2016
Source: Department of Environmental Protection
Number of Days to Update: 6
Telephone: 617-292-5990
Last EDR Contact :10/13/2016

SHWS: Site Transition List

Standard Environmental Record Source: State and tribal - equivalent CERCLIS
Search Distance: 0.333 Mile

Contains information on releases of oil and hazardous materials that have been reported to DEP.

Date of Government Version: 06/28/2016
Number of Days to Update: 6
Last EDR Contact :10/13/2016

Source: Department of Environmental Protection
Telephone: 617-292-5990

SWF/LF: Solid Waste Facility Database/Transfer Stations
Standard Environmental Record Source: State and tribal landfill / solid waste disposal
Search Distance: 0.333 Mile

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 01/31/2016
Number of Days to Update: 14
Last EDR Contact :10/07/2016

Source: Department of Environmental Protection
Telephone: 617-292-5989

TIER 2: Tier 2 Information Listing
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report

Date of Government Version: 12/31/2015
Number of Days to Update: 54
Last EDR Contact :10/17/2016

Source: Massachusetts Emergency Management Agency
Telephone: 508-820-2019

TSD: TSD Facility
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

List of Licensed Hazardous Waste Treatment, Storage Disposal Facilities (TSDFs) in Massachusetts.

Date of Government Version: 04/01/2015
Number of Days to Update: 10
Last EDR Contact :09/30/2016

Source: Department of Environmental Protection
Telephone: 617-292-5580

UST: Summary Listing of all the Tanks Registered in the State of Massachusetts
Standard Environmental Record Source: State and tribal registered storage tank lists
Search Distance: Property

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/22/2016
Number of Days to Update: 42
Last EDR Contact :10/17/2016

Source: Department of Fire Services, Office of the Public Safety
Telephone: 617-556-1035

2020 COR ACTION: 2020 Corrective Action Program List
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.25 Mile

RECORD SOURCES AND CURRENCY

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Number of Days to Update: 6
Last EDR Contact :11/11/2016

Source: Environmental Protection Agency
Telephone: 703-308-4044

COAL ASH DOE: Steam-Electric Plant Operation Data
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Number of Days to Update: 76
Last EDR Contact :09/09/2016

Source: Department of Energy
Telephone: 202-586-8719

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Number of Days to Update: 40
Last EDR Contact :09/06/2016

Source: Environmental Protection Agency
Telephone: Not Reported

CONSENT: Superfund (CERCLA) Consent Decrees
Standard Environmental Record Source: Federal NPL
Search Distance: 0.333 Mile

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2016
Number of Days to Update: 53
Last EDR Contact :09/26/2016

Source: Department of Justice, Consent Decree Library
Telephone: Varies

CORRACTS: Corrective Action Report
Standard Environmental Record Source: Federal RCRA CORRACTS facilities list
Search Distance: 0.333 Mile

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/27/2016
Number of Days to Update: 64
Last EDR Contact :09/28/2016

Source: EPA
Telephone: 800-424-9346

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
Standard Environmental Record Source: State and tribal landfill / solid waste disposal
Search Distance: 0.333 Mile

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Number of Days to Update: 137
Last EDR Contact :10/24/2016
Source: EPA, Region 9
Telephone: 415-947-4219

DOCKET HWC: Hazardous Waste Compliance Docket Listing

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 06/02/2016
Number of Days to Update: 91
Last EDR Contact :11/28/2016
Source: Environmental Protection Agency
Telephone: 202-564-0527

DOT OPS: Incident and Accident Data

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Number of Days to Update: 42
Last EDR Contact :11/02/2016
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595

Delisted NPL: National Priority List Deletions

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/07/2016
Number of Days to Update: 10
Last EDR Contact :10/05/2016
Source: EPA
Telephone: Not Reported

ECHO: Enforcement & Compliance History Information

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/18/2016
Number of Days to Update: 31
Last EDR Contact :09/20/2016
Source: Environmental Protection Agency
Telephone: 202-564-2280

EPA WATCH LIST: EPA WATCH LIST

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Number of Days to Update: 88
Last EDR Contact :11/08/2016

Source: Environmental Protection Agency
Telephone: 617-520-3000

ERNS: Emergency Response Notification System

Standard Environmental Record Source: Federal ERNS list

Search Distance: Property

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/26/2016
Number of Days to Update: 43
Last EDR Contact :09/29/2016

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180

FEMA UST: Underground Storage Tank Listing

Standard Environmental Record Source: State and tribal registered storage tank lists

Search Distance: Property

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Number of Days to Update: 55
Last EDR Contact :10/11/2016

Source: FEMA
Telephone: 202-646-5797

FINDS: Facility Index System/Facility Registry System

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/15/2016
Number of Days to Update: 65
Last EDR Contact :09/07/2016

Source: EPA
Telephone: Not Reported

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667

Last EDR Contact :11/17/2016

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Standard Environmental Record Source: Other Standard Environmental Records

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009 Source: EPA
Number of Days to Update: 25 Telephone: 202-566-1667
Last EDR Contact :11/17/2016

FUDS: Formerly Used Defense Sites

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015 Source: U.S. Army Corps of Engineers
Number of Days to Update: 97 Telephone: 202-528-4285
Last EDR Contact :09/09/2016

FUELS PROGRAM: EPA Fuels Program Registered Listing

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/22/2016 Source: EPA
Number of Days to Update: 59 Telephone: 800-385-6164
Last EDR Contact :11/22/2016

FUSRAP: Formerly Utilized Sites Remedial Action Program

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/21/2016 Source: Department of Energy
Number of Days to Update: 59 Telephone: 202-586-3559
Last EDR Contact :11/08/2016

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Source: Environmental Protection Agency
Number of Days to Update: 40 Telephone: 202-564-2501

Last EDR Contact :12/17/2007

HMIRS: Hazardous Materials Information Reporting System
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/27/2016
Number of Days to Update: 87
Last EDR Contact :09/27/2016
Source: U.S. Department of Transportation
Telephone: 202-366-4555

ICIS: Integrated Compliance Information System
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/27/2016
Number of Days to Update: 77
Last EDR Contact :10/11/2016
Source: Environmental Protection Agency
Telephone: 202-564-5088

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
Search Distance: 0.333 Mile

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/27/2015
Number of Days to Update: 67
Last EDR Contact :10/28/2016
Source: EPA Region 1
Telephone: 617-918-1313

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/07/2016
Number of Days to Update: 41
Last EDR Contact :10/28/2016
Source: EPA Region 10
Telephone: 206-553-2857

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/05/2016
Number of Days to Update: 35
Last EDR Contact :10/28/2016
Source: EPA Region 4
Telephone: 404-562-8677

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 02/17/2016
Number of Days to Update: 37
Source: EPA, Region 5
Telephone: 312-886-7439

Last EDR Contact :10/28/2016

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 12/11/2015
Number of Days to Update: 105
Last EDR Contact :10/28/2016
Source: EPA Region 6
Telephone: 214-665-6597

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/09/2015
Number of Days to Update: 112
Last EDR Contact :10/28/2016
Source: EPA Region 7
Telephone: 913-551-7003

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/13/2015
Number of Days to Update: 118
Last EDR Contact :10/28/2016
Source: EPA Region 8
Telephone: 303-312-6271

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 02/25/2016
Number of Days to Update: 37
Last EDR Contact :10/28/2016
Source: Environmental Protection Agency
Telephone: 415-972-3372

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Number of Days to Update: 52
Last EDR Contact :10/31/2016
Source: Environmental Protection Agency
Telephone: 703-308-8245

INDIAN UST R1: Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal registered storage tank lists
Search Distance: Property

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/20/2015
Number of Days to Update: 67
Last EDR Contact :10/28/2016
Source: EPA, Region 1
Telephone: 617-918-1313

INDIAN UST R10: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 01/07/2016
Number of Days to Update: 41
Last EDR Contact :10/28/2016

Source: EPA Region 10
Telephone: 206-553-2857

INDIAN UST R4: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/05/2016
Number of Days to Update: 35
Last EDR Contact :10/28/2016

Source: EPA Region 4
Telephone: 404-562-9424

INDIAN UST R5: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2015
Number of Days to Update: 52
Last EDR Contact :10/28/2016

Source: EPA Region 5
Telephone: 312-886-6136

INDIAN UST R6: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 12/03/2015
Number of Days to Update: 120
Last EDR Contact :10/28/2016

Source: EPA Region 6
Telephone: 214-665-7591

INDIAN UST R7: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014
Number of Days to Update: 65
Last EDR Contact :10/28/2016

Source: EPA Region 7
Telephone: 913-551-7003

INDIAN UST R8: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 01/26/2016
Number of Days to Update: 119
Last EDR Contact :10/28/2016

Source: EPA Region 8
Telephone: 303-312-6137

INDIAN UST R9: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/25/2016 Source: EPA Region 9
Number of Days to Update: 37 Telephone: 415-972-3368
Last EDR Contact :10/28/2016

INDIAN VCP R1: Voluntary Cleanup Priority Listing

Standard Environmental Record Source: State and tribal voluntary cleanup sites

Search Distance: Property

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015 Source: EPA, Region 1
Number of Days to Update: 142 Telephone: 617-918-1102
Last EDR Contact :09/26/2016

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

Standard Environmental Record Source: State and tribal voluntary cleanup sites

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008 Source: EPA, Region 7
Number of Days to Update: 27 Telephone: 913-551-7365
Last EDR Contact :04/20/2009

LEAD SMELTER 1: Lead Smelter Sites

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

A listing of former lead smelter site locations.

Date of Government Version: 03/07/2016 Source: Environmental Protection Agency
Number of Days to Update: 148 Telephone: 703-603-8787
Last EDR Contact :10/20/2016

LEAD SMELTER 2: Lead Smelter Sites

Standard Environmental Record Source: Other Standard Environmental Records

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001 Source: American Journal of Public Health
Number of Days to Update: 36 Telephone: 703-305-6451
Last EDR Contact :12/02/2009

LIENS 2: CERCLA Lien Information

Standard Environmental Record Source: Federal CERCLIS

Search Distance: Property

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014 Source: Environmental Protection Agency
Number of Days to Update: 37 Telephone: 202-564-6023

Last EDR Contact :10/28/2016

LUCIS: Land Use Control Information System

Standard Environmental Record Source: Federal institutional controls / engineering controls registries

Search Distance: 0.333 Mile

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015
Source: Department of the Navy
Number of Days to Update: 13
Telephone: 843-820-7326
Last EDR Contact :11/18/2016

MLTS: Material Licensing Tracking System

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Source: Nuclear Regulatory Commission
Number of Days to Update: 43
Telephone: 301-415-7169
Last EDR Contact :11/07/2016

NPL: National Priority List

Standard Environmental Record Source: Federal NPL

Search Distance: 0.333 Mile

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 03/07/2016
Source: EPA
Number of Days to Update: 10
Telephone: Not Reported
Last EDR Contact :10/05/2016

NPL Site Boundaries

Sources:

EPA"s Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-566-0690

EPA Region 1
Telephone: 617-918-1102

EPA Region 2
Telephone: 212-637-4293

EPA Region 3
Telephone: 215-814-5418

EPA Region 4
Telephone: 404-562-8681

EPA Region 5
Telephone: 312-353-1063

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6118

EPA Region 9
Telephone: 415-947-4579

EPA Region 10
Telephone: 206-553-4479

NPL LIENS: Federal Superfund Liens

Standard Environmental Record Source: Federal NPL

Search Distance: Property

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Source: EPA
Number of Days to Update: 56
Telephone: 202-564-4267
Last EDR Contact :08/15/2011

ODI: Open Dump Inventory

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Source: Environmental Protection Agency
Number of Days to Update: 39
Telephone: 800-424-9346
Last EDR Contact :06/09/2004

PADS: PCB Activity Database System

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2016
Source: EPA
Number of Days to Update: 127
Telephone: 202-566-0500
Last EDR Contact :10/14/2016

PCB TRANSFORMER: PCB Transformer Registration Database

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Source: Environmental Protection Agency
Number of Days to Update: 83
Telephone: 202-566-0517
Last EDR Contact :10/28/2016

Proposed NPL: Proposed National Priority List Sites

Standard Environmental Record Source: Federal NPL

Search Distance: 0.333 Mile

A site that has been proposed for listing on the NationalPriorities List through the issuance of a proposed rule in the Federal Register.EPA then accepts public comments on the site, responds to the comments,and places on the NPL those sites that continue to meet therequirements for listing.

Date of Government Version: 03/07/2016 Source: EPA
Number of Days to Update: 10 Telephone: Not Reported
Last EDR Contact :10/05/2016

RAATS: RCRA Administrative Action Tracking System

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995 Source: EPA
Number of Days to Update: 35 Telephone: 202-564-4104
Last EDR Contact :06/02/2008

RADINFO: Radiation Information Database

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/03/2016 Source: Environmental Protection Agency
Number of Days to Update: 16 Telephone: 202-343-9775
Last EDR Contact :10/05/2016

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/21/2016 Source: Environmental Protection Agency
Number of Days to Update: 64 Telephone: 703-308-8895
Last EDR Contact :09/28/2016

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list

Search Distance: Property

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/21/2016 Source: Environmental Protection Agency
Number of Days to Update: 64 Telephone: 703-308-8895
Last EDR Contact :09/28/2016

RECORD SOURCES AND CURRENCY

RCRA-LQG: RCRA - Large Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list

Search Distance: Property

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/21/2016 Source: Environmental Protection Agency

Number of Days to Update: 64 Telephone: 703-308-8895

Last EDR Contact :09/28/2016

RCRA-SQG: RCRA - Small Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list

Search Distance: Property

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/21/2016 Source: Environmental Protection Agency

Number of Days to Update: 64 Telephone: 703-308-8895

Last EDR Contact :09/28/2016

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

Standard Environmental Record Source: Federal RCRA TSD facilities list

Search Distance: 0.333 Mile

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/21/2016 Source: Environmental Protection Agency

Number of Days to Update: 64 Telephone: 703-308-8895

Last EDR Contact :09/28/2016

ROD: Records Of Decision

Standard Environmental Record Source: Federal NPL

Search Distance: 0.333 Mile

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013 Source: EPA

Number of Days to Update: 74 Telephone: 703-416-0223

Last EDR Contact :09/09/2016

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Number of Days to Update: 54
Last EDR Contact :11/17/2016

Source: Environmental Protection Agency
Telephone: 615-532-8599

SEMS: Superfund Enterprise Management System

Standard Environmental Record Source: Federal CERCLIS

Search Distance: 0.333 Mile

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 03/07/2016
Number of Days to Update: 10
Last EDR Contact :10/20/2016

Source: EPA
Telephone: 800-424-9346

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 03/07/2016
Number of Days to Update: 10
Last EDR Contact :10/20/2016

Source: EPA
Telephone: 800-424-9346

SSTS: Section 7 Tracking Systems

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Number of Days to Update: 77
Last EDR Contact :10/24/2016

Source: EPA
Telephone: 202-564-4203

TRIS: Toxic Chemical Release Inventory System

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014
Source: EPA
Number of Days to Update: 133
Telephone: 202-566-0250
Last EDR Contact :11/22/2016

TSCA: Toxic Substances Control Act

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Source: EPA
Number of Days to Update: 14
Telephone: 202-260-5521
Last EDR Contact :09/23/2016

UMTRA: Uranium Mill Tailings Sites

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Source: Department of Energy
Number of Days to Update: 146
Telephone: 505-845-0011
Last EDR Contact :09/09/2016

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 06/30/2016
Source: EPA
Number of Days to Update: 88
Telephone: 202-564-2496
Last EDR Contact :09/26/2016

US AIRS MINOR: Air Facility System Data

Standard Environmental Record Source: Other Standard Environmental Records
A listing of minor source facilities.

Date of Government Version: 06/30/2016
Source: EPA
Number of Days to Update: 88
Telephone: 202-564-2496
Last EDR Contact :09/26/2016

US BROWNFIELDS: A Listing of Brownfields Sites

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

RECORD SOURCES AND CURRENCY

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/20/2016
Number of Days to Update: 51
Last EDR Contact :09/21/2016

Source: Environmental Protection Agency
Telephone: 202-566-2777

US CDL: Clandestine Drug Labs

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 08/30/2016
Number of Days to Update: 17
Last EDR Contact :11/29/2016

Source: Drug Enforcement Administration
Telephone: 202-307-1000

US ENG CONTROLS: Engineering Controls Sites List

Standard Environmental Record Source: Federal institutional controls / engineering controls registries
Search Distance: Property

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/09/2016
Number of Days to Update: 93
Last EDR Contact :11/29/2016

Source: Environmental Protection Agency
Telephone: 703-603-0695

US FIN ASSUR: Financial Assurance Information

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 07/12/2016
Number of Days to Update: 65
Last EDR Contact :11/16/2016

Source: Environmental Protection Agency
Telephone: 202-566-1917

US HIST CDL: National Clandestine Laboratory Register

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 08/31/2016
Number of Days to Update: 17
Last EDR Contact :08/31/2016

Source: Drug Enforcement Administration
Telephone: 202-307-1000

RECORD SOURCES AND CURRENCY

US INST CONTROL: Sites with Institutional Controls

Standard Environmental Record Source: Federal institutional controls / engineering controls registries

Search Distance: Property

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/09/2016
Source: Environmental Protection Agency
Number of Days to Update: 93
Telephone: 703-603-0695
Last EDR Contact :11/29/2016

US MINES: Mines Master Index File

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/05/2016
Source: Department of Labor, Mine Safety and Health Administration
Number of Days to Update: 22
Telephone: 303-231-5959
Last EDR Contact :12/01/2016

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

Standard Environmental Record Source: Other Standard Environmental Records

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Source: USGS
Number of Days to Update: 49
Telephone: 703-648-7709
Last EDR Contact :11/29/2016

US MINES 3: Active Mines & Mineral Plants Database Listing

Standard Environmental Record Source: Other Standard Environmental Records

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Source: USGS
Number of Days to Update: 97
Telephone: 703-648-7709
Last EDR Contact :09/02/2016

DOD: Department of Defense Sites

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Source: USGS
Number of Days to Update: 62
Telephone: 888-275-8747
Last EDR Contact :10/14/2016

INDIAN RESERV: Indian Reservations

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

RECORD SOURCES AND CURRENCY

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Number of Days to Update: 34
Last EDR Contact :10/14/2016

Source: USGS
Telephone: 202-208-3710

PWS: Public Water System Data

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

This Safe Drinking Water Information System (SDWIS) file contains public water systems name and address, population served and the primary source of water

Date of Government Version: 12/17/2013
Number of Days to Update: 279
Last EDR Contact :11/28/2016

Source: EPA
Telephone: Not Reported

RECORD SOURCES AND CURRENCY

HISTORICAL USE RECORDS

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

Standard Environmental Record Source: Exclusive Recovered Govt. Archives

Search Distance: Property

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: Not Reported
Source: Department of Environmental Protection
Number of Days to Update: 176
Telephone: Not Reported
Last EDR Contact :06/01/2012

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

Standard Environmental Record Source: Exclusive Recovered Govt. Archives

Search Distance: Property

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: Not Reported
Source: Department of Environmental Protection
Number of Days to Update: 176
Telephone: Not Reported
Last EDR Contact :06/01/2012

EDR Hist Auto: EDR Exclusive Historic Gas Stations

Standard Environmental Record Source: Historical Gas Stations

Search Distance: 0.125 Mile

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: 02/20/2007
Source: EDR, Inc.
Number of Days to Update: 42
Telephone: Not Reported
Last EDR Contact :02/21/2007

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

Standard Environmental Record Source: Historical Dry Cleaners

Search Distance: 0.125 Mile

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: 02/20/2007
Source: EDR, Inc.
Number of Days to Update: 42
Telephone: Not Reported
Last EDR Contact :02/21/2007

EDR MGP: EDR Proprietary Manufactured Gas Plants

Standard Environmental Record Source: Former manufactured Gas Plants

Search Distance: 0.333 Mile

RECORD SOURCES AND CURRENCY

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: 08/28/2009
Number of Days to Update: 55
Last EDR Contact :11/30/2012

Source: EDR, Inc.
Telephone: Not Reported

RECORD SOURCES AND CURRENCY

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5' minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW® Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW® Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services. The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

STREET AND ADDRESS INFORMATION

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3.3 Hazmat

Please see the following reports:

-Asbestos Survey report, prepared by End Point LLC

-Re-Inspection & AHERA Asbestos Management Plan Update, prepared by EFI Global

ENGINEERS & ENVIRONMENTAL PROFESSIONALS

February 17, 2017 EndPoint Project 2475-001

Philip Gray VIA EMAIL
Jonathan Levi Architects
266 Beacon Street
Boston, MA 02116
pgray@leviarc.com

Re: Asbestos Survey – Visual Only
Baldwin School and Soule Recreation Center
484/490 Heath St., 654 Hammond St., and 650 Hammond St.
Brookline, Massachusetts

Dear Mr. Gray,

EndPoint, LLC (EndPoint) has prepared this report documenting our visual inspection services for asbestos containing building media at the Baldwin School building, Soule Environmental Education building, and the Soule Gymnasium, located at 484/490 Heath Street, 654 Hammond Street, and 652 Hammond Street, respectively, in the Chestnut Hill neighborhood of Brookline, MA (the Subject Property). This work was conducted based on our proposal and your authorization to proceed (via email). The asbestos survey was conducted to identify if suspected asbestos containing materials (ACMs) were present in the Subject Property's Baldwin School building, Soule Environmental Education building, and the Soule Gymnasium. Any suspect ACMs would be treated as if they were asbestos-containing and would require abatement activities prior to or management of planned renovations at the above-mentioned Subject Property, in accordance with the National Emission Standards for Hazardous Air Pollutants (NESHAPs) Regulations.

ASBESTOS SURVEY

On December 27, 2016 Ms. Katie Snyder and Ms. Sara Knowles of EndPoint, Asbestos Hazard Emergency Response Act (AHERA) accredited and Massachusetts certified Asbestos Inspectors (AI900553 and AI900693, respectively), were on site to conduct a survey of the Subject Property. Based on our correspondence with you and an understanding that the buildings are still in use, bulk samples of building materials suspected of containing asbestos were not collected from any of the three buildings, in order to preserve the integrity and aesthetic appeal of the properties. A visual inspection of each of the three buildings was conducted. Because samples were not collected, building materials that would typically be sampled due to them possibly containing asbestos were deemed suspect asbestos-containing building

materials (ACBM). It should be noted that all suspect ACBM observed in each of the three buildings were noted to be intact and well maintained.

An ACBM is defined in Massachusetts as any building material within a school building that contains asbestos at a concentration greater than or equal to 1% by weight. As discussed above, because bulk samples of building materials were not collected, and therefore not analyzed, these materials are considered "Suspect" ACBMs until bulk samples are collected and analyzed, and based on the analyses, the materials are determined to not contain asbestos.

Baldwin School

Based on historical asbestos inspections conducted at the Baldwin School, it was determined that wall and ceiling plaster at the property is already known to likely contain asbestos. This material was observed in each of the classrooms, offices, bathrooms, storage rooms and hallways. Please refer to the attached photographic log for selected pictures of locations throughout the properties where known and suspected ACBMs were identified.

Building materials that are considered to be suspect ACBM are identified below:

Exterior:

- Roofing materials on building (adhesive on clay shingles, asphalt shingles, tar, sublayers, etc.). – Approximately 7,000 square feet (SF).
- Roofing materials on detached sheds (asphalt shingles, tar, sublayers, etc.). – Approximately 100 square feet (SF)
- Window caulking and glazing – Approximately 80 windows (and door windows) of various shapes and sizes.

Interior:

- Ceiling and wall plaster was observed throughout the property, on each floor. Plastered walls and ceilings were observed to be intact and well maintained, and in some areas, labeled as ACBM (see photograph). – Approximately 12,100 SF.
- White ½" floor tiles were observed in the bathrooms on the 1st floor. The associated mastic and grout are also suspected ACBM. Floor tiles were observed to be intact, and no visible mastic was noted. – Approximately 300 SF.
- White 4" wall tiles were observed in the bathrooms and water-fountain areas on the 1st floor. The associated mastic and grout are also suspected ACBM. Wall tiles were observed to be intact, and no visible mastic was noted. – Approximately 750 SF.

- Tan 9”x9” floor tiles were observed in the 1st Floor Kitchen and underneath the carpet in the Classroom/Lunchroom and Lounge. The associated mastic is also suspected ACBM. Tiles were observed to be intact, and no visible mastic was noted. – Approximately 1,400 SF.
- Beige 12”x12” floor tiles were observed in the 1st Floor Classroom/Lunchroom and Classroom/Library. The associated mastic is also suspected ACBM. Tiles were observed to be intact, and no visible mastic was noted. – Approximately 1,000 SF.
- Red/Brown 4”x4” floor tiles were observed in the 1st floor entryways to the building (front and side). The associated grout and mastic are also suspected ACBM. Tiles were observed to be intact, and no visible mastic was noted. – Approximately 75 SF.
- Blue and Green carpeting was observed in the 1st floor Classrooms, Offices, and Hallway. The associated mastic is also suspected ACBM. Carpet was observed to be intact, and no visible mastic was noted. – Approximately 2,000 SF.
- White wainscoting was observed in the 1st floor bathroom. The wood wainscoting is not a suspect ACBM; however, the associated mastic is. Wainscoting was observed to be intact, and no visible mastic was noted. – Approximately 150 SF.
- Tan Flooring (linoleum or sealed tiles) was observed in Basement Classrooms, Classroom/Nap Room, Bathroom, and Hallway. The associated mastic is also suspected ACBM. The flooring was observed to be intact, and no visible mastic was noted. – Approximately 1,600 SF.
- Blue carpeting was observed in the Basement Activity Room, Office, Classrooms, and Hallway. The associated mastic is also suspected ACBM. Carpet was observed to be intact, and no visible mastic was noted. – Approximately 1,800 SF.
- Blue- and white-painted 12”x12” acoustical ceiling tiles were observed in the Basement Activity Room. The tiles are reportedly cemented to the ceiling; therefore, the adhesive/cement is also suspected ACBM. The ceiling tiles were observed to be intact, and no visible adhesive/cement was noted.
- Fire Doors were observed in the boiler room of the building, at the entrances to each of the surrounding rooms. Fire doors were labeled as being ACBM (see photographs) – Approximately two 10’x3’ doors, one 15’x6’ door, and one 2’x3’ door.
- Pipe Fitting Insulation (joints and elbows) on fiberglass-insulated pipes was observed in the attic and boiler room. This material is also assumed to be located behind walls and above ceilings. The fittings that were able to be observed were noted to be intact. – Approximately 200 LF.

The aforementioned Suspect ACMs were observed to be in good condition (intact), except where noted above. The Suspect ACMs will need to be removed as part of future asbestos abatement activities prior to any renovation or demolition projects affecting said materials; unless bulk samples are collected and analyzed, and based on the analysis, the materials are determined to not contain asbestos.

Soule Environmental Education Center

Building materials that are considered to be suspect ACBM are identified below:

Exterior:

- Roofing materials on building and detached sheds (asphalt shingles, rolled roofing, tar, sublayers, etc.). – Approximately 1,300 SF.
- Roofing materials on detached sheds (asphalt shingles, rolled roofing, tar, sublayers, etc.). – Approximately 25 SF.
- Stucco/Cementitious Siding was observed on the exterior of the building and intact. – Approximately 450 SF.

Interior:

- Tan 12"x12" floor tiles were observed in RM1. The associated mastic is suspected ACBM. Floor tiles were observed to be intact, and no visible mastic was noted. – Approximately 400 SF.
- Tan cove base was observed in RM1, RM2, RM3, and the Hall. The associated mastic is also suspected ACBM. Cove base was observed to be intact, and no visible mastic was noted. – Approximately 60 SF.
- Light green wallboard and joint compound was observed in RM1, RM2, RM3, and the Hall. Walls were observed to be intact. – Approximately 1,700 SF.
- White wallboard and joint compound was observed on the ceilings in RM1, RM2, RM3, and the Hall. Ceilings were observed to be intact. – Approximately 700 SF.
- White textured insulation on underside of laboratory sink was observed in RM1. The sink and the textured insulation were observed to be intact. – Approximately 2 SF.
- Black laboratory countertop was observed in RM1. The associated mastic is also suspected ACBM. The countertop was observed to be intact, and no visible mastic was noted. – Approximately 10 SF.
- Tan Flooring (linoleum) was observed in RM1 and RM2. The associated mastic is also suspected ACBM. The flooring was observed to be intact, and no visible mastic was noted. – Approximately 210 SF.
- Red carpeting was observed in the Hall. The associated mastic is also suspected ACBM. Carpet was observed to be intact, and no visible mastic was noted. – Approximately 80 SF.

The aforementioned Suspect ACMs were observed to be in good condition (intact), except where noted above. The Suspect ACMs will need to be removed as part of future asbestos abatement activities prior to any renovation or demolition projects affecting said materials; unless bulk samples are collected and analyzed, and based on the analysis, the materials are determined to not contain asbestos.

Soule Gymnasium

Building materials that are considered to be suspect ACBM are identified below:

Exterior:

- Roofing materials on building (asphalt shingles, tar, sublayers, etc.). – Approximately 4,600 SF.
- Roofing materials on detached sheds (asphalt shingles, tar, sublayers, etc.). – Approximately 75 SF.

Interior:

- Loose acoustical ceiling panels (2 boxes of 10 panels each) were observed to be stored in RM1. Packages of ceiling tiles were observed to be intact. – Approximately 160 SF.
- Blue wall tile was observed in RM2. The associated grout and mastic are also suspected ACBM. Wall tiles were observed to be intact, and no visible mastic was noted. – Approximately 210 SF.
- Black floor tile was observed in RM2. The associated grout and mastic are also suspected ACBM. Floor tiles were observed to be intact, and no visible mastic was noted. – Approximately 80 SF.
- Black slip-resistant flooring was observed in RM4 and RM6. The associated mastic is also suspected ACBM. The flooring was observed to be intact, and no visible mastic was noted. – Approximately 200 SF.
- White ceiling board was observed at the basement exits, RM 4 and RM6. The ceiling board was observed to be intact. – Approximately 210 SF.
- Black cove base was observed in RM5. The associated mastic is also suspected ACBM. Cove base was observed to be intact, and no visible mastic was noted. – Approximately 75 SF.
- White 2'x4' acoustical ceiling panels were observed in RM5. The ceiling panels were observed to be intact. – Approximately 3,300 SF.
- Pipe Fitting Insulation (joints and elbows) on fiberglass-insulated pipes was observed in the attic and basement. This material is also assumed to be located behind walls and above ceilings. The fittings that were able to be observed were noted to be intact. – Approximately 175 LF.

The aforementioned Suspect ACMs were observed to be in good condition (intact), except where noted above. The Suspect ACMs will need to be removed as part of future asbestos abatement activities prior to any renovation or demolition projects affecting said materials; unless bulk samples are collected and analyzed, and based on the analysis, the materials are determined to not contain asbestos.

ENGINEERS & ENVIRONMENTAL PROFESSIONALS

POLYCHLORINATED BIPHENYLS

On December 27, 2016 Ms. Snyder and Ms. Knowles also visually inspected the Subject Property for building materials that could contain polychlorinated biphenyls (PCBs). As was the case with suspect ACM, samples of the suspected PCB-containing materials were also not collected in order to maintain the integrity and aesthetic appeal of the buildings.

Building materials that are suspected of being PCB-containing are as follows:

Baldwin School

- Window/Door caulking and glazing – Approximately 80 windows (and door windows) of various shapes and sizes.

Soule Environmental Science Center

- Window/Door caulking and glazing – Approximately 15 windows (and door windows) of various shapes and sizes.

Soule Gymnasium

- Window/Door caulking and glazing – Approximately 28 windows (and door windows) of various shapes and sizes.

- Grout compound at wall intersections (observed in basement stairwell) – Approximately 10 LF.

CONCLUSIONS AND RECOMMENDATIONS

The aforementioned Suspect ACMs were observed to be in good condition (intact). The Suspect ACMs will need to be removed as part of future asbestos abatement activities prior to any renovation or demolition projects that would disturb those materials; unless bulk samples are collected and analyzed, and based on the analyses the materials are determined to not contain asbestos. EndPoint conducted this asbestos survey using visual observations only; therefore, this asbestos survey does not meet the NESHAPs Regulation for obtaining a building permit to renovate or demolish the portions of the building described within this report. As previously mentioned, should renovations or demolition be required in any of the aforementioned areas, a thorough asbestos survey including bulk sample collection and analysis would be required to determine if the suspect ACBMs do not contain asbestos. Note that there is a 10-day permit process to obtain an asbestos abatement permit.

The suspected PCB-containing materials, including the window/door glazing and caulking, and any brick or cement joint caulking/grout would need to be sampled and analyzed in order to determine if the materials do not contain PCBs, prior to any renovation or demolition.

We appreciate the opportunity to assist you in this matter. Please call us if you have any questions regarding this report or any other matter at (603) 965-3810.

Sincerely,
EndPoint, LLC

Katie Snyder
Asbestos Inspector (AI900553)

Richard J. Wozmak, P.E., P.H., LSP, LEP
Principal

Attachments: Floor Plan Figures
Photographic Log

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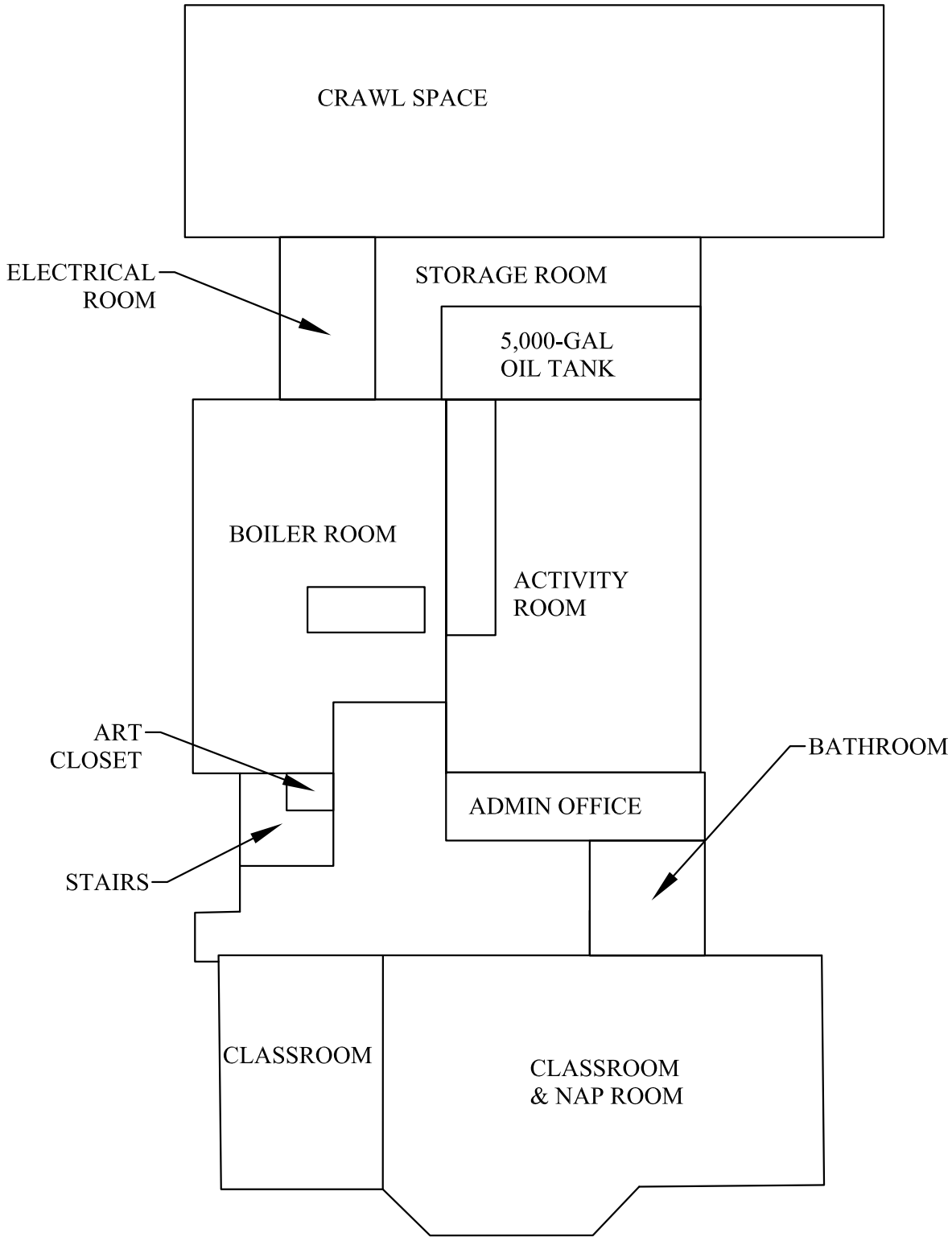

Legend

Note: Site features are approximate and for illustrative purposes only.

EndPoint LLC
ENGINEERS & ENVIRONMENTAL PROFESSIONALS
25 Buttrick Road, Unit D2
Londonderry, NH 03053

CLIENT:	Jonathan Levi Architects
PROJECT:	Baldwin School & Soule Recreation Center
TITLE:	Baldwin School Floor Plan - Basement

DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE NO.:
KLS	KLS	KLS	RJW	1
SCALE:	DATE:	FILE NO.:	PROJECT NO.:	
Not to Scale	12/28/2016	Figure	2475-001	

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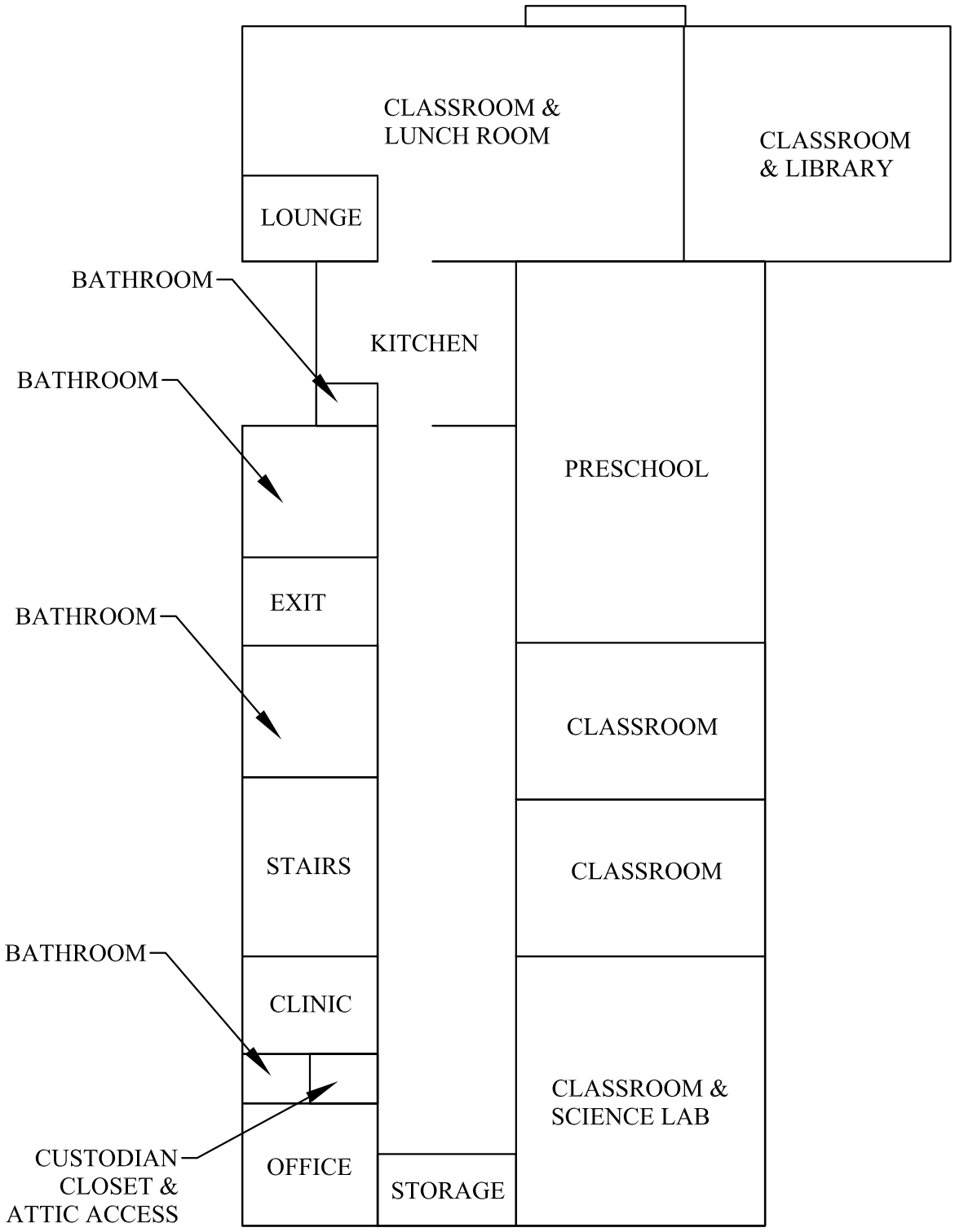

Legend

Note: Site features are approximate and for illustrative purposes only.

EndPoint LLC
ENGINEERS & ENVIRONMENTAL PROFESSIONALS
25 Buttrick Road, Unit D2
Londonderry, NH 03053

CLIENT: Jonathan Levi Architects

PROJECT: Baldwin School & Soule Recreation Center

TITLE: Baldwin School Floor Plan - First Floor

DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE NO.:
KLS	KLS	KLS	RJW	2
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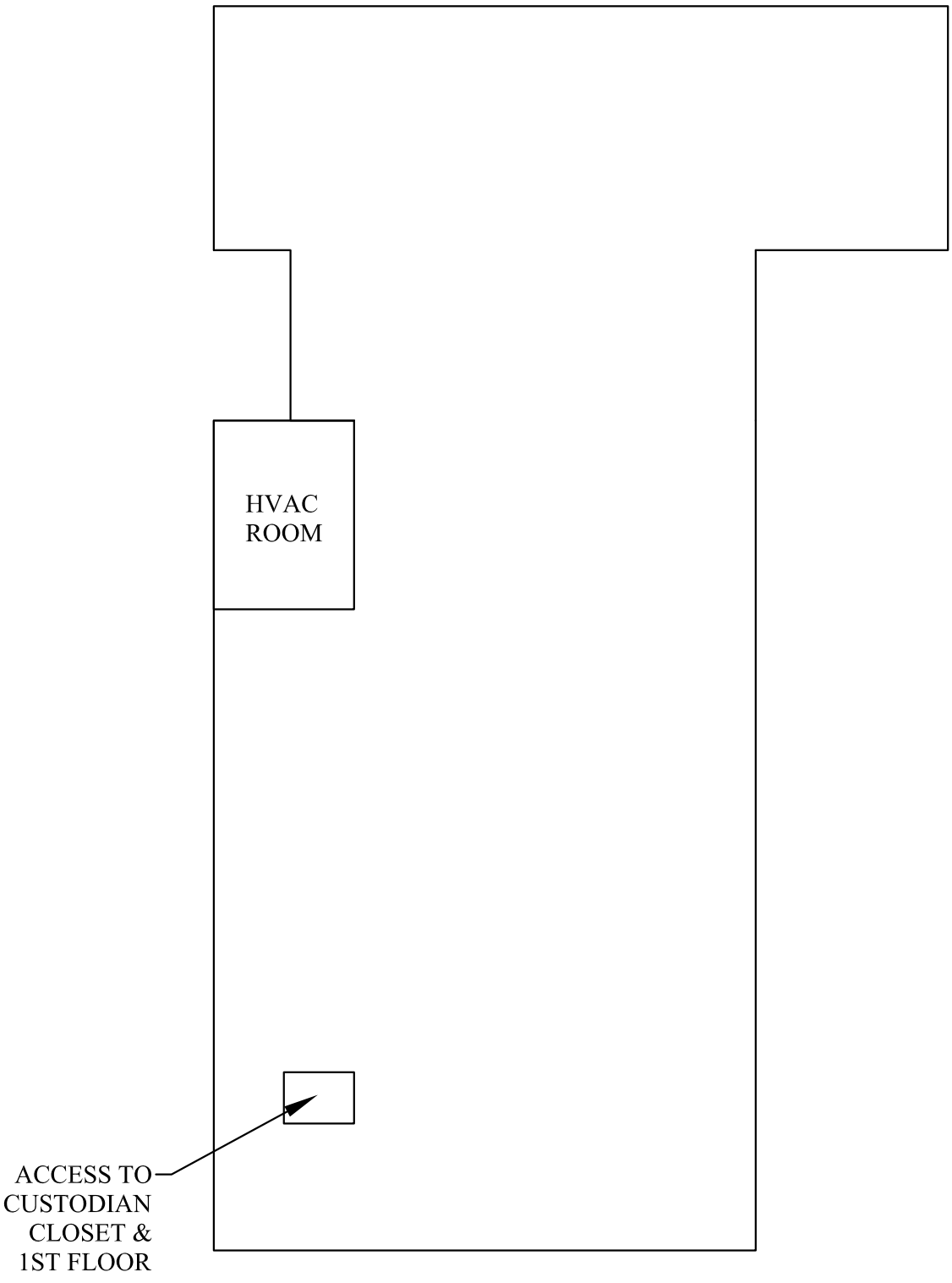

Legend

Note: Site features are approximate and for illustrative purposes only.

EndPoint LLC
ENGINEERS & ENVIRONMENTAL PROFESSIONALS
25 Buttrick Road, Unit D2
Londonderry, NH 03053

CLIENT:	Jonathan Levi Architects
PROJECT:	Baldwin School & Soule Recreation Center
TITLE:	Baldwin School Floor Plan - Attic

DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE NO.:
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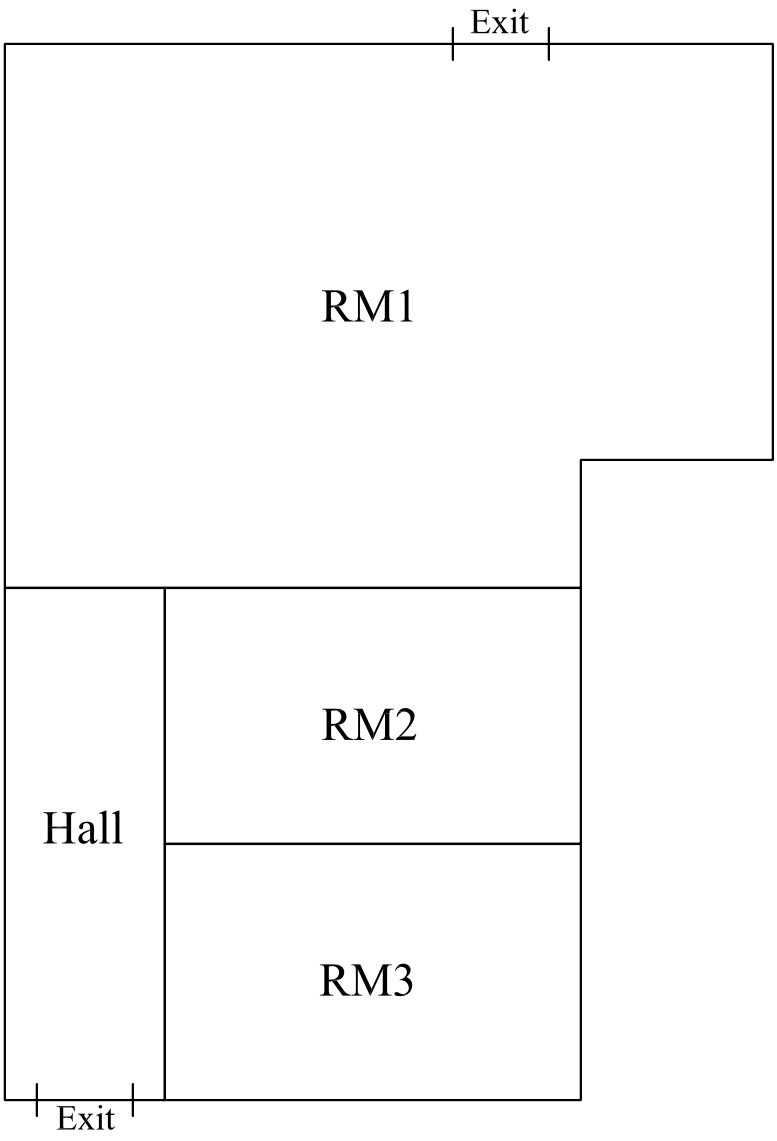

Legend

Note: Site features are approximate and for illustrative purposes only.

EndPoint LLC
ENGINEERS & ENVIRONMENTAL PROFESSIONALS
25 Buttrick Road, Unit D2
Londonderry, NH 03053

CLIENT: Jonathan Levi Architects

PROJECT: Baldwin School & Soule Recreation Center

TITLE: Soule Environmental Education Center Floor Plan

DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE NO.:
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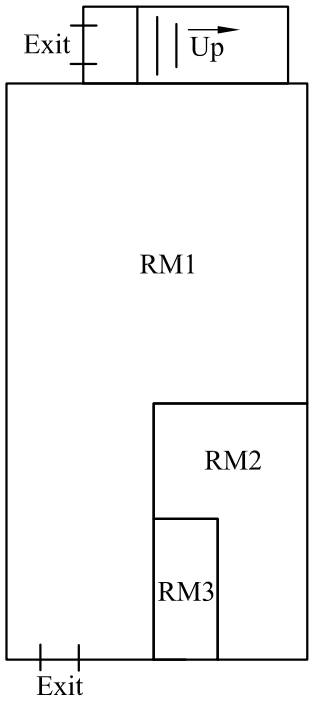
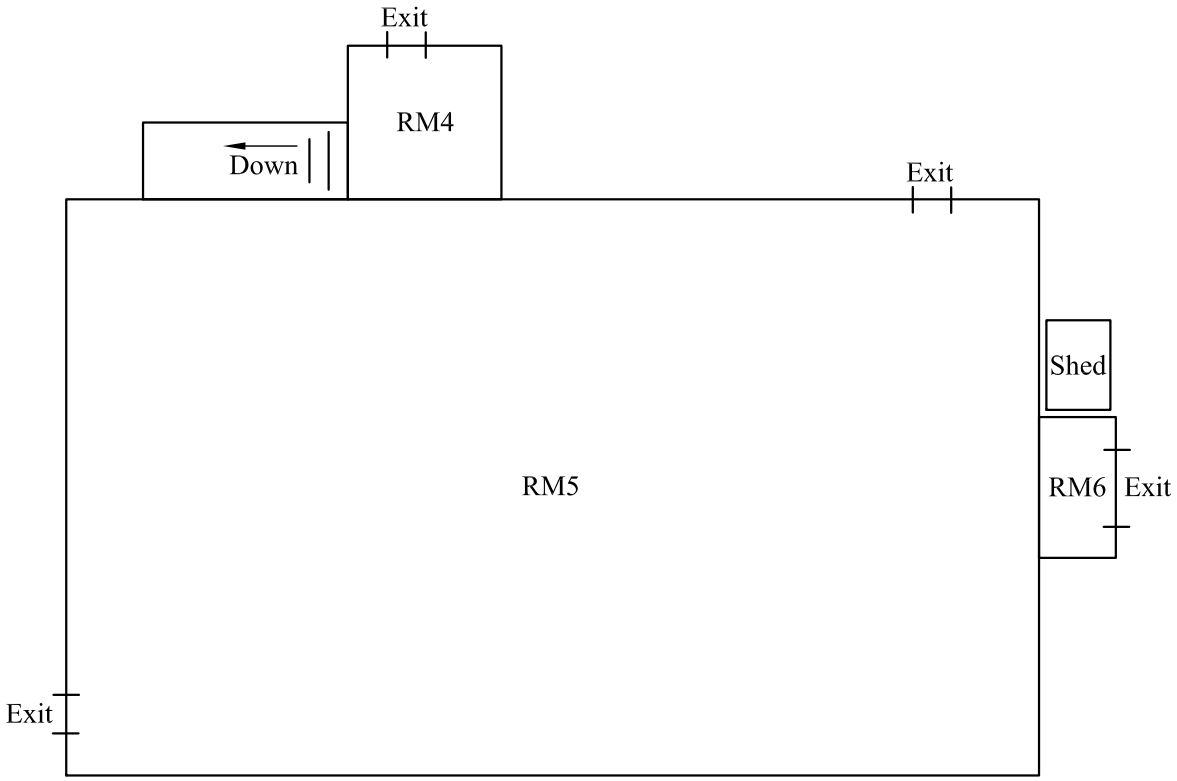


Basement



First Floor

Legend

Note: Site features are approximate and for illustrative purposes only.

EndPoint LLC
ENGINEERS & ENVIRONMENTAL PROFESSIONALS
25 Buttrick Road, Unit D2
Londonderry, NH 03053

CLIENT: Jonathan Levi Architects

PROJECT: Baldwin School & Soule Recreation Center

TITLE: Soule Gymnasium Floor Plan

DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE NO.:
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SCALE: Not to Scale	DATE: 12/28/2016	FILE NO.: Figure	PROJECT NO.: 2475-001	

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Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – 484/490 Heath Street

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Throughout (classrooms, bathrooms, office/storage, and hallways)
Smooth Plaster on Ceilings and Walls

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Bathrooms on 1st Floor
½" White Floor Tile w/ Grout & Mastic

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Bathrooms and Water Fountain Areas on 1st Floor
Wall Tile w/ Grout & Mastic

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Kitchen, and under carpet in Classroom/Lunchroom, and Lounge
Tan 9”x9” Floor Tiles w/ Mastic

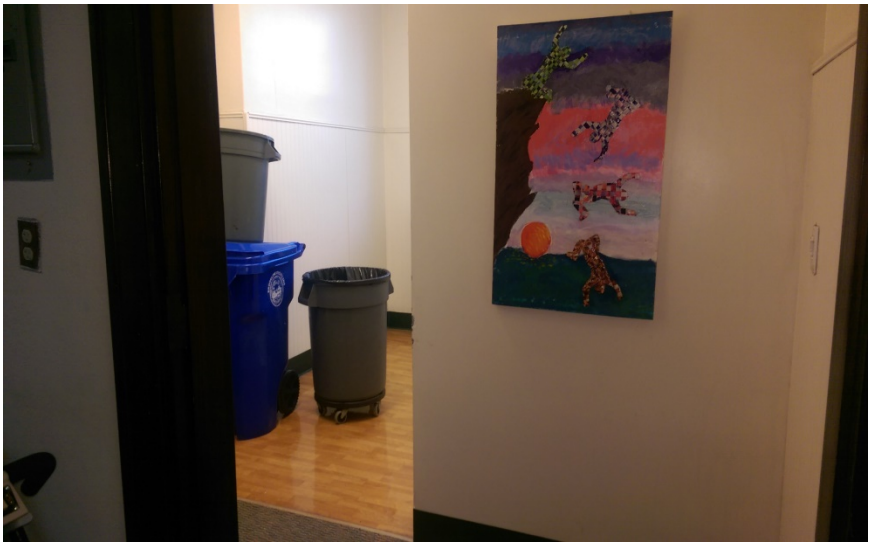
Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Kitchen
Green 9”x9” Floor Tiles w/ Mastic

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Classroom/Lunchroom and Classroom/Library
Beige 12”x12” Floor Tiles w/ Mastic

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Front and Side Entrances
Red/Brown 4”x4” Floor Tiles w/ Grout & Mastic

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – 1st Floor Hallway
Blue Carpet w/ Mastic

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – 1st Floor Classrooms and Offices
Green Carpet w/ Mastic

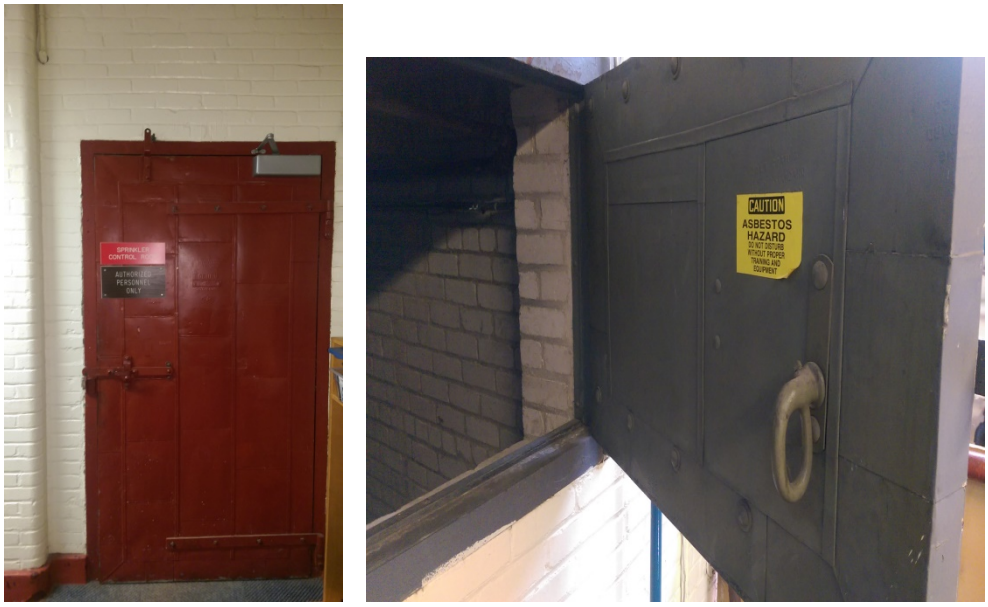


Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – 1st Floor Bathroom
Wainscoting w/ Mastic on Plaster Walls

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Basement Classrooms, Nap Room, Bathroom, and Hallway
Tan Flooring w/ Mastic

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Basement Activity Room, Office, Classrooms, and Hallway
Blue Carpet w/ Mastic

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Basement Activity Room
Textured/Cementitious 12”x12” Ceiling Tiles



Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Boiler Room
Fire Safe Doors

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Attic, Boiler Room, and behind Walls/Ceilings
Pipe Fitting Insulation on Fiberglass-insulated Pipes (joints and elbows)

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Exterior
Window Glazing and Caulking (may also contain PCBs)

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Exterior
Roofing Material (Adhesive on Clay/Slate Shingles, Tar, Sublayers, etc.)

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Exterior
Roofing Materials (Shingles, Tar, Sublayers, etc.)

Baldwin School and Soule Recreation Center, Brookline, MA
Baldwin School – Exterior Storage Sheds
Roofing Material (Shingles, Tar, Sublayers, etc.)

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Environmental Education Center – 654 Hammond Street

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Environmental Education Center – RM1
Tan Flooring and Wallboard & Joint Compound (on ceilings and walls)

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Environmental Education Center – RM1
Tan Cove Base w/ Mastic, and Black Laboratory Counter Top

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Environmental Education Center – RM1
White Textured Insulation on Underside of Sink.

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Environmental Education Center – RM2 (left) and RM3 (right)
Tan Flooring w/ Mastic, Tan Cove Base w/ Mastic, and Light-green Wallboard and Joint Compound.

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Environmental Education Center – Storage Shed
Roofing Materials (Rolled Roofing, Tar, Sublayers, etc.)

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Environmental Education Center – Exterior
Roofing Material (Shingles, Tar, Sublayers, etc.)

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Environmental Education Center – Exterior
Stucco/Cementitious Siding Material

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Gymnasium – 650 Hammond Street

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Gymnasium – Basement Stairwell
Grout Compound at Wall Intersections (may also contain PCBs)

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Gymnasium – RM1 (Basement)
Replacement Acoustical Ceiling Panels.

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Gymnasium – RM2 (Basement)
Blue Wall Tile w/ Grout & Mastic and Black Floor Tile w/ Grout & Mastic

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Gymnasium – RM4
Black Non-slip Flooring w/ Mastic

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Gymnasium – RM5
Black Cove Base w/ Mastic and White 2'x4' Acoustical Ceiling Panels

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Gymnasium – Attic, behind Walls/Ceilings
Pipe Fitting Insulation on Fiberglass-insulated Pipes (joints and elbows)

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Gymnasium – Exterior Storage Shed
Roofing Materials

Baldwin School and Soule Recreation Center, Brookline, MA
Soule Gymnasium – Exterior
Roofing Materials (Shingles, Tar, Sublayers, etc.)

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EFI Global
Engineering, Fire & Environmental Services

May 2, 2017

Mr. Matt Gillis
Director of Operations/Facilities
Public Schools of Brookline
24 Webster Place
Brookline, Massachusetts 02445

RE: **3 Year Re-Inspection & AHERA Asbestos Management Plan Update**
Baldwin School
490 Heath Street
Brookline, Massachusetts
EFI Project No. 98350-06164

Dear Mr. Gillis:

EFI Global Inc. (EFI) is pleased to present this 3-Year Re-Inspection and Asbestos Management Plan Update prepared for the Baldwin School located at 490 Heath Street in Brookline, Massachusetts (Site). This report was completed in accordance with the guidelines outlined in United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) regulations (40 CFR 763).

EFI is pleased to provide environmental consulting services to Brookline Public Schools. If you have any questions regarding the contents of this report, or are in need of additional information, please do not hesitate to contact Sean Cassidy at 978-886-3712. Thank you for the opportunity to serve your environmental needs.

Sincerely,

EFI Global, Inc.

Christopher Eustis
Environmental Scientist
MA Asbestos Inspector # AI 900600

Sean Cassidy, CIEC
District Manager
MA Asbestos Inspector # AI 410059
MA Asbestos Management Planner #AP 410060

Attachments

Attachment A – Asbestos Survey Report
Attachment B – ACBM Inventory & Locations
Attachment C – Training Documentation
Attachment D – Asbestos O&M Plan
Attachment E – Response Action Documentation
Attachment F – Historical 3 Year Re-Inspections & 6 Month Surveillance Reports

A. INTRODUCTION

EFI Global, Inc. (EFI) was retained by Brookline Public Schools to conduct a 3 year re-inspection and prepare an Asbestos Management Plan update in accordance with United States Environmental Protection (USEPA) Asbestos Hazard Emergency Response Act (AHERA) asbestos regulations (40 CFR 763). This regulation, commonly known as the "Asbestos in Schools Rule," requires that secondary schools (K-12) be inspected initially for the presence of asbestos-containing building materials (ACBMs) and re-inspected every three years for any changes in the condition of assumed and confirmed ACBM.

Unfortunately, nearly all of the asbestos inspection, re-inspection reports, and abatement documentation for the Brookline Schools were destroyed in a flood. As such, EFI conducted an intensive asbestos survey of the Baldwin School that involved collecting samples of suspect ACBMs throughout the school. The asbestos survey/inspection was conducted on March 21, 2017 by Mr. Chris Eustis, a Massachusetts licensed asbestos inspector.

The 3 year re-inspection and Management Plan update for the Baldwin School was prepared with the following objectives:

1. Prevent and/or control fiber release and reduce potential for fiber release;

2. Maintain and monitor ACBMs that are present;

3. Inform and educate students, parents, school employees, and outside contractors;

4. Document and retain records for any asbestos-related activities;

5. Ensure that accredited personnel are or will be used to inspect buildings, develop management plans, and design or carry out response actions;

6. Ensure that accredited or approved laboratories with accredited analysts are used to analyze bulk samples; and,

7. Comply with federal and state asbestos regulations.

The asbestos survey report for the Baldwin School is presented in Attachment A. An ACBM inventory and drawings depicting the locations of ACBM are presented in Attachment B.

B. DESIGNATED PERSON RESPONSIBILITIES

The AHERA regulation 763.84[g](1) states that "the general LEA shall designate a person to ensure that requirements under this section are properly implemented". Section 763.84[g](2) further states that "the LEA shall ensure that the designated person receives adequate training to perform duties assigned under this section".

The Designated Person for Baldwin School is Mr. Matt Gillis.

The AHERA regulation maintains that the overall responsibility for the Asbestos Management Plan shall be the Designated Person, whose duties are as follows:

1. Oversees activities of Asbestos Coordinators, Consultants, Contractors, and approves asbestos removal and replacement projects, including planning and scheduling the scope of work.

2. Direct supervision and implementation of the Asbestos Management Plan including:

    - Yearly notification of Management Plan review to building staff and legal guardians of the students

      "The designated person must ensure that workers and building occupants, or their legal guardians, are informed at least once each school year about inspections, response actions, and post-response action activities, including periodic re-inspection and surveillance activities that are planned or in progress", as per the AHERA regulation section 763.84(c).

    - Six month periodic surveillance and three year re-inspection recordkeeping

      The LEA shall conduct six-month periodic surveillance of all known ACBM present in each school in accordance with the AHERA Regulation. A 2 hour trained staff member may conduct the six-month surveillance. The inspection is performed to document any changes in condition in the ACBMs.

    - Managing ACBMs within the building in accordance with an Asbestos Operations and Maintenance (O&M) Plan

    - Training of custodial staff

      Custodial and maintenance personnel hired are required to receive a minimum of 2 hours "asbestos awareness training." Training should be provided within 60 days of employment.

    - Labeling of ACBMs

      As per the AHERA regulation section 763.95[a], "the LEA shall attach a warning label immediately adjacent to any friable and non-friable ACBM and suspected ACBM assumed to be asbestos-containing material (ACM) located in routine maintenance areas (such as boiler rooms) at each school building". Unlabeled materials that should be labeled are located in some custodial spaces.

    - Direct responsibility for recordkeeping system regarding training, response actions, abatement projects, air monitoring, renovations that will impact the ACBMs.

C. ACBM APPLICATION TYPES

ACBMs are divided into the following application types:

Thermal system insulation (TSI): Insulation applied to mechanical, heating, and cooling systems such as pipes, boilers, flue breechings, ducts, tanks and fittings.

Surfacing Materials: Material that is spray-applied or trowel-applied to walls, ceilings or structural components (i.e. plasters, acoustical finishes and fireproofing).

Miscellaneous Materials: All other asbestos materials, including floor tiles & mastic, ceiling tiles, vinyl cove base and mastic, and asbestos-cement board.

D. ACBM ASSESSMENT CRITERIA

The assessment is divided into two categories - the physical assessment and the hazard potential assessment.

Physical Assessment

The physical assessment is divided into the following seven categories and describes the material condition at the time of the inspection:

Physical Condition #1 - Damaged or significantly damaged thermal insulation.
Physical Condition #2 - Damaged friable surfacing ACM.
Physical Condition #3 - Significantly damaged friable surfacing ACM.
Physical Condition #4 - Damaged or significantly damaged friable miscellaneous ACM.
Physical Condition #5 - ACBM with potential for damage.
Physical Condition #6 - ACBM with potential for significant damage.
Physical Condition #7 - Any remaining friable ACBM or friable suspected ACBM.

Hazard Assessment

The hazard assessment is a combination of the physical assessment combined with the potential for disturbance (i.e. physical contact, vibration air movement) as follows:

Hazard Rank #1 – Good condition/Low potential for disturbance
Hazard Rank #2 – Good condition/ Moderate potential for disturbance
Hazard Rank #3 – Good condition/ High potential for disturbance
Hazard Rank #4 – Damaged condition/Low potential for disturbance
Hazard Rank #5 – Damaged condition/Moderate potential for disturbance
Hazard Rank #6 – Damaged condition/High potential for disturbance
Hazard Rank #7 – Significantly damaged condition

The following is the Assessment Criteria used during the 3-Year Re-Inspection:

1. Homogeneous materials (materials with similar texture, style and application) were quantified by location and assessed by condition. Materials are listed as friable or non-friable. Note: friable materials are materials that can be crushed and pulverized to dust by hand pressure. A general condition description for suspect materials used in this inspection is as follows:

    a. Damaged ACBM: That material which has deterioration, delamination, water damage, lacks cohesion, is blistered, crumbling, gouged, marred heavily, abraded, or in any way has lost its structural integrity over more than 1% but less than 10 % of the total surface area if the damage is evenly distributed or less than 25%, if the damage is localized in one area of the homogeneous area.

    b. Significantly Damaged ACBM: That material which has deterioration, delamination, water damage, lacks cohesion, is blistered, crumbling, gouged, marred heavily, abraded, or in any way has lost its structural integrity over at least 10% of the surface area if the damage is evenly distributed or at least 25% if the damaged is localized.

    c. Good Condition ACBM: ACBM with no visible damage or deterioration in less than one percent of the material and/or coverings.

    d. ACBM with potential for damage: Pertains to circumstances in which:

        i. Friable ACBM is in an area regularly used by building occupants, including maintenance workers, currently in intact (good) condition.

        ii. There are indications that there is a reasonable likelihood that the material or its covering will become damaged, deteriorated or delaminated due to factors such as changes in building use, changes in O&M practices, changes in occupancy or recurrent damage.

    Note: All ACBM in good condition is considered to have a potential for damage.

    e. ACBM with potential for significant damage: Pertains to circumstances in which:

        i. Friable ACBM is in an area regularly used by building occupants, including maintenance personnel.

        ii. Indications show that there is a reasonable likelihood that the material or its covering will become damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in O&M practices, changes in occupancy or re-occurring damage.

        iii. The material is subject to major or continuing disturbance, due to factors including, but not limited to, accessibility or under certain circumstances, vibration or air erosion.

E. RESPONSE ACTIONS – GENERAL RECOMMENDATIONS

Specific response actions for each ACBM located at the Baldwin School are located in Section H below. The following are general recommendations for response actions associated with managing ACBMs at any school facility.

1. Damaged materials in the school should be removed or repaired in order to maintain compliance with the AHERA regulations. Damaged ACBMs with over three linear or three square feet listed in the reports should be repaired or removed by a Massachusetts licensed asbestos abatement contractor and final clearance air testing performed in accordance with the AHERA regulations.

2. AHERA regulations state that the response actions chosen for other than small scale/short duration repairs (less than 3 square or linear feet), must be designed and conducted by persons accredited to design and conduct response actions. Massachusetts Division of Labor Standards (DLS) Regulation 453 CMR 6.07 requires the services of certified Abatement Project Designers who meet the requirements set forth in 453 CMR 6.07.

4. Damaged ACBMs that involve small scale/short duration repairs can only be conducted by 16-hour asbestos-trained personnel or by a licensed asbestos abatement contractor.

5. Each ACBM should be monitored for any changes in condition during the six-month periodic surveillance.

6. If known or suspect ACBMs are to be impacted by planned renovation or demolition activities, the ACBM must be removed by a Massachusetts licensed asbestos abatement contractor.

F. AHERA LICENSING & TRAINING DOCUMENTATION

The AHERA re-inspection and Management Plan update report for the Baldwin School was conducted by the following USEPA trained and Massachusetts licensed personnel:

Christopher Eustis
Environmental Scientist
MA Asbestos Inspector # Al 900600

Sean Cassidy, CIEC
District Manager
MA Asbestos Inspector # AL 410059
MA Asbestos Management Planner #AP 410060

Training documentation for the Designated Person and custodial personnel is presented in Attachment C.

G. ASBESTOS BULK SAMPLING

As stated previously, a copy the asbestos survey report and laboratory analytical documentation for the Baldwin School are presented in Attachment A. An inventory of ACBM and floor plans depicting ACBM locations are presented in Attachment B.

H. ACBM HAZARD ASSESSMENT & RECOMMENDED RESPONSE ACTIONS

Accessible locations with friable and non-friable ACBM were inspected and assessed to determine the condition of the ACBM. The following is a listing of known and assumed ACBMs present at the facility, the physical and hazard assessments of the ACBM, and the recommended response action for each ACBM. It should be noted that EFI did not conduct destructive evaluations of the school building to identify ACBM. Per USEPA and Massachusetts Department of Environmental Protection (DEP) asbestos regulations, a path of construction survey should be conducted prior to any renovation or repair activities that may impact suspect ACBM, regardless of the date of installation. A detailed inventory of the types, quantities, and locations of ACBM is presented in Attachment B.

Homogeneous Area No. 1 – Pipe/Fitting Insulation

The asbestos containing pipe insulation/fittings located in the attic was in good condition at the time of the re-inspection survey. Pipe/fitting insulation is likely located behind walls and above ceilings throughout the school building. The materials are presumed to be in good condition.

Physical Assessment: 7

Hazard Rank: 2

Recommended Response Action: The asbestos-containing pipe/fitting insulation that is in good condition should be managed in place in accordance with the Asbestos O&M Program.

Homogeneous Area No. 2 – Interior Boiler Components (gaskets, roping, insulation, refractory, boiler brick, etc.)

The asbestos-containing interior boiler components associated with one boiler within the boiler room are inaccessible, but are presumed to be in good condition.

Physical Assessment: 7

Hazard Rank: 1

Recommended Response Action: The asbestos-containing interior boiler components that are in good condition should be managed in place in accordance with the Asbestos O&M Program.

Homogeneous Area No. 3 – 9”x9” Tan Floor Tile and Associated Black Mastic

The asbestos containing 9”x9” tan floor tile and associated black mastic located in the kitchen and Room 11 and 12 was in good condition at the time of the re-inspection survey.

Physical Assessment: 5

Hazard Rank: 2

Recommended Response Action: The asbestos-containing 9”x9” tan floor tile and associated black mastic that are in good condition should be managed in place in accordance with the Asbestos O&M Program.

ATTACHMENT A

ASBESTOS SURVEY REPORT

155 West Street
Suite 6
Wilmington, MA 01887
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T**F:** 800-659-1202
F: 978-688-5494
www.efiglobal.com

EFI Global
Engineering, Fire & Environmental Services

May 2, 2017

Mr. Matt Gillis
Director of Operations/Facilities
Public Schools of Brookline
24 Webster Place
Brookline, Massachusetts 02445

RE: **Limited AHERA Asbestos Survey Report**
Baldwin School
490 Heath Street
Brookline, Massachusetts
EFI Project No. 98350-06164

Dear Mr. Gillis:

Per your request, EFI Global, Inc. (EFI) performed a limited asbestos survey at the Baldwin School located at 490 Heath Street in Brookline, Massachusetts (Site). The limited asbestos survey was conducted of the interior of the 2-story school building to update the Asbestos Hazard Emergency Response Act (AHERA) Asbestos Management Plan for the school.

SURVEY PROCEDURES

EFI asbestos inspectors, Mr. Christopher Eustis, conducted the site visit and asbestos testing on April 21, 2017. Samples of suspect ACMs identified during the survey were collected and submitted under chain of custody protocol to EMSL Analytical, Inc. (EMSL) of Woburn, Massachusetts, a Massachusetts-licensed laboratory. EMSL is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos fiber analysis which is administered by the National Institute of Standards and Testing (NIST). The samples were analyzed using polarized light microscopy (PLM) with dispersion staining via EPA's "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116). Asbestos concentrations for the samples were determined by visual area estimation. Massachusetts asbestos regulations define an ACM as a material containing greater than or equal to one percent asbestos.

SURVEY RESULTS

The following suspect ACMs sampled by EFI were reported by EMSL as containing no detectable concentration of asbestos:

- Tan vinyl flooring and associated yellow backing
- Gray cove base and associate yellow mastic
- Yellow carpet mastic
- White sealant on fiberglass

- Red rubber floor and associated yellow mastic
- Board/linoleum
- Black cove base and associated yellow mastic
- Green cove base and associate yellow mastic
- Brown vinyl flooring and associated floor leveler
- 12”x12” tan floor tile and associated yellow mastic
- Joint compound
- Gypsum wallboard
- White skim coat plaster
- Grey base coat plaster
- Ceramic tile grout
- White wall tile grout
- White ceramic wall tile molding
- 1’x1’ white fissured ceiling tile and associated brown glue daubs
- White sink undercoating

The following suspect ACMs sampled by EFI were reported by EMSL as containing greater than or equal to one percent asbestos, the Massachusetts limit for classification as ACM:

- 9”x9” tan floor tile and associated black mastic

In addition, pipe/fitting insulation labeled as asbestos-containing was observed during EFI’s survey. The locations and quantities of all asbestos-containing materials identified during the survey are presented in Table 1.

A copy of the laboratory report prepared by EMSL is presented in Attachment A. Representative photographs are presented in Attachment B. A floor plan depicting the asbestos sample locations is presented in Attachment C.

CONCLUSIONS AND RECOMMENDATIONS

All asbestos-containing materials were in good condition at the time of the survey.

Asbestos abatement activities must be conducted by a Massachusetts licensed asbestos abatement contractor in accordance with Massachusetts Department of Environmental Protection and Massachusetts Department of Labor Standards asbestos regulations, as well as, local and federal regulations prior to any renovation or demolition projects that would impact the ACMs.

All confirmed and assumed ACMs within the school must be managed under an AHERA Asbestos Management Plan. The AHERA Asbestos Management Plan and 3-Year Re-inspection Report is presented under separate cover.

If suspect ACMs other than the above-referenced materials are identified during renovation or demolition activities, EFI recommends that they be sampled by a Massachusetts-licensed asbestos inspector and analyzed by a Massachusetts-licensed asbestos analytical laboratory.

LIMITATIONS

EFI's survey was limited to those portions of the interior of the Site building accessible by reasonable and ordinary means. EFI did not perform destructive testing and investigations to identify suspect ACMs within the building. EFI's inspection did not include an evaluation of underground foundation damp-proofing, transite water/sewer piping, and materials that may be present behind solid walls/ceilings and within mechanical and electrical equipment.

EFI is pleased to provide environmental consulting services to Brookline Public Schools. If you have any questions regarding the contents of this report, or are in need of additional information, please do not hesitate to contact either of the undersigned at 800-659-1202. Thank you for the opportunity to serve your environmental needs.

Sincerely,
EFI Global, Inc.

Christopher Eustis
Environmental Scientist

Sean Cassidy, CIEC
District Manager

Table1 – Asbestos-Containing Materials Inventory
Attachment A - Laboratory Analytical Report
Attachment B - Photographs
Attachment C - Sample Location Drawings

ATTACHMENT A

ASBESTOS LABORATORY REPORT

EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

http://www.EMSL.com / bostonlab@emsl.com

EMSL Order:	131701689
Customer ID:	EAFI66
Customer PO:	
Project ID:	

Attention:	Chris Eustis	**Phone:**	(781) 801-7464
	EFI Global, Inc.	**Fax:**	(978) 688-5494
	155 West Street, Suite 6	**Received Date:**	04/24/2017 8:30 AM
	Wilmington, MA 01887	**Analysis Date:**	04/27/2017
		Collected Date:	04/21/2017

Project: 98350-06164 / Baldwin School, Brookline, MA

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
01A *131701689-0001*	Room 1 - Tan Vinyl Flooring	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
01B *131701689-0002*	Room 1 - Tan Vinyl Flooring	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02A *131701689-0003*	Room 1 - Associated Yellow Backing	Tan/Yellow Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
02B *131701689-0004*	Room 1 - Associated Yellow Backing	Tan/Yellow Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
03A *131701689-0005*	Room 1 - Grey Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03B *131701689-0006*	Room 1 - Grey Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04A *131701689-0007*	Room 1 - Associated Yellow Mastic	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04B *131701689-0008*	Room 1 - Associated Yellow Mastic	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05A *131701689-0009*	Room 3 - Yellow Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05B *131701689-0010*	Room 3 - Yellow Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06A *131701689-0011*	Boiler Room - White Sealant on Fiberglass	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06B *131701689-0012*	Boiler Room - White Sealant on Fiberglass	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07A *131701689-0013*	Stairwell - Red Rubber Floor	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07B *131701689-0014*	Stairwell - Red Rubber Floor	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08A *131701689-0015*	Stairwell - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08B *131701689-0016*	Stairwell - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 04/27/2017 12:43:11

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5 Constitution Way, Unit A Woburn, MA 01801
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EMSL Order: 131701689
Customer ID: EAFI66
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
09A *131701689-0017*	2nd Floor Classroom Hall - Board/Linoleum	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09B *131701689-0018*	2nd Floor Classroom Hall - Board/Linoleum	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10A *131701689-0019*	Room 8 - Black Cove Base	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10B *131701689-0020*	Room 8 - Black Cove Base	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11A *131701689-0021*	Room 8 - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11B *131701689-0022*	Room 8 - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12A *131701689-0023*	Single Stall Bathrooms - Green Cove Base	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12B *131701689-0024*	Single Stall Bathrooms - Green Cove Base	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13A *131701689-0025*	Single Stall Bathrooms - Associated Yellow Mastic	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13B *131701689-0026*	Single Stall Bathrooms - Associated Yellow Mastic	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14A *131701689-0027*	Single Stall Bathrooms - Brown Vinyl Flooring	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14B *131701689-0028*	Single Stall Bathrooms - Brown Vinyl Flooring	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15A *131701689-0029*	Single Stall Bathrooms - Associated Floor Leveler	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15B *131701689-0030*	Single Stall Bathrooms - Associated Floor Leveler	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16A *131701689-0031*	Kitchen - 9"x9" Tan Floor Tile	Tan Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
16B *131701689-0032*	Kitchen - 9"x9" Tan Floor Tile				Positive Stop (Not Analyzed)
17A *131701689-0033*	Kitchen - Associated Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
17B *131701689-0034*	Kitchen - Associated Black Mastic				Positive Stop (Not Analyzed)

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EMSL Order: 131701689
Customer ID: EAFI66
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
18A *131701689-0035*	Room 11 - 12"x12" Tan Floor Tile	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18B *131701689-0036*	Room 11 - 12"x12" Tan Floor Tile	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19A *131701689-0037*	Room 11 - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19B *131701689-0038*	Room 11 - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
20A *131701689-0039*	Room 12 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
20B *131701689-0040*	Room 12 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
21A *131701689-0041*	Room 12 - Gypsum Wallboard	Tan/White Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
21B *131701689-0042*	Room 12 - Gypsum Wallboard	Tan/White Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
22A *131701689-0043*	Room 7, 8, 9 - White Skim Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22B *131701689-0044*	Room 7, 8, 9 - White Skim Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22C *131701689-0045*	Room 7, 8, 9 - White Skim Coat Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22D *131701689-0046*	Room 7, 8, 9 - White Skim Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23A *131701689-0047*	Room 7, 8, 9 - Grey Base Coat Plaster	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
23B *131701689-0048*	Room 7, 8, 9 - Grey Base Coat Plaster	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
23C *131701689-0049*	Room 7, 8, 9 - Grey Base Coat Plaster	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
23D *131701689-0050*	Room 7, 8, 9 - Grey Base Coat Plaster	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
22E *131701689-0051*	Kitchen - White Skim Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22F *131701689-0052*	Room 10 - White Skim Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22G *131701689-0053*	Room 11 - White Skim Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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EMSL Order: 131701689
Customer ID: EAFI66
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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
23E *131701689-0054*	Kitchen - Base Coat Plaster	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
23F *131701689-0055*	Room 10 - Base Coat Plaster	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
23G *131701689-0056*	Room 11 - Base Coat Plaster	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
24A *131701689-0057*	Front Entrance - Ceramic Tile Grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
24B *131701689-0058*	Front Entrance - Ceramic Tile Grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
25A *131701689-0059*	Children's Bathroom - White Wall Tile Grout	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
25B *131701689-0060*	Children's Bathroom - White Wall Tile Grout	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
26A *131701689-0061*	Staff Bathroom - White Ceramic Wall Tile Molding	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
26B *131701689-0062*	Staff Bathroom - White Ceramic Wall Tile Molding	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
27A *131701689-0063*	Room 4 - 1'x1' Fissured Ceiling Tile	Gray Fibrous Homogeneous	40% Cellulose 40% Min. Wool	20% Non-fibrous (Other)	None Detected
27B *131701689-0064*	Room 4 - 1'x1' Fissured Ceiling Tile	Gray Fibrous Homogeneous	40% Cellulose 40% Min. Wool	20% Non-fibrous (Other)	None Detected
28A *131701689-0065*	Room 4 - Associated Brown Glue Daubs	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
28B *131701689-0066*	Room 4 - Associated Brown Glue Daubs	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29A *131701689-0067*	Kitchen - White Sink Undercoat	White Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
29B *131701689-0068*	Kitchen - White Sink Undercoat	White Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected

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http://www.EMSL.com / bostonlab@emsl.com

EMSL Order:	131701689
Customer ID:	EAFI66
Customer PO:	
Project ID:	

Analyst(s)
Kevin Pine (66)

Steve Grise, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3, VT AL998919, Maine Bulk Asbestos BA039

Initial report from: 04/27/2017 12:43:11

EFI Global
Complex Issues • Solid Solutions

155 West Street
Suite 6
Wilmington, MA 01887
Tel: 978-688-3736
Tel: 800-659-1202
Fax: 978-688-5494
www.efiglobal.com

BULK SAMPLE CHAIN OF CUSTODY FORM

Your Name:	Chris Eustis	Bill to:	Same
Company:	EFI Global, Inc.	Address:	
Address:	155 West Street		
	Suite 6	City/State:	Zip:
City/State:	Wilmington, Massachusetts Zip: 01887	PO #:	

Project Information

Project #/Name: 98350-06164 Baldwin School, Brookline, MA

Results To: christopher_eustis@efiglobal.com Tel: (978) 688-3736

Alternate: sean_cassidy@efiglobal.com & lynda_mcdermott@efiglobal.com Fax: (978) 688-5954

Requested Turnaround Time

RUSH ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

Media and Methodology

Type of Analysis: PLM Bulk-asbestos **Positive Stop:** (Y) N

DATE COLLECTED: 4/21/17 **Note: Analyze all plaster and joint compound samples.**

SAMPLE NUMBER	TYPE OF MATERIAL	SAMPLE LOCATION	Homogeneous Area #
01A,B	Tan vinyl flooring	Room 1	
02A,B	associated yellow backing	↓	
03A,B	Grey cove base	Room 1	
04A,B	associated yellow mastic	↓	
05A,B	yellow carpet mastic	Room 3	
06A,B	white sealant on fiberglass	Boiler room	
07A,B	red rubber floor	Stairwell	
08A,B	associated yellow mastic	↓	
09A,B	Board/linoleum?	2nd floor classroom hall	
10A,B	Black cove base	Room 8	
11A,B	associated yellow mastic	↓	

Total Number of Samples Submitted: 68

Signatures

Relinquished By: Chris Eustis **Date:** 4/21/17 **Time:**

Received By: **Date:** **Time:**

Relinquished By: **Date:** **Time:** FX

Received By: **Date:** 8:30 AM **Time:**

RECEIVED
APR 24 2017
By
7789 3283 8837

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Fax: 978-688-5494
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Project Name/Number _____ Page 2 of 2

SAMPLE ID	HA #	TYPE OF MATERIAL	LOCATION	QUANTITY
12A,B		Green counter	single stall bathrooms	
13A,B		associated yellow mastic	↓	
14A,B		Brown vinyl flooring		
15A,B		associated floor leveler	↓	
16A,B		9x9" Tan floor tile	Kitchen	
17A,B		associated black mastic	↓	
18A,B		12"x12" Tan ceramic tile	Room 11	
19A,B		associated yellow mastic	↓	
20A,B		joint compound	Room 12	
21A,B		gypsum wallboard	↓	
22A,B,C,D		white skim coat plaster	Room 7, 8, 9	
23A,B,C,D		grey base coat plaster	↓	
22E,F,G		white skim coat plaster	Kitchen, room 10, 11	
23E,F,G		base coat plaster	↓	
24A,B		ceramic tile grout	Front entrance	
25A,B		white wall tile grout	children's bathroom	
26A,B		white ceramic wall tile molding	staff bathroom	
27A,B		1x1 fissured ceiling tile	Room 4	
28A,B		associated brown glue dabs	↓	
29A,B		white sink undercoat	Kitchen	

RECEIVED
APR 24 2017
By 9:30 AB
EX

ATTACHMENT B

PHOTOGRAPHS

Photographs

Tan vinyl sheet flooring

1’x1’ fissured ceiling tiles

Boiler and fiberglass breeching

Red rubber floor

Carpeting and black cove base

Green cove base

Brown vinyl sheet flooring

Red ceramic floor tile grout

White ceramic wall tile

Asbestos-containing 9”x9” tan floor tiles

12”x12” tan floor tile

Gray cove base

White sink undercoat

Asbestos-containing pipe insulation

ATTACHMENT C

SAMPLE LOCATION DRAWING

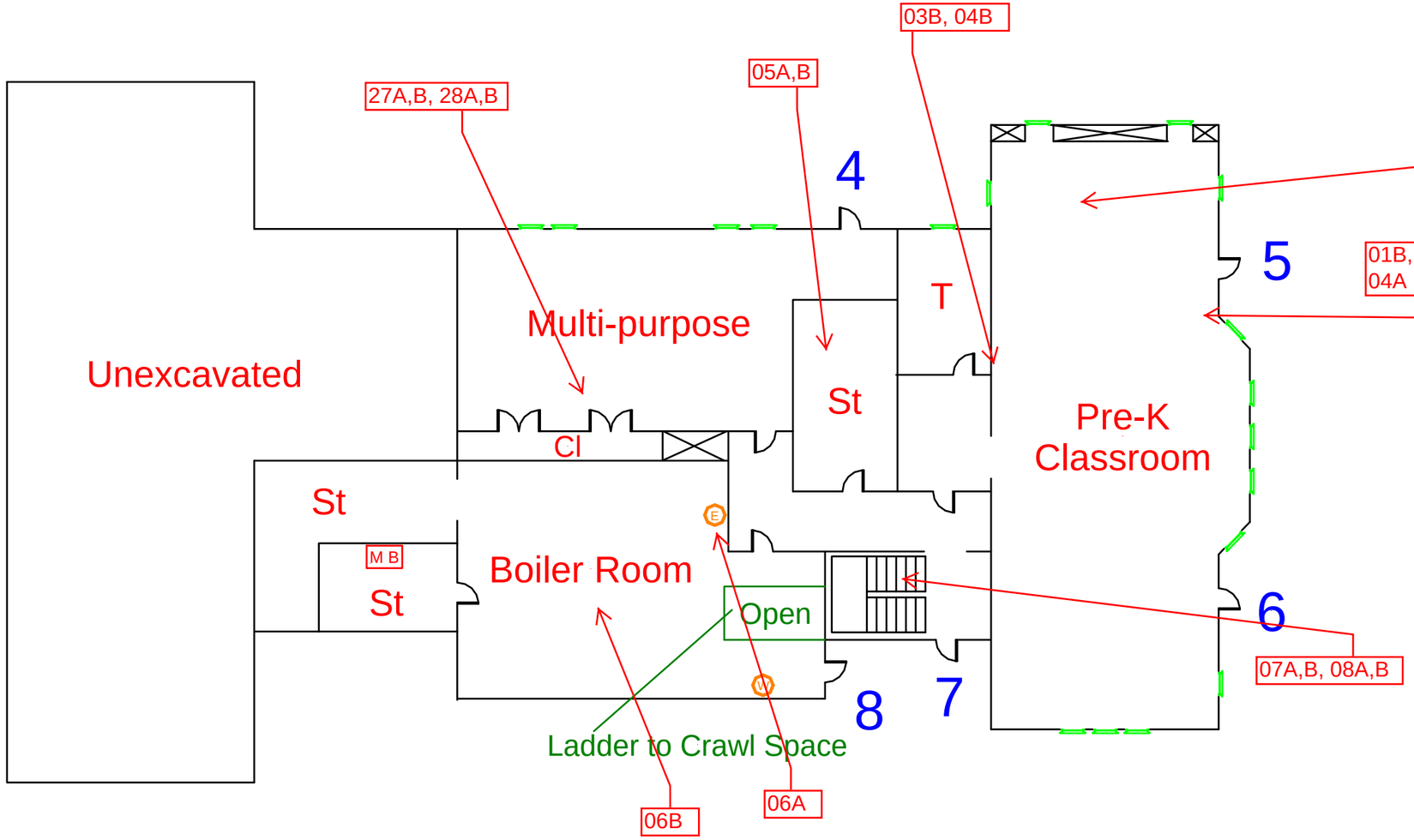
District:	Brookline Public Schools
School Name:	Baldwin Early Childhood Center & Winthrop House
Address:	490 Heath Street Brookline, MA 02445

For Official Use Only

Floor 1

Side C

Sample Location Drawing



Side B

Side D

Legend

- CAM Camera
- Chair Lift
- E Elevator
- W Water Shutoff
- S Sprinkler Shutoff
- E Electrical Shutoff
- G Gas Shutoff
- R Ramp
- GEN Emergency Generator
- M B Fire Alarm Master Box
- H S Halon System
- FDC Fire Dept. Connection

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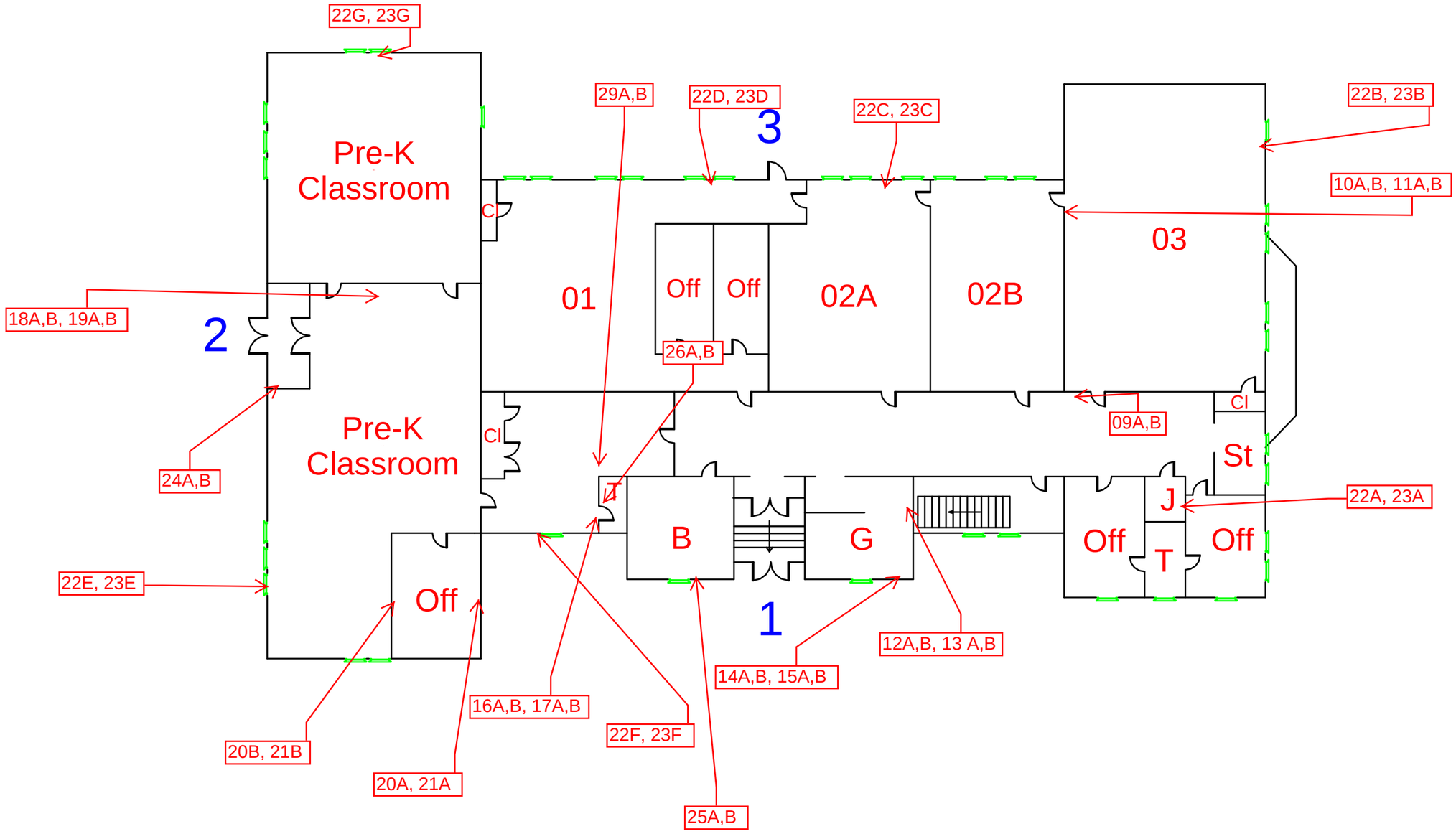
Side A

District:	Brookline Public Schools
School Name:	Baldwin Early Childhood Center & Winthrop House
Address:	490 Heath Street Brookline, MA 02445

Side C

For Official Use Only

Floor 2



Side B

Side D

Legend

- CAM — Camera
- Chair Lift
- E — Elevator
- W — Water Shutoff
- S — Sprinkler Shutoff
- E — Electrical Shutoff
- G — Gas Shutoff
- R — Ramp
- GEN — Emergency Generator
- M B — Fire Alarm Master Box
- H S — Halon System
- FDC — Fire Dept. Connection

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Side A

ATTACHMENT B

ACBM INVENTORY & LOCATIONS

Table 1

Asbestos-Containing Materials Inventory

Material Description	Material Location	Estimated Quantity
Interior boiler components (gaskets, roping, insulation, refractory, boiler brick, etc.)	Boiler Room	1 Boiler
Pipe Insulation/fittings (behind walls and ceilings)	Throughout School	500 LF
Pipe Insulation/fittings/elbows	Attic	175 LF
9”x9” tan floor tile and associated black mastic	Kitchen	250 SF
9”x9” tan floor tile and associated black mastic under carpet	Room 11 and Room 12	600 SF

SF – square feet
LF – linear feet

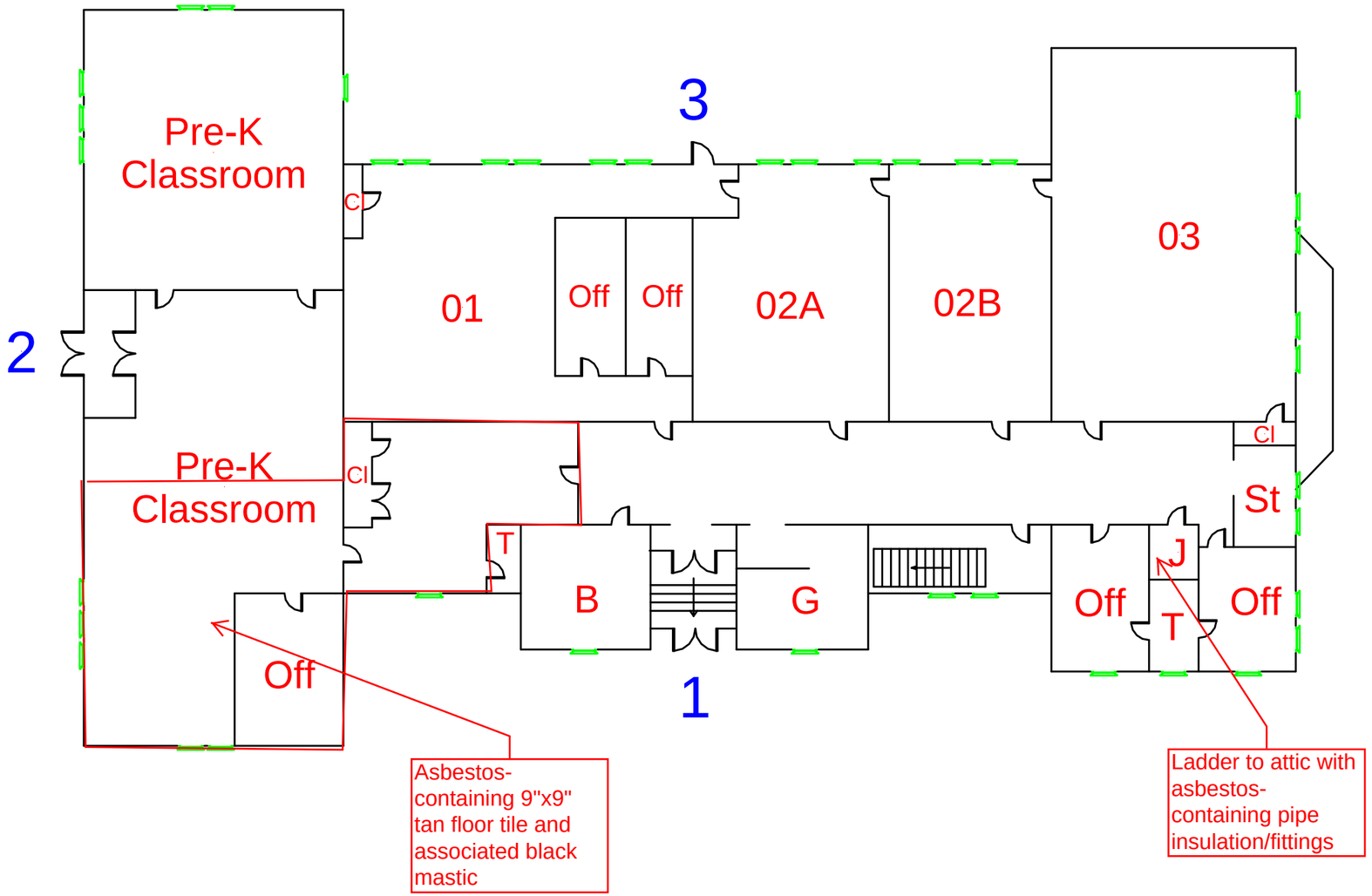
District:	Brookline Public Schools
School Name:	Baldwin Early Childhood Center & Winthrop House
Address:	490 Heath Street Brookline, MA 02445

Side C

For Official Use Only

Asbestos-Containing Materials Location Plan

Floor 2



Side B

Side D

Legend

- CAM — Camera
- Chair Lift
- E — Elevator
- W — Water Shutoff
- S — Sprinkler Shutoff
- E — Electrical Shutoff
- G — Gas Shutoff
- R — Ramp
- GEN — Emergency Generator
- M B — Fire Alarm Master Box
- H S — Halon System
- FDC — Fire Dept. Connection

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Side A

ATTACHMENT C

TRAINING DOCUMENTATION

ATTACHMENT D

ASBESTOS O&M PLAN

ASBESTOS OPERATIONS AND MAINTENANCE PLAN

FOR:

BALDWIN SCHOOL
490 HEATH STREET
BROOKLINE, MASSACHUSETTS

PREPARED BY:

EFI Global
Engineering, Fire & Environmental Services

155 WEST STREET, SUITE 6
WILMINGTON, MASSACHUSETTS 01887

EFI PROJECT NUMBER 98350-06164

May 2017

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1.0 INTRODUCTION

This Operations and Maintenance (O&M) Plan outlines procedures for managing asbestos-containing building materials (ACBM) present in the Baldwin School facility. An ACBM is a material that contains greater than or equal to one percent (1%) asbestos, in accordance with Massachusetts Department of Environmental Protection (MA DEP) regulations.

The specific intent of this program is to protect the health of property occupants, visitors, contractors, custodial and maintenance personnel while they are on the property. This plan is designed to: (1) ensure that asbestos fibers are not released into occupied areas by minimizing disturbance and damage to known and suspect asbestos-containing materials; (2) repair or remove any ACBM which is identified as damaged; and (3) monitor the condition of all ACBM on the property. This plan will remain in effect until all asbestos-containing materials have been removed.

This O&M plan is based on the assumption that custodial employees with 2-Hour Asbestos Awareness Training will not disturb ACBM and will not perform response actions. If at some time in the future, employees become 16-Hour Trained, “spot repairs” of damaged ACBM may be conducted on an as-needed or emergency basis. Otherwise, “spot repairs” and asbestos abatement must be conducted by a Massachusetts licensed asbestos abatement contractor.

This plan shall go into effect immediately.

The presence of asbestos within the school does not necessarily mean that the health of building occupants is endangered. Asbestos fibers present a serious health hazard only when they become airborne after being released from the material in which they are bound. Therefore, both facilities personnel, management, and each employee share the responsibility for not only protecting their own health, but also the health of other persons on the property by not allowing ACBMs to be disturbed while performing their normal work activities. ACBMs are most likely to be disturbed during maintenance, repair, or renovation activities. By complying with all provisions of the O&M Plan, management and employees alike will be ensuring a safe environment.

The types and locations of ACBMs within the facility are identified in the attachment to the Asbestos Management Plan. All inspections were conducted by EFI’s Massachusetts licensed asbestos inspectors. It should be noted that additional asbestos-containing materials may be present within the facility that could not be identified due to inaccessibility. Materials suspected of containing asbestos on the property should either be assumed to contain asbestos or should be sampled by a Massachusetts licensed asbestos inspector and analyzed using polarized light microscopy (PLM) or transmission electron microscopy (TEM), to confirm or refute the presence of asbestos.

2.0 ASBESTOS CHARACTERISTICS AND HEALTH EFFECTS

2.1 Background

Asbestos is the general term for a group of naturally occurring minerals that separate into fibers when crushed or processed. Since the turn of the century, asbestos has been used in a wide variety of construction materials and other building products. Its popularity stems from the fact that it has high resistance to heat, chemical resistance, and its fibers have a high tensile strength, which can help to reinforce otherwise brittle or weak materials.

There are two general types of asbestos rock: serpentine and amphibole. Chrysotile asbestos is derived from serpentine rock. Chrysotile, sometimes called white asbestos, has very thin fibers that are soft and flexible. Approximately 95 percent of the asbestos used in the United States is the chrysotile type, and its primary applications are in construction products, textile, high-strength cement products, and insulating materials.

Amphibole asbestos, which has thicker and harder fibers than chrysotile asbestos, includes several subcategories: amosite, crocidolite, anthophyllite, actinolite, and tremolite. Amosite asbestos, sometimes called brown asbestos, is used mainly in high heat insulating materials such as boiler insulation, pipe insulation, and spray-on fireproofing materials. Crocidolite, or "blue" asbestos, is also very resistant to acid and to the effects of outdoor exposure and weathering. It is used in textiles and high-strength cementitious products. Anthophyllite, actinolite, and tremolite asbestos have brittle fibers and, therefore, are used in a limited number of applications.

As a rule, the degree of asbestos hazard that exists in a particular property depends on a number of factors, the most important of which may be the nature of the asbestos products present. Asbestos-containing materials such as asbestos-cement pipe and shingles, roofing felts, vinyl floor tiles, and mastics in which the asbestos fibers are firmly bonded or encased in another material generally pose very little hazard after installation; however, sanding, grinding, drilling, abrading, or cutting these materials may release significant amounts of asbestos fibers.

Asbestos fibers are more readily released from friable materials like sprayed-on insulation. A material is considered **friable** if it can be easily crumbled, pulverized, or reduced to powder by hand pressure when dry. Friable materials can represent a serious potential health hazard in buildings. This does not mean, however, that all friable materials containing asbestos pose a hazard serious enough to warrant immediate corrective action. Textile products and preformed thermal insulation that contain asbestos are less of a hazard than friable materials, but they are somewhat more hazardous than those products in which the asbestos is encased or tightly bonded.

2.2 Health Effects

Several diseases have been clearly linked to exposure to airborne asbestos fibers, including asbestosis, lung cancer, and mesothelioma. Asbestosis (pulmonary fibrosis) is a chronic lung disease caused by permanent changes in lung tissue due to asbestos exposure. Lung cancer is a malignant and invasive growth or tumor in the lungs. Cigarette smoking significantly increases the risk of lung cancer for persons exposed to asbestos. Mesothelioma is an extremely rare cancer in the general population, but is not uncommon among asbestos workers or workers exposed to friable asbestos, such as shipyard employees. Some believe that it may develop even with very low levels of asbestos exposure. Mesothelioma affects the membrane (mesothelium) lining the chest or abdominal cavities.

The health hazard from asbestos exposure was first thought to be represented by a simple dose-response relationship. As more medical data have become available, it has been found that even persons exposed to low concentrations of airborne asbestos; e.g., families of asbestos workers, have developed asbestos-related diseases. However, the data are difficult to evaluate because there usually is a long delay between exposure and the detection of disease. This is called the latency period, and for asbestos diseases it is approximately 20-40 years. One hypothesis is that "an inverse relationship exists between dose rates and the latency period; as the dose rate becomes progressively lower, the latency period may approach the life span of exposed individuals" (Lory and Coin, 1981).

Because of a lack of specific health based information and a lack of understanding of the precise mechanism that contributes to the development of asbestos-related diseases, it has not been possible to establish permissible levels of exposure to asbestos that will ensure absolute safety. Nonetheless, Government regulators have established exposure limits below which they believe the risk is very low. It is now generally agreed that all unnecessary exposures to asbestos should be avoided, and that proper precautions should be taken to minimize risks if exposures are unavoidable.

2.3 Regulatory Requirements

This O&M Plan is prepared to maintain compliance with the US EPA AHERA regulations, as well as, OSHA regulations.

The AHERA and OSHA regulations require building owners to presume that building materials present within buildings are asbestos-containing until such time that the presence of asbestos is rebutted through sampling by an accredited asbestos inspector and laboratory analysis.

The AHERA and OSHA regulations also require that asbestos-containing or presumed asbestos-containing materials be identified by means of warning labels. Exceptions are granted where labeling is not feasible, such as marking floor coverings or ceiling tiles. Training for custodial workers is required under the regulations.

AHERA and OSHA also regulations require written notification to student's families, employees and contractors who might come in contact with confirmed or presumed asbestos-containing materials.

The regulations define basic work procedures that must be followed when working with or coming in contact with asbestos or presumed asbestos materials. For example, custodial employees buffing and waxing asbestos or presumed asbestos-containing floor coverings must work wet using low abrasion pads mounted on a buffing machines operating at speeds under 300 rpm.

3.0 PROGRAM RESPONSIBILITIES

3.1 Asbestos Program Coordinator

The Asbestos Program Coordinator for the facility is the AHERA Designated Person. Responsibilities of the Designated Person, working in conjunction with school management, include but are not limited to, the following:

(1) Respond to employee and contractor inquiries regarding the presence of asbestos-containing materials on the property.

(2) Maintain records associated with the program. These may include, but are not limited to, air sampling data, asbestos maintenance closure forms, and periodic condition and label inspection data.

(3) Identify maintenance and repair activities that may require asbestos removal and repair activities.

(4) Ensure that all necessary signs and warning labels required by the program are posted and remain in place.

(5) Arrange for testing, by a certified/licensed asbestos inspector, of suspect asbestos-containing materials not previously identified. Since the asbestos survey of the facility was conducted while the facility was occupied, all asbestos materials may not have been identified, the Coordinator should not assume all ACBM has been identified on the property.

(6) Ensure that outside contractors are notified of the presence of asbestos-containing materials before they begin work that might disturb these materials.

3.2 Building Employee Responsibilities

Building employees are also responsible for complying with the provisions of this O&M Plan. Major responsibilities of building employees are to assure they do not disturb confirmed or presumed ACBM.

In the event that employees, contractors, maintenance or service personnel encounter a material they suspect may contain asbestos and will be disturbed, they must immediately stop their activity and notify the Designated Person. The Designated Person will be responsible for determining whether or not suspect material is asbestos-containing, and what further actions are required before work can continue.

Building employees are also expected to notify the Designated Person if they observe damage or deterioration to ACBM or presumed ACBM, and they themselves are expected to do nothing to cause damage to such materials.

4.0 MANDATORY PROGRAM REQUIREMENTS

4.1 Caution Labels

Caution labels shall be affixed to or near all ACBM on the property where feasible. The labels shall be prominently displayed and will remain posted until the ACBM is removed. The caution labels should read, in print which is readily visible, because of large size or bright color, as follows:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

Revisions to the OSHA Asbestos Standards specifically call for placement of signs at the entrance to mechanical rooms/areas in which employees reasonably can be expected to enter and which contain asbestos-containing or presumed asbestos-containing thermal system insulation and/or surfacing

materials. OSHA also permits placement of signs inside mechanical areas, as opposed to outside them, as long as the sign is clearly visible to those entering the space. The signs must identify the material present, its location, and appropriate work practices to assure that the material is not disturbed.

It is generally not feasible to put labels on walls or floors. In such instances, alternatives are available. For example, if asbestos-containing floors are being serviced by employees who operate from a common equipment room day after day, then post the sign or label in the equipment room, which also may be termed the janitorial closet.

At periodic intervals, not to exceed semi-annually, the Designated Person, will inspect and ensure all caution labels and signs are in place and well maintained. Each such inspection shall be documented; a form to document these inspections is provided in Appendix C.

4.2 Training Requirements

The Designated Person and all members of the maintenance staff shall receive two hours of asbestos awareness training. The maintenance staff must receive this training through the school or their employers (if subcontractors), regardless of whether or not their work activities will involve actual direct contact with, or disturbance of, ACBM. New maintenance staff employees must receive the required training within 30 days of hire or transfer or before they come in contact with ACBM or presumed ACBM, whichever is sooner.

The awareness training will address the specific subjects listed below.

- Asbestos use and types
- Health effects, including the relationship between smoking and asbestos in producing lung cancer
- Names, addresses and phone numbers of public health organizations that provide information on smoking cessation programs. A list of such organizations is provided in Appendix E
- Recognition of ACBM damage, deterioration, and delamination
- Details of the Company's asbestos management program and the property's Operations and Maintenance Program
- Provisions of 29 CFR 1910.1001 and 1926.1101, the OSHA Asbestos Standard for General Industry and the Construction Industry, respectively, dated August 10, 1994, as amended June 29, 1995
- Employee responsibilities under the O&M program

A form to document training can be found in Appendix C. To enhance the credibility of the documentation, each employee should sign his/her own name in the appropriate space, as opposed to having someone else write in the participant's name.

4.3 Fiber Release Episodes

A fiber release episode may result from accidental damage or deterioration of ACBM. If one occurs, immediate action must be taken to prevent occupants and employees from being exposed to airborne asbestos fibers. The Designated Person must be contacted immediately. The Designated Person, in conjunction with these individuals, as well as, the Environmental Consultant, will be responsible for implementing the response actions listed below as necessary.

- Evacuate the affected area, post signs and lock all entrances to prevent access.

- Temporarily shut off or modify the air handling system serving the affected area of the property and limit all other sources of air movement.

The Designated Person, in conjunction with school management, will then jointly agree on subsequent remedial steps. These may include the following:

- Evaluate the need to retain an Environmental Consultant and a licensed asbestos abatement contractor.

- Document the incident using the Asbestos Maintenance Closure Form in Appendix C.

Additional procedures for fiber release management are listed in Appendix D.

4.4 Periodic Surveillance Activities

The Designated Person will inspect all ACBMs to identify any damage or deterioration which has occurred from maintenance or other activities. This will be performed semi-annually. See the Asbestos Survey Report prepared by EFI Global, Inc. for the locations of all known ACBM. The Designated Person will also inspect labels at six-month intervals and will document the results of these inspections in the asbestos program files. Periodic inspection results for asbestos-containing materials and caution labels shall be documented in all cases by the Designated Person.

4.5 Periodic Air Monitoring

In special circumstances, ambient air sampling may be performed periodically by an industrial hygienist, environmental consultant, or other licensed/accredited personnel to document a safe building environment. The need and requirements for air monitoring will be based upon periodic surveillance information concerning the location and condition of ACBM. The frequency and location of air monitoring will be determined by the Designated Person. The results of air sampling shall be included in the O&M Program files.

4.6 Waste Disposal

Asbestos regulations require that an asbestos abatement contractor handle, transport, and dispose of all asbestos-contaminated waste materials in a manner that prevents all visible emissions, and that do not expose individuals to asbestos fibers in air above specified levels. Along with the actual asbestos-containing material removed during O&M activities, other materials usually must be disposed of as contaminated waste as well.

All asbestos wastes must be carefully placed in 6-mil polyethylene bags that have pre-printed asbestos warning labels affixed to the bags. The bag shall be sealed airtight with duct tape or a metal twist band, and placed inside another clean, labeled 6-mil waste bag.

Asbestos waste products will be disposed of in accordance with all Federal, State and Local regulations. Waste material will be transported in accordance with all applicable regulations of the U.S. Department of Transportation. Disposal must occur at an authorized asbestos waste disposal site.

4.7 Recordkeeping

The Designated Person is responsible for assuring all records and documentation required in this O&M Program are maintained. Documentation includes, but is not limited to:

- Periodic surveillance activity reports and documentation, may include photographs or air sampling results (if deemed necessary), as applicable.

- Bulk sampling data generated from routine or special surveys.

- Records of personnel receiving asbestos awareness training.

- Asbestos Maintenance Closure Forms. At the completion of any asbestos abatement work (removal, enclosure, encapsulation, or repair) or after a fiber release episode, the asbestos abatement company supervisor or industrial hygienist overseeing the work must complete an Asbestos Maintenance Closure Form (see Appendix C). The purpose of the form is to provide documentation of abatement activity.

- Periodic Surveillance Summary Sheets. See Section 4.4 for periodic surveillance requirements, and Appendix C for a copy of the blank Periodic Surveillance Summary Sheet.

- This O&M Program and updates thereto.

- Documentation of all inquiries about locations of ACBM within the property or other aspects of the O&M Program. Only persons with a need to know; e.g., contractors, consultants, regulators, and Student's families, will be permitted to examine O&M Program documentation. A representative of management must be present at all times while the documentation is being examined. Under no circumstances will persons be permitted to take documents or make copies of O&M Program documents. The company representative will record all documents that the requestee has inspected.

- Memoranda and correspondence that pertain to the O&M program.

- Annual notifications to staff and families of students.

A record keeping system has been developed and its contents are listed in Appendix C. To assure uniformity, this system alone must be used to organize records required by the O&M Program.

All asbestos records shall be retained indefinitely. Although current legal mandates do not require that all asbestos records be retained indefinitely, long-term retention is nonetheless required by this program. Existing law does require that communications by the building owner and receipt by the owner of information re: the identification, location and quantity of asbestos-containing or presumed asbestos-containing materials, as well as written records of such notifications and their content, shall be maintained for the duration of ownership of the property, and shall be transferred to successive owners.

4.8 Contractor Notification

All contract work is cleared through the Designated Person before work begins. Having all contract work funneled through this person assures that appropriate notification is accomplished of the locations of asbestos-containing materials, thereby avoiding accidental disturbance of asbestos.

Despite this safeguard, a possibility still exists that a contractor who has not been briefed on the location of asbestos on the property could gain access to asbestos materials, and therefore potentially disturb them. This is most likely to happen with contractors who have been operating on the property for years and thus are considered as an extension of property staff.

Further, it might occur if the Designated Person merely limits the briefing about the whereabouts of asbestos to locations where the contractor is expected to work, as opposed to throughout the entire property. Briefing the contractor on asbestos throughout the property is crucial, since contractor duties often take them out of their immediate work zones unexpectedly.

Contractors shall be informed by the Designated Person, or designee, of the locations of asbestos on the property by means of the "Contractor Notification Letter" in Appendix F. The letter itself does not specify where asbestos is located; however, the Designated Person may allow the contractor to review the asbestos survey report.

The correspondence requires a signature from an authorized representative of the contractor. The contractor then is to return the letter to the Designated Person for filling in the "Correspondence and Memoranda" section of the O&M files. Some contractors may not return the signed form or, worse, may decline to do so. A reasonable effort should be made to obtain the proper signature. If that effort fails, consideration should be given to discontinuing use of that contractor for any future work on the property.

All verbal briefings given to contractors about asbestos must also be documented to include who performed the briefing, what was said, who received the briefing, that person's or those persons' job title(s) and the date the briefing was held. An authorized representative of the contractor must sign the documentation verifying that he/she received this information.

4.9 Asbestos Regulated Areas

An Asbestos Regulated Area is an area on the property containing asbestos or presumed asbestos that is so friable or badly damaged/deteriorated that access to the area must be restricted. Work in these areas should only be attempted by persons trained and experienced in handling asbestos-containing materials, and with the knowledge and consent of the Designated Person.

Building maintenance work within Asbestos Regulated Areas will be coordinated by the Designated Person. The Designated Person will use an asbestos abatement contractor to perform any required abatement work or maintenance activities which are expected to result in some release of asbestos fibers within an Asbestos Regulated Area. In addition, an Environmental Consultant should be retained to oversee the abatement contractor's work and perform air monitoring.

Other contractors or the property maintenance staff <u>will not</u> perform any maintenance activities within the designated Asbestos Regulated Area unless the Designated Person determines that the work can be done without disturbing ACBM or exposing contractors to asbestos fibers.

5.0 INVENTORY OF ACBM

A number of materials on the property contain asbestos. The asbestos inventory for the facility is presented in the attachment to the Asbestos Management Plan.

Appendix B outlines procedures for cleaning if friable asbestos-containing materials are damaged. Cleaning should be performed by properly trained personnel or a licensed asbestos abatement contractor.

The procedures outlined in Appendix B have been developed only to provide guidance to the Designated Person and maintenance staff when consulting with asbestos abatement personnel, who would perform all work on ACBM within the property.

6.0 LIMITATIONS

This Asbestos Operations & Maintenance program describes the known locations of asbestos as outlined in survey data identified in the Introduction section of this report. Other ACBM or PACM may be present on the property that have not yet been identified or for which identifying data was not provided when this O&M plan was prepared.

This plan does not purport to meet all legal and regulatory requirements. The mere development of an asbestos O&M Plan does not constitute regulatory compliance; rather, its provisions must be implemented. Additionally, while the latest AHERA and OSHA regulations were considered in its development, because AHERA and OSHA regulations are subject to interpretation, we offer no guarantee our interpretation is consistent with that of AHERA and OSHA.

Furthermore, no attempt was made to render provisions of this plan consistent with individual State and Local asbestos regulations. Users, therefore, must assume liability for conformance with regulatory requirements of all asbestos regulatory agencies. When in doubt, consult with an environmental consultant.

Mention of any firm or company in this plan does not constitute an endorsement of its competence or capabilities, real or implied. The buyer of environmental services is responsible for such determinations.

This plan assumes that Brookline Public School employees with 2-Hour Asbestos Awareness Training are prohibited from handling ACBM. While work practices are described for dealing with small amounts of ACBM, these work practices are intended for reference purposes only and for use only by personnel specifically trained in O&M procedures (i.e. 16-Hour Training for Class III work or 32-Hour Asbestos Abatement Worker Training).

O&M Plan users must recognize that information on asbestos locations on the property may change based, say, on new information developed or due to projects to abate ACBM. Issuance of this plan carries no duty on our part to update it. However, we urge users to update the plan regularly as changes that necessitate updating occur.

Persons with questions on the plan should contact:

Mr. Matt Gillis
matt_gillis@psbma.org

APPENDIX A
USEFUL REFERENCES

USEFUL RESOURCES

National Institute of Building Sciences. Guidance Manual: Asbestos Operations and Maintenance Work Practices. September 1992. [To purchase a copy, call 202/289-7800].

TOSCA Assistance Hotline of the U.S. Environmental Protection Agency: 202/554-1404.

U. S. Department of Labor, Occupational Safety and Health Administration. Asbestos Adviser. [Interactive program available on hard disk to assist users through OSHA's asbestos regulations; call your nearest OSHA Area Office to obtain a copy).

U.S. Environmental Protection Agency. Asbestos Hazard Emergency Response Act (40 CFR 763).

U. S. Department of Labor, Occupational Safety and Health Administration. Asbestos Standard for the Construction Industry. OSHA 3096: 1995 (Revised). [To obtain a free copy, contact your nearest OSHA area office or call 202/219-4667].

U. S. Department of Labor, Occupational Safety and Health Administration, Office of Health Compliance Assistance. OSHA Instruction CPL 2-2.63: Inspection Procedures for Occupational Exposure to Asbestos Final Rule 29 CFR Parts 1910.1001, 1926.1101 and 1915.1001. November 3, 1995. [To obtain a free copy, contain your nearest OSHA area office or call 202/219-8036.]

U. S. Environmental Protection Agency. Asbestos on Properties: Guidance for Service and Maintenance Personnel. EPA 560/5-85-018, July 1985. [Available for a charge from the National Technical Information Service, Springfield, Virginia at 1/800/553-6847 or 703/487-4650 or (fax) 703/321-8547].

U.S. Environmental Protection Agency. Guidance for Controlling Asbestos-Containing Materials in Buildings. EPA 560/5-85-024: June 1985. [Available for a charge from the National Technical Information Service, Springfield, Virginia at 1/800/553-6847 or 703/487-4650 or (fax) 703/321-8547].

U.S. Environmental Protection Agency. Managing Asbestos in Place: A Building Owners Guide to Operations and Maintenance Programs for Asbestos-Containing Materials. 20T-2003: July 1990. [Available for a charge from the National Technical Information Service, Springfield, Virginia at 1/800/553-6847 or 703/487-4650 or (fax) 703/321-8547].

APPENDIX B
CLEANING PROCEDURES

CLEANING PROCEDURES

Procedures in this section are to be performed by appropriately trained/licensed asbestos professionals only.

An initial cleaning will be required when damaged or disturbed asbestos-containing materials are identified on the property. The extent of the damage and the friability of the material will determine the extent of the cleaning procedures required.

If damage is minor, asbestos debris on floors and horizontal surfaces around the damaged area can usually be removed using a HEPA vacuum. A combination of HEPA vacuuming and wet mopping may be used to remove small amounts of asbestos debris under most circumstances. If more than three square feet of area is covered with loose debris, more extensive procedures will be required, by a licensed asbestos abatement contractor.

Protective clothing and respirators must be utilized during the cleaning activity. The work area will need to be cordoned off with safety warning tape and air monitoring may also be necessary during the cleaning effort.

Carpeting which has become contaminated with asbestos debris requires special treatment. The carpeting must be thoroughly vacuumed with a HEPA vacuum and steam cleaned. Liquid waste generated during these activities must be disposed of in accordance with Section 4.6.

Extensively damaged materials will most likely require oversight of cleanup activities by an environmental consulting firm. Cleaning procedures, under these circumstances, are usually done within a contained work area by trained individuals. The Designated Person or designee should be consulted if questions on the scope of the cleaning effort arise.

Under most circumstances, air monitoring should be performed during asbestos cleaning procedures. General area sampling shall be performed by an Environmental Consultant in accordance with AHERA regulations.

APPENDIX C
RECORDKEEPING SYSTEM

RECORDKEEPING SYSTEM

File Label	Contents
Asbestos Sampling	Asbestos survey reports and bulk sampling data.
Operations and Maintenance Plan	Operations and Maintenance Program.
Periodic Surveillance	Documentation of all periodic surveillance; e.g., Periodic Surveillance Summary Sheet, periodic air sampling data.
Training	Records of personnel asbestos training received.
Asbestos Abatement, Maintenance and Repair Reports	Copies of all fully completed Asbestos Maintenance Closure Forms, Maintenance, and Repair Work Order Permit forms, etc.
Fiber Release Episodes	Copies of procedures, reports and air sampling data pertaining to each fiber release episode.
Technical Bulletins	All policy directives, bulletins, and notifications prepared and implemented by Brookline Public Schools.

MAINTENANCE AND REPAIR REQUEST FORM
FOR ASBESTOS REGULATED AREAS

Building Address: _____ _____
Telephone Number: _____ Date: _____
Location of Work Area: _____
_____

Requested Starting Date: _____ Anticipated Completion Date: _____

Description of Work: _____
_____
_____

Name of Requestor: _____

Company Affiliation: _____

Telephone Number: _____

DESIGNATED PERSON USE ONLY

1. Work Practices Could Potentially Disturb ACBM: Yes: No:

2. Alternative Procedures to Prevent Disturbance of ACBM: Yes: No:

If yes, describe Alternative Procedures: _____
_____
_____

3. Request: Granted: Not Granted:

If not granted, please explain: _____
_____
_____

_____ _____
Designated Person Signature Date

cc: O & M – Abatement, Maintenance and Repair File

Operations & Maintenance (O & M) Program
Log Book

Instructions: Visitor completes the first four columns; building personnel the last column. Visitors may view O&M Program documents but may not leave with copies of them. **Use blue or black ink only.**

	Name	Representing	Time	Date	Items of Interest (List)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

cc: O & M - Log Book File

ASBESTOS MAINTENANCE CLOSURE FORM

Instructions: Fill out completely in blue or black pen only. Use more than one form if the project involves (a) two or more types of abatement, or (b) abatement of several types of asbestos-containing building materials (ACBM).

1. Property Name: _____

2. Type of abatement: Remove Encapsulate Enclose Repair

3. Contractor Name: _____ Monitor Firm: _____

4. Project Began On (date): _____ Project Ended On: _____

5. Location of Work (be precise): Floor Area Room

   Other: _____

   _____

6. Type of ACBM (fittings, ceiling tile, etc.) _____

---

7. Amount of Asbestos: Square feet: _____ Linear feet: _____ Other: _____

8. Control Methods Used (if not applicable, write "NA")

____ Pre-Cleaning	____ Neg. Air Filtration	____ Aggressive Sampling
____ Wet Methods	____ HVAC Shut Off	____ Final Air Clearance
____ Area Sealed	____ Glove Bag/Boxes	____ Encapsulation
____ Warning Signs	____ Air Monitoring	____ Final Visual Insp.
____ HEPA Vacuum		

9. Name of Disposal Site: _____

   Location: _____

   _____

   _____ _____

10. Post-Abatement Inspection Completed: Yes No

    _____ _____

    Signature Date

cc: Project Monitor
Designated Person
O & M - Abatement, Maintenance and Repair File

Asbestos Operations & Maintenance Program
Training Record

Date of Training _____ Initial ( ) Refresher ( )

Description of Training _____

_____

Handouts (Describe) _____

Attendees (List by Name)

1. _____ 4. _____
2. _____ 5. _____
3. _____ 6. _____

Instructor's Name _____

Date of Training _____ Initial ( ) Refresher ( )

Description of Training _____

_____

Handouts (Describe) _____

Attendees (List by Name)

1. _____ 4. _____
2. _____ 5. _____
3. _____ 6. _____

Instructor's Name _____

cc: O & M - Training File

ASBESTOS
OPERATIONS & MAINTENANCE
PROGRAM
Inspection Form
Warning Labels

Instructions: Describe below where on the property all warning labels are located. Be as specific as possible.

Location on property of warning labels:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Instructions: If all labels are in place, legible and conspicuous, write "Yes" in column 1. Otherwise write "No". If you write "No" in column 1, complete column 2 by writing "Yes" if the problem has been corrected; "no" if it hasn't. Otherwise, leave column 2 blank. After each inspection, place your initials in column 3 and the inspection date (m/d/y) in column 4. Column 1 should be filled out for each inspection. Columns 2, 3 and 4 should be completed as necessary.

#1 Functional? Yes/No	#2 If "No," Prob. Corrected? Yes/No	#3 Initials	#4 Date	#1 Functional? Yes/No	#2 If "No," Prob. Corrected? Yes/No	#3 Initials	#4 Date
1._____	_____	_____	_____	**16.**_____	_____	_____	_____
2._____	_____	_____	_____	**17.**_____	_____	_____	_____
3._____	_____	_____	_____	**18.**_____	_____	_____	_____
4._____	_____	_____	_____	**19.**_____	_____	_____	_____
5._____	_____	_____	_____	**20.**_____	_____	_____	_____
6._____	_____	_____	_____	**21.**_____	_____	_____	_____
7._____	_____	_____	_____	**22.**_____	_____	_____	_____
8._____	_____	_____	_____	**23.**_____	_____	_____	_____
9._____	_____	_____	_____	**24.**_____	_____	_____	_____
10._____	_____	_____	_____	**25.**_____	_____	_____	_____
11._____	_____	_____	_____	**26.**_____	_____	_____	_____
12._____	_____	_____	_____	**27.**_____	_____	_____	_____
13._____	_____	_____	_____	**28.**_____	_____	_____	_____
14._____	_____	_____	_____	**29.**_____	_____	_____	_____

15._____ _____ _____ _____ **30.**_____ _____ _____ ____

cc O & M - Periodic Surveillance File

GUIDE TO PERIODIC SURVEILLANCE

A key feature of the O&M Program is the re-inspection of all asbestos-containing building materials (ACBM) and/or presumed asbestos-containing materials (PACM) on the property. The re-inspection will insure that any damage or deterioration of the ACBM will be detected and corrective action taken. The following section describes the criteria for assessing ACBM/PACM.

The criteria for assessing ACBM/PACM condition should be used to evaluate each homogeneous area of ACBM/PACBM identified on the property. A homogeneous area is an area of ACBM/PACBM which appears the same by date of application, use, texture, color and overall appearance. The individual performing the re-inspection must inspect all areas of friable ACBM/PACBM during each re-inspection. It is not enough to inspect one small area of each ACBM/PACBM and assume the remaining area to be similar. All locations of each ACBM/PACBM identified on the property are provided in the Asbestos Management Plan prepared by EFI. The ACBM/PACBM must be assessed based on the following factors:

- **Changes in Material Condition**

Changes in material condition, which are not the result of renovations to improve material condition, such as painting, may represent degradation in material condition as a result of poor maintenance, aging, or other factors. Materials which have become discolored, blistered, cracked, etc. must be further evaluated to determine the extent and cause of the problem.

- **Damage to Material**

Damage to material may result from deterioration, water damage or physical damage. Deterioration of a material usually indicates damage resulting from aging or poor maintenance. Water damage may occur from pipes or roof leaks and is indicated by patches of discolored areas. Physical damage may result during routine maintenance activities, renovations, or accidental contact. Damage to any material requires response action.

Operations & Maintenance (O&M) Program
Periodic Surveillance Summary Sheet

Material Identification		Material Assessment					
Material Location	Material Description	Material Condition		Damage			No Damage
		Changed	Unchanged	Deterioration	Water	Physical	

APPENDIX D
FIBER RELEASE MANAGEMENT

FIBER RELEASE MANAGEMENT

Immediate response to fiber release episodes is essential. Initial procedures for response to any fiber release episode are detailed in Section 4.3.

The Environmental Consultant is capable of handling emergency response activities involving asbestos-containing materials. If a fiber release episode occurs, the Designated Person shall contact school management immediately. Abatement contractor personnel are available 24 hours a day to respond to all fiber release episodes.

Procedures for the management of fiber release episodes and cleanup of damaged ACBM differ depending upon the degree of damage to the material. The following sections detail work and management procedures for handling the cleanup of damaged ACBM.

The appropriate respiratory protection and protective clothing must be worn by personnel responding to fiber release episodes.

The Asbestos Maintenance Closure Form must be completed for all fiber release episodes. The closure forms shall be included in the asbestos program file.

APPENDIX E
ORGANIZATIONS OFFERING SMOKING CESSATION PROGRAMS

ORGANIZATIONS OFFERING SMOKING CESSATION PROGRAMS

NATIONAL CANCER INSTITUTE
Office of Cancer Communications
National Institutes of Health
Building 31, Room 10A24
Bethesda, MD 20892
1-800-4-CANCER (226 237)

AMERICAN CANCER SOCIETY
3340 Peachtree Road, N.E.
Atlanta, GA 30026
404/320-3333

AMERICAN HEART ASSOCIATION
7320 Greenville Avenue
Dallas, TX 75231
214/750-5300

AMERICAN LUNG ASSOCIATION
1740 Broadway
New York, NY 10019
212/245-8000

OFFICE ON SMOKING AND HEALTH
Department of Health and Human Services
Park Building, Room 110
Rockville, MD 20857
301/443-1575

APPENDIX F
SAMPLE NOTIFICATION LETTERS

SAMPLE CONTRACTOR NOTIFICATION LETTER

RE: Notification of Asbestos-Containing Material

Dear :

This correspondence is intended to inform you of the locations of asbestos-containing materials and presumed asbestos-containing materials at the above-referenced property. This information is provided on the enclosed attachment, which is located in the property's written Asbestos Management Plan.

Your signature below is acknowledgment that you have received the information, and pledge to pass it on to your employees who work at the property before they do work there that might disturb asbestos-containing materials or presumed asbestos-containing materials. Also, you are required to pass on any information concerning asbestos at this property to your subcontractors, if any, who may do work at this property. Please return a signed copy of this letter to my office at your earliest convenience.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Designated Person

_____
(Signature of Authorized Official)

_____
(Job Title of Authorized Official)

_____
(Date)

Attachment: Asbestos Material Inventory Form

cc: O&M Correspondence and Memoranda File

SAMPLE STUDENT FAMILY NOTIFICATION LETTER

RE: Notification of Asbestos-Containing Material

Dear :

On October 22, 1986, President Reagan signed into law an amendment to the Toxic Substance Control Act requiring schools to determine the presence of asbestos containing building materials in all school buildings. That amendment, called the Asbestos Hazard Emergency Response Act (AHERA) required that all school buildings be visually inspected by accredited inspectors and that bulk samples of suspected materials are taken where the material was not assumed to be asbestos. It further required that management plans be created for each individual building and that the maintenance and custodial personnel receive training. The plan must be implemented and the training must be completed by July 9, 1989. This document is the Asbestos Management Plan which provides the means and the methods to effectively deal with asbestos containing building materials.

All phases of asbestos inspection and management planning are reported in this plan including: response actions strategy, priorities, scheduling of abatement activities and coordination of personnel and evaluation of results. The plan has an additional function as a reporting document to that State. At the local level, the plan must be made available for general review by the school district.

The AHERA management plans for our school building is complete. Baldwin School will be completing a three year re-inspection in 2019.

All asbestos containing materials are kept in good condition and the school has taken all necessary actions to insure the safety of all buildings occupants.

Please contact Chris Doyle or the school if you have any questions regarding this notice.

ATTACHMENT E

RESPONSE ACTION DOCUMENTATION

Brookline Public Schools response action documentation was destroyed in a flood. This Attachment is a placeholder for future response action documents.

ATTACHMENT F

HISTORICAL 3 YEAR RE-INSPECTIONS & 6 MONTH SURVEILLANCE REPORTS

Many of the Brookline Public Schools 3-year re-inspection & 6-month surveillance reports were destroyed in a flood. Available reports are attached. This Attachment is also a placeholder for future 6-month surveillance & 3-year re-inspection reports.

ASBESTOS MANAGEMENT PLAN
FOR THE
BALDWIN SCHOOL
BROOKLINE, MASSACHUSETTS

PREPARED BY:

CERTIFIED ENGINEERING & TESTING COMPANY, INC.
25 MATHEWSON DRIVE
WEYMOUTH, MASSACHUSETTS
02189

DATE:

FEBRUARY 17, 1989

RECEIVED
ASBESTOS PROJECT
89A-6678
MAY 8 1989

PREFACE

The Inspector/Management Planner recommends that the Management Plan be read in the order described below. The general guidelines which follow should enable the reader to have the clearest possible understanding of asbestos-related concerns at the Baldwin School.

Sections I-IV of the Management Plan provide a general introduction to the Plan and should be read first. Topics include an overview of the Plan, a brief description of the Baldwin School, and qualification information for the major participants in implementation of the Plan: the LEA's Asbestos Coordinator/Designated Person and the EPA accredited Inspector/Management Planner.

Sub-sections A and B of Section V, the next section which should be read, describe what a homogeneous area is and summarize the homogeneous areas at the Baldwin School, respectively. The summary provides a general description of each homogeneous area and whether or not it was found or assumed to contain asbestos.

Section VIII, the Hazard Priority Summary, ranks the asbestos-containing homogeneous areas summarized in Section V by the potential threat they pose to school occupants. The response action recommended by the Management Planner to manage the material is also included.

Based on the information found in the sections noted above, the reader can identify which homogeneous areas he or she wants more information about. Section V-B (Homogeneous Area Data Sheets) and Section VII (Hazard Assessment Summary Sheets) provide specific information regarding each homogeneous area.

Concurrent with reading the Homogeneous Area and Hazard Assessment Sheets for specific homogeneous areas in Sections V and VII, the Inspector/Management Planner recommends reference to Appendix A, Photographs, Appendix B, Bulk Sample Summary and Analysis Data Sheets, and Appendix C, Floor Plans. These appendices are a useful supplement to the Homogeneous Area Data Sheets and Hazard Assessment Summary Sheets and can also be referenced by homogeneous area number. The appendices provide specific and graphic location and condition information.

Sections VIII and IX, which should also be initially referenced on an area by area basis, summarize response action information, implementation schedules and costs.

Section X provides guidelines for contractor selection.

Section VI, a supplemental section, summarizes prior survey data and abatement actions at the school.

Finally, Section XI, the Operations and Maintenance Program, should be read for an understanding of the maintenance operations and material monitoring required at the school due to the presence of asbestos.

INDUSTRIAL HYGIENE SERVICE CONSTRAINTS

All professional opinions presented in this report are based on information made available to us either by review of data provided by others or data gathered by Certified Engineering and Testing Company, Inc. (Certified) personnel.

Certified affirms that data gathered and presented by Certified in this report was collected in an appropriate manner in accordance with generally accepted methods and practices. Certified cannot be responsible for the accuracy of data provided by others.

Certified is not responsible for analyzed quantities which fall below published standard method detection limits for the method employed. Certified cannot be responsible for decisions made solely on the basis of economic factors.

Conditions described in this report are as found at the time of investigation, unless otherwise stated.

Certified analyzed only the substances, conditions and locations described in the report at the time indicated no inference regarding other substances, conditions, locations or time can be made unless specifically stated in the report.

This report is intended for the use listed in the section of this report described as the Introduction. The use of this report in any other manner than that listed in the Introduction, requires the written consent of Certified Engineering and Testing Co., Inc. This report must be presented in its entirety.

The Operations and Maintenance (O&M) Program has been modified by the Brookline Public Schools to meet their operational needs. Certified does not accept responsibility for any deletions from or additions to the O&M Program.

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I. INTRODUCTION TO THE PLAN

A. BACKGROUND

This Management Plan for asbestos-containing building materials (ACBM) at the Baldwin School describes the means and methods by which ACBM within the school will be addressed. The Management Plan was prepared by Peter G. Fogarty, EPA accredited Inspector and Management Planner for Certified Engineering and Testing Company, Inc.(Certified), in accordance with the provisions of the Asbestos Hazard Emergency Response Act (AHERA).

Inspection of the Baldwin School was performed by Mr. Fogarty on December 14, 1988. The Survey Report detailing the findings of his inspection forms the basis of this Management Plan.

B. CONTENT OF THE PLAN

The Management Plan includes the survey report, laboratory data sheets from bulk material sample analysis, a hazard assessment of all ACBM in the school, a summary sheet for each homogeneous area containing all pertinent information regarding ACBM in that area, and recommended response actions for all such areas.

Another major component of the Management Plan is the Operations and Maintenance Program. The O&M Program details procedures designed to ensure that ACBM, whenever possible, is not disturbed. Monitoring, handling and decontamination procedures associated with routine maintenance procedures and small scale removal of ACBM are also included.

C. ACCREDITATIONS

Certified's laboratory, which performed all sample analysis for the Baldwin School, is accredited under the EPA's "Interim Accreditation Program" for bulk sample analysis pending the establishment of a National Bureau of Standards accreditation program. Certified's laboratory is also accredited by the Massachusetts Department of Labor and Industries, Asbestos Abatement Program Certification for Analytical Services, Certification #AA000004.

The State of Massachusetts requires that all contractors and consultants who do asbestos-related work be licensed. Consultants can be licensed in any or all of four disciplines: Inspection, Management Planning, Project Design and Project Monitoring. Mr. Fogarty is licensed as an Inspector, Management Planner and Project Monitor.

SECTION II

ACCREDITATION/QUALIFICATION INFORMATION

A. ASBESTOS COORDINATOR INFORMATION SHEET

The Asbestos Coordinator is the person designated by the Local Education Agency to be responsible for all asbestos-related concerns for the Brookline school district. He/she is the school district's representative and directs all asbestos-related activities. The Asbestos Coordinator also is responsible for making information regarding asbestos-related activities available to all appropriate interested parties. Please refer to the Operations and Maintenance Program for the Asbestos Coordinator's specific responsibilities. The Asbestos Coordinator must be informed prior to any and all activities in which asbestos-containing building materials (ACBM) may be disturbed.

The Asbestos Coordinator's relevant work history and qualification information follow:

Name: _____
Address: _____
_____
_____
Title: _____
Phone: 617 337 7687

CERTIFIED ENGINEERING & TESTING CO., INC.
25 MATHEWSON DRIVE
WEYMOUTH, MA 02189

Qualification Information:

1. Training
   Course Name: _____
   _____
   Training Facility: _____
   _____
   Date: _____
   Hours of Training: _____

2. State Certifications
   _____
   _____
   _____
   _____

3. Related Experience
   _____
   _____
   _____
   _____

4. As Asbestos Coordinator for the Baldwin School, Brookline School District, I hereby certify that I have read the Management Plan and that the general Local Education Agency responsibilities as stipulated by CFR 763.84 have been met or will be met.

Name	Date
Name	Date

CERTIFIED ENGINEERING & TESTING CO., INC.
25 MATHEWSON DRIVE
WEYMOUTH, MA 02189

5/5/89

B. INSPECTOR INFORMATION SHEET

Name: Peter G. Fogarty
Address: c/o Certified Engineering and Testing Co., Inc.
25 Mathewson Dr., Weymouth, MA. 02189
Title: Industrial Hygienist
Phone: (617) 337-7887

Qualification Information:

1. Training

   Course Name: "Asbestos Abatement for Inspectors"
   Training Facility: Tufts University, Asbestos Training Center
   Date: June 22, 1988
   Hours of Training: 24
   Accreditation Number 8806-30-014, expires June 22, 1989

2. State Certifications

   State of Massachusetts, Management Planner #00503
   State of Massachusetts, Inspector #00382
   State of Massachusetts, Project Monitor #00458

Inspector Signature: Peter G. Fogarty
Date: 4 May 1989

C. MANAGEMENT PLANNER INFORMATION SHEET

Name: Peter G. Fogarty
Address: c/o Certified Engineering and Testing Company, Inc.
25 Mathewson Dr.
Weymouth, MA 02189
Title: Industrial Hygienist
Phone: (617) 337-7887

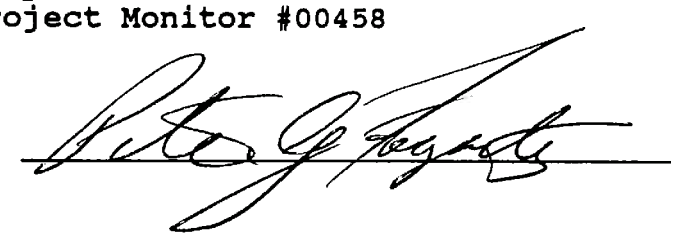
Qualification Information:

1. Training

   Course Name: "Asbestos Abatement for Management Planners"
   Training Facility: Tufts University, Asbestos Training Center
   Date: June 24, 1988
   Hours of Training: 16
   Accreditation Number 8806-03-079, expires June 24, 1989

2. State Certifications

   State of Massachusetts, Management Planner #00503
   State of Massachusetts, Inspector #00382
   State of Massachusetts, Project Monitor #00458

Management Planner Signature: 
Date: 4 May 1989

D. LABORATORY INFORMATION SHEET

CERTIFIED ENGINEERING & TESTING COMPANY, INC.
25 MATHEWSON DRIVE, WEYMOUTH, MA 02189

National and State Certifications

National Institute of Standards and Technology (NIST)
National Voluntary Laboratory Accreditation Program (NVLAP)

Laboratory # 1181

EPA "Interim Asbestos Bulk Sample Analysis Quality Assurance Program"

Commonwealth of Massachusetts Department of Labor and Industries, Asbestos Abatement Program Certification for Analytical Services Certification No. AA000004

	Signatures
Microscopy Lab Manager	
Kevin J. Kelley	Kevin J. Kelley
Microscopy Lab Director	
Noel E. Reid	Noel Everett Reid
Laboratory Microscopists	
Lisa J. Campe	Lisa J. Campe
Kenneth Desruisseau	Kenneth Desruisseau
Paul Hoffman	Paul Hoffman
William McCarriston	William McCarriston
Carl W. Pearson, Jr.	Carl Pearson Jr
Noel E. Reid	Noel Everett Reid
Leo J. Ryan, Jr.	Leo J. Ryan

III. SCHOOL INFORMATION

The Baldwin School is a concrete, masonry and wood structure built in 1927. The school has a total area of 55,500 square feet. An addition was constructed in 1930 and renovated in 1974.

Sixteen homogeneous areas were identified at the Baldwin School, fifteen of which were found or assumed to contain asbestos. The Survey Report section of this Management Plan includes a list describing each homogeneous area and recording whether or not it contained asbestos.

The Inspector, Mr. Fogarty, sampled most accessible, suspect materials at the Baldwin School. All suspect materials which were not sampled were assumed to contain asbestos.

Floor plans are provided with the Management Plan for the Baldwin School on which homogeneous areas are marked.

IV. SAMPLING METHODS

A. Determination of Sampling Locations

Sampling locations were determined by identifying suspect asbestos-containing materials within the school. All areas in the building were inspected, including halls, closets, attic spaces, and crawl spaces. All structural parts such as walls, ceilings, beams, ducts, and other surfaces were also carefully inspected.

The suspect materials were grouped into homogeneous sampling areas. An area of material was designated a homogeneous area if, and only if, it was of uniform texture, color and appearance. Homogeneous areas were further defined based on building construction dates.

B. Surfacing Material

For sprayed or troweled-on materials, samples were collected in a statistically random manner throughout each homogeneous area where possible. Each homogeneous area of surfacing material was divided into nine equal sub-areas - a sampling grid. As a general rule, samples were collected as follows:

Size of the Sampling Area	Number of Samples Collected
Less than 1000 square feet	3
1000 - 5000 square feet	5
Greater than 5000 square feet	7-9

C. Thermal System Insulation

Thermal system insulation was broken into homogeneous areas based on the type of insulation, the use of that type of insulation, and the function of the building system of concern. As a general rule, three samples were collected for each thermal system insulation homogeneous area. As an example, on a run of steam supply pipe, three samples were collected from the straight sections, and three samples from elbows or valve fittings.

D. Miscellaneous Material:

Each homogeneous area of miscellaneous material which is not assumed to contain asbestos was sampled by the accredited inspector in a manner sufficient to determine whether the material is ACBM or not ACBM. A minimum of one sample was collected from each homogeneous area.

V. THE AHERA SURVEY

A. INTRODUCTION

AHERA legislation mandates that all schools be inspected for asbestos-containing building materials (ACBM) by the extended deadline of May 9, 1989 and that assessment of such ACBM include categorization of all ACBM by homogeneous area and functional space. A homogeneous area, as defined by AHERA, is "an area of surfacing material, thermal system insulation or miscellaneous material that is uniform in color or texture." A functional space is defined as a room or group of rooms or homogeneous area which is used by building occupants for a single purpose (e.g. classrooms) as designated by a person accredited to prepare Management Plans.

The Inspector/Management Planner, after surveying all areas of a school, divides it into functional spaces and notes all homogeneous areas within the space. Areas are designated as either surfacing material (Surf or S), thermal system insulation (TSI or T) or miscellaneous material (Misc or M). Suspect material applications are sampled, and all pertinent information regarding material condition and location is recorded.

In accordance with AHERA, materials which are suspected of containing asbestos but are not sampled are assumed to contain asbestos. The Inspector makes such assumptions based on the type of material application, its age and any distinguishing physical characteristics. It is the intention of the Inspector not to disturb suspect materials or to cause damage which does not already exist.

It is the Inspector's opinion that all floor tile and linoleum should be assumed to contain asbestos until such time as it is cost effective to analyze the material by Scanning Electron Microscopy (SEM). As the day-to-day operational costs of maintaining floor tile and linoleum are nominal, the Inspector recommends SEM analysis only prior to renovation or demolition activities during which floor tile or linoleum would be removed. If SEM analyses yield negative results at that time, floor tile or linoleum in the homogeneous area may be considered non-asbestos containing.

In addition, if samples of floor tile and linoleum were taken and found not to contain asbestos by optical microscopy, these materials are still assumed to contain asbestos. This assumption is made due to recent scientific evidence suggesting that light microscopy, the only method required by AHERA, is not sensitive enough to reliably locate and identify the asbestos structures in some vinyl asbestos floor tile and linoleum.

Finally, the following materials, although they are found within some schools, are not considered asbestos-containing building materials: blackboards, wall or ceiling carpet, exterior roofing shingle, chemistry lab table and desk tops, chemistry lab gloves, fire blankets, brake shoes, kiln bricks and cement, bunsen burner pads, electrical insulation, window putty, concrete, sheet-rock tape and counter tops. The Inspector may designate such materials a homogeneous area, however, if in his or her opinion the material constitutes a potential hazard.

SURVEY REPORT

SURVEY DATA SHEET:

The Homogeneous Area Data Sheets contain information regarding the location and material condition of all suspect asbestos-containing materials at the Baldwin School. While sample analysis results are noted on the data sheets, the information on them was compiled by the Inspector in the field prior to sample analysis.

Type of Material

AHERA requires that all suspect material be described as belonging to one of three categories: Thermal System Insulation (T or TSI), Surfacing material (SURF or S), or Miscellaneous material (M or MISC). Thermal System Insulation includes piping, fitting, boiler, tank and flue insulation. Surfacing material includes wall plaster, ceiling plaster, fireproofing and decorative ceilings. Miscellaneous material includes floor tile, ceiling tile, wall board (transite), boiler gaskets and flex connectors (expansion joints).

Friability of Material

A material is friable if it can be reduced to powder by hand pressure. Friable materials are more likely to release asbestos fibers into the air than materials of low friability. The friability of a material is therefore an important index of its potential hazard. It is important to note that all materials, if broken, crushed or disturbed, can become friable. For this reason, the Inspector/Management Planner does not use the term "non-friable" to describe any materials.

Homogeneous Area Description

A Homogeneous Area is an area of a specific material application which is uniform in color and texture. A Homogeneous Area can extend throughout the school and can include materials in non-contiguous rooms.

Functional Space Description

A Functional Space is any area of the school dedicated to a single purpose as defined by the Inspector/Management Planner. The activities which occur in a given functional space are an important component in the Management Planner's assessment of potential material hazards.

Sampling Rationale

AHERA dictates that specific sampling strategies be employed to guarantee that statistically representative samples of material applications are collected in the field. In the event that random sampling methods cannot be employed, the Inspector may make his or her own determination regarding sample locations. In addition, the Inspector may choose to assume that a material contains asbestos rather than sample it. Factors which influence the Inspector's choice might include material accessibility, condition and location.

Damage Factors

Material can be damaged in one of two general ways: by water (i.e. roof, ceiling or piping leaks) or by physical damage (i.e. repair, vandalism, deterioration due to age). In this section the Inspector assigns percentage values to each of these types of damage in the homogeneous area and notes the potential sources of this damage.

HOMOGENEOUS AREA SUMMARY

HOMOGENEOUS AREA I.D. #	HOMOGENEOUS AREA AND FUNCTIONAL SPACE DESCRIPTION	ANALYSIS RESULTS
M-01	The material is 12" x 12" white acoustical ceiling tile cemented to the ceiling. The ceiling tile is found in the gym.	Assumed ACBM
M-02	The material is white, cloth expansion joints. The material is found on the HVAC system in the attic.	ACBM
M-03	The material is linoleum floor sheeting in tan, red brick and rainbow plaid patterns. The linoleum covers portions of the floor in classrooms one and two, and the toddler room behind the kitchen.	Assumed ACBM
M-04	The material is 9" x 9" gray vinyl floor tile. The tile is located in the kitchen and under the carpet in the infant and toddler day care rooms.	Assumed ACBM
S-01	The material is smooth plaster wall and ceiling surfacing. The material is found on walls and ceilings in classrooms, hallways, bathrooms and storage rooms.	Assumed ACBM
S-02	The material is a grayish-white, cementitious ceiling and wall plaster with brown hair-like fibers. The plaster is located in the attic HVAC room.	Non-ACBM
T-01	The material is hard-pack fitting insulation on fiberglass-insulated pipes. The fittings are located on fiberglass insulated pipes in the boiler room.	ACBM
T-02	The material is magnesium chalk pipe and fitting insulation. It is a white, chalky, powdery and fibrous substance. The chalk insulation is located in the boiler room, oil tank storage room, crawl space and electrical room.	Assumed ACBM

HOMOGENEOUS AREA SUMMARY

HOMOGENEOUS AREA I.D. #	HOMOGENEOUS AREA AND FUNCTIONAL SPACE DESCRIPTION	ANALYSIS RESULTS
T-03	The material is aircell pipe insulation consisting of layers of corrugated cardboard lined with a grayish-white, fibrous substance. The material is located in the boiler room.	Assumed ACBM
T-04	The material is white, chalky, fibrous fitting insulation connecting aircell-insulated pipes. The insulation material is located in the boiler room.	Assumed ACBM
T-05	The material is the boiler flue insulation. It is a hard-packed, white, chalky, fibrous material. The insulation is found in the boiler room on the boiler exhaust pipe.	Assumed ACBM
T-06	The material is accessible chalk-insulated pipes and fittings. It is a white, chalky, fibrous substance encased in a canvas covering. The material is located in the gym, gym foyer, restroom and classroom in the basement of the building.	Assumed ACBM
T-07	The material is accessible aircell-insulated pipes which consist of layers of corrugated cardboard lined with a gray fibrous substance. The material is located in the basement restroom.	Assumed ACBM
T-08	The material is fitting insulation on straight pipe lines with aircell insulation. The material is located in the basement restroom.	Assumed ACBM
T-09	The material is chalky pipe and pipe fitting insulation. It is white, powdery and fibrous. The material is located in the attic.	Assumed ACBM
T-10	The material is pipe insulation located between walls, under floors or above ceilings. The material is located in any inaccessible areas of the building such as, in walls, ceilings or floors.	Assumed ACBM

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: M-01
PHOTO ID #: M-01
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Miscellaneous

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is 12" x 12" white acoustical ceiling tile cemented to the ceiling.

FUNCTIONAL SPACE DESCRIPTION:

The ceiling tile is found in the gym.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

The inspector could not reach the ceiling for sampling.

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL:

	LINEAR FEET
637	SQUARE FEET - OTHER
	SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE 1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

18% = HIGH = MODERATE = LOW

REASONS FOR DAMAGE:

Many tiles are punctured and dislodged due to sports activities.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: M-01 .....

The ceiling is in poor condition.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: M-02
PHOTO ID #: M-02
NUMBER OF SAMPLES: 1 *
AREA STATUS: ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Miscellaneous

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is white, cloth expansion joints.

FUNCTIONAL SPACE DESCRIPTION:

The material is found on the HVAC system in the attic.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
(X) INSPECTOR'S CHOICE
( ) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

One sample was taken from the top seam of the cloth joint.

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL:

	LINEAR FEET
20	SQUARE FEET - OTHER
	SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE <1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE <1% = LOW

REASONS FOR DAMAGE:

The material is in fair condition, however, the seams are beginning to fray.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: M-02 .....

The HVAC unit is not in use at the present time.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: M-03
PHOTO ID #: M-03
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Miscellaneous

( ) FRIABLE MATERIAL
(X) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is linoleum floor sheeting in tan, red brick and rainbow plaid patterns.

FUNCTIONAL SPACE DESCRIPTION:

The linoleum covers portions of the floor in classrooms one and two, and the toddler room behind the kitchen.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

The material is assumed due to the limitation of PLM sensitivity for detecting asbestos in floor tile and linoleum. (See The AHERA Survey, section V, p.10)

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL:

	LINEAR FEET
	SQUARE FEET - OTHER
280	SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE <1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE <1% = LOW

REASONS FOR DAMAGE:

The linoleum is in good condition. The edges are protected and adhered to the carpet beneath by duct tape.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: M-03 .....

The linoleum is in good condition.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: M-04
PHOTO ID #: M-04
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Miscellaneous

( ) FRIABLE MATERIAL
(X) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is 9" x 9" gray vinyl floor tile.

FUNCTIONAL SPACE DESCRIPTION:

The tile is located in the kitchen and under the carpet in the infant and toddler day care rooms.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

The floor tile is assumed to contain asbestos because of the limitation of polarized light microcopy for detecting asbestos in floor tile.(See The AHERA Survey, section V, p.10)

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL:

	LINEAR FEET
	SQUARE FEET - OTHER
1,460	SQUARE FEET - TILE

Baldwin

HOMOGENEOUS AREA SUMMARY

HOMOGENEOUS AREA I.D. #	HOMOGENEOUS AREA AND FUNCTIONAL SPACE DESCRIPTION	ANALYSIS RESULTS
M-01	The material is 12" x 12" white acoustical ceiling tile cemented to the ceiling. The ceiling tile is found in the gym.	Assumed ACBM
M-02	The material is white, cloth expansion joints. The material is found on the HVAC system in the attic.	ACBM
M-03	The material is linoleum floor sheeting in tan, red brick and rainbow plaid patterns. The linoleum covers portions of the floor in classrooms one and two, and the toddler room behind the kitchen.	Assumed ACBM
M-04	The material is 9" x 9" gray vinyl floor tile. The tile is located in the kitchen and under the carpet in the infant and toddler day care rooms.	Assumed ACBM
S-01	The material is smooth plaster wall and ceiling surfacing. The material is found on walls and ceilings in classrooms, hallways, bathrooms and storage rooms.	Assumed ACBM
S-02	The material is a grayish-white, cementitious ceiling and wall plaster with brown hair-like fibers. The plaster is located in the attic HVAC room.	Non-ACBM
T-01	The material is hard-pack fitting insulation on fiberglass-insulated pipes. The fittings are located on fiberglass insulated pipes in the boiler room.	ACBM
T-02	The material is magnesium chalk pipe and fitting insulation. It is a white, chalky, powdery and fibrous substance. The chalk insulation is located in the boiler room, oil tank storage room, crawl space and electrical room.	Assumed ACBM

HOMOGENEOUS AREA SUMMARY

HOMOGENEOUS AREA I.D. #	HOMOGENEOUS AREA AND FUNCTIONAL SPACE DESCRIPTION	ANALYSIS RESULTS
T-03	The material is aircell pipe insulation consisting of layers of corrugated cardboard lined with a grayish-white, fibrous substance. The material is located in the boiler room.	Assumed ACBM
T-04	The material is white, chalky, fibrous fitting insulation connecting aircell-insulated pipes. The insulation material is located in the boiler room.	Assumed ACBM
T-05	The material is the boiler flue insulation. It is a hard-packed, white, chalky, fibrous material. The insulation is found in the boiler room on the boiler exhaust pipe.	Assumed ACBM
T-06	The material is accessible chalk-insulated pipes and fittings. It is a white, chalky, fibrous substance encased in a canvas covering. The material is located in the gym, gym foyer, restroom and classroom in the basement of the building.	Assumed ACBM
T-07	The material is accessible aircell-insulated pipes which consist of layers of corrugated cardboard lined with a gray fibrous substance. The material is located in the basement restroom.	Assumed ACBM
T-08	The material is fitting insulation on straight pipe lines with aircell insulation. The material is located in the basement restroom.	Assumed ACBM
T-09	The material is chalky pipe and pipe fitting insulation. It is white, powdery and fibrous. The material is located in the attic.	Assumed ACBM
T-10	The material is pipe insulation located between walls, under floors or above ceilings. The material is located in any inaccessible areas of the building such as, in walls, ceilings or floors.	Assumed ACBM

BULK SAMPLE SUMMARY

SAMPLE ID #	LOCATION	SAMPLE RESULTS	HOMOGENEOUS AREA ID #
BGB-1	BOILER ROOM: FITTING INSULATION OF FIBERGLASS COVERED PIPES; TAKEN FROM 3" FITTING ALONG BOILER EDGE NEXT TO FLUE	1-5% TOTAL ASBESTOS DETECTED	T-01
BGB-2	BOILER ROOM: FITTING INSULATION ON FIBERGLASS COVERED PIPES; TAKEN FROM 4" FITTING BACK OF BOILER ATTACHED TO VALVE	NOT ANALYZED	T-01
BGB-3	BOILER ROOM: FITTING INSULATION ON FIBERGLASS PIPES; TAKEN FROM DAMAGED FITTING LEFT CORNER IN BACK OF BOILER	NOT ANALYZED	T-01
BGB-4	ATTIC HVAC ROOM: CLOTH EXPANSION JOINT; SAMPLE FROM TOP SEAM OF THE SQUARE JOINT ON THE HVAC UNIT	90-95% TOTAL ASBESTOS DETECTED	M-02
BGB-5	ATTIC HVAC ROOM: WALL PLASTER TAKEN FROM DAMAGED AREA IN SOUTHEAST CORNER, 3 FT. ABOVE FLOOR	NO ASBESTOS DETECTED	S-02
BGB-6	ATTIC HVAC ROOM: CEILING PLASTER AT DAMAGED AREA 5 FT. FROM SOUTH WALL, 5 FT. FROM EAST WALL	NO ASBESTOS DETECTED	S-02
BGB-7	ATTIC HVAC ROOM: WALL PLASTER FROM DAMAGED AREA 1 FT. ABOVE GROUND ON NORTH WALL, 5 FT. FROM EAST WALL	NO ASBESTOS DETECTED	S-02

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE <1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE <1% = LOW

REASONS FOR DAMAGE:

The tile is in good condition, with only slight damage due to normal wear.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: M-04 .....

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: S-01
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Surfacing

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is smooth plaster wall and ceiling surfacing.

FUNCTIONAL SPACE DESCRIPTION:

The material is found on walls and ceilings in classrooms, hallways, bathrooms and storage rooms.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

The material was not sampled so as not to damage the plaster.

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL:

	LINEAR FEET
12,070	SQUARE FEET - OTHER
	SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE 1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE 1% = LOW

REASONS FOR DAMAGE:

Minor damage is due to age and incidental physical contact.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: S-01 .....

The plaster is in good condition.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: S-02
PHOTO ID #: S-02
NUMBER OF SAMPLES: 3 *
AREA STATUS: Non-ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Surfacing

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is a grayish-white, cementitious ceiling and wall plaster with brown hair-like fibers.

FUNCTIONAL SPACE DESCRIPTION:

The plaster is located in the attic HVAC room.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
(X) INSPECTOR'S CHOICE
( ) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

Three samples were taken from damaged areas.

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL:

	LINEAR FEET
516	SQUARE FEET - OTHER
	SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE 1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE 4% = LOW

REASONS FOR DAMAGE:

The material is in moderate to good condition. There are a few gouges in the plaster probably due to maintenance work on the HVAC equipment.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: S-02 .....

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: T-01
PHOTO ID #: T-01
NUMBER OF SAMPLES: 3 *
AREA STATUS: ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Thermal System Insulation

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is hard-pack fitting insulation on straight pipe lines with fiberglass insulation.

FUNCTIONAL SPACE DESCRIPTION:

The fittings are located in the boiler room.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
(X) INSPECTOR'S CHOICE
( ) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

Three samples were collected from the material, one from a damaged area and two core samples from other fittings.

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL: 26
LINEAR FEET
SQUARE FEET - OTHER
SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE 1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE 1% = LOW

REASONS FOR DAMAGE:

The has slightly deteriorated due to age, moisture and physical contact.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: T-01 .....

The fittings are in good condition.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: T-02
PHOTO ID #: T-02
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Thermal System Insulation

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is magnesium chalk pipe and fitting insulation. It is a white, chalky, powdery and fibrous substance.

FUNCTIONAL SPACE DESCRIPTION:

The chalk insulation is located in the boiler room, oil tank storage room, crawl space and electrical room.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL: 575 LINEAR FEET
SQUARE FEET - OTHER
SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE 1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH 9% = MODERATE = LOW

REASONS FOR DAMAGE:

The insulation has deteriorated due to age, and has sustained water (moisture) and incidental physical damage.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: T-02 .....

The pipes are in good condition in the crawl space and electrical room. The boiler room has some areas of small localized damage, while the pipe insulation over the oil tank is in poor condition.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: T-03
PHOTO ID #: T-03
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Thermal System Insulation

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is aircell pipe insulation consisting of layers of corrugated cardboard lined with a grayish-white, fibrous substance.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in the boiler room.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL: 145 LINEAR FEET
SQUARE FEET - OTHER
SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE 1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE 3% = LOW

REASONS FOR DAMAGE:

The insulation material has deteriorated due to age and thermal use. It has also sustained slight water and physical damage.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: T-03 .....

The overall condition of the aircell pipe insulation is good.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: T-04
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Thermal System Insulation

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is fitting insulation on straight pipe lines with aircell insulation. The material is white, chalky and fibrous.

FUNCTIONAL SPACE DESCRIPTION:

The insulation material is located in the boiler room.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL: 28 LINEAR FEET
SQUARE FEET - OTHER
SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE <1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE <1% = LOW

REASONS FOR DAMAGE:

The material has slightly deteriorated due to age, and has sustained some physical damage.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: T-04 .....

The material is in good condition except for one localized area.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: T-05
PHOTO ID #: T-05
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Thermal System Insulation

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is the boiler flue insulation. It is a hard-packed, white, chalky, fibrous material.

FUNCTIONAL SPACE DESCRIPTION:

The insulation is found in the boiler room on the boiler exhaust pipe.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL:

	LINEAR FEET
47	SQUARE FEET - OTHER
	SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE <1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH 5% = MODERATE = LOW

REASONS FOR DAMAGE:

The insulation casing is cracked due to age and excessive heat. A 9" x 9" square has been cut out of the material to accommodate a gauge, leaving exposed ends. A 2-inch diameter hole has been bored into the material opposite the gauge.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: T-05 .....

The flue is moderately damaged.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: T-06
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Thermal System Insulation

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is accessible chalk-insulated pipes and fittings. It is a white, chalky, fibrous substance encased in a canvas covering.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in the gym, gym foyer, restroom and a classroom in the basement of the building.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL: 104 LINEAR FEET
SQUARE FEET - OTHER
SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE <1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE <1% = LOW

REASONS FOR DAMAGE:

Minor damage is due to age and incidental contact.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: T-06 .....

The material is in good condition.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: T-07
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Thermal System Insulation

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is accessible aircell-insulated pipes consisting of layers of corrugated cardboard lined with a gray fibrous substance.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in the restroom in the basement of the building.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL: 25 LINEAR FEET
SQUARE FEET - OTHER
SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE <1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE <1% = LOW

REASONS FOR DAMAGE:

There is slight deterioration due to age and incidental damage.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: T-07 .....

The aircell pipe insulation in the restroom is in good condition.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: T-08
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Thermal System Insulation

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is fitting insulation on straight pipe lines with aircell insulation.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in a restroom adjacent to the basement classroom.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL: 4
LINEAR FEET
SQUARE FEET - OTHER
SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE <1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE <1% = LOW

REASONS FOR DAMAGE:

Slight deterioration has occurred due to age and incidental damage.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: T-08 .....

The fitting insulation is in good condition.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: T-09
PHOTO ID #: T-09
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Thermal System Insulation

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is chalky pipe and fitting insulation. It is white, powdery and fibrous.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in the attic.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL: 191 LINEAR FEET
SQUARE FEET - OTHER
SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE <1% = LOW

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

10% = HIGH = MODERATE = LOW

REASONS FOR DAMAGE:

Insulation has been dislodged due to physical vibration in the HVAC room, HVAC maintenance and opening an attic window.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: T-09 .....

There is significant damage in localized areas. The remaining material is in good condition.

HOMOGENEOUS AREA DATA SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: T-10
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

*IF ZERO (0) SAMPLES WERE COLLECTED, THE MATERIAL IS ASSUMED TO BE ASBESTOS

.....AREA DESCRIPTION.....

TYPE OF MATERIAL: Thermal System Insulation

(X) FRIABLE MATERIAL
( ) A MATERIAL OF LOW FRIABILITY (NON-FRIABLE)

HOMOGENEOUS AREA DESCRIPTION:

The material is inaccessible pipe insulation located between walls, under floors or above ceilings.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in any inaccessible areas of the building such as, in walls, ceilings or floors.

.....SAMPLING METHOD AND RATIONALE.....

METHOD USED TO COLLECT SAMPLES:
( ) RANDOM GRID
( ) INSPECTOR'S CHOICE
(X) ASSUMED TO BE ASBESTOS

RATIONALE FOR SAMPLING STRATEGY:

.....QUANTITY ESTIMATES.....

AREA ESTIMATE OF SUSPECT MATERIAL: undet.
LINEAR FEET
SQUARE FEET - OTHER
SQUARE FEET - TILE

.....DAMAGE FACTORS.....

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (WATER):

= HIGH = MODERATE = LOW Undetermined

PERCENTAGE OF OVERALL DAMAGE TO THE MATERIAL (PHYSICAL):

= HIGH = MODERATE = LOW Undetermined

REASONS FOR DAMAGE:

Physical condition is unknown.

.....GENERAL COMMENTS--HOMOGENEOUS AREA ID #: T-10 .....

If pipe insulation is uncovered during any demolition or renovation activity it should be treated as containing asbestos and/or tested.

VI. SUMMARY OF PRIOR SURVEY REPORTS/ASBESTOS ABATEMENT

No information from any previous survey for asbestos-containing materials has been adopted as part of this Management Plan.

VII. HAZARD ASSESSMENT

Introduction:

One of the primary goals of AHERA was to establish criteria by which the current and potential hazards of asbestos-containing building materials could be assessed. In general, these criteria have to do with the accessibility of the material, who can access it, its current condition including the extent of any existing damage, and its potential for damage in the future.

Using the criteria outlined in AHERA, the accredited Inspector/ Management Planner evaluates the condition of the material and its hazard potential. It is this assessment that forms the basis of the Management Plan.

It is important to note, however, that all material assessments are based on the condition of the material at the time of the inspection. Any deterioration in material condition brought about by physical disturbance, water damage, air erosion, etc., will increase the material's potential for fiber release. Response actions necessitated by such deterioration are described in the Operations and Maintenance Program. Material condition and potential for fiber release will, in keeping with AHERA, be reassessed at least once every six months by the Asbestos Coordinator or his/her designated representative, and every three years by an accredited Inspector.

For an explanation of recommended response actions, please refer to the Operations and Maintenance Program, the EPA Decision Tree in Appendix IV and to the Hazard Assessment Summary Sheets which follow.

HAZARD ASSESSMENT SUMMARY SHEETS

The Management Planner completes a Hazard Assessment Summary Sheet for each homogeneous area found or assumed to contain asbestos. The amount of damage to the material, its accessibility and its potential for damage are assessed on this sheet and the Management Planner's response action recommendations are provided. If localized sub-areas of the homogeneous area are damaged, the Management Planner may choose to describe them separately on the Hazard Assessment Summary Sheet.

Homogeneous Area Description

A Homogeneous Area is an area of a specific application which is uniform in color and texture. A Homogeneous Area can extend throughout the school and can include materials in non-contiguous rooms.

Functional Space Description

A Functional Space is any area of the school dedicated to a single purpose as defined by the Inspector/Management Planner. The activities which occur in a given functional space are an important component in the Management Planner's assessment of potential material hazards.

Assessment Criteria

One of the major tasks of the Inspector/Management Planner in the field is to determine not only the current condition of a given material but also to identify those factors which might influence the material's condition, and therefore potential for fiber release, in the future. Among the factors which might result in fiber release are air erosion, maintenance and student activities. Also noted by the Inspector/Management Planner are conditions which might affect potential exposure if fiber release were to occur. These factors include the existence of barriers (such as a drop ceiling which would "contain", to a limited extent, fiber release from a textured ceiling above it, or a door to a crawl space) and access features which either reduce the likelihood of damage (e.g. height) or would limit the number of people exposed (e.g. an attic area accessed rarely, and only by maintenance personnel).

The assessment criteria on the Hazard Assessment Summary Sheets will also be used during semi-annual reinspection of each homogeneous area.Damage Factors

Damage Factors

Material can be damaged in one of two general ways: by water (i.e. roof, ceiling or piping leaks) or by physical damage (i.e. repair, vandalism, deterioration due to age). In this section the Inspector/Management Planner assigns percentage values to each of these types of damage in the homogeneous area and notes the potential sources of this damage.

Recommended Response Actions

Immediate Removal: When a material poses an immediate threat to the health and safety of building occupants the Management Planner recommends Immediate Removal. Materials requiring immediate removal are generally highly damaged and routinely accessible to building occupants.

Removal When Practical: When a material is badly damaged, has the potential for damage or is highly accessible, particularly to students, the Management Planner recommends Removal When Practical. Materials recommended for Removal When Practical generally require careful maintenance under the Operations and Maintenance Program until such time as scheduling and budgeting considerations allow for their removal.

Patch and Repair: Materials which are damaged can often be repaired rather than removed. Patch and Repair activities can be undertaken, if less than three square feet of damage is involved, by properly trained in-house maintenance personnel. In some cases, temporary patch and repair of damaged materials is necessary pending removal to reduce their potential for fiber release.

Enclosure: Enclosure, isolation of a material behind a hard, airtight, impermeable barrier, is recommended by the Management Planner only in very rare circumstances in which either the material cannot be removed or it is in a rarely accessed area where there is relative certainty that no renovations are likely to take place for the life of the building. Enclosure is not substantially less expensive than removal and is therefore recommended infrequently.

Encapsulation: Encapsulation, coating the material with a bonding or sealing agent, is generally recommended by the Management Planner as an interim response pending removal of the material.

Operations and Maintenance Program (O&M): Maintenance of ACBM under the Operations and Maintenance Program is recommended for all ACBM at every school. The O&M Program, which provides guidelines for the day to day management and handling of ACBM at the school, must be implemented and employed whenever asbestos is present. Materials which are scheduled for abatement must be maintained under the O&M Program until such time as they are removed. Likewise, ACBM which is to remain in the building must be maintained under the O&M for the duration.

Localized Damage Areas:

In cases where there is localized damage within a homogeneous area, the Inspector/Management Planner may choose to define this specific area as a Localized Damage Area. Each such area is described in detail by the Inspector/Management Planner who also provides a separate response action and cost estimate for the specified response action.

HAZARD ASSESSMENT SHEET

PROJECT #: 881328-002
George Baldwin School
INSPECTOR'S STATE ID #: I00382

HOMOGENEOUS AREA ID #: M-01
PHOTO ID #: M-01
NUMBER OF SAMPLES: 0 *
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTION.....

HOMOGENEOUS AREA DESCRIPTION:

The material is 12" x 12" white acoustical ceiling tile cemented to the ceiling.

FUNCTIONAL SPACE DESCRIPTION:

The ceiling tile is located in the gym.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTANCE OF BARRIES : No

ABNORMAL ACCESS FEATURES : Yes

The height of the ceiling makes it inaccessible.

AIR EROSION = Low
MAINTENANCE ACTIVITES =Low
STUDENT/STAFF ACTIVITIES = High
VANDALISM = Low
OTHER =
POTENTIAL FOR FIBER RELEASE = Low

COMMENTS:

Student sports activites have disturbed the ceiling tile. Dislodged or damaged tile may cause a fiber release.

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	1%	= LOW
PHYSICAL : 18%	= HIGH	= MODERATE		= LOW

DAMAGE FACTORS:

Many tiles are punctured and dislodged due to age and sports activities.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
( ) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
(X) OTHER

RESPONSE ACTION RATIONALE:

Replace any damaged tile with non-asbestos containing tile. Care should be taken not to damage the material with sports equipment and activities. Maintain the ceiling under the O & M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: M-01 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)
x $25.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER 637 x $30.00 = $19,110

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE x $5.00 = $0

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: M-02
PHOTO ID #: M-02
NUMBER OF SAMPLES: 1
AREA STATUS: ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is white, cloth expansion joints.

FUNCTIONAL SPACE DESCRIPTION:

The material is found on the HVAC system in the attic.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : Yes

The attic is accessed by a ladder through the ceiling of the utility closet.

AIR EROSION = High
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = None
VANDALISM = None
OTHER =
POTENTIAL FOR FIBER RELEASE = Low

COMMENTS:

The material is an expansion joint on an air vent, hence is subject to high air movement.

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	<1%	= LOW
PHYSICAL :	= HIGH	= MODERATE	<1%	= LOW

DAMAGE FACTORS:

The material is in fair condition, however, the seams are beginning to fray.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
(X) REMOVE WHEN PRACTICAL
( ) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

Due to the asbestos content, material should be removed when practical. It should be maintained under the O&M Program until removal takes place.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: M-02 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)
x $25.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER 20 x $30.00 = $600

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE x $5.00 = $0

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: M-03
PHOTO ID #: M-03
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is linoleum floor sheeting in tan, red brick and rainbow plaid patterns.

FUNCTIONAL SPACE DESCRIPTION:

The linoleum covers portions of the floor in classrooms one and two, and the toddler room behind the kitchen.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : No

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = Moderate
VANDALISM = Low
OTHER =
POTENTIAL FOR FIBER RELEASE = Low

COMMENTS:

Student and staff activities will cause fiber release if the material is cut or the surface is abraded to expose the backing of the linoleum.

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	<1% = LOW
PHYSICAL :	= HIGH	= MODERATE	<1% = LOW

DAMAGE FACTORS:

The linoleum is in good condition. The edges are protected and adhered to the carpet beneath by duct tape.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
( ) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

The material can be maintained on an O&M Program. The edge of the tan linoleum in classroom 2 is curling up. This edge should be secured against the wall to prevent incidental damage.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: M-03 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)
x $25.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER x $30.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE 280 x $5.00 = $1,400

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: M-04
PHOTO ID #: M-04
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is 9" x 9" gray, vinyl floor tile.

FUNCTIONAL SPACE DESCRIPTION:

The tile is located in the kitchen and under the carpet in the infant and toddler day care rooms.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : Yes

The floor tile is covered by carpet in the infant and toddler day care rooms.

ABNORMAL ACCESS FEATURES : No

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = Moderate
VANDALISM = Low
OTHER =
POTENTIAL FOR FIBER RELEASE = Low

COMMENTS:

Fiber release may occur if the tile is damaged or sanded.

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	<1% = LOW
PHYSICAL :	= HIGH	= MODERATE	<1% = LOW

DAMAGE FACTORS:

The tile is in good condition, with only slight physical damage due to wear.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
( ) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

The tile can be maintained on the O&M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: M-04 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)
x $25.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER x $30.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE 1,460 x $5.00 = $7,300

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: S-01
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is smooth plaster wall and ceiling surfacing.

FUNCTIONAL SPACE DESCRIPTION:

The material is located on walls and ceilings in classrooms, hallways, bathrooms and storage rooms.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : No

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = Moderate
VANDALISM = Low
OTHER =
POTENTIAL FOR FIBER RELEASE = Low

COMMENTS:

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	1%	= LOW
PHYSICAL :	= HIGH	= MODERATE	1%	= LOW

DAMAGE FACTORS:

Minor damage is due to age and incidental physical contact.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
( ) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

The material has a low fiber release potential. Patch damaged areas as they occur. Maintain on the O&M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: S-01 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)
x $25.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER 12,070 x $30.00 = $362,100

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE x $5.00 = $0

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: T-01
PHOTO ID #: T-01
NUMBER OF SAMPLES: 3
AREA STATUS: ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is hard-pack fitting insulation on straight pipe lines with fiberglass insulation.

FUNCTIONAL SPACE DESCRIPTION:

The fittings are located in the boiler room.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : No

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = None
VANDALISM = None
OTHER =
POTENTIAL FOR FIBER RELEASE = Low

COMMENTS:

Fibers will be released if the insulation casing is damaged.

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	1%	= LOW
PHYSICAL :	= HIGH	= MODERATE	1%	= LOW

DAMAGE FACTORS:

The fittings are in good condition with some deterioration due to age,moisture and incidental physical contact.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
( ) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

Undamaged material has a low fiber release potential, but it must be maintained on the O&M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: T-01 .....

(LINEAR FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)		
26	x	$25.00	=	$650		
(SQUARE FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)		
OTHER	x	$30.00	=	$0		
(SQUARE FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)		
TILE	x	$5.00	=	$0		

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: T-02
PHOTO ID #: T-02
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is magnesium chalk pipe and fitting insulation. It is a white, chalky, powdery and fibrous substance.

FUNCTIONAL SPACE DESCRIPTION:

The chalk insulation is located in the boiler room, oil tank storage room, crawl space and electrical room.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : Yes

The material in the crawl space requires access through an opening in the wall.

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Moderate
STUDENT/STAFF ACTIVITIES = None
VANDALISM = None
OTHER =
POTENTIAL FOR FIBER RELEASE = Moderate

COMMENTS:

.....DAMAGE FACTORS.....

WATER :	= HIGH		= MODERATE	1%	= LOW
PHYSICAL :	= HIGH	9%	= MODERATE		= LOW

DAMAGE FACTORS:

The insulation has deteriorated due to age, and has sustained water (moisture) and incidental damage.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
(X) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
(X) OTHER

RESPONSE ACTION RATIONALE:

The overall condition of the pipe insulation is moderate to good. There are areas of localized damage,which are discussed below, that will have to either be removed when practical or repaired. The remainder of the insulation should be maintained under the O&M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: T-02 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)
575 x $25.00 = $14,375

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER x $30.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE x $5.00 = $0

.....LOCALIZED DAMAGE DESCRIPTION AND RECOMMENDED RESPONSE ACTIONS .....

Localized Area: T-02 (L.A.-1)

Six feet of 2" diameter pipe above the oil tank should be removed when practical. The pipe extends the width of the oil tank, four feet from the east wall. Asbestos-containing insulation debris has fallen to the sand covering the oil tank; this sand must be decontaminated or removed also as asbestos.

Localized Area: T-02 (L.A.-2)

Fifteen feet of 2" diameter chalk-insulated pipe above oil tank needs to be repaired. It runs the length of the oil tank. Sections of insulation alternate with sections of exposed metal pipe. The exposed ends need to be rewrapped. The missing insulation sections are not found below the pipes, but this sand below the pipes must be decontaminated. After repair is completed, the material can be maintained on an O&M program.

Localized Area: T-02 (L.A.-3)

Six feet of 4" diameter chalk-insulated pipe needs to be repaired. This is located above the corner of the oil tank, next to the east wall. Three feet of metal pipe is exposed. This insulation must be rewrapped, and the sand underneath the pipes must be decontaminated.

Localized Area: T-02 (L.A.-4)

Four fittings in the oil tank storage room need to be patched and repaired. They are located on the 2" diameter pipe above the entrance extending to the north wall. The casing has been ripped and insulation fibers hang from the fitting. The exposed insulation material must be rewrapped. Straight pipe insulation in this area that has punctured or deteriorated casing, should also be rewrapped.

Localized Area: T-02 (L.A.-5)

Ten feet of 2" chalk-insulated pipe in the boiler room have been disturbed by physical contact. The location is the southeast corner next to the boiler where shovels, strollers, sleds and tables are leaning against the pipes. This practice should stop immediately; no equipment should be stored against the insulation. The casing has abraded in a few spots in this area. These sections should be rewrapped to prevent fiber release.

Localized Area: T-02 (L.A.-6)

There is one damaged fitting ten feet above the floor between the exit door and left window. The insulation has been sliced to accommodate a neighboring pipe. Patch and repair to prevent fiber release.

Localized Area: T-02 (L.A.-7)

The elbow and valve fitting above the boiler is damaged. The area is one foot in diameter and has a cracked and delaminated covering. The elbow has exposed ends because the insulation does not cover 10-inches of the circumference. The valve has a 12-inch square torn section where the covering is ripped and insulation is dislodged. This area of the elbow and valve should be rewrapped.

.....COST ESTIMATES FOR LOCALIZED DAMAGE.....

L.A. - 1	: $	150.00
L.A. - 2	: $	375.00
L.A. - 3	: $	150.00
L.A. - 4	: $	100.00
L.A. - 5	: $	250.00
L.A. - 6	: $	25.00
L.A. - 7	: $	25.00

TOTAL LOCALIZED AREA COST ESTIMATE = $1,075.00

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: T-03
PHOTO ID #: T-03
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is aircell pipe insulation which consists of layers of corrugated cardboard lined with a grayish-white, fibrous substance.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in the boiler room.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : Yes

This area has access to maintenance personnel only.

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = None
VANDALISM = None
OTHER =
POTENTIAL FOR FIBER RELEASE = Moderate

COMMENTS:

The access door to the crawlspace below the stairwell has damaged the material and creates a high fiber release potential.

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	1%	= LOW
PHYSICAL :	= HIGH	= MODERATE	3%	= LOW

DAMAGE FACTORS:

The insulation material has deteriorated due to age and thermal use. It has also sustained slight water and physical damage.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
(X) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

The areas of localized damage should be repaired and the remainder maintained under the provisions of the O&M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: T-03 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)
145 x $25.00 = $3,625

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER x $30.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE x $5.00 = $0

.....LOCALIZED DAMAGE DESCRIPTION AND RECOMMENDED RESPONSE ACTIONS .....

Localized Area: T-03 (L.A.-1)

There are six inches of damage to aircell insulation next to the access panel, which opens to the crawl space beneath the stairwell. Opening the door abrades the insulation covering so that the aircell layers are exposed. Opening the door creates a fiber disturbance. This area should be patched and repaired immediately and metal wrapped to prevent further damage.

Localized Area: T-03 (L.A.-2)

There is one linear foot of damage to aircell insulation above the custodian's file cabinets. The aircell layers have been torn away to reveal the metal pipe beneath. The damaged area is twelve feet above the ground. Disturbance is unlikely, so the area should be repaired when practical.

.....COST ESTIMATES FOR LOCALIZED DAMAGE.....

L.A. - 1 :	$ 25.00
L.A. - 2 :	$ 25.00
TOTAL LOCALIZED AREA COST ESTIMATE =	$ 50.00

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: T-04
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is fitting insulation connecting aircell insulated pipes. The material is white, chalky and fibrous.

FUNCTIONAL SPACE DESCRIPTION:

The insulation material is located in the boiler room.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : Yes

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = None
VANDALISM = None
OTHER =
POTENTIAL FOR FIBER RELEASE = Moderate

COMMENTS:

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	<1% = LOW
PHYSICAL :	= HIGH	= MODERATE	<1% = LOW

DAMAGE FACTORS:

The material has deteriorated due to age, and has sustained some physical damage.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
(X) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

Areas of localized damage should be patched and repaired; the remainder should be maintained under the O&M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: T-04 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)
28 x $25.00 = $700

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER x $30.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE x $5.00 = $0

.....LOCALIZED DAMAGE DESCRIPTION AND RECOMMENDED RESPONSE ACTIONS .....

Localized Area: T-04 (L.A.-1)

There is one damaged fitting ten feet above the sink in the boiler room. The material will be disturbed if the adjacent window is opened. This insulation should be repaired immediately.

.....COST ESTIMATES FOR LOCALIZED DAMAGE.....

L.A. - 1 : $ 25.00

TOTAL LOCALIZED AREA COST ESTIMATE = $ 25.00

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: T-05
PHOTO ID #: T-05
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is the boiler flue insulation. It is a hard-packed, white, chalky, fibrous material.

FUNCTIONAL SPACE DESCRIPTION:

The insulation is located in the boiler room on the boiler exhaust pipe.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : Yes

The boiler room area has access to maintenance personnel only.

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = None
VANDALISM = None
OTHER =
POTENTIAL FOR FIBER RELEASE = Moderate

COMMENTS:

Exposed insulation material creates a fiber release hazard.

.....DAMAGE FACTORS.....

WATER :	= HIGH		= MODERATE	<1%	= LOW
PHYSICAL :	= HIGH	5%	= MODERATE		= LOW

DAMAGE FACTORS:

The insulation casing is cracked due to age and excessive heat. A 9" x 9" square has been cut out of the material to accommodate a gauge, leaving exposed ends. A 2-inch diameter hole has been bored into the material opposite the gauge.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
(X) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

Damaged sections of the boiler flue need to be repaired. After repair, the flue material can be maintained on an O&M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: T-05 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)
x $25.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER 47 x $30.00 = $1,410

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE x $5.00 = $0

.....LOCALIZED DAMAGE DESCRIPTION AND RECOMMENDED RESPONSE ACTIONS .....

Localized Area: T-05 (L.A.-1)

The damaged insulation material is located in the boiler room, behind the boiler. The insulation on the flue is cracking and losing its structural integrity, and should be repaired before further damage occurs. The flue is about 10 feet long and should be entirely rewrapped.

.....COST ESTIMATES FOR LOCALIZED DAMAGE.....

L.A. - 1 : $ 250.00

TOTAL LOCALIZED AREA COST ESTIMATE = $ 250.00

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: T-06
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is accessible chalk-insulated pipes and fittings. It is a white, chalky, fibrous substance encased in a canvas covering.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in the gym, gym foyer, restroom and a classroom in the basement of the building.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : No

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = Moderate
VANDALISM = Low
OTHER =
POTENTIAL FOR FIBER RELEASE = Low

COMMENTS:

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	<1%	= LOW
PHYSICAL :	= HIGH	= MODERATE	<1%	= LOW

DAMAGE FACTORS:

Minor damage is due to age, moisture and incidental contact.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
( ) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

The material should be maintained under the provisions of the O&M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: T-06 .....

(LINEAR FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)
104	x	$25.00	=	$2,600

(SQUARE FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)
OTHER	x	$30.00	=	$0

(SQUARE FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)
TILE	x	$5.00	=	$0

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: T-07
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is accessible aircell-insulated pipes consisting of layers of corrugated cardboard lined with a gray fibrous substance.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in the restroom in the basement of the building.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : No

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = Moderate
VANDALISM = Low
OTHER =
POTENTIAL FOR FIBER RELEASE = Low

COMMENTS:

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	<1% = LOW
PHYSICAL :	= HIGH	= MODERATE	<1% = LOW

DAMAGE FACTORS:

Deterioration is due to age and incidental damage.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
( ) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

The material should be maintained under the provisions of the O&M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: T-07 .....

(LINEAR FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)
25	x	$25.00	=	$625

(SQUARE FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)
OTHER	x	$30.00	=	$0

(SQUARE FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)
TILE	x	$5.00	=	$0

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: T-08
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is fitting insulation on straight pipe lines with aircell insulation.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in a restroom adjacent to the basement classroom.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : No

AIR EROSION = Low
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = Moderate
VANDALISM = Low
OTHER =
POTENTIAL FOR FIBER RELEASE = Low

COMMENTS:

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	<1% = LOW
PHYSICAL :	= HIGH	= MODERATE	<1% = LOW

DAMAGE FACTORS:

Slight deterioration has occurred due to age and incidental damage.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
( ) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

The material should be maintained under the provisions of the building O&M Program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: T-08 .....

(LINEAR FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)		
4	x	$25.00	=	$100		
(SQUARE FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)		
OTHER	x	$30.00	=	$0		
(SQUARE FOOTAGE)	x	(REMOVAL PRICE PER FOOT)	=	(1988/89 COST ESTIMATE)		
TILE	x	$5.00	=	$0		

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: T-09
PHOTO ID #: T-09
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is chalky pipe and fitting insulation. It is white, powdery and fibrous.

FUNCTIONAL SPACE DESCRIPTION:

The material is found in the attic.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : No

ABNORMAL ACCESS FEATURES : Yes

The attic is accessed by a ladder through the ceiling of the utility closet.

AIR EROSION = Moderate
MAINTENANCE ACTIVITIES = Low
STUDENT/STAFF ACTIVITIES = None
VANDALISM = None
OTHER =
POTENTIAL FOR FIBER RELEASE = High

COMMENTS:

Damaged insulation and debris on the floor create a high fiber release hazard.

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	<1%	= LOW
PHYSICAL :	10% = HIGH	= MODERATE		= LOW

DAMAGE FACTORS:

Insulation has been dislodged due to physical vibration in the HVAC room, HVAC maintenance and opening an attic window.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
(X) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
(X) OTHER

RESPONSE ACTION RATIONALE:

Remove insulation in the localized damage areas. Maintain the remaining material under the O&M program.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: T-09 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)
191 x $25.00 = $4,775

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER x $30.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE x $5.00 = $0

.....LOCALIZED DAMAGE DESCRIPTION AND RECOMMENDED RESPONSE ACTIONS .....

Localized Area: T-09 (L.A.-1)

Two feet of chalk-insulated pipe are severely damaged in the attic. The area is located three feet behind the entrance ladder. The damage is caused by opening and closing an attic vent. Two feet of solid and powdered debris lies on the floor below the vent. The remaining insulation on the pipes should be removed, the ends rewrapped and the assumed asbestos-containing debris on the floor removed. This is a low activity area so removal can be done when practical. After removal, the area should be decontaminated.

Localized Area: T-09 (L.A.-2)

There is 10 feet of severe damage in the attic HVAC room. The fittings on the HVAC unit have either lost their insulation, or are currently losing it. Insulation debris lies below the fittings. Solid sections of chalky debris lie on top of the HVAC vent. All damaged insulation should be removed, all debris should be removed, and exposed ends and undamaged insulation should be rewrapped for reinforcement. Removal can be done when practical because it is a low activity area. The area must be decontaminated after removal.

.....COST ESTIMATES FOR LOCALIZED DAMAGE.....

L.A. - 1 :	$ 50.00
L.A. - 2 :	$ 250.00

TOTAL LOCALIZED AREA COST ESTIMATE = $ 300.00

HAZARD ASSESSMENT SUMMARY SHEET

PROJECT #: 881328-002
George Baldwin School
MANAGEMENT PLANNER ID #: MP00503

HOMOGENEOUS AREA ID #: T-10
PHOTO ID #: N/A
NUMBER OF SAMPLES: 0
AREA STATUS: Assumed ACBM

.....AREA DESCRIPTIONS.....

HOMOGENEOUS AREA DESCRIPTION:

The material is inaccessible pipe insulation located between walls, under floors or above ceilings.

FUNCTIONAL SPACE DESCRIPTION:

The material is located in any inaccessible areas of the building such as, in walls, ceilings or floors.

.....ASSESSMENT CRITERIA--CURRENT CONDITIONS.....

EXISTENCE OF BARRIERS : Yes

The material is in walls, ceilings or floors.

ABNORMAL ACCESS FEATURES : Yes

The material has no direct access except by demolition.

AIR EROSION = Low
MAINTENANCE ACTIVITIES = None
STUDENT/STAFF ACTIVITIES = None
VANDALISM = None
OTHER =
POTENTIAL FOR FIBER RELEASE = Low

COMMENTS:

.....DAMAGE FACTORS.....

WATER :	= HIGH	= MODERATE	= LOW	Undetermined
PHYSICAL :	= HIGH	= MODERATE	= LOW	Undetermined

DAMAGE FACTORS:

Physical condition is unknown.

.....RECOMMENDED RESPONSE ACTION (OVERALL).....

( ) IMMEDIATE REMOVAL
( ) REMOVE WHEN PRACTICAL
( ) PATCH & REPAIR
( ) ENCLOSURE
( ) ENCAPSULATION
(X) OPERATIONS & MAINTENANCE PROGRAM
( ) OTHER

RESPONSE ACTION RATIONALE:

The condition of the material is unknown, so it should be maintained under the provisions of the O&M program for inaccessible material.

.....ABATEMENT COST ESTIMATE--HOMOGENEOUS AREA ID #: T-10 .....

(LINEAR FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

x $25.00 = Undetermined

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

OTHER x $30.00 = $0

(SQUARE FOOTAGE) x (REMOVAL PRICE PER FOOT) = (1988/89 COST ESTIMATE)

TILE x $5.00 = $0

VIII. HAZARD PRIORITY SUMMARY

The majority of the ACBM at the Baldwin School can be managed under the provisions of the Operations and Maintenance Program. Materials in some areas, however, will require patch and repair and, in some cases, removal when practical.

The Hazard Priority Summary list ranks the homogeneous areas which contain asbestos according to their potential for fiber release. Based on material condition as observed during the Inspector's survey, no area at the Baldwin School requires immediate or emergency abatement.

Factors which may influence decisions as to when areas are to be repaired or abated, apart from an area's potential for fiber release, might include scheduled renovations, appropriate funding, or the availability of unoccupied areas (such as during vacation periods).

The Hazard Priority Summary:	Response Actions
Homogeneous Area T-02	Patch and repair, O&M.
Localized Area L.A.-01	Remove when practical
Localized Area L.A.-02	Patch and repair
Localized Area L.A.-03	Patch and repair
Localized Area L.A.-04	Patch and repair
Localized Area L.A.-05	Patch and repair
Localized Area L.A.-06	Patch and repair
Localized Area L.A.-07	Patch and repair
Homogeneous Area T-03	Patch and repair, O&M.
Localized Area L.A.-01	Patch and repair.
Localized Area L.A.-02	Patch and repair
Homogeneous Area T-09	Patch and repair, O&M.
Localized Area L.A.-01	Remove when practical, Patch and repair
Localized Area L.A.-02	Remove when practical Patch and repair
Homogeneous Area M-02	Remove when practical
Homogeneous Area T-04	Patch and repair, O&M.
Localized Area L.A.-01	Patch and repair
Homogeneous Area T-05	Patch and repair, O&M.
Localized Area L.A.-01	Patch and repair
Homogeneous Area T-01	O&M.
Homogeneous Area T-06	O&M.

Homogeneous Area	T-07	O&M.
Homogeneous Area	T-08	O&M.
Homogeneous Area	M-01	O&M.
Homogeneous Area	T-10	O&M.
Homogeneous Area	M-03	O&M.
Homogeneous Area	M-04	O&M.
Homogeneous Area	S-01	O&M.

IX. ASBESTOS MANAGEMENT SCHEDULE

A. Tentative Implementation Schedule

1. Implement Operations and Maintenance Program

   a. train all maintenance employees as required
   b. perform AHERA-mandated initial cleaning in all affected areas of friable ACBM, damaged or significantly damaged thermal system insulation ACM, or friable suspected ACBM assumed to be ACM
   c. begin patch and repair operations
   d. determine approximate schedule for required removal

2. Prepare schedule for semi-annual ACBM surveillance including re-inspection by an accredited Inspector every three years.

3. Begin contractor selection procedures if removal operations are required in accordance with the procedures outlined in the Management Plan.

B. Cost Estimate Summary

The cost of removing all accessible ACBM at the Baldwin School is as follows:

$	362,100	S-01	$	700	T-04
$	19,110	M-01	$	1,410	T-05
$	600	M-02	$	2,600	T-06
$	1,400	M-03	$	625	T-07
$	7,300	M-04	$	100	T-08
$	650	T-01	$	4,775	T-09
$	14,375	T-02	$	Undetermined	T-10
$	3,625	T-03			
	Total Removal Cost		$	419,370	

The Inspector does not recommend immediate removal of any of these materials at this time.

C. Operations and Maintenance Program Cost

Following implementation of the Operations and Maintenance Program and associated training, the annual cost of the Operations and Maintenance Program can vary widely depending on the amount of asbestos present, and on the extent of damage.

When O&M training takes place (16 hours) a package of equipment necessary to work within the design of the program must be purchased. The Inspector recommends the purchase of at least one AHERA cleaning kit of the kind advertised by a number of asbestos abatement supply companies. The type and quantity of equipment which should be included with each kit depends on each school's or district's needs.

The estimated cost of the purchase of such kits ranges from $1,800 - $3,000. Once a kit is purchased, the only costs associated with program upkeep will be the time of the school personnel who perform the work and periodic resupply. The specific materials required for proper implementation of the O&M Program are delineated in Section X of the O&M document.

Projected Per Annum Costs

Updated Training (4 men)	$ 2,500.00
Supplies	$ 500.00
Personnel Time	$ Various
Disposal (400 sq. ft/yr.)	$ 100-500.00

D. Provisions for Updating Building Diagrams

The Massachusetts Department of Occupational Hygiene recommends that open shell diagrams marked with ACBM locations be updated upon completion of all response actions.

X. CONTRACTOR SELECTION

Contractor selection will take place in accordance with all state regulations regarding public bidding. In addition, the contractor selected must be licensed in the State of Massachusetts to perform asbestos abatement. Such licensure is predicated on the contractor having met a number of requirements including employee training, experience in asbestos abatement and an acceptable safety record.

XI. THE OPERATIONS AND MAINTENANCE PROGRAM

ASBESTOS-CONTAINING BUILDING MATERIALS SPECIAL OPERATIONS AND MAINTENANCE (O&M) PROGRAM FOR THE BALDWIN SCHOOL BROOKLINE, MASSACHUSETTS

DATE:

FEBRUARY 7, 1989

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I - BALDWIN SCHOOL POLICY

This asbestos-containing building materials (ACBM) Operations & Maintenance (O&M) Program sets forth the policy of the Baldwin School regarding activities which may have an impact on the ACBM present at the Baldwin School. The O&M Program is designed to protect the health and safety of all persons who may come into contact with ACBM at the Baldwin School and to comply with the Asbestos Hazard Emergency Response Act (AHERA), 40 CFR Part 763.

The O&M Program details procedures designed to ensure that ACBM, whenever possible, is not disturbed. Handling and decontamination procedures associated with routine maintenance, small-scale removal, and monitoring requirements of ACBM are also included. This program, along with mandatory training of appropriate personnel, shall provide all the information necessary to implement a proper asbestos management program at the Baldwin School.

It is the express policy of Brookline Public Schools that no employee or outside contractor shall remove any ACBM except as part of small scale, short duration maintenance or repair operations. These routine operations are more fully described in Section XI.

No activities which are not small scale, short duration maintenance or repair projects shall be undertaken by maintenance employees of the Brookline Public Schools. Small scale, short duration projects are defined as those in which less than three square or three linear feet of ACBM are to be disturbed. Any large scale project must be designed by an EPA accredited project designer and carried out by persons accredited by EPA to undertake response actions.

The specific recommendations included in this Operations and Maintenance (O&M) Program are drawn, in part, from the National Institute of Building Sciences (NIBS) Asbestos Abatement Specification and from Environmental Protection Agency documents including their draft O&M program dated February 13, 1987.

II - INTRODUCTION

Asbestos is a proven human carcinogen. Exposure to airborne asbestos can cause respiratory disease, lung cancer, mesothelioma, and other types of cancer. The use of asbestos in construction materials has raised concern about exposure to airborne asbestos in some schools. If asbestos-containing building material (ACBM) remains in good condition and is unlikely to be disturbed, exposure will be negligible. However, when ACBM is damaged or disturbed, asbestos fibers are released creating a potential hazard for school occupants.

An O&M Program for ACBM is a set of activities and procedures designed to minimize any exposure of school occupants and workers to airborne asbestos fibers that either have been or may be released in the school. An ongoing O&M Program should be established in all schools with ACBM as soon as the presence of asbestos is confirmed, and should be maintained until all ACBM (including both friable and non-friable forms) is removed.

The goal of an asbestos O&M Program is to manage ACBM in a school in a way that minimizes exposure of school occupants and service workers to airborne asbestos. To accomplish this goal, the O&M Program is designed to: (1) remove asbestos fibers that may have been released by the ACBM, (2) avoid or control disturbance of the ACBM during school activities in order to eliminate or greatly reduce the future release of fibers, and (3) monitor the condition of ACBM. The focus of an O&M Program is on school maintenance and service workers, since their activities are most likely to create a major episode of fiber release. The O&M Program addresses both major and minor maintenance activities including maintenance and repair work on building systems and routine cleaning and custodial work.

The monitoring of activities involving ACBM and of ACBM conditions over time is an important aspect of the O&M Program. Building owners, employers, maintenance supervisors, and asbestos coordinators are all responsible for ensuring program monitoring. School Asbestos Workers/Technicians will report all activities or change in conditions to the Asbestos Coordinator for his/her required inspection and record keeping purposes.

Copies of this O&M document shall be made available to all appropriate maintenance and outside contractor personnel.

III- SITE BACKGROUND

The Baldwin School has been the subject of an inspection by Certified Engineering and Testing Company, Inc. (Certified), designed to identify the presence of asbestos-containing building materials (ACBM) in accordance with the requirements of the Asbestos Hazard Emergency Response Act (AHERA). The Survey Report, which details the locations in which ACBM was found, is included in the Management Plan, and copies are available from the Asbestos Coordinator. In this report, ACBM locations are reported by homogeneous area. A homogeneous area is any material application that is uniform in color and texture.

A number of the suspect materials at the Baldwin School were assumed to be asbestos. The assumption that a material is asbestos-containing has few ramifications during day-to-day non-disruptive activities at the school. During activities in which small scale disturbance is anticipated, however, a sample of the affected material should be collected and analyzed by the Consultant to confirm its asbestos content. This will prevent unnecessary precautions in the event that a material proves to be non-asbestos-containing.

Certified did not sample areas which are accessible only by demolishing hard enclosures such as masonry walls or ceilings. For the purposes of AHERA, all such materials, and any suspect materials which are encountered during activities in which access to previously inaccessible areas is necessary, must be assumed to be ACBM, until such time as testing can be performed to show otherwise. Certified does not anticipate that any unidentified asbestos-containing building materials are present at the Baldwin School. In the event of any renovation or demolition project in which unknown or suspect materials are revealed, however, the Asbestos Coordinator must be notified. In addition, whenever work requiring extensive demolition is to be performed, the advice of the Consultant must be sought.

One of the primary aims of the O&M Program is to ensure that adequate records regarding the ACBM at the Baldwin School are maintained for as long as ACBM remains in the school. It is critical, therefore, that any time activities require the disturbance of ACBM that the Asbestos Coordinator be notified and that all appropriate forms be completed.

ACBM at the Baldwin School is located in the following homogeneous areas:

Homogeneous Area M-01	The material is 12" x 12" acoustical ceiling tile located in the gym.
Homogeneous Area M-02	The material is a cloth expansion joint located in the attic HVAC room.

Homogeneous Area M-03	The material is linoleum flooring, located in classrooms 1 & 2 and the day care room.
Homogeneous Area M-04	The material is 9" x 9" floor tile located in the kitchen and under the carpet in the infant day care room.
Homogeneous Area S-01	The material is smooth white plaster located throughout the building.
Homogeneous Area T-01	The material is hard-packed fitting insulation on pipe lines with fiberglass insulation.
Homogeneous Area T-02	The material is chalk pipe and fitting insulation in the boiler room and crawl space.
Homogeneous Area T-03	The material is aircell pipe insulation located in the boiler room.
Homogeneous Area T-04	The material is fitting insulation on pipes with aircell insulation.
Homogeneous Area T-05	The material is boiler flue insulation located in the boiler room.
Homogeneous Area T-06	The material is chalk pipe and fitting insulation located in the gym, restroom and a classroom in the basement.
Homogeneous Area T-07	The material is aircell pipe insulation located in a restroom adjacent to the classroom in the basement.
Homogeneous Area T-08	The material is fitting insulation on pipes with aircell insulation located in a restroom adjacent to the basement classroom.
Homogeneous Area T-09	The material is chalk pipe and fitting insulation located in the attic.
Homogeneous Area T-10	The material is all pipe and fitting insulation located in inaccessible areas.

The Massachusetts Department of Occupational Hygiene recommends that the open shell diagrams marked with ACBM locations be updated upon completion of all response actions.

No ACBM should be removed or disturbed prior to submittal of notification to the Asbestos Coordinator or the School Asbestos Worker/Technician. ACBM locations are summarized in the asbestos survey report available from the Asbestos Coordinator or the School Asbestos Worker/Technician. All ACBM in routine maintenance areas shall be marked with warning signs.

IV - PROGRAM PARTICIPANTS

Participants in the O&M Program include the Asbestos Coordinator, School Asbestos Worker/Technician, Consultant, building staff, employees, and outside contractors.

A. The Asbestos Coordinator

The Asbestos Coordinator shall have overall responsibility for implementing and documenting the program as the Local Education Agency's representative. He/she is directly responsible to the Local Education Agency (LEA) and must be knowledgeable about the health effects of asbestos, the requirements of regulations concerning asbestos, and all aspects of asbestos assessment, control and management.

The Asbestos Coordinator shall:

1. ensure that the activities of any persons who perform inspections, reinstallations, and periodic surveillance, develop and update management plans, and develop and implement response actions, including this Operations and Maintenance program, are carried out in accordance with AHERA

2. ensure that all custodial and maintenance employees are properly trained as required by AHERA and any other applicable local, state or federal regulation

3. ensure that workers and building occupants, or their legal guardians, are informed at least once each school year about inspections, response actions, and post-response actions activities, including periodic reinspection and surveillance activities that are planned or in progress

4. ensure that new workers and short term workers who may come in contact with asbestos in the school are provided information regarding the locations of ACBM and suspected ACBM assumed to be ACBM. Also ensure that outside contractor who may come in contact with the asbestos in the school are properly advised and have the option of additional information, if requested.

5. ensure that all warning labels are posted in accordance with AHERA

6. ensure that Management Plans are available for inspection and that notification of such availability has been provided

7. consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel

8. ensure that the school is reinspected semi-annually by in-house personnel and at least every three years by an accredited inspector. All friable and non-friable, known and suspected ACBM must be reinspected

9. maintain a record of all known ACBM remaining within the structure and all work related to ACBM. Exact locations of ACBM shall be recorded on building plans and drawings

10. maintain all records required under AHERA for a period of 30 years including medical and training records of employees exposed to ACBM

11. ensure that a medical examination is made available to each employee required to handle ACBM

12. consult with experts and state, local and federal regulatory agencies annually regarding any changes in the best available technologies and regulations regarding ACBM

13. request consultation with experts when the solution of an ACBM related problem lies outside the scope of this plan or beyond the training and/or expertise of employees

14. coordinate Baldwin School's relationship with any parties who may be involved in ACBM management

15. ensure that all ACBM abatement performed complies with applicable EPA, OSHA, state and local regulations and laws

16. advise outside contractors of the existence of ACBM in the building and of the precautions necessary to protect building occupants and themselves

17. The Asbestos Coordinator should visit the work site when the work is initiated and periodically thereafter to verify that maintenance is being performed according to the requirements of this Operations & Maintenance program. His or her observations should be appropriately recorded. Any deviation from appropriate work practices should be corrected immediately. Contractors should be released only after the work site has passed visual inspection and asbestos air clearance monitoring. Upon completion of the work, a copy of the Asbestos Coordinator's written evaluation should be placed in a permanent file

B. School Asbestos Worker/Technician

The School Asbestos Worker/Technician shall:

1. be trained and knowledgeable in all the activities described below, as well as with the asbestos hazards associated with his/her position

2. determine prior to any work if the possibility exists that ACBM may be disturbed. If ACBM is to be disturbed, an Asbestos Job Notification Form must be completed and submitted to the Asbestos Coordinator

3. inform all employees assigned that ACBM may be encountered

4. ensure the availability of adequate supplies and equipment for contact with ACBM

5. determine, in conjunction with the Asbestos Coordinator, whether in-house staff or, alternatively, an outside abatement contractor will perform any work which may involve disturbing ACBM. In general, if maintenance activities require removal of ACBM, an outside contractor should perform such work. Other activities, such as removing light fixtures, or any minor activity, may be handled by a properly trained in-house staff member on a case-by-case basis

6. arrange, in conjunction with the Asbestos Coordinator, for any air monitoring that may be required

7. ensure that all employees present in ACBM areas adhere to the plan

8. ensure the required use and proper fitting of personal protective clothing and equipment by all employees engaged in ACBM related work

9. transmit all documents and records generated in connection with ACBM related work to the Asbestos Coordinator, and

10. arrange with the Asbestos Coordinator for the disposal and documentation of disposal of all ACBM removed

C. Employees

Preparation and commitment of all Maintenance Employees and the School Asbestos Worker/Technician are necessary for the effectiveness of this Management Plan.

Prior to any ACBM related work, the School Asbestos Worker/Technician shall advise all employees assigned to the work of the likely presence of ACBM and the procedures to be followed in performing the work.

Should ACBM actually be encountered, all employees shall wear respirators, personal protective clothing and equipment in accordance with the Program or as directed by the Coordinator prior to actually disturbing any ACBM.

The Program's procedures can protect the safety and health of employees only when they are implemented conscientiously. It is the responsibility of each employee to perform his/her duties in a manner which places due emphasis and care on the handling of ACBM and on the control of asbestos fiber release. Each employee should be aware of the potential health effects of exposure to asbestos. The use of common sense coupled with conscientious implementation of the proper procedures as set forth in the Program and/or as explained by the Coordinator should permit work involving contact with ACBM to be completed safely and efficiently.

All employees shall have completed the following prior to commencing any ACBM related work:

1. a medical examination in accordance with OSHA regulations and this Program

2. a formal training program, as specified in AHERA and

3. a respirator fit test

Custodial and Maintenance Staff Shall:

1. know the location and condition of all asbestos-containing materials on the site

2. know the location of all safety equipment and keep his personal equipment in clean condition

3. be aware of hazardous waste disposal and record keeping procedures

4. be familiar and up-to-date with EPA guidelines and Operations and Maintenance procedures

5. clear all repair and construction work in advance with the Maintenance Supervisor and Asbestos Coordinator, and

6. inform the School Asbestos Worker/Technician and the Asbestos Coordinator when new damage or debris is encountered or cleaned up

An employee who declines to participate in ACBM related work, or who refuses related medical examinations or training, shall not be penalized.

D. Consultant

The Consultant shall:

1. provide bulk analysis of suspect material

2. analyze all air samples taken at the Baldwin School

3. evaluate the condition of ACBM as requested by the Asbestos Coordinator, and as required by AHERA during reinspection of all ACBM at the school every three years

4. monitor asbestos abatement work performed by outside contractors

5. administer the contract specifications prepared for abatement work performed by an outside contractor

E. Outside Contractors

An Outside Contractor is anyone who is not a Brookline Public School employee who performs maintenance within the facility. Outside Contractors must comply with the conditions set forth in the O&M Program and must review this document before beginning work.

V - NOTIFICATION PROCEDURES

There are three major components of the notification procedures required by AHERA: on-site labeling of all asbestos containing building materials in routine maintenance areas, written notification, in the Management Plan, of all activities involving ACBM at the school, and a maintenance worker training program.

Labels, in letters large enough to be easily visible, must be placed immediately adjacent to all ACBM or suspected ACBM and must read: CAUTION: ASBESTOS. HAZARDOUS. DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT. Labels must be prominently displayed and should remain in place until such time as the ACBM is removed. The initial labeling will have been accomplished by Certified before the implementation of the O&M Plan.

The Management Plan, as the receptacle of all the documents and information regarding asbestos at the school, shall serve as the primary notification tool for all interested parties. The Plan must be maintained in the Local Education Agency (LEA) administrative office and copies of the plan must be made available to EPA, State, teacher, maintenance and parent representatives.

The requirements of the mandatory worker training program are outlined in a later section of this program.

VI - EMPLOYEE PROTECTION

A. Worker Training Program

Each in-house maintenance employee who may come into contact with asbestos-containing materials shall participate in a two hour awareness training program conducted under the supervision of the Consultant. The training program shall be in compliance with OSHA regulation 29 CFR 1926.58 and shall meet the maintenance employee training requirements of the Asbestos Hazard Emergency Response Act (AHERA). The training program shall be presented in a manner that the employee is able to understand and shall include:

1. Methods of identifying ACBM in the building in addition to an overview of the known locations of ACBM

2. The health effects associated with asbestos exposure including the relationship between smoking, asbestos exposure and lung cancer

3. The type of activities that would result in exposure to asbestos and methods to minimize exposure including engineering controls, work practices and personal protective equipment

4. The purpose, use, and limitations of available respirators

B. Medical Examinations

The Asbestos Coordinator must provide, at the school department's expense, a series of on-going medical examinations to all employees who may be exposed to asbestos. The examinations shall occur as: 1) a pre-placement exam, 2) an annual exam and 3) an optional exam at the employee's discretion at the time of his/her employment termination. The purpose of these examinations is to monitor employee health and to determine whether or not the employee can use a negative pressure respirator. The examining physician shall be provided with:

1. a copy of 29 CFR 1926.58 with Appendices D, E and I of the regulation

2. a description of the employee's duties as they relate to the employee's exposure

3. the employee's representative exposure level or anticipated exposure level

4. a description of any personal protective and respiratory equipment used or to be used

5. information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

All examinations shall include:

1. chest x-rays (posterior-anterior, 14x17 inches) interpreted by a certified "B Reader" or Certified Occupational Health Physician

2. pulmonary function tests of forced vital capacity (FVC) and forced expiratory volume at one second (FEV)

3. a medical and work history questionnaire with special emphasis on the pulmonary, cardiovascular, and gastrointestinal systems

4. examination by a physician

VII - RESPIRATOR PROGRAM

General: Exposure to airborne asbestos can be minimized through the use of proper respiratory protection. As airborne fiber concentrations increase, so too must the protection factor of the respirator used. This section outlines the required levels and types of protection, in addition to providing a description of who can use respirators, fit testing and respirator care.

A. Respirator Fit Testing and Assignment: the Consultant shall fit test each employee who has received the two (2) hour awareness training and the additional fourteen (14) hour training course for a NIOSH approved 1/2 face respirator, using a qualitative fit test. Once fit has been established, the employee will be assigned that respirator for his/her exclusive use.

B. Selection of Respirators: all respirators must be NIOSH approved and all filter cartridges must have TC Approval Number 21C-xxx (where xxx is a three digit number). Respirators for use under the O&M Program are of two varieties: 1/2 face cartridge and full face cartridge. Normally 1/2 face protection is all that is required but the following guidelines must be followed based on fiber concentration:

f/cc	Respirator Type
0.01 - 0.05	1/2 face cartridge
0.05 - 0.10	full face cartridge

C. Personnel Approved for Respirator Use: persons should not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. Such determination is made during a medical examination.

Respirators shall not be worn when conditions prevent a good face seal. Such conditions may include a growth of beard, sideburns, a hard hat that projects under the face piece or protruding eyeglass temple pieces.

D. Fit Testing: Respirators issued to employees must exhibit the least possible face leakage. Qualitative fit testing shall be required prior to use of a new respirator and at least every 6 months thereafter using the OSHA irritant smoke or amyl acetate protocol. The initial testing shall be performed by the Consultant but subsequent testing may be performed by any employee trained in these methods by the Consultant.

E. **Respirator Care and Maintenance:** All respirators shall be inspected before and after use. Respirators not routinely used shall be inspected before and after each use and at least monthly to assure that they are in satisfactory working condition. Respirator inspection shall include a check of the respirator seal, the condition of the facepiece, headbands, valves, connecting tube, and filter cartridge.

Respirators shall be collected, cleaned and disinfected as frequently as necessary to insure that proper protection is provided to the worker.

Respirators shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture and damaging chemicals.

Respirator filter cartridges should be changed after every 8 hours of use or when resistance to air flow is detected, whichever comes first. Cartridges shall be disposed of as asbestos waste.

VIII - ACBM SEMI-ANNUAL INSPECTIONS

Each area known to contain ACBM must be visually inspected by the person or persons designated by the Asbestos Coordinator or the School Asbestos Worker/Technician. The results of this inspection shall be recorded on an ACBM Reinspection Form. All forms shall be transmitted to the Asbestos Coordinator within 48 hours of the inspection.

The purpose of the inspection is to ensure that ACBM condition has not deteriorated significantly during the preceding six-month period. If the condition of any ACBM has deteriorated since the last inspection, the Asbestos Coordinator shall be notified as soon as possible. The Asbestos Coordinator shall then investigate to determine if remedial action is required to prevent a health hazard.

IX - AIR QUALITY MONITORING

Area sampling will measure airborne fiber concentrations of a specific volume of air over a specific length of time and will be performed by using a high volume pump. Area sampling must be done before and after large scale abatement projects. Area sampling will also be done during inspections or other times which are appropriate or required by the Asbestos Coordinator.

Personal air sampling should be done inside containment areas during ACBM projects and during ACBM cleaning activities or emergency situations. Personal air sampling pumps are attached to the workers and measure fiber concentrations directly in the breathing zone outside the workers' respirators.

It is not anticipated that employees will be exposed to asbestos fiber concentrations above the PEL during routine activities. However, personal air samples must be collected daily whenever it is reasonable to anticipate that an employee may be exposed to asbestos fiber concentrations above the Permissible Exposure Limit (PEL) as defined by OSHA Regulations.

All samples shall be collected and analyzed by the Consultant or an accredited laboratory, in accordance with OSHA regulations (29 CFR 1926.58) using NIOSH Method 7400 or P&CAM 239. Sample results shall be recorded and transmitted to the Asbestos Coordinator for permanent retention.

Airborne fiber concentrations found through air sampling require minimum responses in accordance with the table on the following page.

Airborne Fiber Concentration	Response
<0.01 f/cc	Acceptable airborne fiber level. No response required.
>0.01 and <0.1	Action level for occupied spaces or public common areas. Identify source of problem, conduct at least one area air sample in the area by the Asbestos Coordinator or School Asbestos Worker/Technician and take immediate action to reduce airborne fiber levels in area. Shut down forced air circulation to the area until remedial action is completed and airborne fiber concentrations return to an acceptable level.
>0.1 f/cc	Restrict access and prevent all occupants who are not employees from entering the contaminated area. Any employee exposed to this limit must be trained and informed of the danagers of asbestos.
>0.2 f/cc	All employees shall wear respirators and protective clothing in the contaminated area. Identify boundaries of contamination by air monitoring. Contact the Consultant immediately for advice regarding remedial action.

Should the airborne fiber level exceed 0.01 f/cc at any time, contact the Consultant to assist in defining the cause of the elevated fiber level and to recommend remedial actions.

The Asbestos Coordinator or the School Asbestos Worker/Technician shall notify all employees who were involved in ACBM abatement work or who may have been exposed to airborne fiber levels in excess of the Action level of the air sampling results. Such notification is required immediately upon receipt of the results and may be made on an individual basis or by posting the results in an appropriate location, accessible to affected employees.

The Action Limit is defined by AHERA subpart G as 0.1 f/cc. While this is the level which triggers legally required responses, it is the expectation of the Brookline Public Schools that no employee shall be exposed to such levels. Maintenance work shall be conducted in a manner which shall minimize exposure and maintain ambient fiber levels well below the 0.1 Action Level.

X - EQUIPMENT

The School Asbestos Worker/Technician is responsible for ensuring the availability of equipment needed for ACBM work or emergency situations.

A. The equipment necessary for controlling fiber release in accordance with this O&M Plan includes:

1. HEPA filtered vacuum with extensions
2. Rolls of 6 mil polyethylene sheeting
3. 6 mil polyethylene bags labeled with an asbestos material warning sign
4. NIOSH approved 1/2 face cartridge respirators with filters approved for asbestos dust
5. Garden sprayer for misting
6. Surfactant
7. Full body disposable protective clothing
8. Caution signs conforming with current OSHA regulations (1926.58)
9. A fully contained glovebag for removal of asbestos-containing pipe covering ("Profo-Bag" or equivalent)
10. A personal sampling pump to ascertain fiber levels during maintenance activities
11. An area sampling pump to ascertain background and work area ambient fiber levels prior to and during maintenance activities.

B. Brookline Public Schools will be responsible for the above listed equipment and for keeping it stored, clean, and in good condition at all times according to procedural guidelines. Equipment will be made available at a designated location provided by the school system.

C. Proper space for worker change area and decontamination of equipment should also be designated by the School Asbestos Worker/Technician.

XI - ESTABLISHING APPROPRIATE WORK PRACTICES

The central focus of the O&M Program is to establish appropriate work practices for custodial, maintenance, and construction staffs. The provisions of the O&M Program also extend to any activities by an outside contractor during which ACBM might be disturbed.

The work practices outlined in this section are broken down by material application and by the likelihood of ACBM disturbance during the project.

Recommended practices and respiratory protection are tailored to the likelihood and severity of ACBM disturbance, and to the potential for exposure of workers and other building occupants to airborne asbestos.

Special work practices are required when ACBM is being cleaned or otherwise potentially disturbed by maintenance. Special cleaning practices are particularly important when involving surfacing materials or friable pipe and boiler insulation. Maintenance work near ACBM or with heavy tools which may vibrate or extend into ACBM areas ought to be considered potentially disturbing.

Special work practices are not required where disturbance of ACBM is unlikely. For example, simply changing light bulbs in fixtures located near ACBM would normally create little chance of disturbance. Likewise, work around non-friable ACBM is not likely to cause fiber release unless ACBM is directly manipulated such as by drilling or cutting. However, if in doubt about the possibility of disturbing ACBM during maintenance activities, take adequate precautions to minimize fiber release and building contamination.

A Summary of Special Practices for Maintenance Work according to the likelihood of ACBM disturbance is found in Appendix I.

Any type of work that goes beyond the scope of this plan shall not be undertaken without the prior approval of the Asbestos Coordinator. Any extensive type of work generally will be performed by a qualified outside asbestos abatement contractor approved by the Asbestos Coordinator.

A. Standard Operating Procedures

All ACBM related work by employees and outside contractors must conform to the procedures set forth in the Program. Prior to any renovation or demolition, the Asbestos Coordinator will determine if ACBM may be disturbed and inform the School Asbestos Worker/Technician accordingly. If the composition of a material is not certain, a sample shall be submitted to the Consultant for analysis prior to work.

1. All employees shall be aware of the procedures outlined in the EPA document "Guidance for Service and Maintenance Personnel" (Appendix II) and shall have successfully completed the training program provided by the Consultant.

2. ACBM shall not be handled or disturbed except when necessary.

3. If the presence of ACBM is suspected but cannot be adequately documented prior to the start of work, the work shall be conducted as if the suspect materials contain asbestos until it is possible to document the contrary.

4. Insofar as practical, ACBM shall be handled, removed, cut, stored or otherwise worked in a thoroughly wet state sufficient to prevent the emission of airborne asbestos fibers. If the usefulness of any materials or necessary equipment will be diminished by such wetting, the Asbestos Coordinator or the School Asbestos Worker/Technician shall be notified and the work shall not proceed without his/her approval.

5. Employees shall consult with the Asbestos Coordinator and School Asbestos Worker/Technician prior to commencing any work in which it appears that ACBM may be disturbed.

6. There shall be no dry sweeping or vacuuming of ACBM <u>except</u> with a HEPA vacuum.

7. Only NIOSH-approved respirators for asbestos dust shall be worn during ACBM work.

8. A copy of each document or record generated in connection with this program shall be provided to the Asbestos Coordinator.

9. Response to any ACBM-related situation not covered in this Program shall be governed by common sense, with due regard for the physical properties of asbestos, the potential health risks associated with exposure to asbestos, and applicable federal, state and local regulations concerning asbestos.

10. With any maintenance activity in which ACBM (less than 3 square or 3 linear feet) is disturbed, the procedures below must be followed:

    a. The post-completion air samples shall be of sufficient volume to produce 95% confidence in the results calculated.

    b. Personal air samples must be collected daily whenever an employee has the potential for exposure to asbestos fiber concentrations above the Permissible Exposure Limit (PEL) as defined by OSHA regulations. A personal sample is an air sample taken with the sampling pump directly attached to the worker. The collecting filters are placed in the worker's breathing zone. It is not anticipated that any employees will be exposed to asbestos fiber concentrations above the PEL during routine activities.

    c. The air samples may be taken by either the Consultant or trained maintenance personnel. The samples shall be analyzed by the Consultant.

11. Use of HEPA Equipment

    a. The HEPA vacuum shall be used solely in connection with asbestos work.

    b. All wastes collected in the HEPA vacuum shall be treated as friable asbestos.

    c. The HEPA vacuum's collected wastes and filter shall be kept in the HEPA vacuum until it is full or until the filter must be replaced. At such time, and while the area is still sealed (or within the confines of a glovebag), the collected waste and filter shall be removed from the HEPA vacuum, placed in a sealed impermeable container and disposed of in accordance with applicable regulations.

    d. All employees cleaning the HEPA vacuum or servicing the filter shall wear a respirator.

e. Material collected in the HEPA vacuum should be handled in accordance with the manufacturer's instructions and disposed of as asbestos-containing waste.

f. If the HEPA vacuum has been used, HEPA vacuum filters shall be replaced every (6) months unless heavy usage requires more frequent replacement.

g. The Asbestos Coordinator and the School Asbestos Worker/Technician shall be notified of each HEPA vacuum filter replacement and waste disposal date.

B. Initial/Episodic Cleaning

An extremely thorough initial cleaning of the school is required by AHERA if a cleaning using comparable methods has not taken place within six months of the original inspection. Initial cleaning must be completed in areas where there is friable ACBM, damaged or significantly damaged thermal system insulation ACM, or friable assumed ACBM. These areas shall be cleaned after the completion of the inspection and before the initiation of any response action, other than O&M activities or repairs. Cleaning using the same approved methods, will also be performed in specific areas of the school building for episodes of elevated airborne asbestos fiber levels above the EPA guideline for clean air of 0.01 f/cc. The Brookline Public Schools require that half-face respirators with disposable cartridge filters or a more substantial respirator to be worn by all custodial personnel for the initial cleaning and for any subsequent cleaning initiated due to a fiber release episode which is above the OSHA Permissible Exposure Limit (PEL) of 0.2 f/cc.

Cleaning and follow-up procedures shall include the following steps:

1. All curtains, books, furniture, carpets, and other irregular surfaces throughout the area should be vacuumed with a HEPA-vacuum cleaner. Do not use a standard vacuum cleaner!

2. Carpets should be steam cleaned and vacuumed with a HEPA vacuum cleaner.

3. All non-carpeted floors should be wet-mopped, and all other horizontal surfaces such as the tops of light fixtures and file cabinets should be wiped with damp cloths. These surfaces may also be HEPA-vacuumed.

4. Vacuum bags, filters, wet cloths and mop heads should be deposited into sealed plastic bags and labeled according to EPA regulations for disposal of asbestos waste.

5. Incidents of excessive debris from ACBM or new debris or damage since the previous cleaning should be reported to the the School Asbestos Worker/Technician and Asbestos Coordinator immediately.

6. All work requiring the disturbance of ACBM that may result in airborne fiber concentrations above 0.01 f/cc shall be monitored to determine actual fiber concentrations encountered.

7. Work carried out by employees in exposure level areas between 0.1 f/cc and 0.2 f/cc must be done by trained employees as indicated in subpart G of the AHERA regulations.

C. Surfacing Materials

Asbestos-containing spray-on or troweled-on ceiling and wall material is most often the main source of airborne asbestos fibers in buildings. When the material is old and friable, the potential for fiber release is high. Many ordinary activities could disturb wall or ceiling materials.

Consideration must also be given to surfacing which may, for example, be releasing fibers inside suspended ceilings, and particular attention should be given when these areas may be part of air circulation routes.

Contact with Surfacing ACBM Unlikely:

In some buildings with ACBM, many routine maintenance activities can be conducted without disturbing or touching the ACBM. For example, changing light bulbs in a fixture on a ceiling with asbestos-containing acoustical plaster can usually be performed without jarring the fixture or otherwise disturbing the ACBM. (The top of the fixture should have been wet-cleaned previously to remove settled fibers.) In these situations, few precautions other than normal care are needed. The only precaution is to assure the availability of respirators and a HEPA vacuum if needed. These do not have to be taken to the site, but should be available at a known location in the building. Where maintenance is performed in parts of the building free of ACBM, no special precautions are usually necessary. An exception would be work causing vibrations at a distant location where ACBM may be present.

Accidental Disturbance of Surfacing ACBM Possible:

Routine maintenance and repair includes work on light fixtures, plumbing fixtures and pipes, air registers, HVAC ducts, and other accessible parts of school building utility systems. Where these fixtures or system parts are near friable ACBM, maintenance work may unintentionally disturb the ACBM and release asbestos fibers.

For example, maintenance work on ventilation ducts in an air-handling room where asbestos fireproofing is present only on structural beams could be conducted without contacting the ACBM. However, the fireproofing could be disturbed accidentally during the course of the work.

The following precautions and procedures should be used if accidental disturbance of ACBM (or dust and debris containing asbestos fibers) is possible:

1. Submit ACBM Reinspection Form to the Asbestos Coordinator and School Asbestos Worker/Technician before beginning work. The Asbestos Coordinator should make an initial visit to the work site.

2. The work should be scheduled after normal working hours (nights or weekends), if possible, or access to the work area should be controlled: doors should be locked from the inside and signs posted to prevent unauthorized persons from entering the work area (e.g., "MAINTENANCE WORK IN PROGRESS, DO NOT ENTER", or, if asbestos levels are above the OSHA Rule of .2 f/cc (the PEL or higher), "DANGER - ASBESTOS; CANCER AND LUNG DISEASE HAZARD; AUTHORIZED PERSONNEL ONLY; RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA"). Note, emergency exits must remain in operation.

3. The air-handling system should be shut off or temporarily modified to prevent the distribution of any released fibers to areas outside the work site. After the work, the system filters should be misted with amended water as they are removed, and then discarded as asbestos waste.

4. A 6-mil polyethylene plastic dropcloth should be placed beneath the location of the maintenance work, extending at least 10 feet beyond all sides of the work site. Alternatively, a rectangular enclosure constructed of 6-mil plastic on a frame can be positioned underneath the maintenance area to inhibit the spread of fibers from fallen ACBM. (Mobile enclosures of this type are available commercially.)

5. Workers must wear at least air-purifying respirators with HEPA filters (see discussion in Section VII on respiratory protection) and protective clothing including a body suit and hood.

6. The ACBM in the vicinity of the maintenance work should be misted lightly with amended water -- a combination of a surfactant and water. Use a mister that produces a very fine spray. Be sure that the electrical system is shut off before spraying around any electrical conduits or fixtures.

7. After the maintenance work is completed, the fixture, register, or other component, and all tools, ladders and other equipment should be HEPA-vacuumed or wiped with a damp cloth.

8. If any debris is apparent on the dropcloth, floor or elsewhere, it should be HEPA-vacuumed.

9. The plastic dropcloth (or enclosure) should be wiped with a damp cloth, carefully folded, and discarded as asbestos waste.

10. All cloths, vacuum bags/filters, and other disposable materials should be discarded in sealed and labeled plastic bags as asbestos waste.

11. Workers should HEPA-vacuum respirators and protective clothing at the work site. The clothing should then be discarded as asbestos waste. If ACBM was disturbed during the course of the work, workers should leave their respirators on, proceed to a shower room, shower with respirators on, and clean their respirators while in the shower.

Disturbance of Surfacing ACBM Intended or Likely:

Certain maintenance and repair activities will unavoidably disturb the ACBM. For example, installing new sprinkler or piping systems will necessitate hanging pipes from structural members of ceilings. It may be deemed necessary to have all surfacing removed before sprinkler or pipe installation. If the beams or ceilings are insulated or covered with ACBM, the ACBM will be at least scraped away to install hangers. Likewise, pulling cables or wires through spaces with ACBM or ACBM debris is likely to dislodge pieces of the ACBM or disturb ACBM debris. Furthermore, any time tiles are moved to enter the space above a suspended ceiling, settled dust on top of the tiles will be resuspended. If the beams or decking above the ceiling are covered with ACBM, the dust is likely to contain asbestos fibers. All of these examples involve disturbances of ACBM or asbestos dust and debris, and will likely result in elevated levels of airborne asbestos fibers.

The following procedures are appropriate for maintenance activities which involve small-scale (less than 3 square feet) removal of surfacing ACBM or when disturbance of ACBM dust and debris or unintentional contact with the ACBM is likely.

1. Submit appropriate forms to the Asbestos Coordinator and School Asbestos Worker/Technician before beginning work, and the work should be supervised.

2. The work should be scheduled for after normal working hours (nights or weekends), if possible, or access to the work area should be controlled: doors should be locked from the inside and signs posted to prevent unauthorized persons from entering the work area (e.g. "MAINTENANCE WORK IN PROGRESS, DO NOT ENTER", or, if the asbestos levels are high enough to trigger the OSHA Rule (the PEL or higher), "DANGER - ASBESTOS; CANCER AND LUNG DISEASE HAZARD; AUTHORIZED PERSONNEL ONLY; RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA"). Note, emergency exits must remain in operation.

3. The air handling system should be shut off or temporarily modified to prevent the distribution of fibers from the work site to other areas in the building. After the work, the system filters should be misted with amended water as they are removed, and then discarded as asbestos waste.

4. At a minimum, workers should wear air purifying respirators with HEPA filters (see the discussion in Section VII on respiratory protection) and protective clothing including a body suit with hood and boots.

5. A 6-mil polyethylene plastic dropcloth should be placed beneath the location of the maintenance work, extending at least 10 feet beyond all sides of the work site. (In the case of entry into the space above a suspended ceiling, the work site would be the area of the tiles removed to gain access.) Alternatively, a rectangular enclosure constructed of 6-mil plastic on a frame can be positioned underneath the maintenance area to inhibit the spread of fibers from fallen ACBM. (Mobile enclosures of this type are available commercially.)

6. If entry to the space above a suspended ceiling is necessary, the entry tile(s) should be removed carefully with as little jarring as possible. The air above the opening, the top of the removed tile, all tiles surrounding the opening, and the ACBM likely to be disturbed should be misted with amended water. Use a mister with a very fine spray. A thorough misting of the air helps fibers to settle more quickly. Cleaning ceiling tiles with a HEPA vacuum cleaner is also effective, as long as care is taken not to vibrate tiles and disturb the ACBM.

7. A selected worker must wear a personal sampling pump as required by OSHA unless previous experience with the same ACBM and similar operations indicate that fiber levels are likely to be less than the PEL.

8. During the course of the work, any ACBM which is removed should be collected by the HEPA-vacuum. This is best accomplished by placing the vacuum hose just below the ACBM being removed.

9. Upon completion of the work, any visible debris on top of the suspended ceiling, on the dropcloth or the floor, or anywhere else in the area should be collected with the HEPA vacuum.

10. All equipment and tools should be wiped with damp cloths or HEPA-vacuumed.

11. The plastic sheet should be wiped with a damp cloth, carefully folded, and discarded as asbestos waste.

12. All debris, cloths, and vacuum bags/filters should be discarded in sealed and labeled plastic bags as asbestos waste.

13. Workers should vacuum their disposable suits before leaving the work site (or remove and discard them as asbestos waste and put on a clean disposable suit), proceed to a shower room, shower with their respirators on, and clean their respirators while in the shower.

D. Thermal System Insulation (TSI)

Maintenance activities affecting asbestos-containing thermal system insulation generally involve plumbing-type repairs, or repairs to the heating, ventilation and air conditioning (HVAC) system. Frequently, the ACBM must be removed to provide access to the valve, flange, duct, or related system part needing maintenance.

Contact with Asbestos-Containing TSI Unlikely:

Maintenance activities or repairs which can be performed without contacting or disturbing the ACBM require little more than normal care and good workmanship. For example, valves can be repacked or repaired without disturbing asbestos lagging on nearby pipes. The only precautions necessary are to make sure that a HEPA vacuum cleaner and air-purifying respirators are available if needed.

Accidental Disturbance of Asbestos-Containing TSI Possible:

Even maintenance tasks that involve no direct contact with ACBM may cause accidental disturbance. For example, vibrations created by maintenance activities in one part of a piping network will be transmitted to other parts. Vibrations could then cause fibers to be released from insulation which is exposed (not covered with a protective jacket) or not in good condition. If in doubt about the possibility of fiber release, thoroughly inspect the thermal system insulation before undertaking the maintenance or repair work. Then, either correct the problem before starting, or assume that the maintenance work may cause accidental disturbance and fiber release. In this case, the procedures below should be followed:

1. Submit ACBM Reinspection Form to the Asbestos Coordinator and School Asbestos Worker/Technician before beginning work. The Asbestos Coordinator or the School Asbestos Worker/Technician should make an initial visit to the work site.

2. The work should be scheduled after normal working hours (nights or weekends), if possible, or access to the work area should be controlled: doors should be locked from the inside and signs posted to prevent unauthorized persons from entering the work area (e.g., "MAINTENANCE WORK IN PROGRESS, DO NOT ENTER", or, if asbestos levels are high enough to trigger the OSHA Rule (the PEL or higher), "DANGER - ASBESTOS; CANCER AND LUNG DISEASE HAZARD; AUTHORIZED PERSONNEL ONLY; RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA"). Note, emergency exits must remain in operation.

3. The air-handling system should be shut off or temporarily modified to prevent the distribution of any released fibers to areas outside the work site. After the work, the system filters should be misted with amended water as they are removed, and then discarded as asbestos waste.

4. Plastic sheets (6-mil polyethylene) should be cut and taped around any insulation which might be accidentally disturbed. The plastic should be misted with amended water before taping it shut. If the locations where insulation could be disturbed are too numerous for isolation with plastic, workers should perform the maintenance work wearing air-purifying respirators and protective clothing, including disposable suits and hoods. A plastic drop cloth should be set up around the work area.

5. The ACBM in the vicinity of the maintenance work should be misted lightly with amended water -- a combination of a surfactant and water. Use a mister that produces a very fine spray. Be sure that the electrical system is shut off before spraying around any electrical conduits or fixtures.

6. After the maintenance work is completed, the fixture, register, or other component, and all tools, ladders and other equipment should be HEPA-vacuumed or wiped with a damp cloth.

7. When removing the plastic from the insulation, special care should be taken to minimize disturbance of any ACBM dust or debris that may have fallen from the insulation.

8. If any debris is apparent on the dropcloth, floor or elsewhere, it should be HEPA-vacuumed.

9. The plastic dropcloth and/or enclosure should be wiped with a damp cloth, carefully folded, and discarded as asbestos waste.

10. All cloths, vacuum bags/filters, and other disposable materials should be discarded in sealed and labeled plastic bags as asbestos waste.

11. Workers should HEPA-vacuum respirators and protective clothing at the work site. The clothing should then be discarded as asbestos waste. If the ACBM was disturbed during the course of the work, the workers should leave their respirators on, proceed to a shower room, shower with respirators on, and clean their respirators while in the shower.

Disturbance of Asbestos-Containing TSI Intended or Likely:

Where asbestos-containing insulation must be removed to maintain or repair the thermal system, the ACBM will obviously be disturbed. The amount of ACBM to be removed or manipulated will determine the procedures to be used.

Small Disturbances of TSI:

If the amount to be removed is 3 linear feet or less, the project should be considered a small-scale disturbance. The following procedures should be followed:

1. Submit appropriate forms to the Asbestos Coordinator and School Asbestos Worker/Technician before beginning work. The Asbestos Coordinator should make an initial visit to the work site.

2. The work should be scheduled after normal working hours (nights or weekends), if possible, or access to the work area should be controlled: doors should be locked from the inside and signs posted to prevent unauthorized persons from entering the work area (e.g., "MAINTENANCE WORK IN PROGRESS, DO NOT ENTER", or, if asbestos levels are high enough to trigger the OSHA Rule (the PEL or higher), "DANGER - ASBESTOS; CANCER AND LUNG DISEASE HAZARD; AUTHORIZED PERSONNEL ONLY; RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA"). Note, emergency exits must remain in operation.

3. The air-handling system should be shut off or temporarily modified to prevent the distribution of any released fibers to areas outside the work site. After the work, system filters should be misted with amended water as they are removed, and then discarded as asbestos waste.

4. Maintenance workers should wear at least air-purifying respirators with HEPA filters and protective clothing in case of a fiber release episode.

5. The asbestos-containing insulation should be removed as necessary for the repairs, and the repairs made using standard glove bag techniques as described in Section XI, Part J.

E. Miscellaneous ACBM

Other asbestos-containing materials include vinyl asbestos floor tiles, asbestos ceiling tiles, transite wall board and counter tops, asbestos roof tiles, and various textile products such as stage curtains. Such materials are classified as miscellaneous ACBM. Disturbance of these materials should be avoided. Any damaged ACBM materials may be hazardous and, if friable, should be monitored carefully. Maintenance workers should report any damage to the School Asbestos Worker/Technician or Asbestos Coordinator.

ACBM tiles or boards on walls and ceilings must not be overlooked when doing electrical or other maintenance work. When these materials are likely to be disturbed, precautions must be taken and appropriate forms must be filed with the Asbestos Coordinator and School Asbestos Worker/Technician. If floor tile or linoleum is missing or removed, do not sand asbestos backing material remaining on the floor.

Cutting, drilling, grinding, sanding or removal of miscellaneous ACBM where there is excessive disturbance must be performed by an abatement contractor.

F. Cutting and Patching Asbestos Materials

Submit appropriate forms to Asbestos Coordinator and School Asbestos Worker/Technician for approval prior to the start of the project.

Workers will take all safety precautions by using protective clothing and respirators, and by containing the work area according to regulations.

Perform cutting, drilling, abrading, or otherwise disturbing activities in a manner so as to minimize the dispersal of asbestos fibers into the air.

Provide adequate local exhaust to capture fibers produced by cutting, drilling, or abrading by means of an approved High Efficiency Particulate Absolute (HEPA) filter vacuum. Use specialized equipment such as drills or saws having integral ventilation hoods which are connected to a HEPA vacuum with a flexible hose. Handle and dispose of HEPA filters as contaminated material.

Thoroughly saturate absorbent surfaces of the asbestos-containing building material to be disturbed with a penetrating type encapsulant. Allow the encapsulant to penetrate to the substrate before working on materials.

Seal the edges of the asbestos-containing building material exposed by cutting, drilling, or abrading with two (2) coats of an approved penetrating encapsulant applied in accordance with the manufacturers' printed instructions for use of the encapsulant as an asbestos coating.

G. Repair of Damaged Materials

This section applies to the repair of damaged insulation on piping, boilers and equipment on which asbestos-containing insulation is to remain.

Submit appropriate forms to the Asbestos Coordinator and School Asbestos Worker/Technician for approval prior to the start of the project.

Workers will take all safety precautions by using protective clothing and respirators, and by containing the work area according to regulations.

Products which may be used for these activities are:

Non-Fibrous Insulating Cement: job-mixed insulating plaster manufactured for use on plumbing equipment.

Waterproof Cement: premixed or job mixed cement manufactured for coating of thermal insulation lagging.

Nonwoven Fibrous Glass Mat: felt approximately 3/32" thick fabricated from glass fibers.

Open Weave Glass Fiber Mat: cloth with approximately 1/4" openings in weave, fabricated from glass fibers twisted or braided into strands approximately 1/128" in diameter.

Bridging-Type Encapsulant: sealants which cover the surface of a material.

The following paragraphs address each type of ACBM which may need to be repaired:

1. Piping:

   a. Remove any loose material with a HEPA vacuum. No existing jacket material should be removed.

   b. Fill holes with non-fibrous insulating cement and cover damaged areas with a nonwoven fibrous glass mat completely saturated with bridging-type encapsulant.

   c. Wrap open joints with nonwoven fibrous glass mat embedded in bridging-type encapsulant.

   d. Smooth mat to a wrinkle free condition. Allow to dry and coat the entire surface of the mat with an additional coat of bridging-type encapsulant and brush to a smooth uniform appearance.

2. Fittings:

   a. Remove any loose material with a HEPA vacuum.
   b. Patch damaged fittings as required, using non-fibrous insulating cement.

   c. Smooth insulation to a uniform appearance, continuous with and not overlapping adjacent straight insulation runs.

   d. Cover the entire surface of the fitting with nonwoven fibrous mat embedded in bridging-type encapsulant.

   e. Stretch the fibrous mat to conform to the shape of the fitting and smooth to a uniform appearance without wrinkles.

   f. Overlap jackets of adjacent straight insulation sections by 3". Allow to dry and coat entire surface of mat with bridging-type encapsulant and brush to a smooth finished appearance.

3. Equipment Laggings:

   a. Remove any loose material with a HEPA vacuum.

   b. Fill damaged portion of lagging as required with non-fibrous insulating cement and cover with nonwoven fibrous glass mat completely embedded in bridging-type encapsulant.

   c. Coat the area of repair and six inches on all sides with bridging-type encapsulant, brush to a uniform appearance.

   d. Completely coat laggings which do not possess a canvas jacket with two coats of bridging-type encapsulant.

4. Boiler and Smoke Hoods' Breeching Laggings:

   a. Remove any loose material with a HEPA vacuum.

   b. Fill damaged portions of laggings, as required, with non-fibrous insulating cement.

   c. Coat the entire surface of the lagging with 1/4" minimum thickness of non-fibrous insulating cement reinforced with open weave fiber mat.

   d. Trowel surface to a smooth finish.

5. **Labeling:**

a. Label all asbestos containing pipe insulation, fitting insulation laggings, etc. in maintenance areas with a 3"x5" yellow sticker containing the words: CAUTION - CONTAINS ASBESTOS FIBERS - AVOID BREATHING DUST - BREATHING ASBESTOS MAY CAUSE SERIOUS BODILY HARM."

b. Apply a minimum of 2 labels per side or a maximum of five feet apart on boilers, breeching and equipment and a minimum of one per section and a maximum of eight feet apart on pipe runs.

c. Apply labels to both sides of pipe runs which are accessible from both sides.

d. In occupied areas, provide labels shaped like stop signs approximately 3" across with text reading: "STOP - Before Doing Work In This Area See School Asbestos Worker/Technician ."

H. Encapsulation

Encapsulation refers to the coating of ACBM with a bonding or sealing agent to prevent the release of airborne fibers. Encapsulation may be used over acoustical plaster ceiling and wall material if that material is cementitious, but it is preferable that such material is removed. It is more often recommended that encapsulation is used after ACBM is removed, and the encapsulation is then done over the remaining surfaces where some fibers may still exist. Encapsulation can also be used on small repair areas on ceilings and walls where exposed edges remain or on insulation where removal or damage leaves exposed edges or ends.

When ACBM has not been removed, encapsulation is an option only if the existing material is in good condition. It is a temporary measure until the ACBM is eventually removed. Encapsulation should not be done on very loose or fluffy material.

Prior to performing encapsulation, submit the Material Safety Data Sheet, or the equivalent to the Asbestos Coordinator, in accordance with the OSHA Hazard Communication Standard (29CFR 1910.1200) for each surfactant and encapsulating material proposed for use in the work. Include a separate attachment for each sheet indicating the specific worker protective equipment proposed for use with the material indicated.

General Encapsulating Procedures:

File appropriate forms with the Asbestos Coordinator and School Asbestos Worker/Technician prior to the start of the project.

Apply encapsulating materials only when environmental conditions in the work area are as required by the manufacturer's instructions. Utilize only penetrating or bridging-type encapsulants specifically designed for application to asbestos-containing building material. These materials should have a flame spread index of less than 25, when dry, when tested in accordance with American Society for Testing and Materials (ASTM) E-84.

Prior to applying any encapsulating material, ensure that application of the sealer will not cause the base material to fail and allow the sealed material to fall of its own weight and separate from the substrate. Do not encapsulate delaminated, flaking, or otherwise damaged material. Should personnel doubt the ability of the installation to support the sealant, request direction from the Asbestos Coordinator before proceeding with the encapsulating work.

Before beginning work with any material for which a Material Safety Data Sheet has been submitted, provide workers with the required protective equipment. Require that appropriate protective equipment be used at all times.

In addition to protective breathing equipment required by OSHA requirements or by this Operations and Maintenance Program, use painting pre-filters on respirators to protect the dust filters when organic solvent based encapsulants are in use.

Encapsulation techniques vary according to what type of material is being encapsulated. The following sections outline encapsulating procedures for use over scratch coat plaster when ACBM has been removed and for small areas where edges of ACBM are exposed.

1. Encapsulating Scratch Coat Plaster

   a. Apply two coats of encapsulant to the scratch coat plaster after all asbestos-containing building material has been removed. Apply in strict accordance with the manufacturer's printed instructions for use of the encapsulant as an asbestos coating. Any deviations from such printed instructions must be approved by the Asbestos Coordinator in writing prior to commencing work.

   b. Apply the encapsulant with an airless spray gun with an air pressure and nozzle orifice as recommended by the encapsulant manufacturer. Apply the first coat encapsulant while the scratch coat is still damp from asbestos removal procedures. If the surface has been permitted to dry, vacuum the surface with a HEPA filtered vacuum cleaner prior to spraying with the encapsulant. Apply the second coat over the first in strict conformance with the manufacturer's instructions.

   c. Color the encapsulant contrasting colors in alternate coats so that visual confirmation of complete and uniform coverage of each coat is possible. Adhere to the manufacturer's instructions for coloring. At the completion of work the encapsulated surface must be a uniform third color produced by the mixture.

2. Sealing Exposed Edges

   a. HEPA vacuum any loose debris or material.

   b. Seal edges of the asbestos-containing building material exposed by removal or damage up to an inaccessible spot such as a sleeve, wall penetration, etc. with two coats of encapsulant. Prior to sealing, permit the exposed edges of recently removed ACBM to dry completely to permit penetration of the sealer.

   c. Color the encapsulant contrasting colors in alternate coats so that visual confirmation of complete and uniform coverage of each coat is possible. Adhere to the manufacturer's instructions for coloring. At the completion of work the encapsulated surface must be a uniform third color produced by the mixture.

   d. In the case of pipe insulation ends, after encapsulation, ends should be wrapped with rewettable fiberglass cloth.

I. Enclosure

Enclosure refers to constructing airtight walls or ceilings around ACBM. Enclosure, like encapsulation, is a temporary measure to reduce fiber release potential. It is restricted to use where ACBM can be localized. It is an option only when ACBM is in good condition.

Prior to the project, submit appropriate forms to the Asbestos Coordinator and School Asbestos Worker/Technician .

1. Enclosure work should be monitored by the Asbestos Coordinator or Consultant and all safety precautions should be determined before work proceeds.

2. Workers should be protected by respirators and the area should be contained according to instructions of the Consultant or Asbestos Coordinator.

3. Drills for wall construction should be equipped with HEPA-filtered vacuums.

4. Construction material should be hard and assembled to be airtight. Caulking should be done along all joints. (Suspended ceilings do not meet the requirements of enclosure).

5. Lights or other fixtures must be removed carefully if recessed into ACBM and should be reinstalled beyond any new enclosing ceiling or wall.

6. Reports and records must show the location of ACBM and show the enclosure to notify all maintenance or construction workers.

7. Signs should be posted showing that ACBM is located behind or above the enclosure.

J. Glovebag Procedures

Prior to work, appropriate forms must be filed with the School Asbestos Worker/Technician and Asbestos Coordinator. Workers must take all safety precautions using protective clothing and respirators and by containment of the area.

Thoroughly wet the insulation with amended water or an encapsulant and allow it to soak in. Wet the insulation adequately to penetrate and soak the material through to the substrate.

After the material is saturated, remove it using a glovebag enclosure according to the following procedure:

1. Check pipe where the work will be performed. Wrap damaged (broken lagging, hanging, etc.), pipe in 6 mil plastic and "candy-stripe" it with duct tape. Place one layer of duct tape around the undamaged pipe at each end where the glovebag will be attached.

2. Slit the top of the glovebag open (if necessary) and cut down the sides to accommodate the size of the pipe (about two inches longer than the pipe diameter).

3. Place the necessary tools into the pouch located inside the glovebag. These tools will usually include: a bone saw, utility knife, rags, scrub brush, wire cutters, tin snips and pre-wetted cloth.

4. Place one strip of duct tape along the edge of the open top slit of the glovebag for reinforcement.

5. Place the glovebag around the section of pipe to be worked on and staple the top together through the reinforcing duct tape. Next, duct tape the ends of the glovebag to the pipe itself, where it was previously covered with plastic or duct tape.

6. Use a smoke tube and aspirator bulb to test the seal. Place the tube into the water sleeve (two-inch opening to glovebag) squeezing the bulb and filling the bag with visible smoke. Remove the smoke tube and twist the water sleeve closed. While holding the water sleeve tightly, gently squeeze the glovebag and look for smoke leaking out, (especially at the top and ends of the glovebag). If leaks are found, tape the leak closed with duct tape and re-test.

7. Insert the wand from the garden sprayer through the water sleeve. Duct tape the water sleeve tightly around the wand to prevent leakage.

8. One person places his/her hands into the long-sleeved gloves while the second person directs the garden sprayer at the work.

9. Use the bone saw, if required, to cut the insulation at each end of the section to be removed. A bone saw is a serrated heavy gauge wire with ring-type handles at each end. Throughout this process, spray amended water or removal encapsulant on the cutting area to keep dust to a minimum.

10. Remove the insulation using putty knives or other tools. Place the pieces of insulation in the bottom of the glovebag without dropping them.

11. Rinse all tools with water inside the bag and place them back into the pouch.

12. Using the scrub brush, rags and water, scrub and wipe down the exposed pipe.

13. Remove the water wand from the water sleeve and attach the small nozzle from the HEPA-filtered vacuum. Turn on the vacuum only briefly to collapse the bag.

14. Remove the vacuum nozzle, twist the water sleeve closed and seal with duct tape.

15. From outside the bag, pull the tool pouch away from the bag. Place duct tape over the twisted portion and then cut the tool bag from the glovebag, cutting through the twisted/taped section. Contaminated tools may then be placed directly into the next glovebag without cleaning. Alternatively, the tool pouch with the tools can be placed in a bucket of water, opened underwater, and the tools cleaned and dried. Discard the rags and scrub brush as asbestos waste. If more than one adjacent section of pipe is to be removed, the glovebag may be loosened at each end and slid along the pipe to the next section. In this case, the tools may remain in the bag for continued use.

16. With removed insulation in the bottom of the bag, twist the bag several times and tape it to keep the material in the bottom during removal of the glovebag from the pipe.

17. Slip a 6 mil disposal bag over the glovebag (still attached to the pipe). Remove the tape or cut the bag and open the top of the glovebag and fold it down into the disposal bag.

18. Clean all surfaces in the work area using disposable cloths wetted with water with surfactant or removal encapsulant added. When these surfaces have dried, clean them with a HEPA filtered vacuum. Material adhered to a surface with removal encapsulant may require the application of additional removal encapsulant to facilitate cleaning.

19. Seal the exposed ends of the remaining pipe insulation with encapsulant.

20. Rewrap ends of pipe insulation or fittings with a rewettable fiberglass cloth wrap.

21. Remove disposable suits and place these into a waste bag with other debris.

22. Collapse the bag with a HEPA vacuum, twist the top of the bag, seal with at least 3 wraps of duct tape, fold over and seal again with at least 3 wraps of duct tape.

XII - EMERGENCY PROCEDURES

In the event of accidental damage to ACBM due to roof leaks, broken water lines, improper maintenance, fire or any other cause, maintenance personnel shall:

A. Notify the Asbestos Coordinator or the School Asbestos Worker/Technician.

B. Shut down the HVAC system and seal all vents in the area of the release.

C. Isolate the area by closing and locking doors and sealing with polyethylene sheeting and duct tape.

D. In the event that significant damage (greater than three square or linear feet) has occurred, do not proceed with any clean-up until the Asbestos Consultant has been notified and has approved any action to be taken.

E. Following instruction from the Consultant or in the event of a small disturbance (less than three square or linear feet), only approved maintenance personnel should be allowed to enter the area. A log must be kept of all persons involved in the event.

F. All maintenance personnel must wear NIOSH approved 1/2 face cartridge respirators with filters approved for asbestos dust and full body disposable protective clothing when handling ACBM. All personnel using respirators must be fit tested and OSHA qualified.

G. Using the garden sprayer containing a mixture of water and surfactant, thoroughly saturate the damaged ACBM.

H. If clean-up is required due to water damage, the wet ACBM should not be allowed to dry.

I. Wet and remove larger pieces of ACBM by hand and place them in a 6 mil labeled bag. HEPA vacuum the remainder.

J. HEPA vacuum or wet mop, whichever is appropriate, the entire area. Dispose mop heads or wet cloths, which have been used, into sealed bags with labeling according to EPA regulations.

K. HEPA vacuum protective clothing, then remove and dispose of it as contaminated waste.

L. Perform air monitoring on all projects related to ACBM to ensure proper clean-up. Clearance samples should be analyzed by the Consultant using Transmission Electron Microscopy (TEM).

M. Respirators must be worn in the work area until TEM results indicate acceptable airborne fiber levels. At this time, barriers may be removed and HVAC systems reactivated.

N. File appropriate forms with the Asbestos Coordinator and School Asbestos Worker/Technician .

XIII - DISPOSAL OF ASBESTOS MATERIAL

Unless otherwise indicated, disposal of asbestos-containing building materials shall be as follows:

A. All friable ACBM must be adequately wetted and placed in a sealed impermeable container. The container must be a sturdy (i.e. polyethylene) bag or an airtight drum.

B. All contaminated suits and used respirator cartridges should be wetted and disposed of in labeled plastic bags.

C. Containers used for the disposal of ACBM shall be labeled: Contains Asbestos - Avoid Opening or Breaking Container - Breathing Asbestos is Hazardous To Your Health.

D. Sealed impermeable containers from the asbestos work area may be placed in specially designated areas for temporary storage until a full shipment is accumulated. Otherwise, all containers shall be sent directly to the waste disposal site at the completion of the job. The temporary storage area shall be properly isolated and posted with asbestos warning signs. All containers shall be sealed at the close of active work periods.

E. All asbestos waste generated from asbestos work shall be disposed of in accordance with all applicable regulations. HEPA vacuum waste may be held until a full shipment has accumulated for disposal.

F. All ACBM must be properly sealed and shipped via a duly licensed and insured solid waste hauler, in impermeable containers.

G. All friable asbestos shall be properly disposed of at a landfill approved for asbestos disposal with the disposer and the hauler prior to shipment. Make advance inquiry regarding specific procedures required by such parties.

H. A receipted copy of the Waste Origin - Waste Disposal Form for the shipment shall be kept with other documents relating to the asbestos work.

XIV - RECORD KEEPING

The Asbestos Coordinator or the School Asbestos Worker/Technician shall maintain the following documents as part of the Management Plan, which will be retained in the administrative office of the Local Education Agency:

A. medical exam records, if required, (in accordance with 29 CFR 1910.1001(m)(3) and 1926.58(n)(3) or other applicable OSHA regulations) for all employees engaged in asbestos work or who may have been exposed to asbestos fibers in excess of the Action Level of 0.01 f/cc at the facility,

B. a detailed written description of each preventive measure or response action, including methods used, the location where the measure was taken, reasons for selecting the measure or action, start and completion dates of the work, names and addresses of all contractors involved, and, if applicable, their State accreditation numbers, and if ACBM is removed, the name and location of the storage or disposal site of the ACBM.

C. the name and signature of any person collecting any air sample required to be collected at the completion of certain response actions specified by AHERA, the locations where samples were collected, date of collection, the name and address of the laboratory analyzing the samples, the date of analysis, the results of the analysis, the method of analysis, the name and signature of the person performing the analysis, and a statement that the laboratory meets the requirements of AHERA.

D. For each person required to be trained under AHERA, the Asbestos Coordinator or the School Asbestos Worker/Technician, as the LEA representative, shall provide the person's name and job title, the date that training was completed by that person, the location of the training and the number of hours completed in such training.

E. For each time that periodic surveillance is performed, the name of each person performing the surveillance, the date of the surveillance and any changes in the conditions of the materials shall be recorded.

F. For each time that cleaning is performed, the name of each person performing the cleaning, the date of such cleaning, the locations cleaned and the methods used to perform such cleaning shall be recorded.

G. For each time that Operations and Maintenance activities are performed, the Asbestos Coordinator, as the Local Education Agency's representative, shall record the name of each person performing the activity, the start and completion dates of the activity, the locations where such activity occurred, a description of the activity including preventive measures used, and if ACBM is removed, the name and location of the storage or disposal site of the ACBM.

H. For each time that major asbestos activity is performed, the name and signature, State of accreditation, and if applicable, the accreditation number of each person performing the activity, the start and completion dates of this activity, the locations where such activity occurred, a description of the activity including preventive measures used, and if ACBM is removed, the name and location of the the storage or disposal site of the ACBM shall be provided.

I. For each fiber release episode, the date and location of the episode, the method of repair, preventive measures or response actions taken, the name of each person performing the work, and if ACBM is removed, the name and location of the storage or disposal site of the ACBM.

J. For each fiber release episode, copies of each document and record shall be maintained for at least 30 years. These copies shall be retained even if the facility is sold.

K. all Waste Origin - Waste Disposal forms for the disposal of asbestos material,

L. all documents relating to the HEPA vacuum, HEPA vacuum filter replacement dates, and HEPA vacuum waste disposal dates,

M. all correspondence regarding ACBM,

N. all correspondence with any federal, state or local agencies regarding asbestos,

O. all other documents and records relating to asbestos.

Records shall be made available to appropriate OSHA representatives in accordance with 29 CFR 1910.1001 (m)(5) and 1926.58 (n)(5) or other applicable federal, state or local laws. Sampling results and medical records shall be made available to appropriate affected employees, former employees and designated representatives in accordance with 29 CFR 1910.1001 (m)(5) and 1926.58 (n)(5) or other applicable federal, state or local laws.

APPENDIX I

Summary of Special Practices for Maintenance Work

Summary of Special Practices for Maintenance Work at:

Baldwin School

Likelihood of ACBM Disturbance

	Contact Very Unlikely	Accidental Disturbance Possible	Small Disturbance Intended or Likely
Approval needed	No	Yes	Yes
Special scheduling or access control	No	Yes	Yes
Supervision needed	No	Initial	Yes
HVAC system modification	None	If possible	Shut Down
Containment	None	Drop Cloths	Complete
Respirator protection	Available	Yes	Yes
Protective clothing	None	Yes	Yes
Use of wet methods	No	As Needed	Yes
Use of HEPA vacuum	Available	Yes	Yes
Personal decontamination	No	Dry	Wet

APPENDIX II

Asbestos in Buildings (EPA)

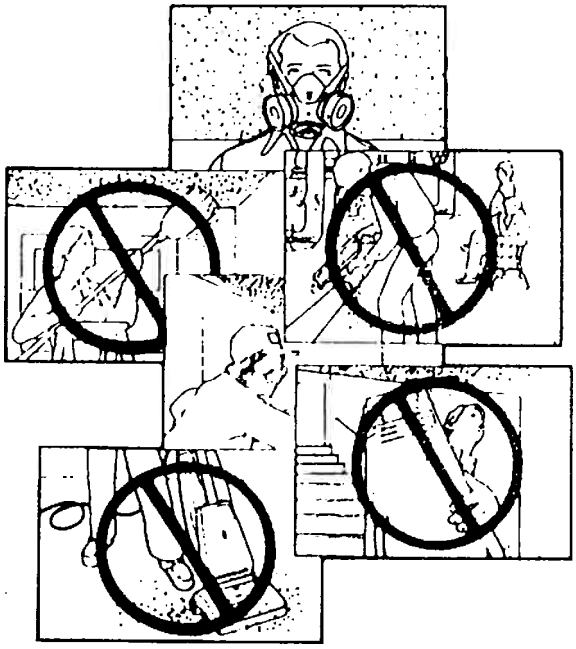
United States
Environmental Protection
Agency
Washington DC 20460

EPA 560/5-85 018
July 1985

EPA

Asbestos in Buildings

Guidance for Service and Maintenance Personnel



Definitions

Asbestos: A mineral composed of small, thin fibers. It is common in many building materials.

Cementitious: Materials that are hard and usually rough-textured or cement-like in appearance.

Friable: Materials that can be crumbled, pulverized, or reduced to powder by hand pressure.

HEPA: (High Efficiency Particulate Air.) A special type of filter that can trap asbestos fibers.

Introduction

This booklet has been prepared by the United States Environmental Protection Agency to assist service and maintenance personnel in implementing special Operating and Maintenance procedures in buildings containing asbestos. The information is extracted from "Guidance for Controlling Asbestos-Containing Materials in Buildings" (EPA 560/5-85-024).

If you follow the steps in this booklet you will:

- Protect the health of people using the building
- Protect your own health.

If there is asbestos in your building, you should ask your supervisor for training on:

- Asbestos-related hazards
- How to avoid releasing asbestos fibers into the air
- How to avoid breathing asbestos fibers by proper use of respirators
- How to handle asbestos materials.

Health Risks

Avoid breathing [illegible]

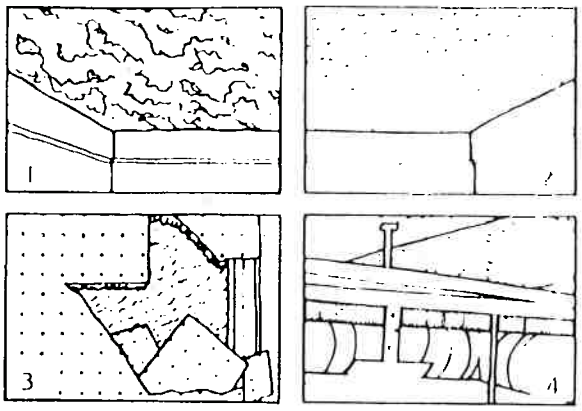
Breathing airborne asbestos fibers has been associated with

- Asbestosis—a serious lung disease
- Lung cancer
- Mesothelioma—a cancer of the lining of the lung or abdominal cavities.

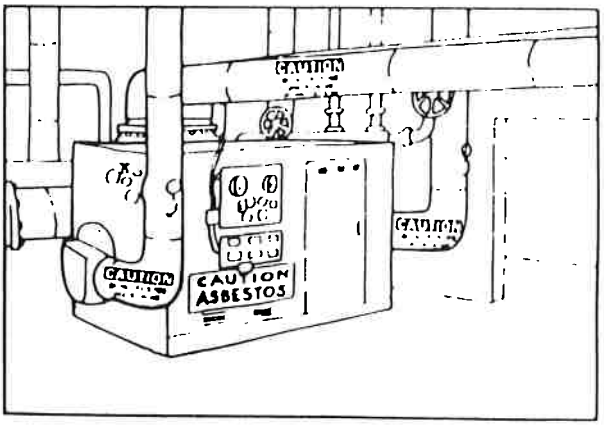
Airborne asbestos levels in buildings are much lower than those in industrial workplaces where serious health effects have been observed. However, it is still important to minimize exposure to asbestos fibers, by following proper work practices.

Recognizing Asbestos Materials

Become familiar [illegible] could contain [illegible]



1. Friable, fluffy sprayed-on material (fireproofing).
2. Friable, cementitious sprayed-on or troweled material (acoustical plaster)
3. Perforated, nonfriable wallboard with friable sprayed-on material behind.
4. Friable fireproofing material on beam with pipe insulation below

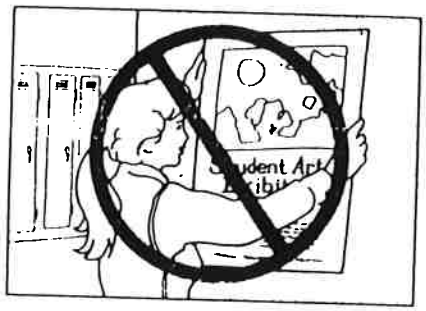


Do not overlook the boiler room

- Boilers and pipes are often insulated with asbestos materials
- The walls and ceilings of the boiler room may be covered with asbestos material.

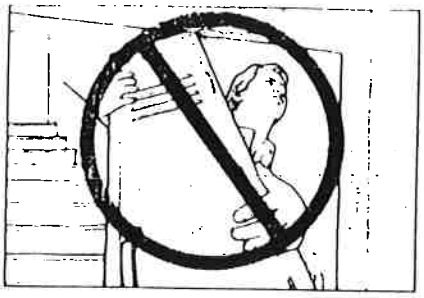
Disturbing Asbestos Materials

- **Do not** drill holes in asbestos materials
- **Do not** hang plants or anything else from ceilings covered with asbestos materials.

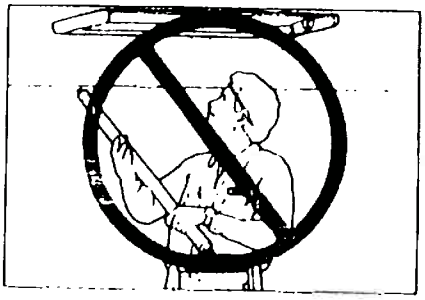


- **Do not** pin or hang pictures on walls covered with asbestos materials

- **Do not** sand asbestos floor tiles or backing material.



- **Do not** damage asbestos material while moving furniture, etc.



- **Do not** disturb asbestos material when replacing light bulbs, etc.

- **Do not** allow curtains, drapes or dividers to damage asbestos materials

Cleaning

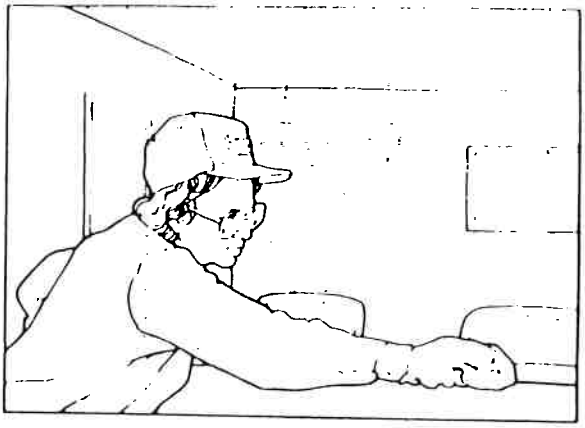
Improper cleaning can stir up asbestos fibers.

NOT THIS

- **Do not** dust with a brush.

- **Do not** dry sweep floors.

BUT THIS

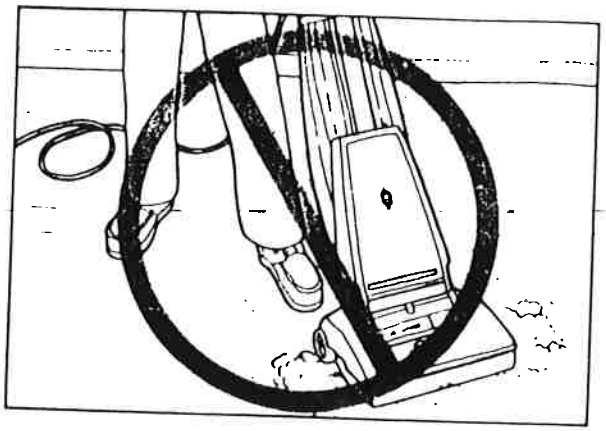


- Dust with a damp cloth.

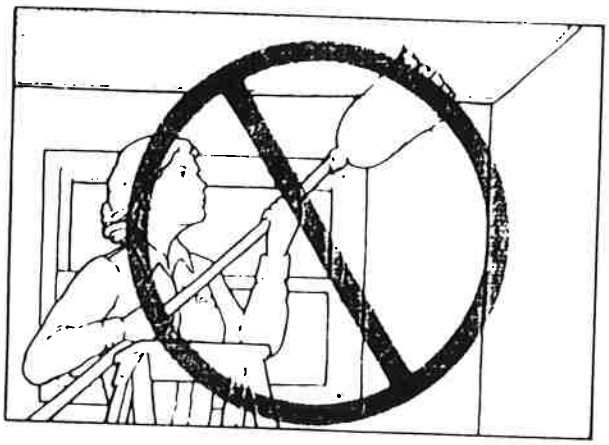
- Wet mop floors.

Cleaning

NOT THIS

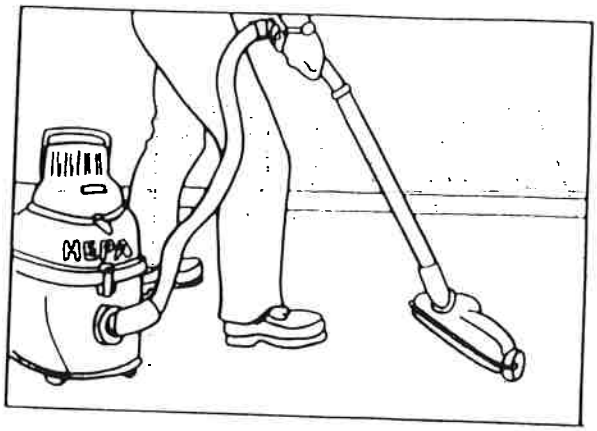


- **Do not** use an ordinary vacuum to clean up asbestos debris.

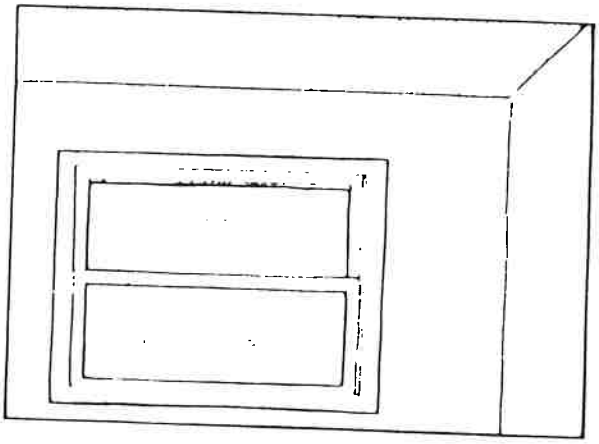


- **Do not** brush or sweep ceilings and walls covered with asbestos materials.

BUT THIS



- Use only a special HEPA vacuum to clean up asbestos debris.



- Avoid touching or disturbing ceilings and walls covered with asbestos materials.

General Maintenance

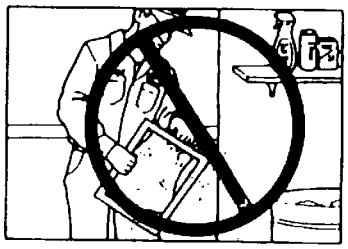
Take care when doing routine maintenance jobs around asbestos materials.

NOT THIS

- **DO NOT** use a dust mask. It does not protect you against asbestos fibers.

If you have to remove ceiling tiles below asbestos material

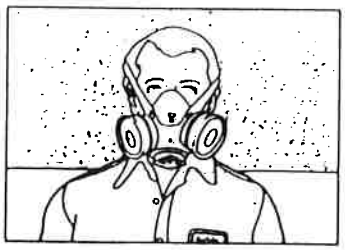
- **DO NOT** start work without protection.
- **DO NOT** allow other people in the area.
- **DO NOT** leave dust and debris after you have finished.



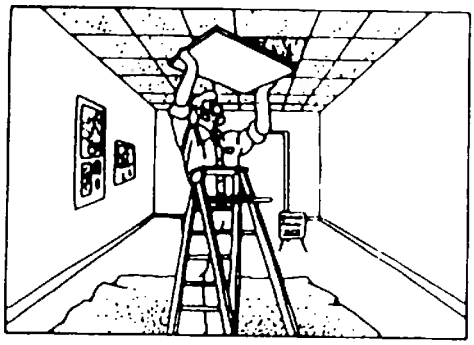
If you change filters in the Air Ventilation System:

- **DO NOT** remove the filter dry.
- **DO NOT** shake the filter. Asbestos fibers could be released.

BUT THIS



- Wear a respirator that is approved for work with asbestos.

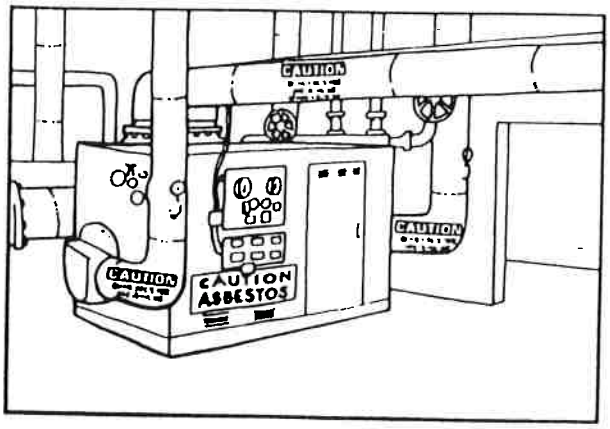


- Wear an approved respirator
- Clear the area of other people
- Use a drop cloth and clean up carefully after each job.

- Mist the filter with water
- Remove the filter carefully
- Dispose of properly.

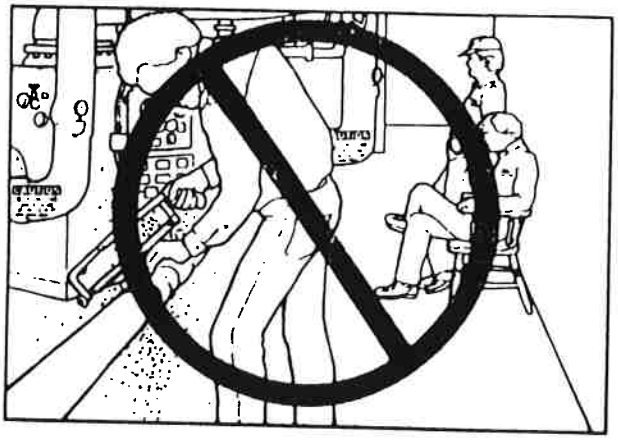
Boiler Room Maintenance

Take special care when working in boiler rooms



- Suggest that pipe insulation that contains asbestos be labeled with "CAUTION-ASBESTOS".

NOT THIS

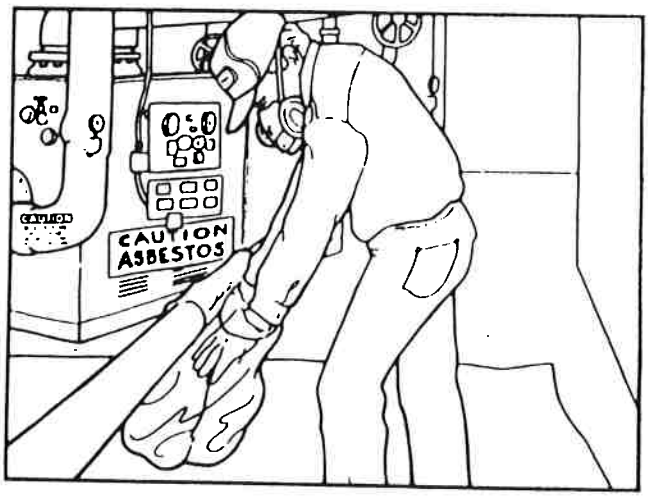


If you have to repair boilers or pipes that have asbestos insulation:

- **DO NOT** start work without protection.
- **DO NOT** allow other people in the area.
- **DO NOT** allow asbestos material to fall on the floor.
- **DO NOT** allow asbestos fibers to be released into the air.

- Report all damage you see to your supervisor
- Obtain instruction on how to repair damaged insulation.

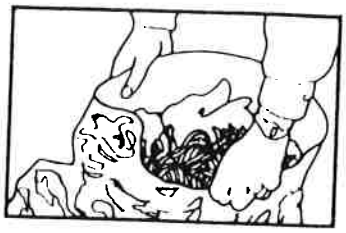
BUT THIS



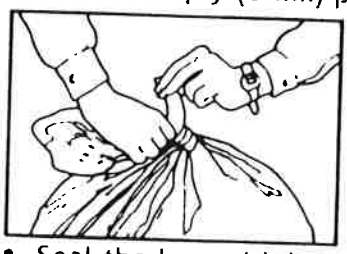
- Wear an approved respirator.
- Clear the area of other people.
- Use a drop cloth.
- Use a glove bag (Ask your supervisor for details).
- Clean up carefully.

Disposal

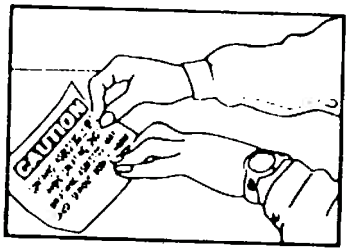
All cleaning materials and other asbestos waste must be disposed of properly



- Place all dampened filters, cloths, mopheads and other asbestos wastes in double ply (6 mil) plastic bags.



- Seal the bag with heavy duty tape.



- Label each bag with a sign: "CAUTION: Asbestos Waste".

- Place the sealed and labeled bags with other solid waste material for pick-up and delivery to an approved waste disposal site
- Asbestos materials should be disposed of according to Federal and local regulations.

Actions to Take

By taking the right action you can reduce the risk of exposure to asbestos.

- Know where the asbestos is in your building
- If you find materials that could contain asbestos recommend to your supervisor that they be tested
- Ask your supervisor for training in proper ways to work around asbestos materials.

- If you see materials that have been disturbed report the damage to your supervisor.
- If the cleaning or maintenance in your building is not being done properly see that it is corrected.
- Keep on hand items useful for working on or around asbestos materials. These include:
  - disposal bags
  - respirators
  - tools for working on insulation
  - disposable coveralls
  - dropcloths
  - water bottles for misting filters, etc.
  - glove bags.

Further Information

How to get more details

- If you work in a school and have not received these documents—ask your supervisor for them.

If you need more information:

- Refer to EPA publications
- For copies of this and other EPA documents on asbestos call 800-424-9065 (554-1404 in Washington, D.C.)
- Contact your EPA regional asbestos coordinator for technical assistance and information on training.

GPO : 1986 O - 151-811

EPA Regional Asbestos Coordinators

Region 1
(617) 223-0585
Maine
Vermont
New Hampshire
Connecticut
Massachusetts
Rhode Island

Region 2
(201) 321-6668
New York
New Jersey
Puerto Rico
Virgin Islands

Region 3
(215) 597-9859
Pennsylvania
Maryland
Delaware
Virginia
West Virginia
District of Columbia

Region 4
(404) 881-3864
Georgia
Alabama
Mississippi
Florida
North Carolina
South Carolina
Tennessee
Kentucky

Region 5
(312) 886-6006
Indiana
Ohio
Illinois
Michigan
Wisconsin
Minnesota

Region 6
(214) 767-5414
Texas
New Mexico
Oklahoma
Arkansas
Louisiana

Region 7
(913) 236-2838
Kansas
Missouri
Nebraska
Iowa

Region 8
(303) 293-1747
Colorado
Utah
Wyoming
Montana
North Dakota
South Dakota

Region 9
(415) 974-8558
California
Nevada
Arizona
Hawaii
Guam, Am. Samoa

Region 10
(206) 442-7870
Washington
Oregon
Idaho
Alaska

APPENDIX III

ACBM Forms

EMPLOYEE TRAINING FORM

Location of Training: _____

Date: _____ Period of Instruction: _____ Hrs.

Instructor (Print Name): _____

Subject Matter Covered: _____

ATTENDEES:

NAME (Print)	JOB TITLE

*LEA School Asbestos Worker/Technician certifies that the person indicated attended the above described AHERA Compliance Training Program.

LEA School Asbestos Worker/Technician: _____

Signature: _____

LEA: _____

Date: _____

ACBM REINSPECTION FORM \SCHOOL:_____

Fill out three (3) sheets for each ACBM area.

Date:_____ Time:_____ Inspector:_____
Location or Area:_____

1. Did you perform the last visual inspection in this area

   ____ yes ____ no

2. Are you familiar with the locations and prior condition of ACBM in the area which this inspection covers?

   ____ yes ____ no

3. Have you received training in the purpose of this inspection, the health hazards associated with asbestos exposure, and work practices to protect yourself against exposure to airborne asbestos including use of air purifying respirators and the use of this form?

   ____ yes ____ no

   If you are not familiar with the locations of ACBM, safe work practices or the use of this form, contact the Asbestos Coordinator and do not continue.

4. Is the proper Notice to Employees Form in place?

   ____ yes ____ no

5. Evaluate the physical condition of ACBM in this area. Evaluate each of the following criteria by checking the appropriate statement.

   a. Material Condition
      ____ No Damage
      ____ Moderate (small area)
      ____ Severe

   b. Water Damage
      ____ None
      ____ Minor
      ____ Moderate/Severe

   c. Exposed Surface Area
      ____ None
      ____ 10% or less
      ____ Greater than 10%

d. **Accessibility**

____ Not Accessible
____ Rarely Accessed
____ Accessible

e. Activity/Movement

____ None/Low
____ Moderate
____ High

f. Air Plenum/Direct Air Stream

____ Present
____ Not Present

g. Friability

____ Low
____ Moderate
____ High

6. Has the condition of any ACBM within the area of this inspection deteriorated since the last inspection?
____ yes ____ no

If yes, describe:

Location: Extent and Probable Cause:

7. Is there any damaged ACBM present that was reported previously?

If yes, describe:

Location: Extent and Probable Cause:

8. Is it possible or probable that unprotected persons may be exposed to asbestos due to the conditions described in items 4-7, above?

____ yes ____ no
If yes, verbally notify the Asbestos Coordinator of the conditions. Check here if you verbally notified someone of potentially dangerous conditions and give their name and the date and time of notification:

Name: _____
Date: _____ Time: _____

9. **Check the appropriate spaces below (check all that apply):**

_____ No change in conditions
_____ Conditions have deteriorated
_____ Personnel may be exposed to asbestos
_____ Repair or removal may be required
_____ Recommend IMMEDIATE investigation
_____ Minor repairs are necessary
_____ Posting missing

Inspector's Signature: _____
Date: _____

FOR USE BY ASBESTOS COORDINATOR ONLY:

Received ACBM Condition Form _____
(Date and Time)

Action:

_____ None Required
_____ In-House Clean Up. Completed _____
(Date and Time)

_____ Evacuation of area
_____ Outside Contractor Clean Up. Completed _____
(Date and Time)

Contacted: _____
Visited Site: _____
Completed Recommendation: _____
Action Required: _____
Other: _____

REINSPECTION SUMMARY SHEET /SCHOOL:_____

Fill out every six (6) months and insert in Appendix of Management Plan

HA No.	Description of ACBM	Area Inspected	Change in Condition (if any)

Inspectors' Signature:_____

Date:_____ LEA:_____

JOB REQUEST FORM /SCHOOL: _____

_____

Name: _____ Date: _____

1. Building _____
   Address _____
   City _____ State _____ Zip Code _____

2. Description of work: _____
_____
_____
_____

3. Work date: _____

4. Has O&M been reviewed for appropriate procedure? _____
   Understood? _____

5. Estimated duration of project: _____

6. Asbestos Coordinator signature: _____
   Date signed _____

7. Was this project completed following procedures outlined in the O&M Program, Section XI? _____

8. Actual duration of project: _____

9. Employee signature _____
   Date signed _____

10. School Asbestos Worker/Technician signature: _____
    Date signed

JOB NOTIFICATION FORM /SCHOOL: _____

Job Location _____ Floor _____

Area and Equipment _____

Description of Project _____

Total linear feet of pipe involved (if pipe): _____

Pipe size: _____

Total square feet (if other material/equipment): _____

Type of equipment/material: _____

Area dimensions: _____

Start date: _____ Completion date: _____

Methods to control emissions: _____

Name of monitoring lab: _____

Anticipated disposal site: _____

Supervisor in charge of job: _____

(name and phone number)

Contractor/School Asbestos Worker/ Technician _____

Address: _____

City: _____ State: _____ Zip Code: _____

OPERATIONS AND MAINTENANCE ACTIVITY/
SCHOOL:_____

_____

1. Description of locations of Operations and Maintenance (O&M) activity:

2. Start and completion dates of O&M activity:

3. Description of activity including preventive measures used:

4. Name(s) of Person(s) performing O&M activity:

5. If ACBM is removed, name and location of storage or disposal site:

School Asbestos Worker/ Technician:_____
Date:_____
LEA Asbestos Coordinator:_____
Signature:_____ Date:_____

_____

LEA:_____
Date:_____

CLEANING RECORD /SCHOOL:_____

1. Locations cleaned:

2. Cleaning methods used (pursuant to 40 CFR 763.91(a)):

3. Names of persons performing cleaning and training dates:

4. Date cleaning performed:_____

5. School Asbestos Worker/Technician:_____

   Signature:_____

   Date:_____

6. LEA Asbestos Coordinator:_____

   Signature:_____

   Date:_____

LEA:_____

Date:_____

FIBER RELEASE EPISODE /SCHOOL:_____

1. Description of fiber release episode including location, ACBM, method of repair, preventative measure or response action taken:

2. Date of fiber release episode:_____

3. Person(s) performing any work described above:

4. If ACBM is removed, name and location of storage or disposal site:

5. School Asbestos Worker/Technician:_____

   Signature:_____

   Date:_____

6. LEA Asbestos Coordinator:_____

   Signature:_____

   Date:_____

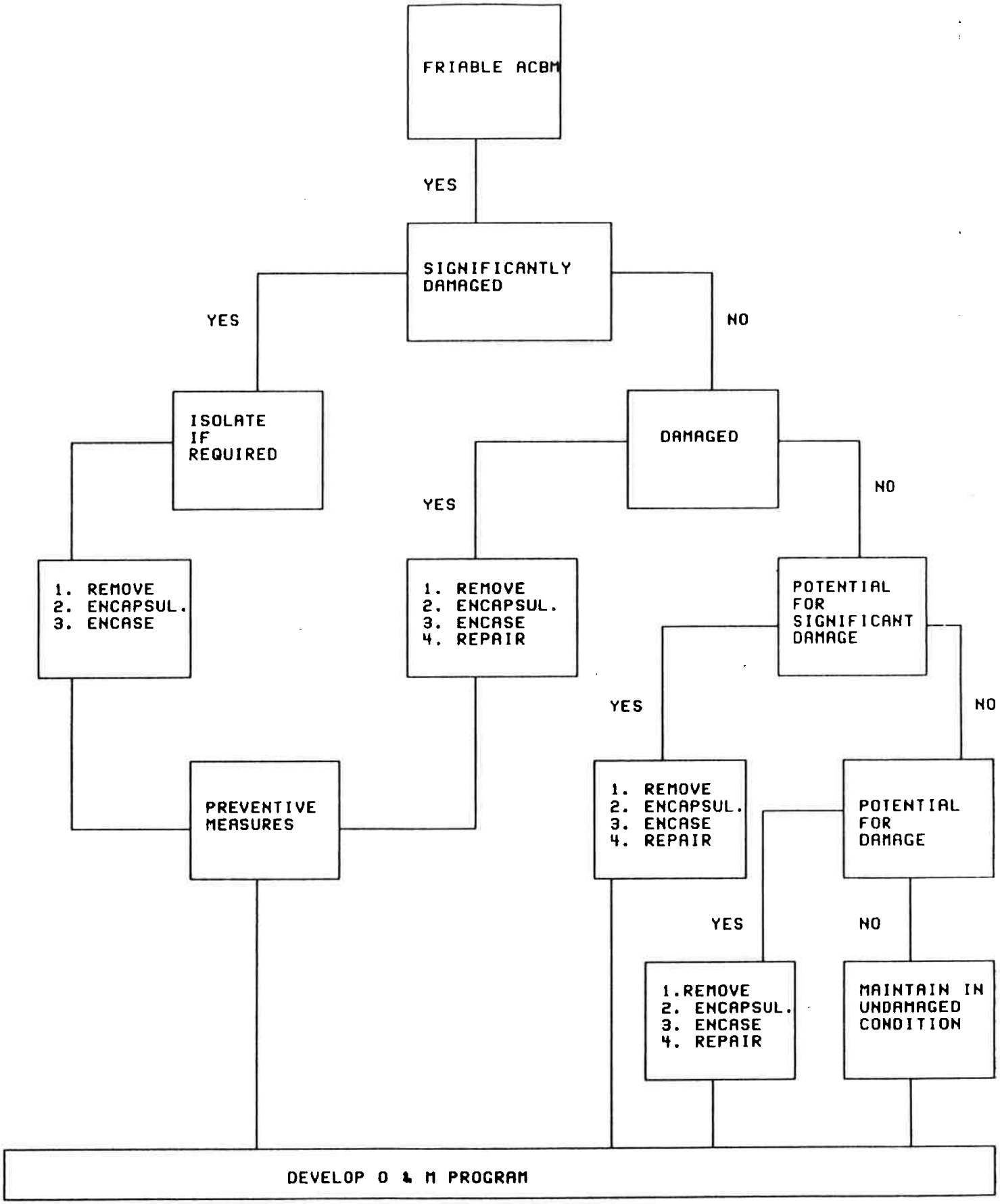
LEA:_____

Date:_____

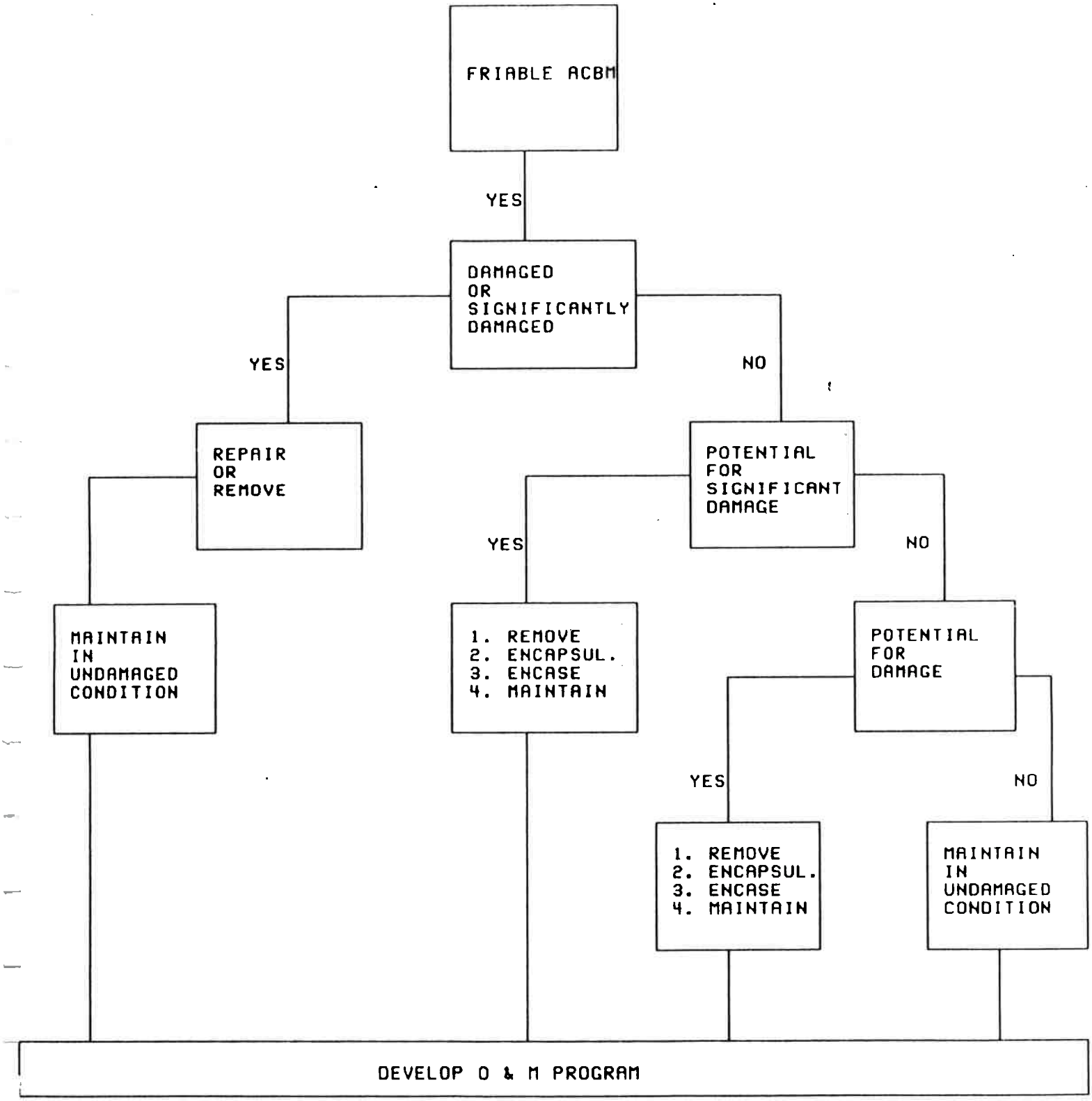
APPENDIX IV

EPA Decision Sheets

FRIABLE SURFACING & MISCELLANEOUS ACBM
E.P.A. DECISION TREE
20 OCTOBER 1987



THERMAL SYSTEM INSULATION
E.P.A. DECISION TREE
20 OCTOBER 1987



APPENDIX V

Outside Contractor Statement And Notice

OUTSIDE CONTRACTOR STATEMENT

Name: _____ Date: _____

Company Name: _____
Address: _____
City: _____ State: _____ Zip Code _____

Type of Business: _____

Location of contract work: _____

I have read Section XI of the Operations and Maintenance Program regarding asbestos-containing building materials (ACBM). I acknowledge the location of ACBM as identified in Section III and agree to comply with all OSHA requirements and the procedures outlined in the Operations and Maintenance Program.

Corporate Officer or Principal:

_____
(signature)

_____
(name)

_____
(date)

Supervisor or Foreman:

_____
(signature)

_____
(name)

_____
(date)

Employees performing work at site:
(duplicate as necessary for additional employees)

_____
(signature)

_____
(name)

_____
(date)

NOTICE TO CONTRACTORS

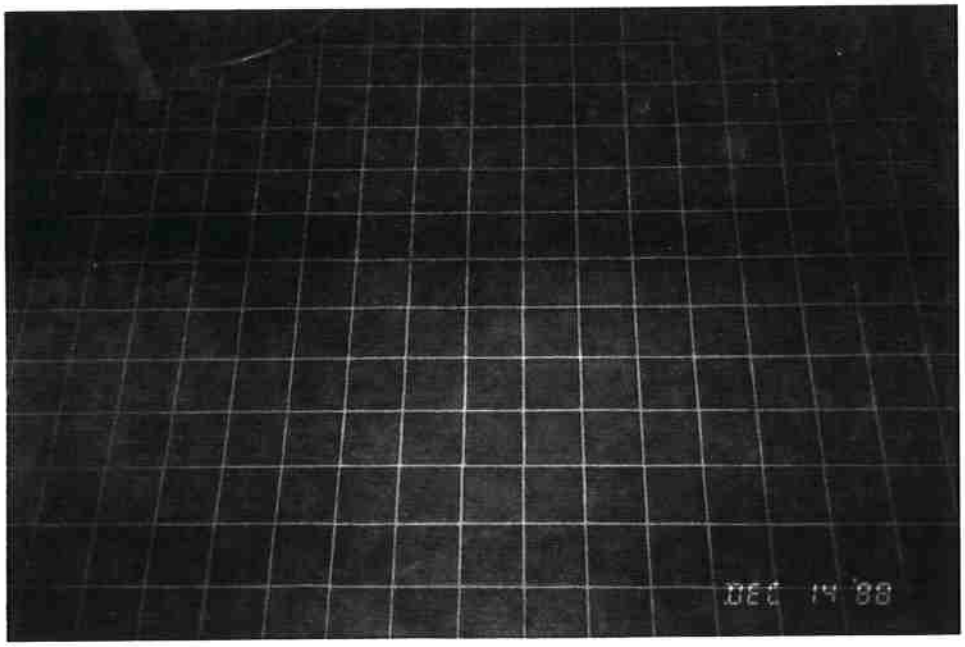
An effort has been made to eliminate the likelihood of disturbing asbestos-containing materials during the course of the work specified. However, there is a possibility that you could come in contact with such materials. Before any work begins, review the asbestos management plan, located in the school's administrative office, to determine if any asbestos-containing materials would be disturbed by your work. If so, or it is unclear, do not proceed with your work. Instead, contact the Asbestos Coordinator or the School Asbestos Worker/Technician for the Baldwin School for further instructions. This information is required by the Environmental Protection Agency.

APPENDIX A

PHOTOGRAPHS

GEORGE BALDWIN SCHOOL

M-03



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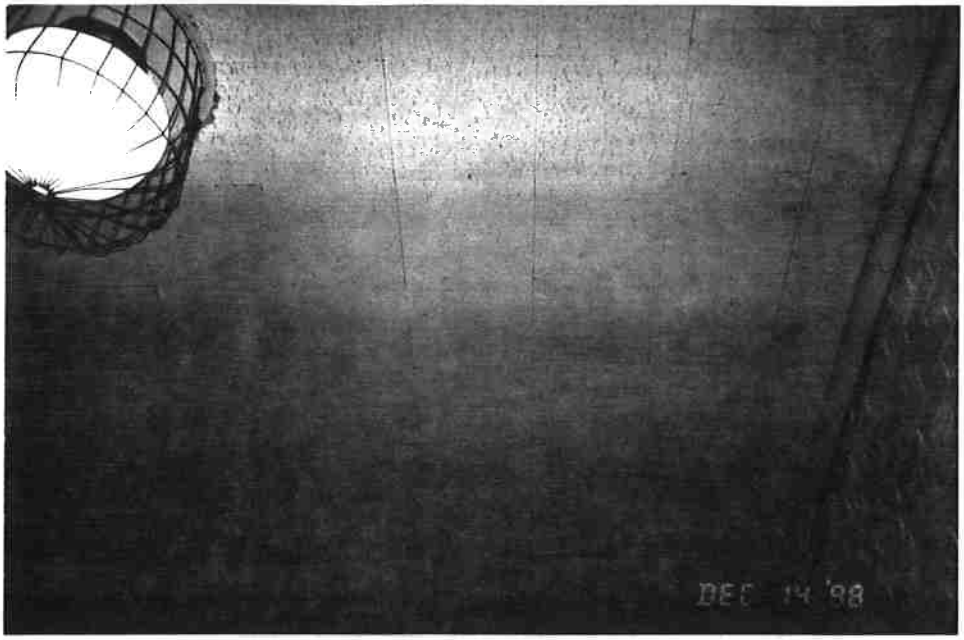

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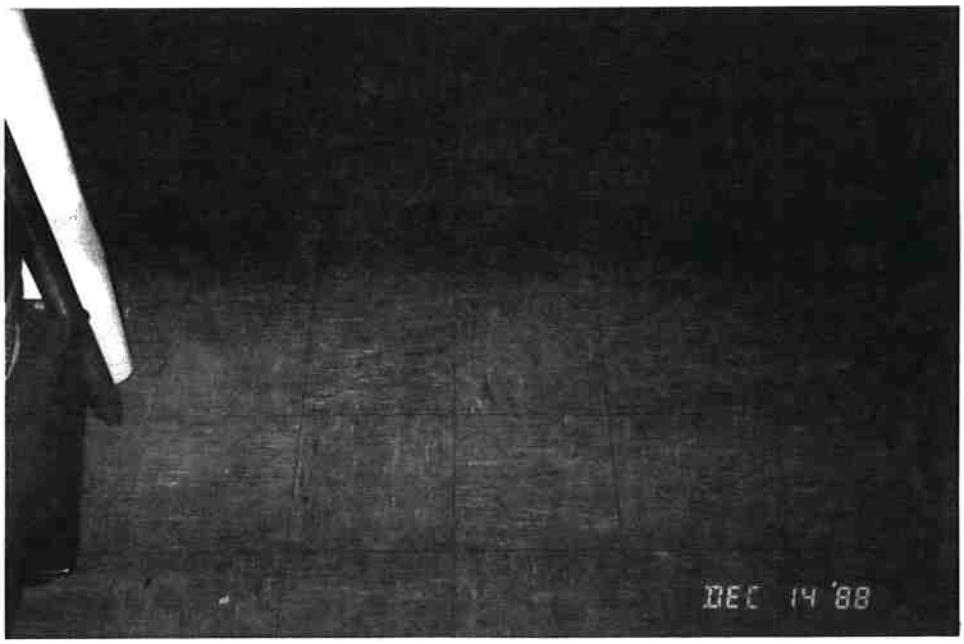

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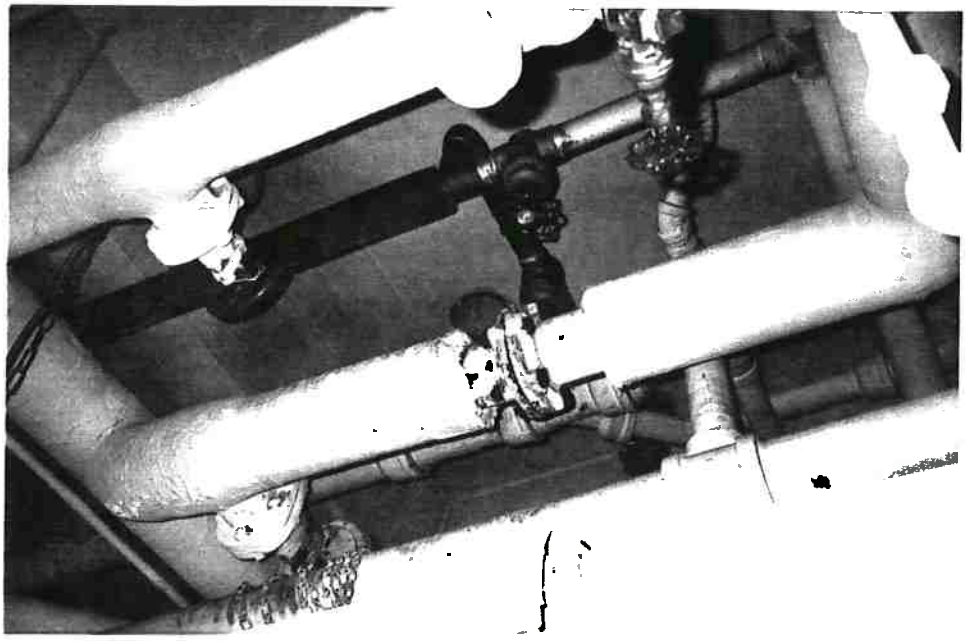

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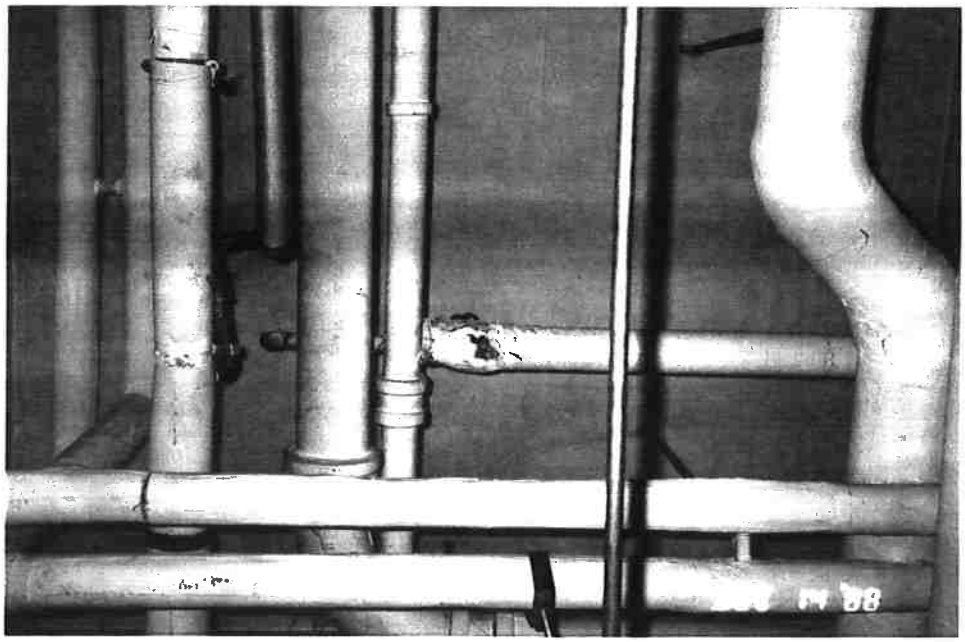

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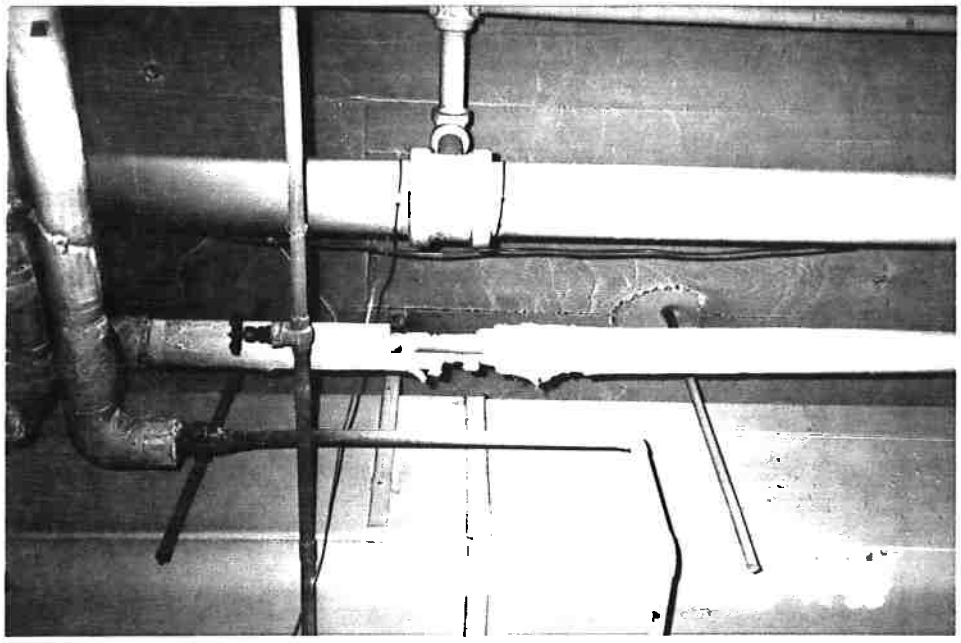

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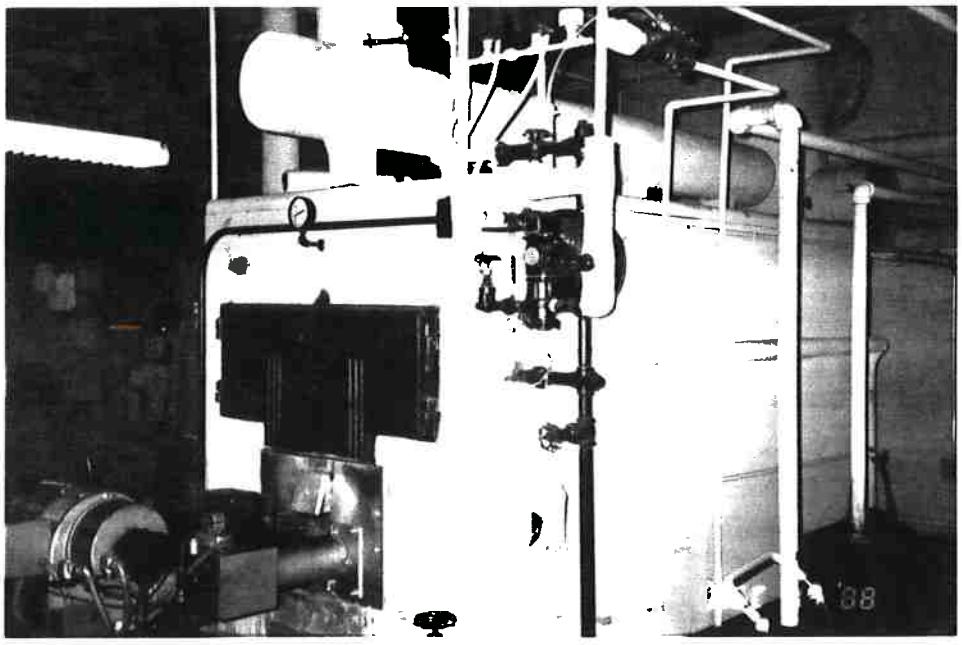

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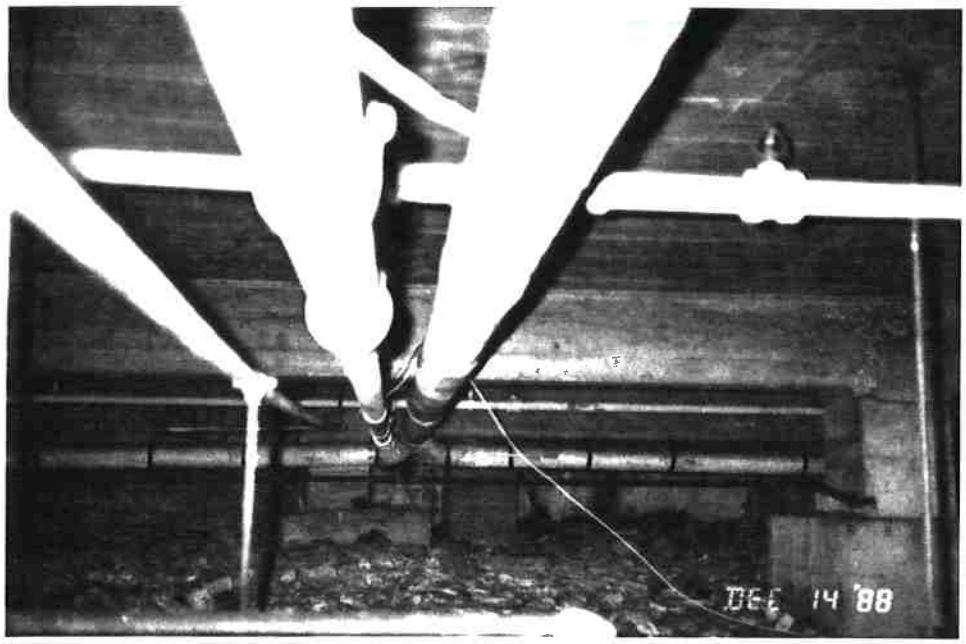

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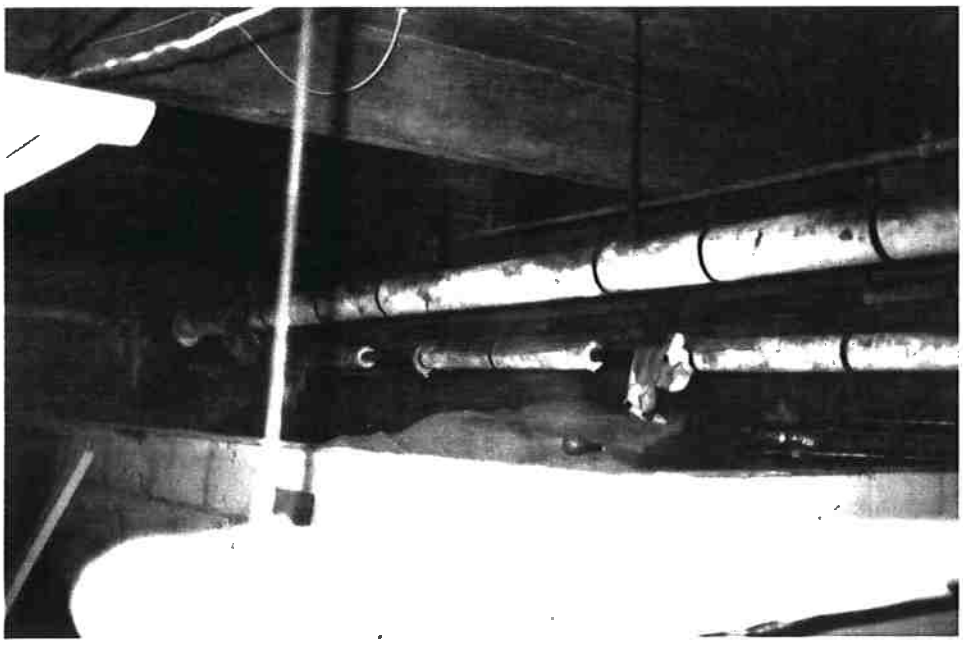
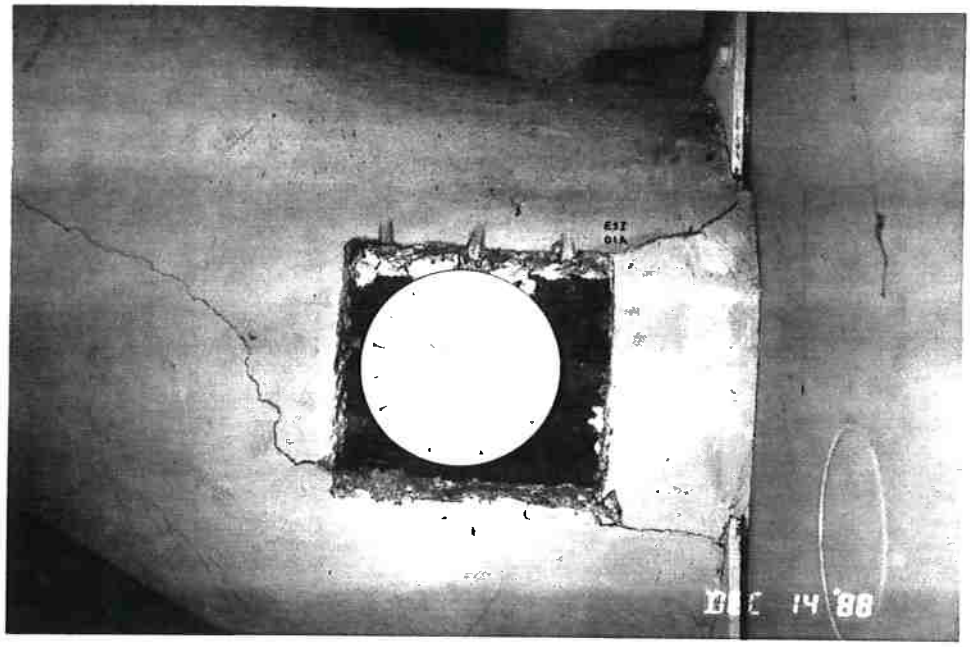


T-02
(L.A.-1; L.A.-2; L.A.-3)



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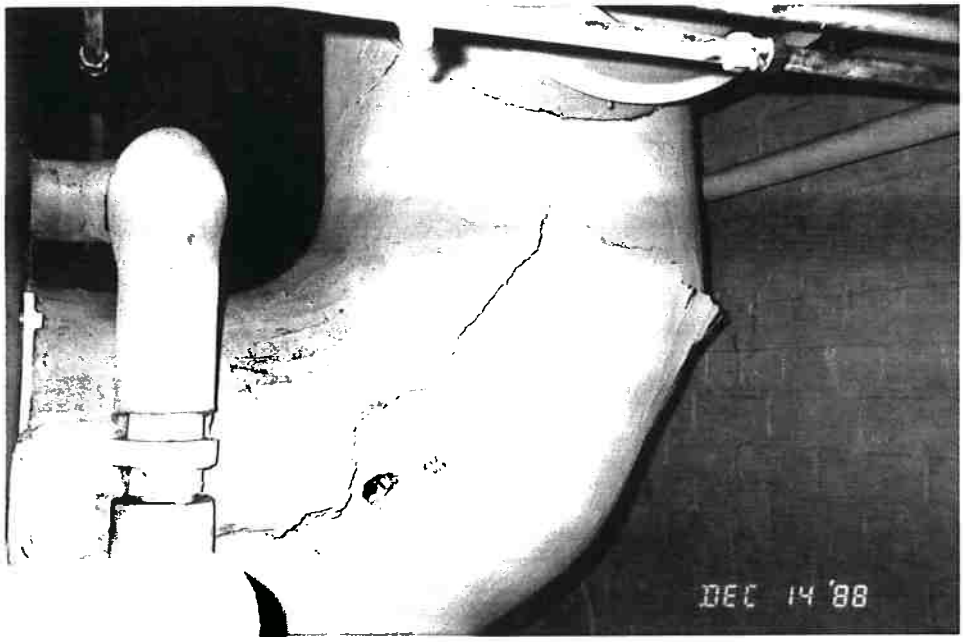

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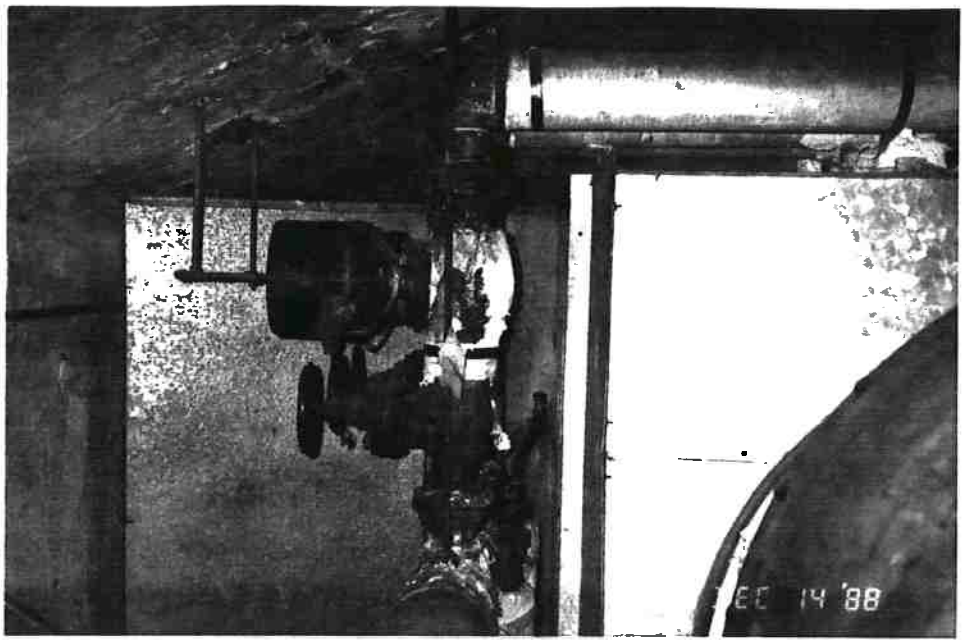
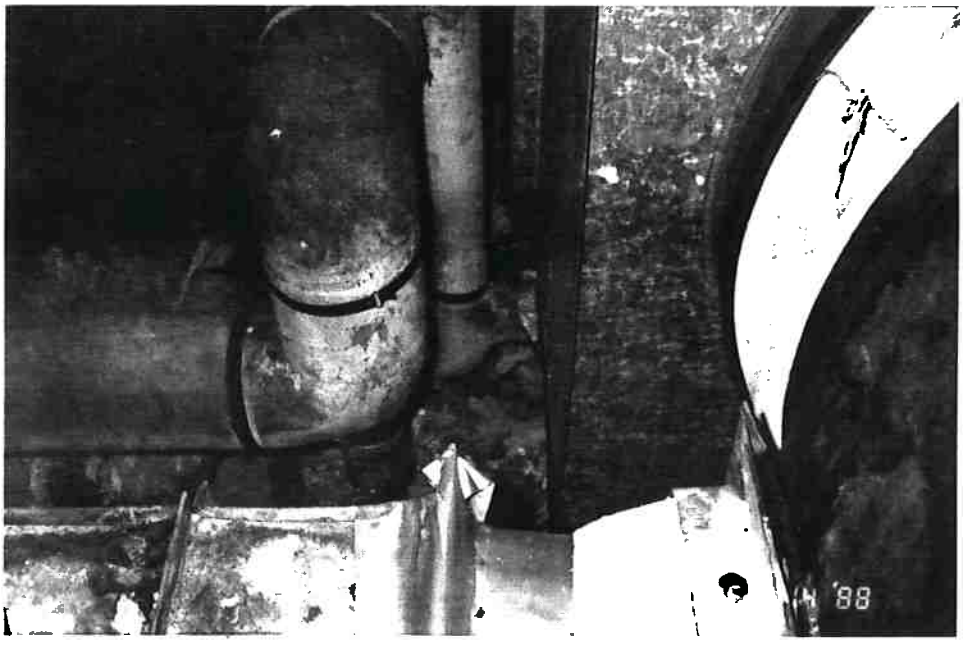
(L.A.-1)



T-09
(L.A.-2)



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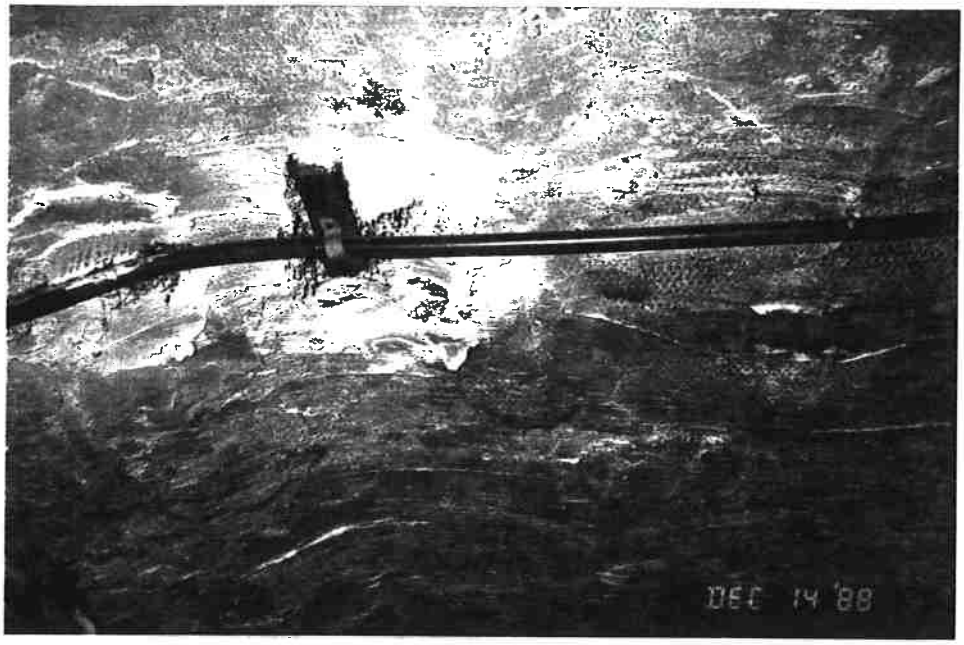
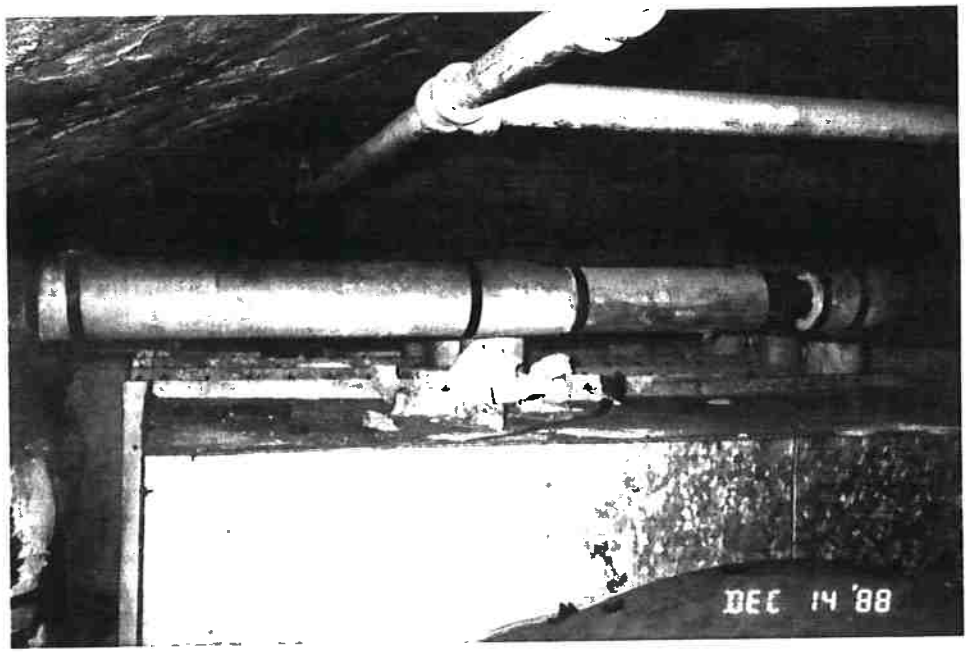
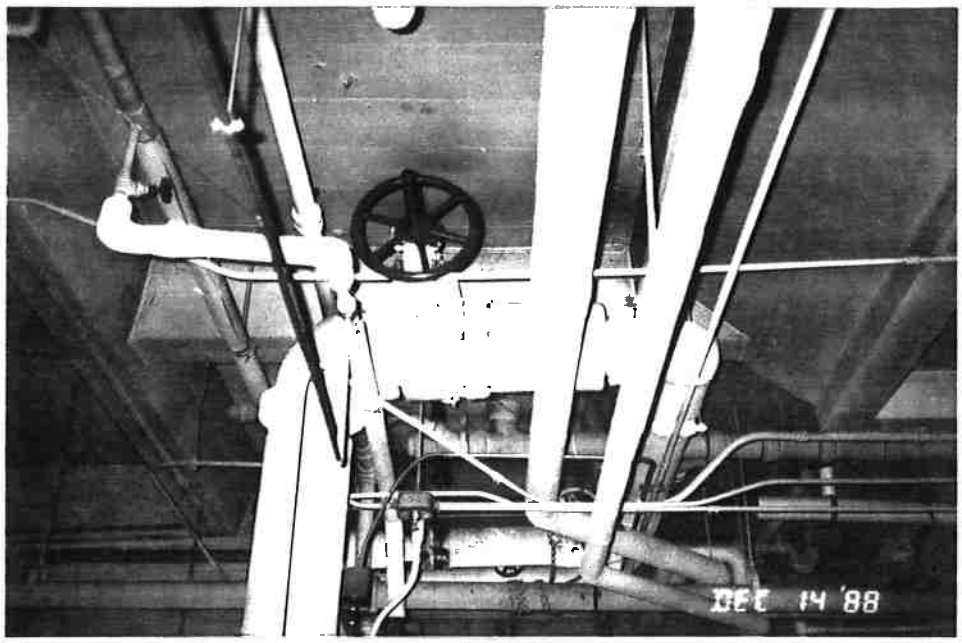
(L.A.-2)



S-02



T-09
(L.A.-2)



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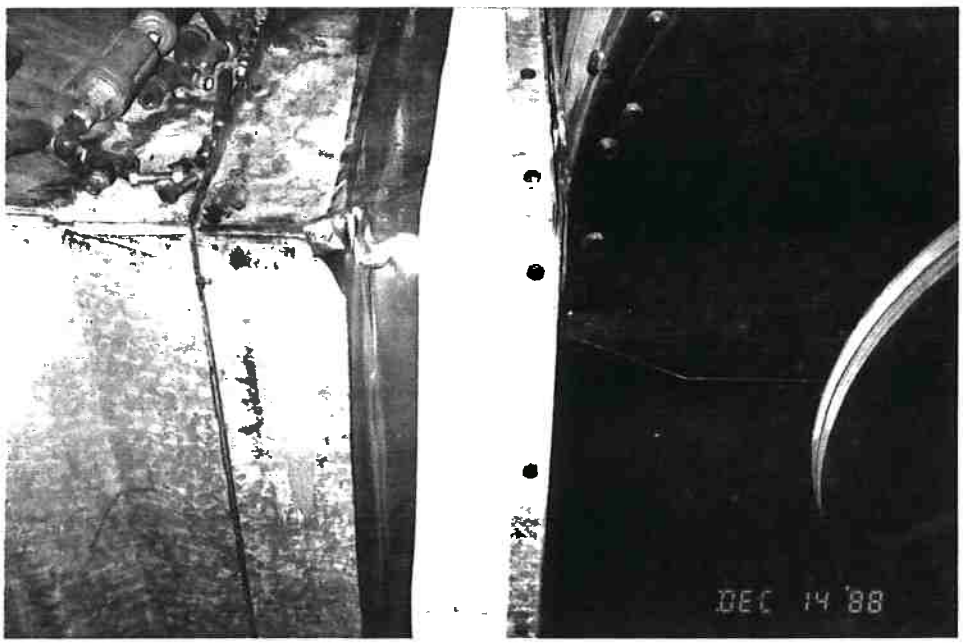
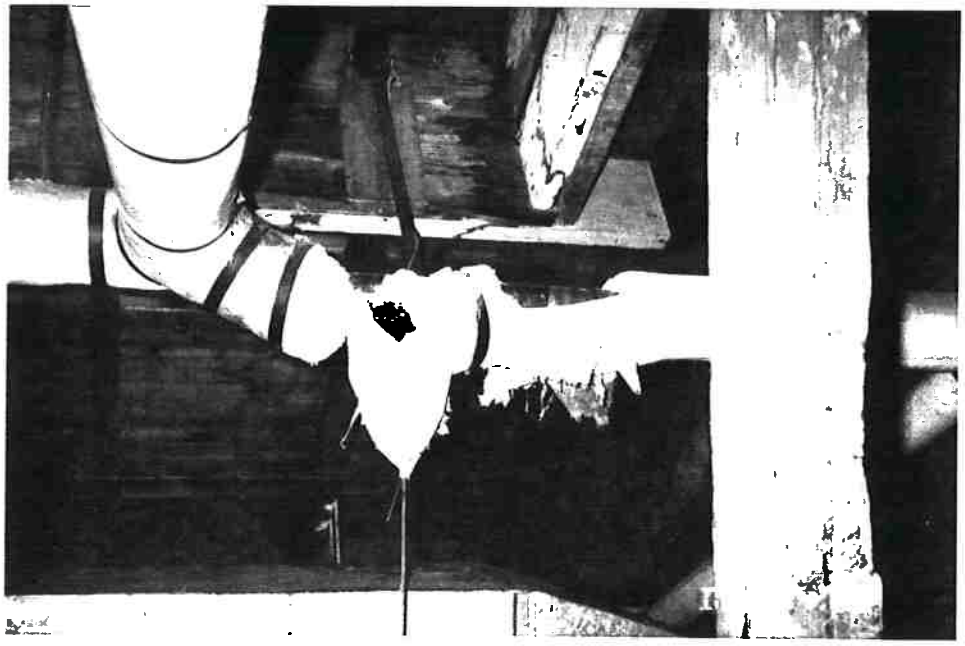
(L.A.-7)



M-02



T-09
(L.A.-1)

T-09
(Debris from L.A.-1)

APPENDIX B

BULK SAMPLE SUMMARY
AND ANALYSIS LABORATORY DATA SHEETS

BULK SAMPLE SUMMARY

SAMPLE ID #	LOCATION	SAMPLE RESULTS	HOMOGENEOUS AREA ID #
BGB-1	BOILER ROOM: FITTING INSULATION OF FIBERGLASS COVERED PIPES; TAKEN FROM 3" FITTING ALONG BOILER EDGE NEXT TO FLUE	1-5% TOTAL ASBESTOS DETECTED	T-01
BGB-2	BOILER ROOM: FITTING INSULATION ON FIBERGLASS COVERED PIPES; TAKEN FROM 4" FITTING BACK OF BOILER ATTACHED TO VALVE	NOT ANALYZED	T-01
BGB-3	BOILER ROOM: FITTING INSULATION ON FIBERGLASS PIPES; TAKEN FROM DAMAGED FITTING LEFT CORNER IN BACK OF BOILER	NOT ANALYZED	T-01
BGB-4	ATTIC HVAC ROOM: CLOTH EXPANSION JOINT; SAMPLE FROM TOP SEAM OF THE SQUARE JOINT ON THE HVAC UNIT	90-95% TOTAL ASBESTOS DETECTED	M-02
BGB-5	ATTIC HVAC ROOM: WALL PLASTER TAKEN FROM DAMAGED AREA IN SOUTHEAST CORNER, 3 FT. ABOVE FLOOR	NO ASBESTOS DETECTED	S-02
BGB-6	ATTIC HVAC ROOM: CEILING PLASTER AT DAMAGED AREA 5 FT. FROM SOUTH WALL, 5 FT. FROM EAST WALL	NO ASBESTOS DETECTED	S-02
BGB-7	ATTIC HVAC ROOM: WALL PLASTER FROM DAMAGED AREA 1 FT. ABOVE GROUND ON NORTH WALL, 5 FT. FROM EAST WALL	NO ASBESTOS DETECTED	S-02

CERTIFIED ENGINEERING & TESTING COMPANY, INC.
Bulk Asbestos Sample Report and Chain Of Custody Field Record.....Page 1

Received by:NOEL EVERET REID Relinquished by: PETER FOGARTY

Project Title: BALDWIN SCHOOL Project Number: 881328-002

Technician: PETER FOGARTY Analyst: BILL McCARRISTON

Date Collected: 12/14/88 Date Analyzed: 12-15-88

Laboratory ID Number: B-88-413

Sample #	Location		Results %
BGB-1	BOILER ROOM: FITTING INSULATION OF FIBERGLASS COVERED PIPES; TAKEN FROM 3" FITTING ALONG BOILER EDGE NEXT TO FLUE	1-5%	Chrysotile Asbestos
			Amosite Asbestos
			Other Asbestos
		X	Fibrous Glass
		X	Cellulose
			Non-Fibrous
		X	Cementitious
			Other Fibrous

Comment: (field) IT IS GRAY, CEMENTITIOUS HARD-PACKED INSULATION WITH A CANVAS COVERING.

Comment: (lab) 1-5% TOTAL ASBESTOS DETECTED

Homogeneous Area I.D.#

T-01

Sample #	Location	Results %
BGB-2	BOILER ROOM: FITTING INSULATION ON FIBERGLASS COVERED PIPES; TAKEN FROM 4" FITTING BACK OF BOILER ATTACHED TO VALVE	Chrysotile Asbestos
		Amosite Asbestos
		Other Asbestos
		Fibrous Glass
		Cellulose
		Non-Fibrous
		Cementitious
		Other Fibrous

Comment: (field) IT IS GRAY, CEMENTITIOUS HARD-PACKED INSULATION WITH A CANVAS COVERING.

Comment: (lab) NOT ANALYZED

Homogeneous Area I.D.#

T-01

Samples will be maintained under Chain of Custody protocol for thirty (30) days after analysis unless instructed otherwise.

CERTIFIED ENGINEERING & TESTING COMPANY, INC.
Bulk Asbestos Sample Report and Chain Of Custody Field Record.....Page 2

Received by:NOEL EVERET REID | Relinquished by: PETER FOGARTY

Project Title: BALDWIN SCHOOL | Project Number: 881328-002

Technician: PETER FOGARTY | Analyst: BILL McCARRISTON

Date Collected: 12/14/88 | Date Analyzed: 12-15-88

Laboratory ID Number: B-88-413

Sample #	Location		Results %
BGB-3	BOILER ROOM: FITTING INSULATION ON FIBERGLASS PIPES; TAKEN FROM DAMAGED FITTING LEFT CORNER IN BACK OF BOILER		Chrysotile Asbestos
			Amosite Asbestos
			Other Asbestos
			Fibrous Glass
			Cellulose
			Non-Fibrous
			Cementitious
			Other Fibrous

Comment: IT IS GRAY/WHITE, CEMENTITIOUS AND FIBROUS INSULATION WITH A CANVAS COVERING. (field)

Comment: NOT ANALYZED (lab)

Homogeneous Area I.D.#

T-01

Sample #	Location		Results %
BGB-4	ATTIC HVAC ROOM: CLOTH EXPANSION JOINT; SAMPLE FROM TOP SEAM OF THE SQUARE JOINT ON THE HVAC UNIT	90-95%	Chrysotile Asbestos
			Amosite Asbestos
			Other Asbestos
			Fibrous Glass
		X	Cellulose
			Non-Fibrous
		X	Cementitious
			Other Fibrous

Comment: GOOD CONDITION (field)

Comment: 90-95% TOTAL ASBESTOS DETECTED (lab)

Homogeneous Area I.D.#

M-02

Samples will be maintained under Chain of Custody protocol for thirty (30) days after analysis unless instructed otherwise.

CERTIFIED ENGINEERING & TESTING COMPANY, INC.
Bulk Asbestos Sample Report and Chain Of Custody Field Record.....Page 3

Received by:NOEL EVERET REID | Relinquished by: PETER FOGARTY

Project Title: BALDWIN SCHOOL | Project Number: 881328-002

Technician: PETER FOGARTY | Analyst: BILL McCARRISTON

Date Collected: 12/14/88 | Date Analyzed: 12-15-88

Laboratory ID Number: B-88-413

Sample #	Location		Results %
BGB-5	ATTIC HVAC ROOM: WALL PLASTER TAKEN FROM DAMAGED AREA IN SOUTHEAST CORNER, 3 FT. ABOVE FLOOR		Chrysotile Asbestos
			Amosite Asbestos
			Other Asbestos
			Fibrous Glass
		X	Cellulose
			Non-Fibrous
		X	Cementitious
			Other Fibrous

Comment: (field) GRAYISH-WHITE, CEMENTITIOUS WITH BROWN FIBERS, IN MODERATE TO GOOD CONDITION

Comment: (lab) NO ASBESTOS DETECTED

Homogeneous Area I.D.#

S-02

Sample #	Location		Results %
BGB-6	ATTIC HVAC ROOM: CEILING PLASTER AT DAMAGED AREA 5 FT. FROM SOUTH WALL, 5 FT. FROM EAST WALL		Chrysotile Asbestos
			Amosite Asbestos
			Other Asbestos
			Fibrous Glass
		X	Cellulose
			Non-Fibrous
		X	Cementitious
			Other Fibrous

Comment: (field) GRAYISH-WHITE, CEMENTITIOUS WITH BROWN FIBERS, IN MODERATE TO GOOD CONDITION

Comment: (lab) NO ASBESTOS DETECTED

Homogeneous Area I.D.#

S-02

Samples will be maintained under Chain of Custody protocol for thirty (30) days after analysis unless instructed otherwise.

CERTIFIED ENGINEERING & TESTING COMPANY, INC.
Bulk Asbestos Sample Report and Chain Of Custody Field Record.....Page 4

Received by:NOEL EVERET REID

Relinquished by: PETER FOGARTY

Project Title: BALDWIN SCHOOL

Project Number: 881328-002

Technician: PETER FOGARTY

Analyst: BILL McCARRISTON

Date Collected: 12/14/88

Date Analyzed: 12-15-88

Laboratory ID Number: B-88-413

Sample #	Location		Results %
BGB-7	ATTIC HVAC ROOM: WALL PLASTER FROM DAMAGED AREA 1 FT. ABOVE GROUND ON NORTH WALL, 5 FT. FROM EAST WALL		Chrysotile Asbestos
			Amosite Asbestos
			Other Asbestos
			Fibrous Glass
		X	Cellulose
			Non-Fibrous
		X	Cementitious
			Other Fibrous

Comment: GRAYISH-WHITE, CEMENTITIOUS WITH BROWN FIBERS MODERATE TO GOOD CONDITION (field)

Comment: NO ASBESTOS DETECTED (lab)

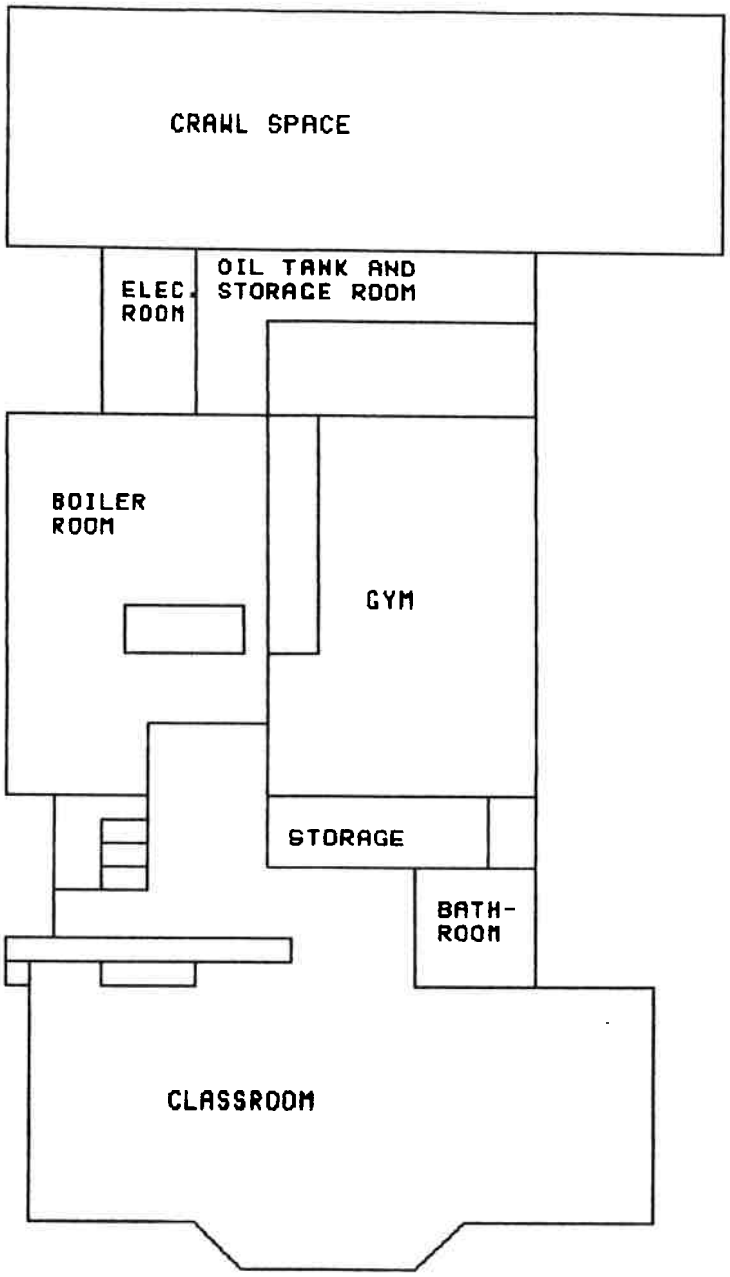
Homogeneous Area I.D.#

S-02

Samples will be maintained under Chain of Custody protocol for thirty (30) days after analysis unless instructed otherwise.

APPENDIX C

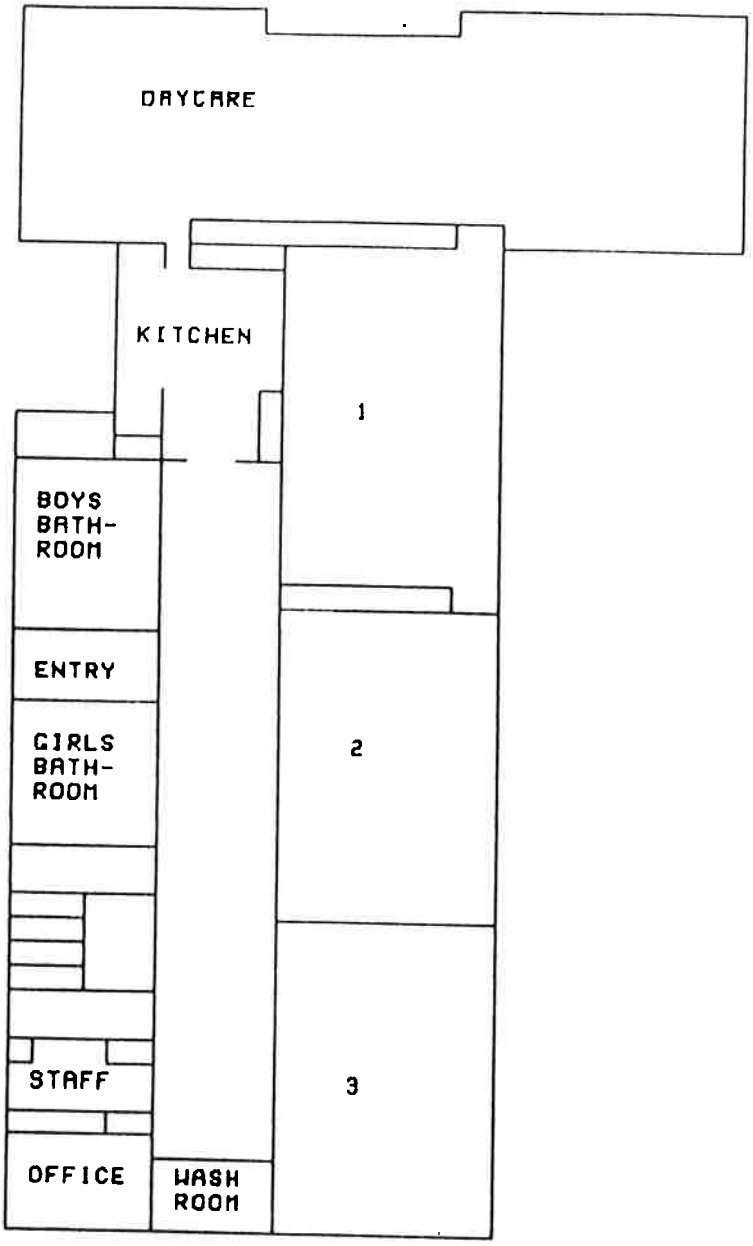
FLOOR PLANS



BASEMENT FLOOR

NOTE: DRAWING NOT TO SCALE

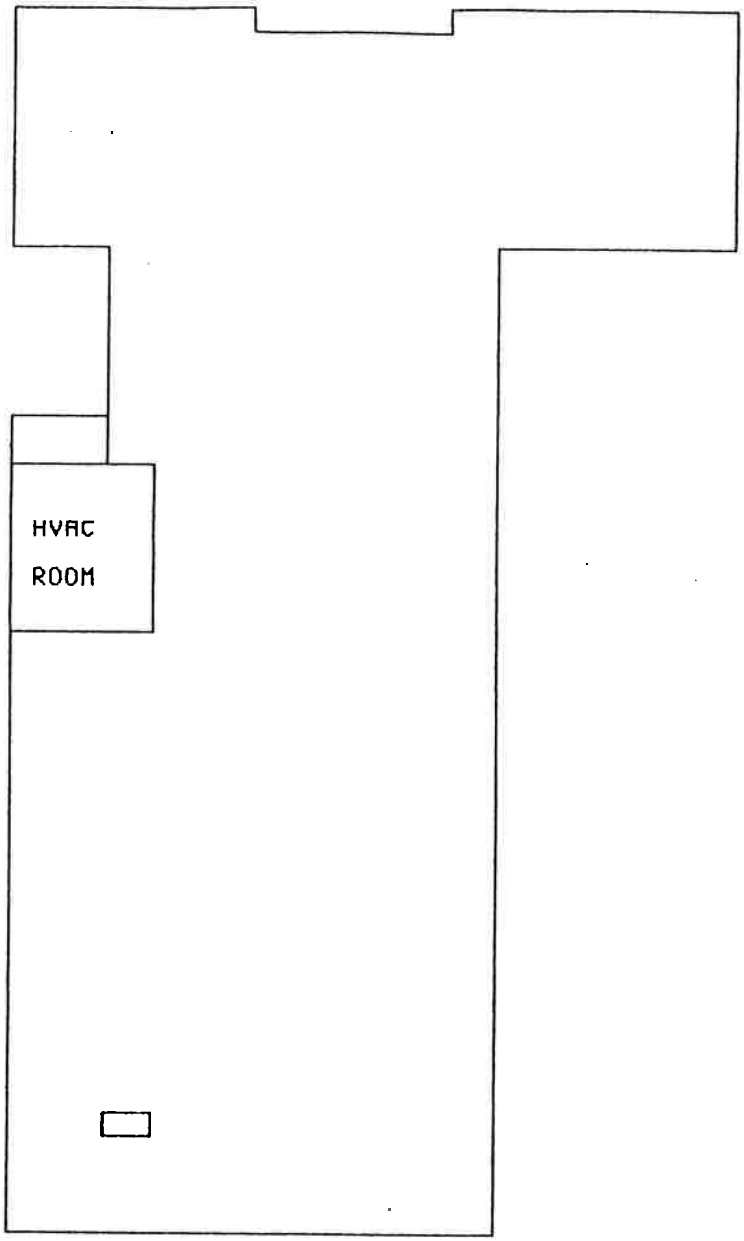
PROJECT NAME: GEORGE S. BALDWIN SCHOOL	CERTIFIED ENGINEERING & TESTING COMPANY, INC.	DRAFTED BY TIMOTHY WOODWARD
PROJECT NUMBER: BB1328-002	25 MATHEWSON DRIVE WEYMOUTH, MASSACHUSETTS 02188	
INSPECTOR: PETER FOGARTY		2/07/89
INSPECTION DATE: 12/14/88		



FIRST FLOOR

NOTE: DRAWING NOT TO SCALE

PROJECT NAME: GEORGE S. BALDWIN SCHOOL	CERTIFIED ENGINEERING & TESTING COMPANY, INC.	DRAFTED BY TIMOTHY WOODWARD
PROJECT NUMBER: 881328-002	25 MATHEWSON DRIVE WEYMOUTH, MASSACHUSETTS 02188	
INSPECTOR: PETER FOGARTY		2/07/89
INSPECTION DATE: 12/14/88		



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NOTE: DRAWING NOT TO SCALE

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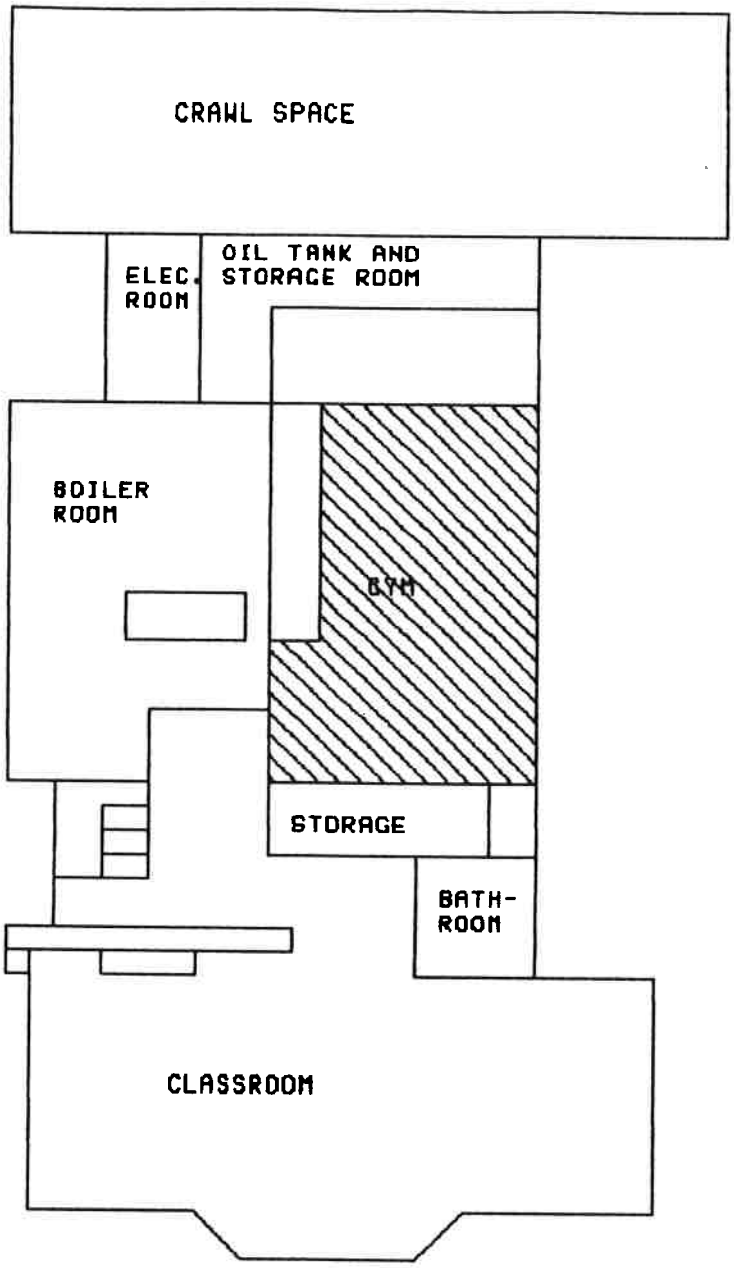
PROJECT NUMBER: 881328-002	25 MATHEWSON DRIVE WEYMOUTH, MASSACHUSETTS 02189	2/07/89
INSPECTOR: PETER FOGARTY		
INSPECTION DATE: 12/14/88		

HOMOGENEOUS AREA M-01



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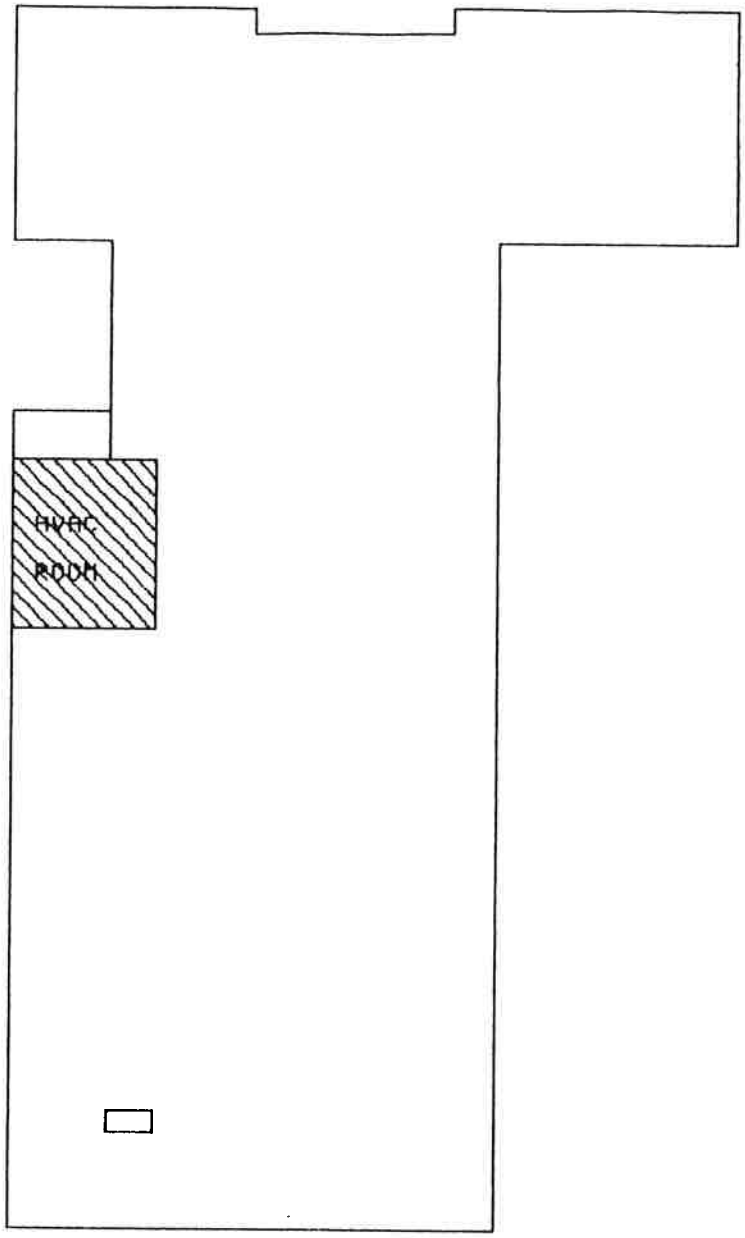
PROJECT NAME: GEORGE S. BALDWIN SCHOOL PROJECT NUMBER: 881328-002 INSPECTOR: PETER FOGARTY INSPECTION DATE: 12/14/88	CERTIFIED ENGINEERING & TESTING COMPANY, INC. 25 MATHEWSON DRIVE WEYMOUTH, MASSACHUSETTS 02189	DRAFTED BY TIMOTHY WOODWARD 2/07/89

HOMOGENEOUS AREAS: M-02, S-02



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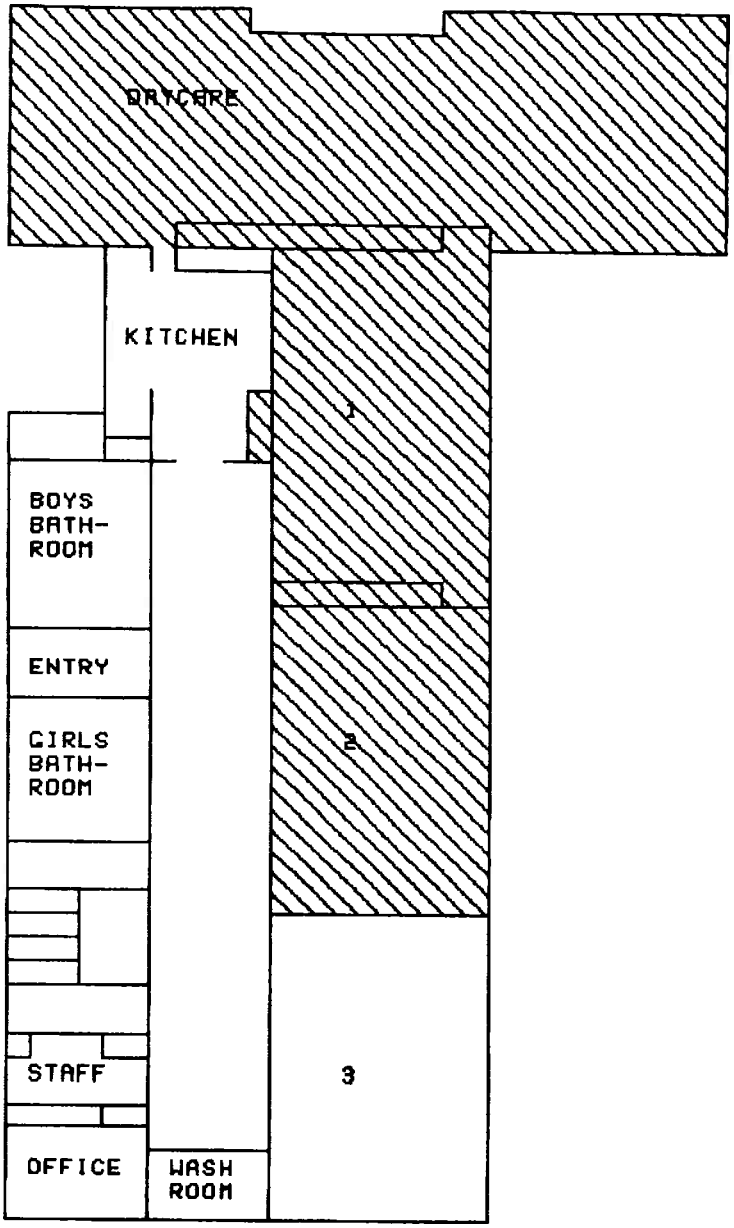
PROJECT NUMBER: BB1328-002		
INSPECTOR: PETER FOGARTY	25 MATHEWSON DRIVE WEYMOUTH, MASSACHUSETTS 02189	2/07/89
INSPECTION DATE: 12/14/88		

HOMOGENEOUS AREA M-03



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NOTE: DRAWING NOT TO SCALE

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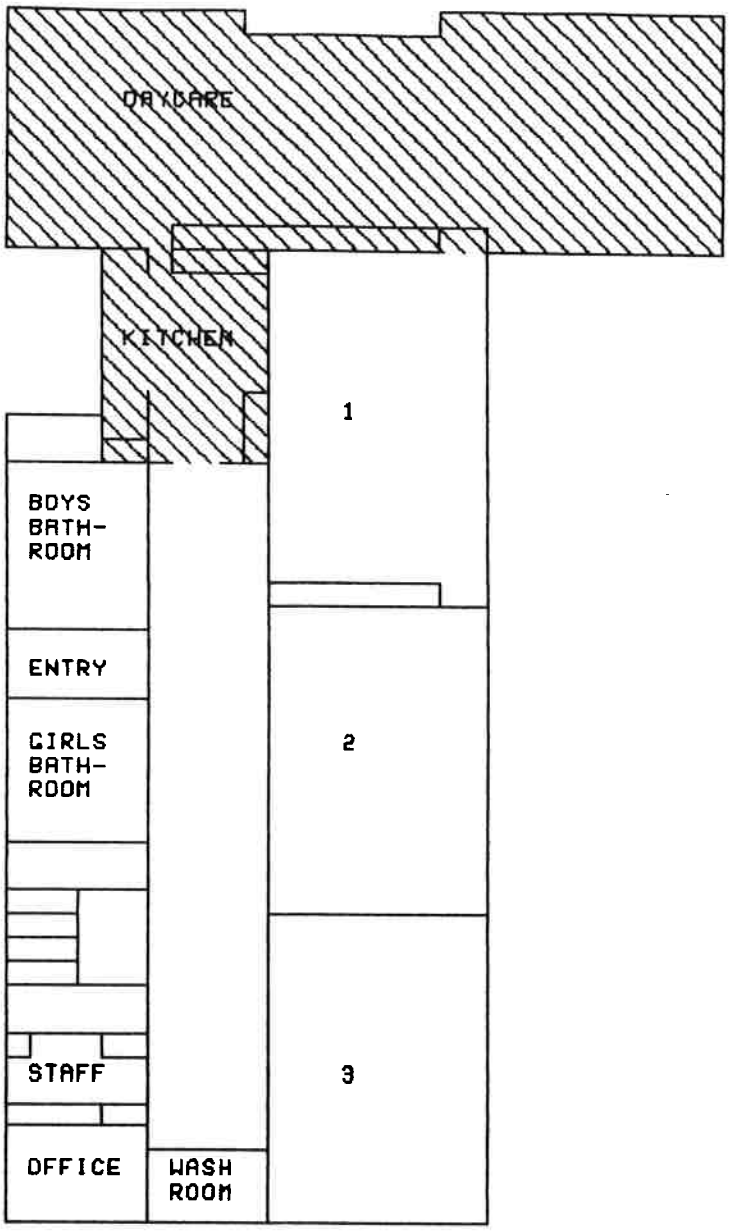
PROJECT NUMBER: BB1328-002	
INSPECTOR: PETER FOGARTY	
INSPECTION DATE: 12/14/88	2/07/89

CERTIFIED ENGINEERING & TESTING COMPANY, INC.
25 MATHEWSON DRIVE
WEYMOUTH, MASSACHUSETTS 02188

HOMOGENEOUS AREA M-04



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NOTE: DRAWING NOT TO SCALE

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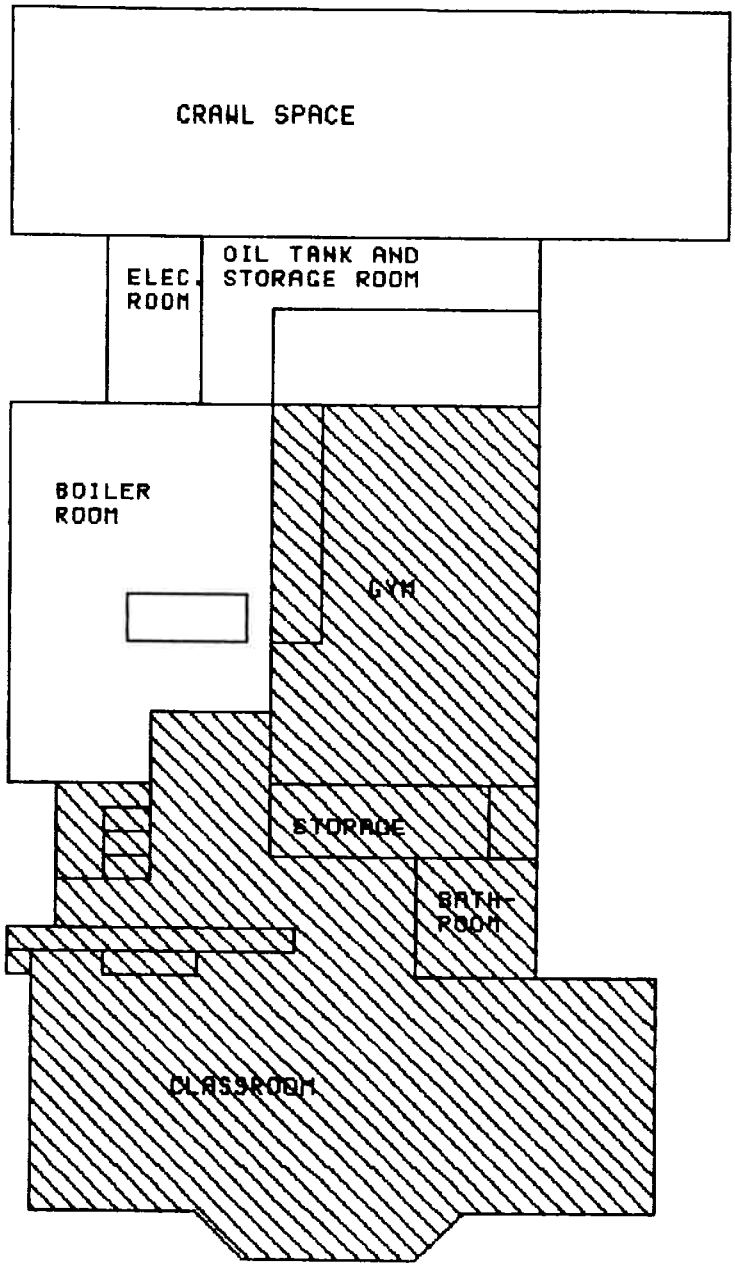
PROJECT NUMBER: BB1328-002		
INSPECTOR: PETER FOGARTY	25 MATHEWSON DRIVE WEYMOUTH, MASSACHUSETTS 02188	2/07/89
INSPECTION DATE: 12/14/88		

HOMOGENEOUS AREAS: T-10, S-01



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NOTE: DRAWING NOT TO SCALE

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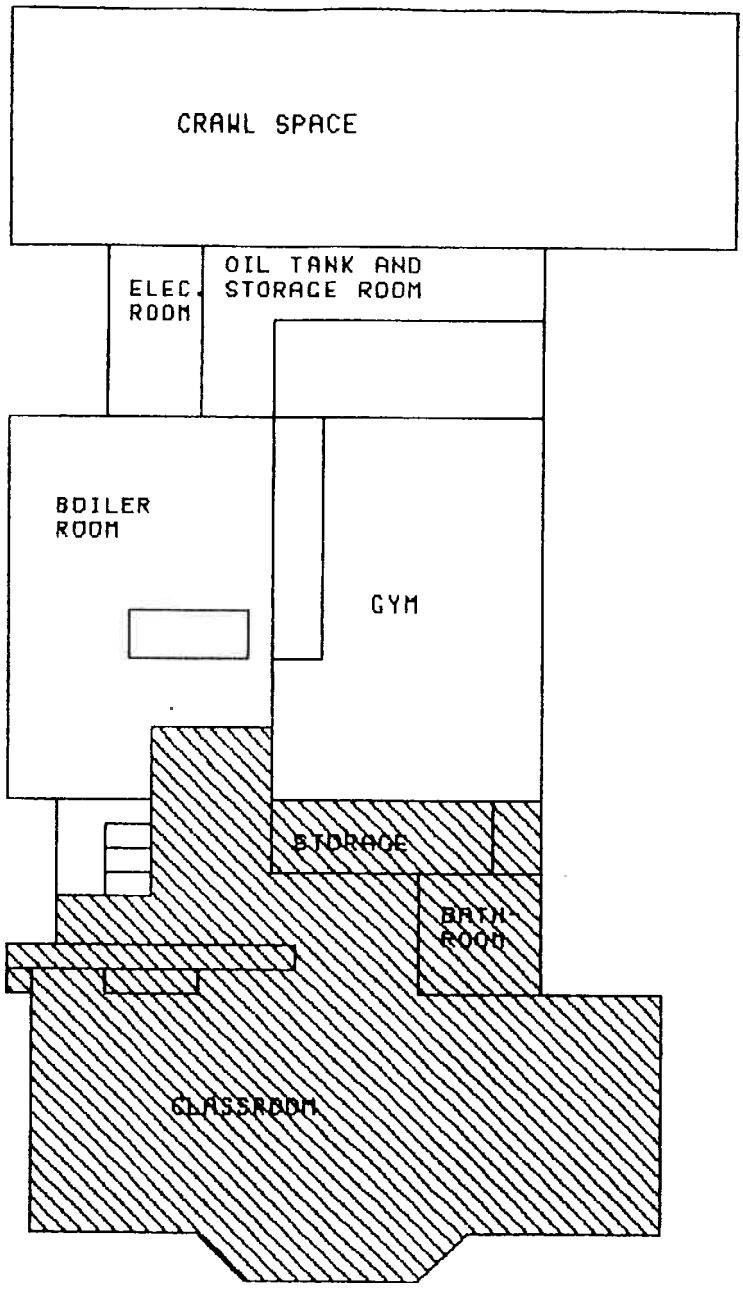
PROJECT NUMBER: B81328-002	25 MATHEWSON DRIVE WEYMOUTH, MASSACHUSETTS 02189	2/07/89
INSPECTOR: PETER FOGARTY		
INSPECTION DATE: 12/14/88		

HOMOGENEOUS AREA S-01



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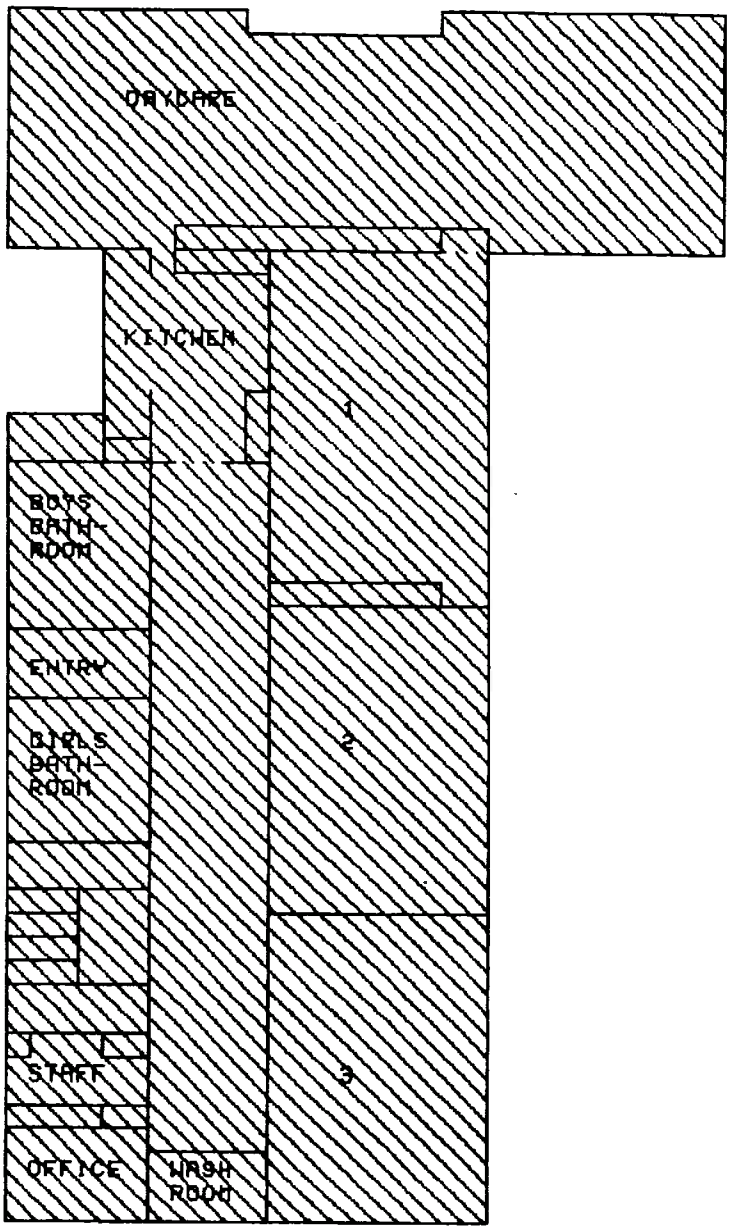
INSPECTION DATE: 12/14/88		

HOMOGENEOUS AREAS: S-01, T-10



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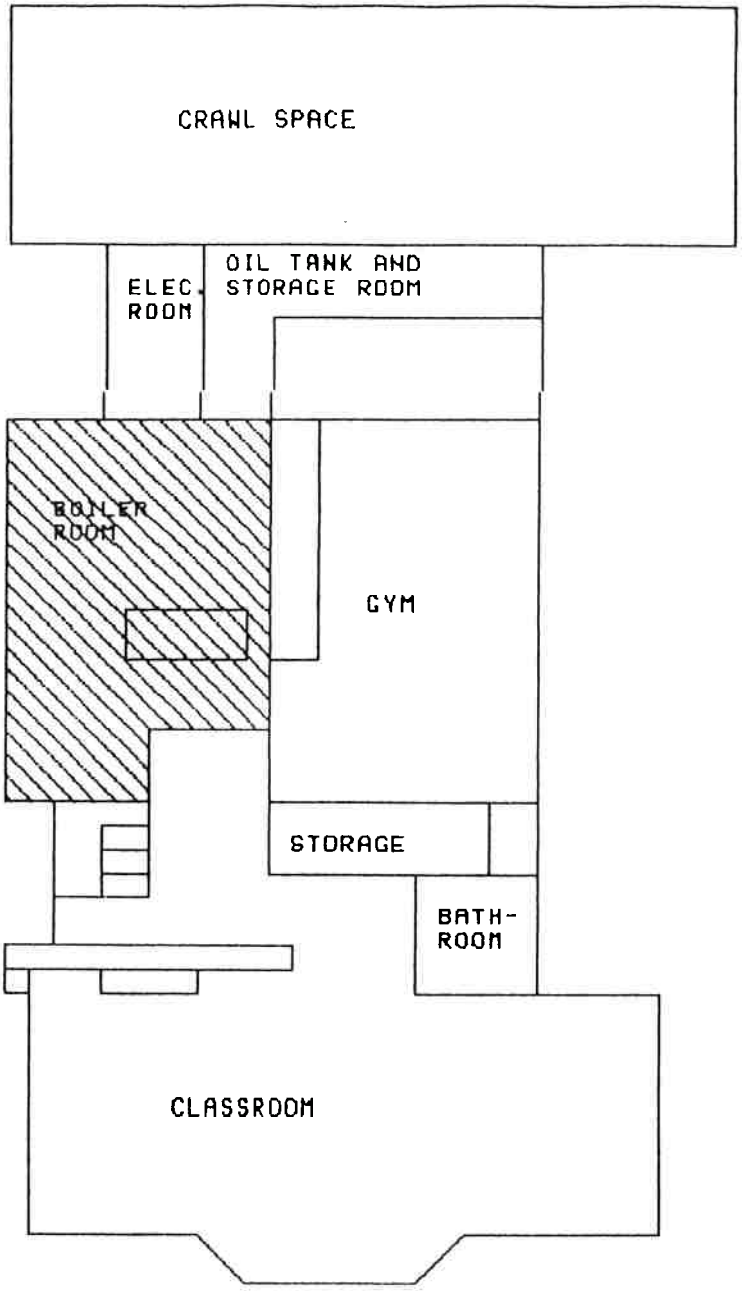
INSPECTOR: PETER FOGARTY	25 MATHEWSON DRIVE WEYMOUTH, MASSACHUSETTS 02189	2/07/89
INSPECTION DATE: 12/14/88		

HOMOGENEOUS AREAS: T-01, T-03, T-04, T-05



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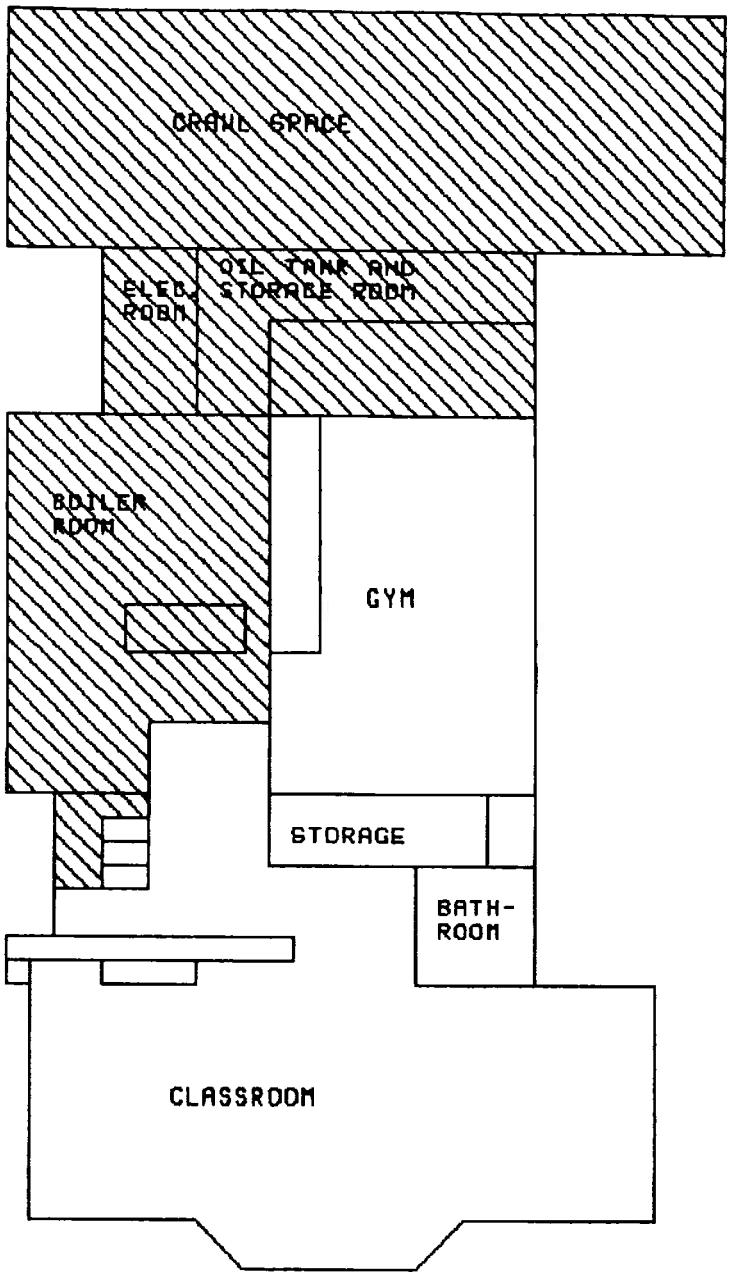
HOMOGENEOUS AREA T-02



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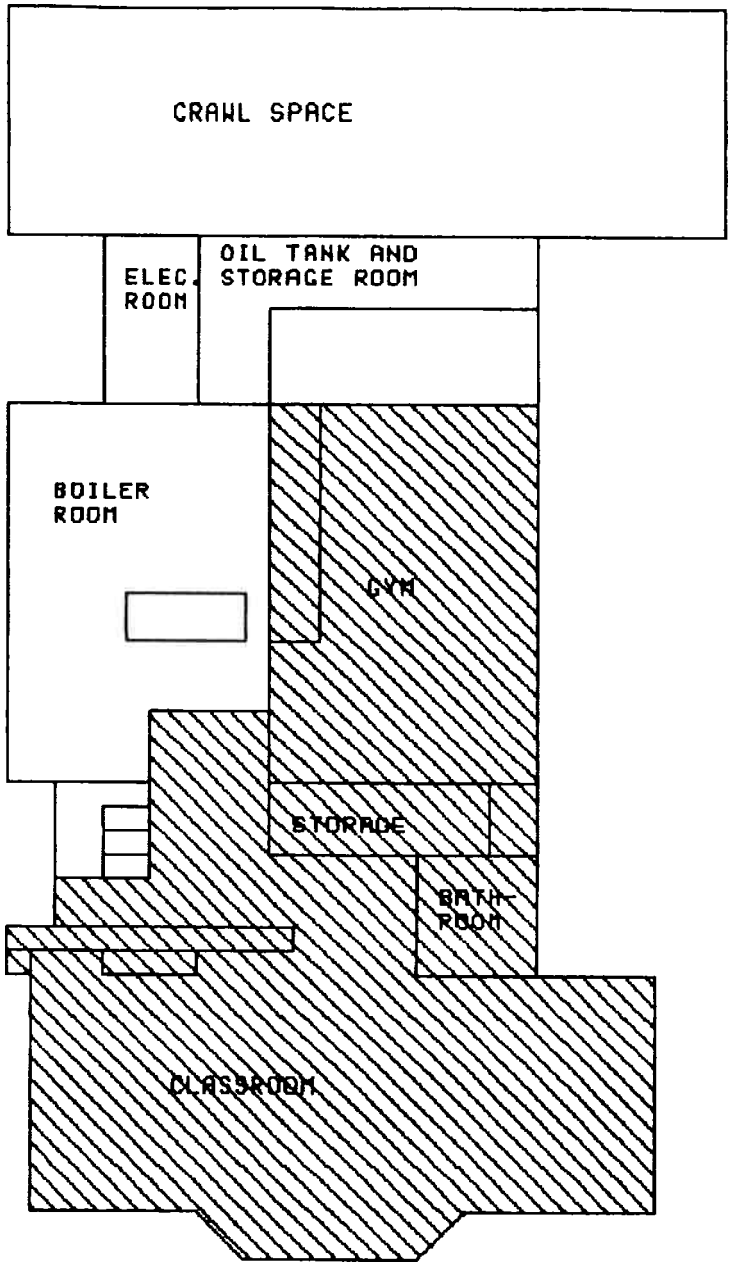
INSPECTOR: PETER FOGARTY		2/07/89
INSPECTION DATE: 12/14/88		

HOMOGENEOUS AREAS: T-06, T-07, T-08



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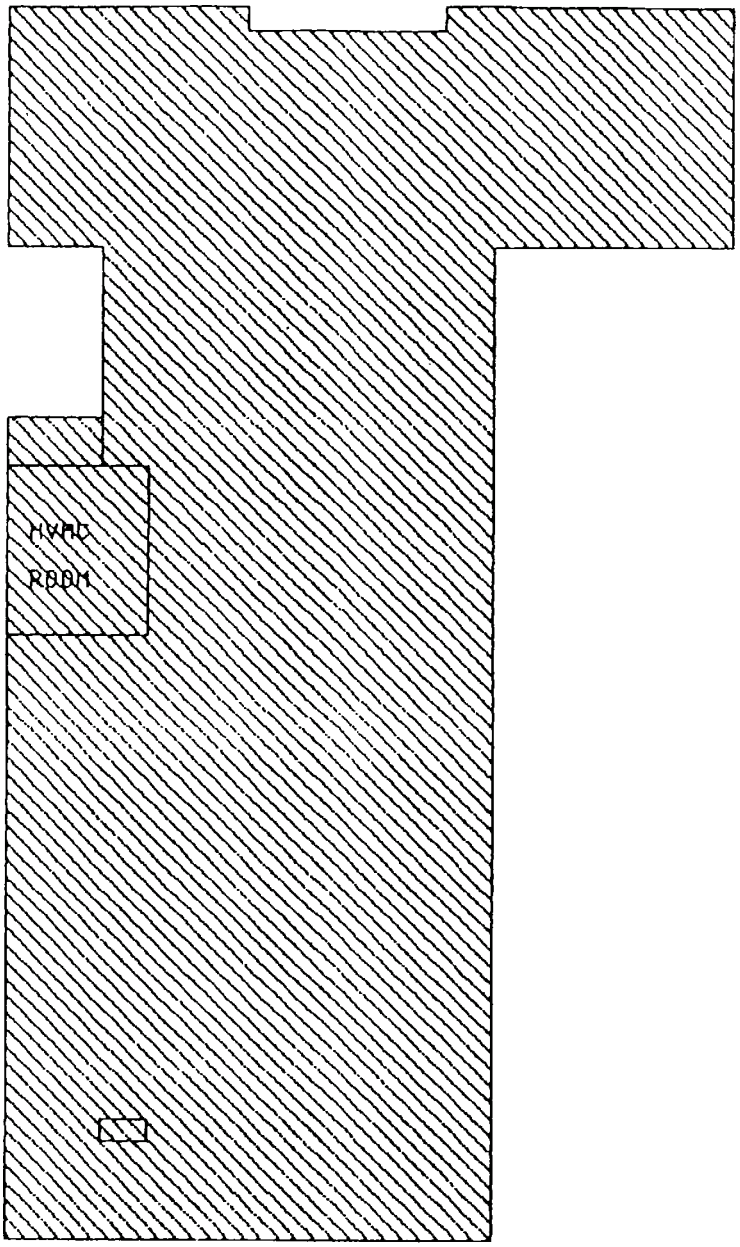
HOMOGENEOUS AREAS: T-09



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APPENDIX D

GLOSSARY OF ASBESTOS TERMS

ASBESTOS GLOSSARY

ACBM - Asbestos-containing building material. Includes surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a building.

ACM - Asbestos-containing materials, means any material or product which contains more than 1% asbestos.

Accessible - When referring to ACM means that the material is subject to disturbance by building occupants or custodial or maintenance personnel in the course of their normal activities.

Accredited or Accreditation - When referring to a person or laboratory means that such person or laboratory is accredited in accordance with Section 206 of Title II of the Toxic Substances Control Act.

Acoutical Insulation - The general application or use of asbestos for the control of sound due to its lack of reverberant surfaces.

Acoustical Tile - A finishing material in a building usually found in the ceiling or walls for the purpose of noise control.

Action Level - As defined by OSHA regulations; an airborne asbestos concentration of 0.1 f/cc as an 8-hour TWA (Time Weighted Average). At this level, an employer is required to implement exposure measurements, medical surveillance and employee training.

Aggressive Sampling - Air sampling which takes place while the air is being physically agitated to produce a "worst case" situation.

AHERA - Asbestos Hazard Emergency Response Act requiring asbestos surveys and management plans for all public and private schools K-12. Signed by President Reagan October 22, 1986.

AIA - American Institute of Architects

AIHA - American Industrial Hygiene Association

AIHA Accredited Laboratory - A certification given by the AIHA to an analytical laboratory that has successfully participated in the "Proficiency Analytical Testing" program for quality control as established by the National Institute for Occupational Safety and Health.

Airborne Asbestos Analysis - Determination of the amount of asbestos fibers suspended in a given amount of air by analyzing the filter media through which a known volume of air was drawn. The methods for asbestos are commonly known as NIOSH P&CAM 239, NIOSH 7400, TEM and SEM.

Air Diffuser - A device designed to disperse an air stream throughout a given area.

Air Erosion - The passage of air over friable ACBM which may result in the release of asbestos fibers.

Air Lock - A system of enclosures consisting of two polyethylene curtained doorways at least three feet apart that does not permit air movement between clean and contaminated areas.

Air Monitoring (or Sampling) - The process of measuring the airborne fiber concentration of a specific quantity of air over a given amount of time.

Air Plenum - Any space used to convey air in a building or structure. The space above a suspended ceiling is often used an an air plenum.

Air Sampling Cassette - Three piece plastic housing in which filter media and backing pad are mounted. Sizes are 37mm diameter (P&CAM 239) or 25mm (7400). Cassettes are used open faced for random distribution and collection of fibers.

Ambient Air - The surrounding air or atmosphere in a given area under normal conditions.

Amended Water - Water to which a chemical wetting agent (surfactant) has been added to improve penetration into asbestos-containing materials that are being removed.

ANSI - American National Standards Institute

Approved Landfill - A site for the disposal of asbestos-containing and other hazardous wastes that has been given EPA approval.

Area Monitoring (Sampling) - Sampling of airborne fiber concentrations outside the containment area which may reach the breathing zone. Samples collected should be representative of occupied conditions.

Asbestiform - Fibrous minerals which, due to their crystal structures and chemical composition, can be classified as a form of asbestos.

Asbestos - A generic name given to a number of naturally occurring hydrated mineral silicates that possess a unique crystalline structure, are incombustible in air, and are separable into fibers. Asbestos includes the asbestiform varieties of chrysotile (serpentine); crocidolite (riebeckite); amosite (cummingtonite-grunerite); anthophyllite; and actinolite.

Asbestos Abatement	- Procedures to control fiber release from asbestos-containing materials in buildings. Includes removal, encapsulation, enclosure and special long-term maintenance.
Asbestos Control	- Minimizing the generation of airborne asbestos fibers until a permanent solution is developed.
Asbestos Coordinator	- The designated person having overall responsibility for implementing and documenting an Operations and Maintenance (O&M) Program for a Local Education Agency.
Asbestos Exposure Assessment System	- A decision tool which can be used to determine the extent of the asbestos hazard that exists in a building, and which can also be used to develop corrective actions.
Asbestos Fibers	- Fibers with their length being greater than five microns (length to width ratio of 3:1), generated from an asbestos-containing material.
Asbestos Standard	- Reference to the OSHA requirements in the general industry standards regarding asbestos exposure (29 CFR 1910.1001), and EPA National Emission Standard for Hazardous Air Pollutant (NESHAP) (40 CFR 61, subpart M).
Asbestosis	- A non-malignant, progressive, irreversible lung disease caused by the inhalation of asbestos dust and characterized by diffuse fibrosis.
ASTM	- American Society for Testing and Materials
Atmosphere Supplying Respirators	- Respiratory protection devices which exclude workplace air altogether and provide clean air from some independent source.

"Blue Book"	- EPA publication of March 1983 titled, "Guidance for Controlling Friable Asbestos-Containing Materials in Building." Now replaced by 1985 revised edition.
Bridging Encapsulant	- The application of a sealant over the surface of asbestos-containing material to prevent the release of asbestos fibers.
Building Survey (Audit)	- An inspection to determine the type, extent and condition of ACBM within a structure.
Bulk Sampling	- The collection and analysis of a sample of material to determine if it may contain asbestos.
Chrysotile (white asbestos)	- The only asbestiform mineral of the serpentine variety which contains approximately 40% each of silica and magnesium oxide. It is the most common form of asbestos used in buildings.
CIH	- An industrial hygienist who has been granted certification by the American Board of Industrial Hygiene.
Competent Person	- Asbestos abatement supervisor on site usually from the contracted company.
Ceiling Concentration	- The maximum allowable level of toxic material that can be present at any given point in time.
Cementitious	- Asbestos-containing materials that are densely packed, granular and are friable.
CFM	- Cubic feet per minute
Clean Area	- The first stage of the decontamination enclosure system in which workers prepare to enter the work area.

Clearance Air Sampling	- See Final Clearance Air Sampling
Concrete-Like Asbestos	- Hard, non-friable asbestos-containing material that requires a mechanical force to penetrate its surface.
Containment	- The process of constructing or setting up an enclosure around an ACBM work area to prevent contamination to outside the area.
Contaminated Items	- Any objects that have been exposed to airborne asbestos fibers without being sealed off or isolated.
Continuous Flow Airline Device	- A respirator that maintains a constant airflow to the wearer.
Contract Specifications	- A set of guidelines that a contractor must follow when conducting an asbestos abatement job.
Decontamination	- The ridding of unwanted or hazardous material by regulated prescribed methods.
Decontamination Enclosure System	- A series of connected room with polyethylene curtained doorways for the purpose of preventing contamination of areas adjacent to the work area.
Delaminate	- To separate into layers; to separate from the substrate.
Demand Airline Device	- A respirator in which air enters the facepiece only when the wearer breathes in.
DEQE	- Department of Environmental Quality Engineering
Dirty Area	- Any area in which the concentration of airborne asbestos fibers exceeds 0.01 f/cc, or where there is visible asbestos residue.

Dispersion Staining	- Coloration added to asbestos samples for the purpose of making the sample more visible and easier to identify.
DLI	- Department of Labor and Industry
DOH	- Department of Occupational Hygiene
Duct Tape	- Heavy gauge tape capable of sealing joints of adjacent sheets of polyethylene.
Electron Microscopy	- A method of asbestos sample analysis which utilizes an electron beam to differentiate between fibers.
Employee Notification	- Informing employees or building occupants if asbestos is present in the building, also informing them of the hazards associated with asbestos exposure, what is being done to eliminate the problem, etc.
Encapsulation	- The coating of asbestos-containing material with a bonding or sealing agent to prevent the release of airborne fibers.
Encapsulant (sealant)	- A substance applied to asbestos-containing material which controls the release of airborne asbestos fibers by sealing.
Enclosure (encasement)	- The construction of a hard, airtight, and impermeable barrier around ACBM to control fiber release.
EPA	- Environmental Protection Agency
EPA Regulations	- Regulatory standards which cover emissions into the outside environment from a workplace and disposal of hazardous wastes from job sites.

Equipment Room - The last stage or room of the worker decontamination system before entering the work area.

Eyepiece - A component of a full facepiece respirator which is a gas-tight transparent window through which the wearer may see.

Facepiece - The portion of a respirator which covers the wearer's nose, mouth, and eyes in a full facepiece.

Fallout - The intermittent release of fibers which occurs as a result of weakened bonds in the material, or because of deterioration.

F/CC - Fibers per cubic centimeters of air.

Fiber Containment - Enclosing or sealing off an area having airborne asbestos fibers present so that the fibers will not migrate resulting in contamination of other areas.

Fiber Control - Minimizing the amount of airborne fiber generation through the application of amended water onto asbestos-containing material, or enclosure (isolation) of the material.

Fiber Releasability - The potential for generation of airborne fibers from an asbestos-containing source.

Fiber Release Episode - The uncontrolled or unintentional disturbance of ACBM.

Fibrosis - A condition of the lungs caused by the inhalation of excessive amounts of fibrous dust marked by the presence of scar tissue.

Final Air Clearance Sampling - Air sampling used to determine if a response action is complete and if the area is safe to reoccupy. Final air clearance sampling is conducted after a removal area has been cleared by thorough visual inspection and prior to the dismantling of containment barriers and prior to surface encapsulation. The results of final clearance testing should be <0.01 f/cc by PCM or for TEM, <70 structures per mm or as determined by the "Z" test calculator.

Fireproofing - Spray- or trowel-applied fire resistant materials.

Friable Asbestos - Any materials that contain more than 1% asbestos by weight and can be crumbled, pulverized, or reduced to powder by hand pressure.

Full Facepiece Respirator - A respirator which covers the wearer's entire face from the hairline to below the chin.

Functional Space - A room, a group of rooms or homogeneous area which is used by school occupants for a single purpose as designated by a person accredited to prepare management plans.

Glovebag - Plastic bag-type enclosure placed around asbestos-containing pipe lagging so that it may be removed without generating airborne fibers into the atmosphere.

Glove-box (bag) - Plastic enclosure placed around a specific operation such as a valve to contain small areas of materials for asbestos removal.

Ground Fault Circuit Interrupter - A circuit breaker that is sensitive to very low levels of current leakage from a fault in an electrical system.

Ground Fault Interrupter - A device which automatically de-energizes any high voltage system component which has developed a fault in the ground line.

Half Mask - High Efficiency - A respirator which covers one-half of the wearer's face and is equipped with filters capable of screening out 99.97% of all particles larger than 0.3 microns.

HEPA - High Efficiency Particulate Air (Air Filter)

HEPA Filtered Vacuum - A high efficiency particulate air (HEPA) filtered vacuum capable of trapping and retaining 99.97% of all particles larger than 0.3 microns.

Holding Area - The airlock between the shower room and the clean room in a worker decontamination system.

Homogeneous - Evenly mixed and similar in appearance and texture throughout.

Homogeneous Area - An area of surfacing material, thermal systems insulation or miscellaneous material that is uniform in color or texture.

Hose Masks - Respirators that supply air from an uncontaminated source through a strong, large diameter hose to the facepiece that does not use compressed air or have any pressure regulating devices.

HVAC System - Heating, Ventilation, and Air Conditioning system usually found in large business and industry facilities.

Industrial Hygienist - A professional qualified by education, training, and experience to recognize, evaluate, and develop controls for occupational health hazards.

LEA	- Local Education Agency
Local Exhaust Ventilation	- The mechanical removal of air contaminants from a point of operation.
Low Volume Sampler	- Air sampling pump with flow rates of approximately 2 liters per minute (2 Lpm) to 5 liters per minute (5 Lpm) designed to draw air at the same rate at which a person breathes. Used for personal sampling.
M or Misc.	- Miscellaneous materials
"Mag" Block	- Magnesium and asbestos-containing, chalky-type insulation commonly used on thermal systems.
Make-up Air	- Supplied or recirculated air to offset that which has already been exhausted from an area.
MCEF	- Mixed Cellulose Ester Filter which is one of several types of media used to collect asbestos air samples. (Used in area of personal sampling usually for PCM analysis.)
Mesothelioma	- A relatively rare form of cancer which develops in the lining of the pleura or peritoneum with no known cure.
Method 7400	- NIOSH sampling and analytical method for fibers using phase-contrast microscopy. Usually replaces method P&CAM 239 for environmental or area sampling.
Micron	- One millionth of a meter
Millimeter (mm)	- One thousandth of a meter
Mineral Wool	- A commonly used substitute for asbestos

Miscellaneous Materials	- A variety of generally classified materials such as ceiling and floor tiles, wallboards, and other materials not included as insulation or surfacing materials.
MSDS	- Material Safety Data Sheet
NBS	- National Bureau of Standards
Negative Pressure	- An atmosphere created in a work area enclosure such that airborne fibers will tend to be drawn through the filtration system rather than leak out into the surrounding areas. The air pressure inside the work area is less than that outside the work area.
NESHAP	- National Emission Standards for Hazardous Air Pollutants -- EPA Regulation 40 CFR subpart M, part 61.
NIBS	- National Institute of Building Sciences
NIOSH/MSHA	- The official approving agencies for respiratory protective equipment which test and certify respirators.
Numerical Value	- Refers to the types and percentages of asbestos present in a given sample.
Oil-less Compressor	- An air compressor that is not oil lubricated and therefore does not allow oil vapor or droplets to be formed in the breathing air.
Open Circuit SCBA	- A type of self-contained breathing unit which exhausts the exhaled air to the atmosphere instead of recirculating it.
Operations and Maintenance Program (O&M)	- Specific procedures and practices developed for the interim control of asbestos-containing materials in buildings until it is removed.

"Orange Booklets" - EPA publications issued in March 1979 titled: Asbestos-Containing Materials in School Building: A Guidance Document, parts I and II.

OSHA - The Occupational Safety and Health Administration which was created by the Occupational Safety and Health Act of 1970; serves as the enforcement agency for safety and health in the workplace environment.

Particulate Contaminants - Minute airborne particles given off in the form of dusts, smokes, fumes, or mists.

P&CAM 239 - A NIOSH sampling and analytical method for measuring airborne fibers using phase contrast microscopy.

PEL - Permissible Exposure Limit as stated by OSHA currently defined as 0.2 f/cc as an 8-hour TWA (Time Weighted Average).

Penetrating Encapsulant - Liquid material applied to asbestos-containing material to control airborne fiber release by penetrating into the material and binding its components together.

Personal Protective Equipment (PPE) - Any material or device worn to protect a worker from exposure to, or contact with, any harmful material or force.

Personal Sample - An air sample taken with the sampling pump directly attached to the worker with the collecting filter placed in the worker's breathing zone.

Personnel Protection - Notification and instruction of all workers prior to the beginning of a project as to the hazards associated with the job and what they can do to protect themselves from these hazards.

PF - Protection factor as provided by a respirator which is determined by dividing the airborne fiber concentration outside of the mask by the concentration inside the mask.

Phase Contrast Microscopy (PCM) - An optical microscopic technique used for the counting of fibers in air samples, but which does not distinguish fiber types. Methods utilizing PCM include NIOSH P&CAM 239 and NIOSH 7400.

Pipe Lagging - The insulation or wrapping around a pipe.

Polarized Light Microscopy (PLM) - An optical microscopic technique used to distinguish between different types of asbestos fibers by their shape and unique optical properties. Approved method for analysis of bulk asbestos samples.

Posting - Refers to caution or warning signs which should be posted in any area in which asbestos removal is taking place, or where airborne fiber levels may present a health hazard.

Post Response Action - Activities which follows ACBM response actions such as air monitoring and documentation.

Powered Air Purifying Respirator (PAPR) - Either a full facepiece, helmet, or hooded respirator that has the breathing air powered to the wearer after it has been purified through a filter.

Pressure Demand Airline Devices - A respiratory protection device which has a regulator and valve design such that there is a continuous flow of air into the facepiece at all times.

Prevalent Levels - Levels of airborne contaminants occurring under normal conditions.

Prevalent Samples	- Air samples taken under normal conditions (background samples).
Profo-bag	- A type of glovebag.
Protective Clothing	- Protective, lightweight garments worn by workers performing asbestos abatement to keep gross contamination off the body.
Purple Book	- EPA publication of June 1985 titled, "Guidance for Controlling Asbestos-Containing Materials in Buildings, 1985 Edition." This document is a revision of the "Blue Book."
Qualitative Fit Test	- A method of testing a respirator's face-to-facepiece seal by covering the inhalation or exhalation valves and either breaking in or out to determine the presence of any leaks.
Random Sample	- A sample drawn in such a way that there is no set pattern and is designed to give a true representation of the entire population or area.
Recordkeeping	- Detailed documentation of all program activities, decisions, analyses, and any other pertinent information to a project.
Response Action	- A method including removal, encapsulation, enclosure, repair or operations and maintenance that protects human health and the environment from friable ACBM.
Respirator Program	- A written program established by an employer which provides for the safe use of respirators on their job sites.
S or Surf	- Surfacing Material.

Salient - A limited area of significantly different material or material condition within a homogeneous area such as a patch or replaced area.

Scanning Electron Microscopy (SEM) - A method of microscopic analysis which utilizes an electron beam directed at the sample and then collects the beams that are reflected to produce an image from which fibers can be identified and counted.

Scanning Transmission Electron Microscopy (STEM) - A combination of a transmission electron microscope with scanning and focusing coils so that a beam of electrons can be identified and counted.

Settled Dust Sampling - Collection and analysis of dust on surfaces to determine the presence of asbestos.

Shower Room - A room between the clean room and the equipment room in a worker decontamination system in which workers take showers when leaving the work area.

Substrate - The material or existing surface located under or behind the asbestos-containing material.

Supplied Air Respirator - A respirator that has a central source of breathing air which is supplied to the wearer by way of an airline.

Surfactant - A chemical wetting agent added to water to improve its penetration abilities into asbestos-containing materials.

Surfacing Materials - Sprayed- or troweled-on ceiling and wall materials also sometimes used on heating equipment such as ducts.

Thermal System Insulation	- Insulation found on equipment containing hot air or liquid pipes, boilers, tanks and ducts. These insulation materials may be a chalky mixture of magnesia and asbestos, preformed fibrous asbestos wrapping, asbestos fiber felt, corrugated paper, or insulating cement. In most cases, the insulating material is covered with a protective jacket of cloth, tape, paper, metal, or cement.
TLV	- Levels of contaminants established by the American Conference of Governmental Industrial Hygienists to which it is believed that workers can be exposed to with minimal adverse health effects.
Transmission Electron Microscopy (TEM)	- A method of microscopic analysis which utilizes an electron beam that is focused onto a thin sample. As the beam penetrates (transmits) through the sample, the difference in densities produces an image on a fluorescent screen from which samples can be identified and counted.
Treated Cellulose	- An insulation material made of paper or wood products with fire-retarding treatment added.
TSI (T)	- Thermal System Insulation
TWA	- Time Weighted Average, as in air sampling.
Type B Reader	- A physician with specialized training in reading x-rays, specifically in recognizing lung disorders.
Type C Supplied Air Respirator	- A respirator designed to provide a very high level of protection which supplies air to the wearer from an outside source such as a compressor.
USEPA	- United States Environmental Protection Agency

Vermiculite - A micaceous mineral that is sometimes used as a substitute for asbestos which is lightweight and highly water-absorbent.

Visible Emissions - Airborne fibers given off from an asbestos-containing source that are visible to the human eye.

Visual Inspection - A walk-through type inspection of the work area to detect incomplete work, damage, or inadequate clean up of a worksite.

Washroom - A room between the work area and the clean room in the equipment decontamination enclosure system where workers shower.

Water Damage - Deterioration or delamination of ceiling or wall materials due to leaks from plumbing or cracks in the roof.

Wet Cleaning - The process of eliminating asbestos contamination from surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water.

Wet Wrap - Rewettable fiberglass cloth wrap

Wetting Agents - Materials that are added to water which is used for wetting the asbestos-containing material in order for the water to penetrate more effectively.

AHERA Asbestos Reinspection #2

BALDWIN SCHOOL December, 1989

THE PUBLIC SCHOOLS OF BROOKLINE, MASSACHUSETTS

M E M O R A N D U M

Date December 15, 1989

To Senior Custodians *From* John L. Rudser

AHERA requires that each area of Assumed Asbestos Containing Building Material or Asbestos Containing Building Material be inspected every 6 months. These areas are listed and described in Section V of your report. The Hazard Assessment and Damage Factors are found in Section VII with floor plans available in Appendix C.

I have attached, for your information, the 1st inspection which has been reviewed by Certified Engineering & Testing Company The DEA. Please insure that Certified comments are incorporated in your reinspection. File copy of these 6 month inspections will only be maintained in the Central Office; therefore, I request that you return the 1st inspection with this, the 2nd inspection.

Attached for your use are the revised reinspection forms. Request that they be completed and returned to my office by January 15, 1990. These inspection forms have been greatly simplified. The previous three page form per area has been reduced to one page with a second one page form required per inspection report. If you have any problems with these new forms, please contact me immediatey.

SCHOOL	SR. CUSTODIAN	NO. of REPORTS
Baker	J. McCarthy	21
Baldwin	R. Edgar	15
Devotion	J. Geiger	30
Driscoll	W. Jackson	31
Heath	E. Bagley	11
Lawrence	J. Canney	14
Lincoln	L. Hovsepian	13
Lincoln Primary	J. Kenney	11
Pierce	E. Matteson	10
Pierce Primary	E. Matteson	13
Runkle	C. Barron	11
High School	R. Murphy	76
Physical Ed.	R. Murphy	16
Unified Arts	R. Murphy	14
Sewall	Edna Stein Academy	7

We serve Youth that Youth may learn to serve

School: BALDWIN

ACBM REINSPECTION FORM

Inspector, please complete this form once for each school that you are inspecting.

1. Are you familar with the locations and prior condition of ACBM in this area ?

   ✓ yes ____ no

2. Have you received training in the health hazards and work practices associated with asbestos exposure and in the use of this form ?

   ✓ yes ____ no

   If no, contact the Asbestos Coordinator and do not continue.

3. Is a copy of the AHERA Management Plan maintained at the school ?

   ✓ yes ____ no

   If no, contact the Asbestos Coordinator.

4. In your opinion, is it probable that unprotected persons may be exposed to asbestos due to the present damage ?

   ____ yes ✓ no

   If yes, notify the Asbestos Coordinator.

   Record who was notified, the date of the notification and which materials are involved, below.

Name: _____

Date: _____

Materials involved: _____

Commments: _____

Inspector Signature: Robert J. Edgar

Date: 12/29/89

School: Baldwin
Area: M-01
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a)	Overall Condition	___	No damage
		✓	Minor damage (<10%)
		___	Severe Damage (>10%)
b)	Accessibility (for all school occupants not just maintenance)	___	Not Accessible
		___	Rarely Accesssible
		✓	Accessible
c)	Air Stream	✓	Present
		___	Not Present
d)	Friability	✓	Low
		___	Moderate
		___	High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ___
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J. Colgan

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

___ further action is recommended, see comments page enclosed at front of document.

✓ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & TESTING CO. Inc. 15 MATHEWSON DRIVE WEYMOUTH, MA 02189

Date:

School: Baldwin
Area: M-02
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a)	Overrall Condition	___	No damage
		✓	Minor damage (<10%)
		___	Severe Damage (>10%)
b)	Accessibility (for all school occupants not just maintenance)	___	Not Accessible
		✓	Rarely Accesssible
		___	Accessible
c)	Air Stream	✓	Present
		___	Not Present
d)	Friability	✓	Low
		___	Moderate
		___	High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ___
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J. Edgar

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

___ further action is recommended, see comments page enclosed at front of document.

✓ no further action is recommended.

Reviewer Signature: _____

Date: _____

School: Baldwin
Area: M-03
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a) Overrall Condition
- ✓ No damage
- ____ Minor damage (<10%)
- ____ Severe Damage (>10%)

b) Accessibility (for all school occupants not just maintenance)
- ____ Not Accessible
- ____ Rarely Accesssible
- ✓ Accessible

c) Air Stream
- ____ Present
- ✓ Not Present

d) Friability
- ✓ Low
- ____ Moderate
- ____ High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ____
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J. Colgan

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

____ further action is recommended, see comments page enclosed at front of document.

✓ no further action is recommended.

Reviewer Signature: _____

Date: _____

ENGINEERING & TESTING CO., INC.
DAVIDSON DRIVE
MA 02180

School: Baldwin
Area: M-04
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a) Overrall Condition
- ✓ No damage
- ____ Minor damage (<10%)
- ____ Severe Damage (>10%)

b) Accessibility (for all school occupants not just maintenance)
- ____ Not Accessible
- ____ Rarely Accesssible
- ✓ Accessible

c) Air Stream
- ____ Present
- ✓ Not Present

d) Friability
- ✓ Low
- ____ Moderate
- ____ High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ____
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J. Edgar

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

____ further action is recommended, see comments page enclosed at front of document.

✓ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & TESTING CO., INC.
[illegible] MATHEWSON DRIVE
WEYMOUTH, MA 02189

Date: [illegible]

School: Baldwin
Area: S-01
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a) Overrall Condition	✓	No damage
		Minor damage (<10%)
		Severe Damage (>10%)
b) Accessibility (for all school occupants not just maintenance)		Not Accessible
		Rarely Accesssible
	✓	Accessible
c) Air Stream		Present
	✓	Not Present
d) Friability	✓	Low
		Moderate
		High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ____
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J Edgar

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

✓ further action is recommended, see comments page enclosed at front of document.

✓ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & TESTING CO., INC.
20 MATTHEWSON DRIVE
WEYMOUTH, MA 02189

Date: FEB 1990

School: Baldwin
Area: T-01
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a) Overrall Condition
- ____ No damage
- ✓ Minor damage (<10%)
- ____ Severe Damage (>10%)

b) Accessibility (for all school occupants not just maintenance)
- ____ Not Accessible
- ____ Rarely Accesssible
- ✓ Accessible

c) Air Stream
- ____ Present
- ✓ Not Present

d) Friability
- ✓ Low
- ____ Moderate
- ____ High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ____
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J. Edgar

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

- ✓ further action is recommended, see comments page enclosed at front of document.
- ____ no further action is recommended.

Reviewer Signature: _____

Date: _____

School: Baldwin
Area: T-02
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a) Overrall Condition
___ No damage
_✓_ Minor damage (<10%)
___ Severe Damage (>10%)

b) Accessibility (for all school occupants not just maintenance)
___ Not Accessible
___ Rarely Accesssible
_✓_ Accessible

c) Air Stream
___ Present
_✓_ Not Present

d) Friability
___ Low
___ Moderate
___ High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ___
if no, check here _✓_

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert A Edgar
Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

_✓_ further action is recommended, see comments page enclosed at front of document.

___ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & TESTING CO. INC.
25 MATHEWSON DRIVE
WEYMOUTH MA 02189

Date:

School: Baldwin
Area: T-03
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a)	Overrall Condition	___	No damage
		✓	Minor damage (<10%)
		___	Severe Damage (>10%)
b)	Accessibility (for all school occupants not just maintenance)	___	Not Accessible
		___	Rarely Accesssible
		✓	Accessible
c)	Air Stream	___	Present
		✓	Not Present
d)	Friability	✓	Low
		___	Moderate
		___	High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ___
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert A. Galgon

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

✓ further action is recommended, see comments page enclosed at front of document.

___ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & TESTING CO. Inc. 25 MATHESON DRIVE WEYMOUTH MA 02190

Date:

School: Baldwin
Area: T-04
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a) Overrall Condition
___ No damage
_✓_ Minor damage (<10%)
___ Severe Damage (>10%)

b) Accessibility (for all school occupants not just maintenance)
___ Not Accessible
___ Rarely Accesssible
_✓_ Accessible

c) Air Stream
___ Present
_✓_ Not Present

d) Friability
_✓_ Low
___ Moderate
___ High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ___
if no, check here _✓_

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J. Edgar

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

___ further action is recommended, see comments page enclosed at front of document.

_✓_ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & TE...

Date: _____

School: Baldwin
Area: T-05
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a) Overrall Condition	___	No damage
	✓	Minor damage (<10%)
	___	Severe Damage (>10%)
b) Accessibility (for all school occupants not just maintenance)	___	Not Accessible
	___	Rarely Accesssible
	✓	Accessible
c) Air Stream	___	Present
	___	Not Present
d) Friability	✓	Low
	___	Moderate
	___	High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ___
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J. Colgan

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

___ further action is recommended, see comments page enclosed at front of document.

✓ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & TESTING CO., INC.

Date: 25 MATHEWSON DRIVE WEYMOUTH, MA 02189

School: Baldwin
Area: T-06
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a) Overrall Condition
- ✓ No damage
- ___ Minor damage (<10%)
- ___ Severe Damage (>10%)

b) Accessibility (for all school occupants not just maintenance)
- ___ Not Accessible
- ___ Rarely Accesssible
- ✓ Accessible

c) Air Stream
- ___ Present
- ✓ Not Present

d) Friability
- ✓ Low
- ___ Moderate
- ___ High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ___
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert A Edgar

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

___ further action is recommended, see comments page enclosed at front of document.

✓ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & DESIGN

Date: 25 MATHEWSON DRIVE WEYMOUTH, MA 02189

School: Baldwin
Area: T-07
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a)	Overrall Condition	✓	No damage
			Minor damage (<10%)
			Severe Damage (>10%)
b)	Accessibility (for all school occupants not just maintenance)		Not Accessible
			Rarely Accesssible
		✓	Accessible
c)	Air Stream		Present
		✓	Not Present
d)	Friability	✓	Low
			Moderate
			High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ____
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J. Edgar

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

____ further action is recommended, see comments page enclosed at front of document.

✓ no further action is recommended.

Reviewer Signature: CERTIFIED EXAMINER

Date:

School: Baldwin
Area: T-08
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a)	Overrall Condition	✓	No damage
			Minor damage (<10%)
			Severe Damage (>10%)
b)	Accessibility (for all school occupants not just maintenance)		Not Accessible
			Rarely Accesssible
		✓	Accessible
c)	Air Stream		Present
		✓	Not Present
d)	Friability	✓	Low
			Moderate
			High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ____
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J. Edgar

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

____ further action is recommended, see comments page enclosed at front of document.

✓ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & TESTING CO. INC.
25 MATHEWSON DRIVE
WEYMOUTH, MA 02195

Date:

School: Baldwin
Area: T-09
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a) Overrall Condition
___ No damage
_✓_ Minor damage (<10%)
___ Severe Damage (>10%)

b) Accessibility (for all school occupants not just maintenance)
___ Not Accessible
_✓_ Rarely Accesssible
___ Accessible

c) Air Stream
___ Present
_✓_ Not Present

d) Friability
___ Low
_✓_ Moderate
___ High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ___
if no, check here _✓_

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert J. Colgan
Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

___ further action is recommended, see comments page enclosed at front of document.

_✓_ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & TESTING CO., INC.
Date: 25 MATHEWSON DRIVE WEYMOUTH, MA 02189

School: Baldwin
Area: T-10
Date: December 1989

Inspector, please complete one copy of this form for each homogeneous material application.

1. Rate the present condition of this material with respect to the following factors.

a) Overrall Condition
- ✓ No damage
- ___ Minor damage (<10%)
- ___ Severe Damage (>10%)

b) Accessibility (for all school occupants not just maintenance)
- ✓ Not Accessible
- ___ Rarely Accesssible
- ___ Accessible

c) Air Stream
- ___ Present
- ✓ Not Present

d) Friability
- ✓ Low
- ___ Moderate
- ___ High

2. Has the material condition deteriorated since the previous inspection ?

if yes, describe damage and probable cause in item 4 below:
if you did not perform the previous inspection, check here ___
if no, check here ✓

4. Please use this space for your comments regarding current damage and/or potential damage to this material.

Inspector Signature: Robert A. Edgar

Date: 12/29/89

This space reserved for review by Asbestos Coordinator or LEA representative.

Upon review of this reinspection report:

___ further action is recommended, see comments page enclosed at front of document.

✓ no further action is recommended.

Reviewer Signature: CERTIFIED ENGINEERING & TESTING CO., INC. 35 HARRISON DRIVE WEYMOUTH, MA 02189

Date:

3.4 Traffic

Please see the following reports prepared by Vanasse & Associates, Inc:

-Transportation Impact Assessment:

Transportation Impact Assessment

Proposed Baldwin 2 Section Pk-8 School

Brookline, Massachusetts

Prepared for:

Jonathan Levi Architects
Boston, Massachusetts

Vanasse & Associates, Inc.
Transportation Engineers & Planners
35 New England Business Center Drive
Suite 140
Andover, MA 01810-1066

TRANSPORTATION IMPACT ASSESSMENT

PROPOSED BALDWIN 2 SECTION PK-8 SCHOOL
BROOKLINE, MASSACHUSETTS

Prepared for:

Jonathan Levi Architects
Boston, Massachusetts

December 2018

Prepared by:

VANASSE & ASSOCIATES, INC.
Transportation Engineers & Planners
35 New England Business Center, Suite 140
Andover, MA 01810
(978) 474-8800

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No.	Title
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EXECUTIVE SUMMARY

VAI has completed a detailed assessment of the potential impacts on the transportation infrastructure associated with the proposed Baldwin 2 Section PK-8 School to be located off Heath Street in Brookline, Massachusetts. The proposed School will accommodate up to 453 students with 86 staff. The school size has been reduced from 800 students to the current 453 students which will significantly reduce the overall impact to the area. In addition, critical measures have been recommended to facilitate traffic flow in the area and to manage peak conditions, which were not considered in prior studies. These include: crossing guard control at Heath Street at Oak Street (School Drive), new phasing and timing at Heath Street and Hammond Street with a crossing guard; and a recommended Earlier Start Time. These new measures are designed to improve area safety conditions and reduce the school traffic during the area peak periods. Prior opinions with respect to this project were without benefit of a full traffic study and these recommendations. This assessment has been completed in accordance with State and Town standards and those of the Traffic Engineering and Transportation Planning professions for the preparation of such reports. The following specific areas have been evaluated as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

- Based upon a safety assessment of the area, the school can be safely accommodated with the design as planned.

- The impact of the proposed school will be very similar to conditions experienced at other schools in Brookline. Impacts are limited to a short 15-20-minute period during parents' drop-off and pick-up times.

- The school is expected to generate approximately 340 vehicle trips (207 entering/ 133 exiting) during the weekday morning peak-hour and 174 vehicle trips (82 entering/ 92 exiting) during the weekday afternoon peak-hour.

- During the peak period in the morning, only 71 vehicles turn left from the school driveway onto Heath Street over a one-hour period.

- The proposed driveway off Oak Street has adequate sight distances for safe and efficient operations.

- Safe conditions can be achieved with sidewalks, crosswalks and crossing guards at appropriate locations for students walking to school. The town will implement safety improvements to the area sidewalks.

- The Project will increase traffic in the morning and afternoon periods with increased delays and queues at locations within the study area. These delays and queues will be confined to limited and distinct periods during the morning drop-off and afternoon pick-up periods (15-20 minutes at peaks) and these periods are non-coincident with the peak periods of the adjacent roadways.

In summary, the proposed site is a good location for a new school and a safe environment can be maintained with traffic conditions at manageable levels. While the school can be safely accommodated, there will be delays and queues during limited period of the day, and improvements will be necessary to minimize the impacts and enhance safety conditions.

RECOMMENDATIONS

A detailed transportation improvement program has been developed that is designed to maintain safe and efficient access to the school and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements have been recommended as a part of this evaluation and will be completed in coordination with the Town.

School Start Time

Based upon observations of area traffic it is recommended that the school start time begin prior to 8:00 AM in advance of peak traffic volumes. Even a 15-minute adjustment to a 7:45 AM start will significantly improve conditions.

Project Access and Circulation

The school driveways were planned such that traffic impacts to the area are minimized and safe and efficient access and egress is provided. As currently planned, an entrance driveway will be located along Heath Street at Dunster Street with an exit driveway at Oak Street. The on-site circulation includes a 650-foot drop-off area for queuing.

The following recommendations are offered with respect to the design and operation of the school site driveways:

- The main entrance driveway should have a minimum 24-foot entrance and will be illuminated. The driveway will provide two lanes with a drop-off/pick-up lane and a separate by-pass lane.

- The Oak Street driveway will be a minimum of 24-feet wide accommodating two-way traffic and will be under stop control and illuminated. During peak drop-off and pick-up periods this location will be placed under crossing guard control.

- A bus pull-off area is recommended off Heath Street and shall be designed such that buses pull-off from Heath Street to safely drop-off and pick-up students.

- School Zone signs, pavement markings and traffic control devices (i.e., flashing school speed limit signs) should be provided along Heath Street.

- All signs and other pavement markings to be installed within the Project site shall conform to the applicable standards of the current Manual on Uniform Traffic Devices (MUTCD).[1]

- Signs and landscaping adjacent to the Project site driveway intersections should be designed and maintained so as not to restrict lines of sight.

Pedestrian Improvements

New crosswalks are proposed along Heath Street and Hammond Street. The new Heath Street crosswalk is located near Oak Street where the sight lines are better. Sidewalks entering the site will be provided along the bus pull-off area and entering the site. In addition, all of the identified existing pedestrian deficiencies should be addressed by the Town including all pedestrian routes which are anticipated to accommodate teacher parking. ADA-complaint sidewalks should be provided in the area. The desirable sidewalk minimum width is five (5) feet and a 3-foot clearance at point objects. Further review of the pedestrian improvements will be required.

Proposed Rectangular Rapid Flashing Beacon (RRFB) signs are proposed along Route 9 at Dunster Road in the both directions and Hammond Street to alert drivers of the crossings and enhance safety for the school children. A pedestrian traffic signal is also proposed at Route 9 and Norfolk Road.

Off-Site

Hammond Street at Route 9 and Hammond Street at Heath Street

The Heath Street and Hammond Street signalized intersections will be retimed to include an exclusive pedestrian phase and reallocated green time to Heath Street approach to better facilitate peak traffic movements associated with the school. The new phasing and timing can better serve the peak school demand in comparison to the current signal timing and phasing. The Heath Street approach to Hammond Street will operate at LOS D, an acceptable peak condition. Hammond Street at Boylston Street (Route 9) will remain unchanged.

Traffic Enforcement

Increased traffic enforcement along Heath Street is recommended to enforce the school speed zone.

Parking

Designated teacher parking on local street must be approved by the Transportation Board. In addition, existing Heath Street on-street parking should be considered for 15-minute parking during parent drop-off and pick-up times. A minimum of 10 parking spaces should be provided on-site for visitors and handicap parking. An EV installation should be considered. Similar to other schools in Brookline, off-site parent parking can be found on local residential streets a short walking distance from the school.

[1] *Manual on Uniform Traffic Control Devices (MUTCD); Federal Highway Administration; Washington, D.C.; 2009*

Bicycle Considerations

The following should be incorporated into the site plan.

- Bicycle racks should be provided proximate to the building entrance in a visible location.
- Interior bicycle storage and shower facilities should be provided.
- Bicycle enhancements by the Town should be reviewed for both Heath Street and Woodland Road.

Transit Usage

While public transit usage will be limited to staff, the school should actively promote staff usage of public transportation to the school. This should be incorporated into a school Travel Demand Management Plan.

School Drop-Off and Pick-Up Traffic Management Plan

A central feature of the Project is the implementation of a traffic and parking management plan for school drop-off and pick-up activities. The Project site and the site access and off-site improvements detailed herein have been developed to facilitate access to the school campus for pedestrians, bicyclists, school buses and parents/caregivers in a safe and efficient manner. The traffic and parking management plan has been designed to build-upon this created infrastructure and will consist of the following major elements, all of which are overseen by school staff:

- A crossing guard should be located at the Oak Street school driveway in order to manage the flow of vehicles exiting the school and pedestrian crossings.
- School staff should be stationed at the drop-off areas to manage traffic within the site and along the driveway, as well as to facilitate the safety of pedestrians and bicyclists.
- A designated drop-off/pick-up area should be designed to facilitate these movements.
- A lane along the entryway should remain unobstructed during student drop-off and pick-up times.
- Parents and caregivers should be given information on school drop-off and pick-up times and procedures at the beginning of the school year, with periodic updates and reminders provided as may be necessary.

The elements of the traffic and parking management plan for school drop-off and pick-up activities should be reviewed and updated as may be necessary in order to ensure the safety of students.

Regional Traffic in the Area

Regional traffic was observed to utilize Heath Street to access Route 9 and contribute to area delays. While not required for this project, neighborhood conditions can be improved with the following considerations:

- Implement peak hour on-way flow on Heath Street in the westbound direction.
- Closure of Dunster Road

These measures can be considered by the Town to reduce regional impacts to the immediate area.

Construction Management Plan

A detailed Construction Management Plan should be prepared and reviewed by the Town.

Traffic Monitoring

Within three months after school opening, a traffic monitoring study should be completed to review traffic counts at the school driveways and evaluate the traffic condition within the area.

Annually, the school should assess conditions and evaluate pedestrian safety, crossing guards, and evaluate the level of student busing and make adjustments, as necessary.

CONCLUSION

Overall, a safe environment to the school can be maintained and the increased traffic conditions with respect to delays and queues will be limited to short periods in the morning and afternoon.

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to identify the potential traffic impacts associated with the proposed Baldwin 2 Section PK-8 School to be located off Heath Street in Brookline, Massachusetts. As typical with school traffic in Brookline, there is a relatively short peak period of impacts between 15 and 20 minutes as drop-off and pick-up occur at the school. Generally, the morning peak is more pronounced than the afternoon peak, as after school programs reduce the afternoon impacts. The focus of this study is to provide a safe environment for the school children, while minimizing the impacts to the surrounding neighborhood. This report identifies and analyzes existing and future traffic conditions both with and without the school and reviews access requirements, potential off-site improvements, and safety considerations.

PROJECT DESCRIPTION

The Baldwin Elementary School will consist of a 453-student elementary school with 86 staff to be located on Heath Street in Brookline, Massachusetts. Careful consideration has been made with respect to site access and egress. The school will be serviced by two driveways onto Heath Street (Entrance only) and Oak Street (exit only). The primary school driveway entrance is located opposite Dunster Road. This enter only driveway will service mostly parent drop-off and pick-ups and limited parking. The second driveway is an exit only and will be located off Oak Street. The site will accommodate at a minimum 10 parking spaces for visitor and Handicap parking.

STUDY METHODOLOGY

The scope of the Transportation Assessment was reviewed with Town officials. This study was prepared in general accordance with the state and town guidelines for Transportation Impact Assessments (TIA); and was conducted in three distinct stages.

The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics; observations of traffic flow; and collection of daily and peak period traffic counts.

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the school were assessed along with future traffic demands due to expected traffic growth independent of the project. A seven-year time horizon was selected for analyses consistent with state guidelines for the preparation of TIA. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues.

The third stage of the study presents and evaluates measures to address traffic and safety issues, if any, identified in stage two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of traffic conditions on the study area roadways was conducted. The field investigation consisted of an inventory of existing roadway geometrics, traffic volumes, and operating characteristics, as well as posted speed limits and land use information within the study area. The study area for the project was selected to contain the major roadway providing access to the project site, Heath Street, as well as 12 intersections located near the site:

1. Boylston Street at Hammond Street
2. Hammond Street at Heath Street
3. Hammond Street at Soule Recreation Drive and Private Drive
4. Hammond Street at Woodland Road
5. Heath Street at Oak Street
6. Heath Street at Dunster Road
7. Boylston Street at Dunster Road
8. Heath Street at Cary Road and Soule Recreation Drive
9. Heath Street at Woodland Road
10. Heath Street at Randolph Road
11. Heath Street at Warren Street
12. Horace James Circle: Newton Street at Hammond Street, Hammond Pond Parkway and LaGrange Street

The following describes the study area roadways and intersections. Figure 1 provides a Study Location Map and the study area intersections.

GEOMETRY

Roadways

Heath Street

Heath Street, in the vicinity of the site, is a roadway under local jurisdiction that generally travels in an east/west orientation in Brookline Massachusetts. Heath Street accommodates a two-lane roadway in each direction with travel separated by a double yellow centerline. Concrete sidewalks are generally provided along Heath Street within the study area. Land use along Heath Street consists primarily of residential, school and recreational properties. There is no posted speed limit on Heath Street in the vicinity of the site.

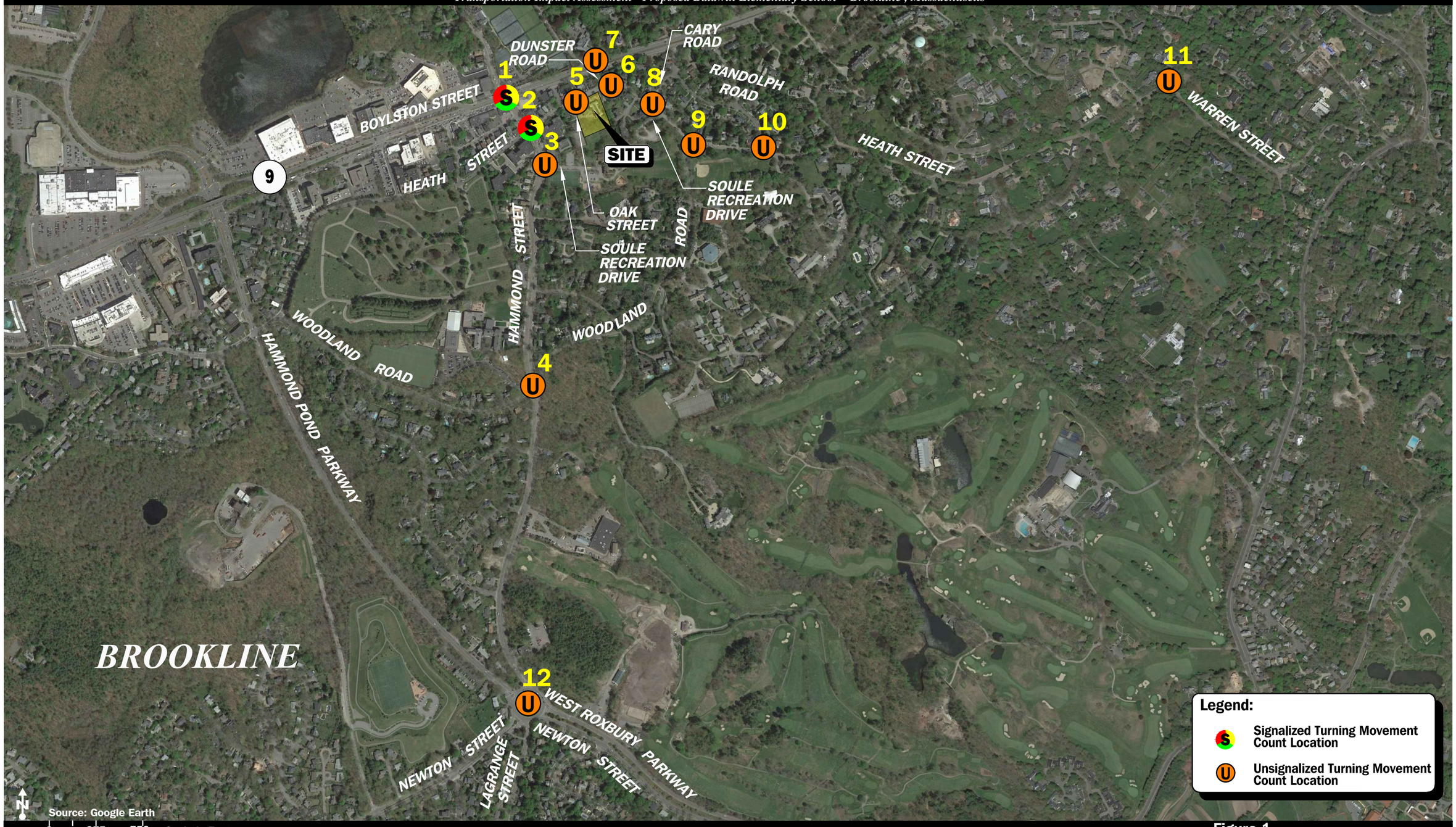

Figure 1

Site Location and Study Area Map

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Intersections

Figures 2 and 3 summarizes lane use and lane widths at the study area intersections as observed in November 2018.

EXISTING TRAFFIC VOLUMES

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, manual turning movement counts (TMCs) and vehicle classification counts were completed in September 2018. The ATR counts were conducted on Heath Street in the vicinity of the Project site in order to record weekday daily traffic conditions over an extended period, with weekday morning (7:00 to 9:00 AM) and weekday afternoon (1:00 to 4:00 PM) peak period manual TMCs performed at the study intersections. These time periods were selected for analysis purposes as they are representative of the peak traffic volume hours for the school.

Traffic Volume Adjustments

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, historical traffic data collected by MassDOT were examined. Based on a review of seasonal adjustment factors collected by MassDOT for urban arterials and collectors, October traffic volumes are typically 3 percent higher than average monthly conditions and, therefore, were not adjusted downward in order to provide a conservative (above-average) analysis condition. For purposes of the study, the weekday morning peak hour of the school generally occurs between 7:00 and 8:00 AM while the weekday afternoon peak hour of the school generally occurs between 1:30 and 2:30 PM. In all instances, these peak hours of the school were utilized for analysis purposes.

The 2018 Existing traffic volumes are summarized in Table 1 and graphically depicted on Figures 4 and 5, respectively.

Table 1
EXISTING ROADWAY TRAFFIC-VOLUME SUMMARY

		Weekday Morning Peak Hour (7:00 - 8:00 AM)			Weekday Afternoon Peak Hour (1:30-2:30 PM)		
Location	Daily Volume (vpd)[a]	Volume (vph)[b]	Percent of Daily Traffic[c]	Predominant Flow	Volume (vph)	Percent of Daily Traffic	Predominant Flow
Heath Street, west of Dunster Road	3,400	369	10.6	53% EB	237	6.9	54% WB
Hammond Street North of Woodland Road	12,500	1,071	8.6	60% NB	729	5.8	55% SB

[a]Two-way daily traffic expressed in vehicles per day; from ATR Counts October 2018.
[b]Manual turning movement counts conducted in September 2018
[c]The percent of daily traffic that occurs during the peak hour.
SB = southbound; EB = eastbound; WB = westbound;

As can be seen in Table 1, Heath Street was found to accommodate approximately 3,400 vehicles per day (vpd) with 369 vehicles per hour (vph) during the weekday morning school peak hour and

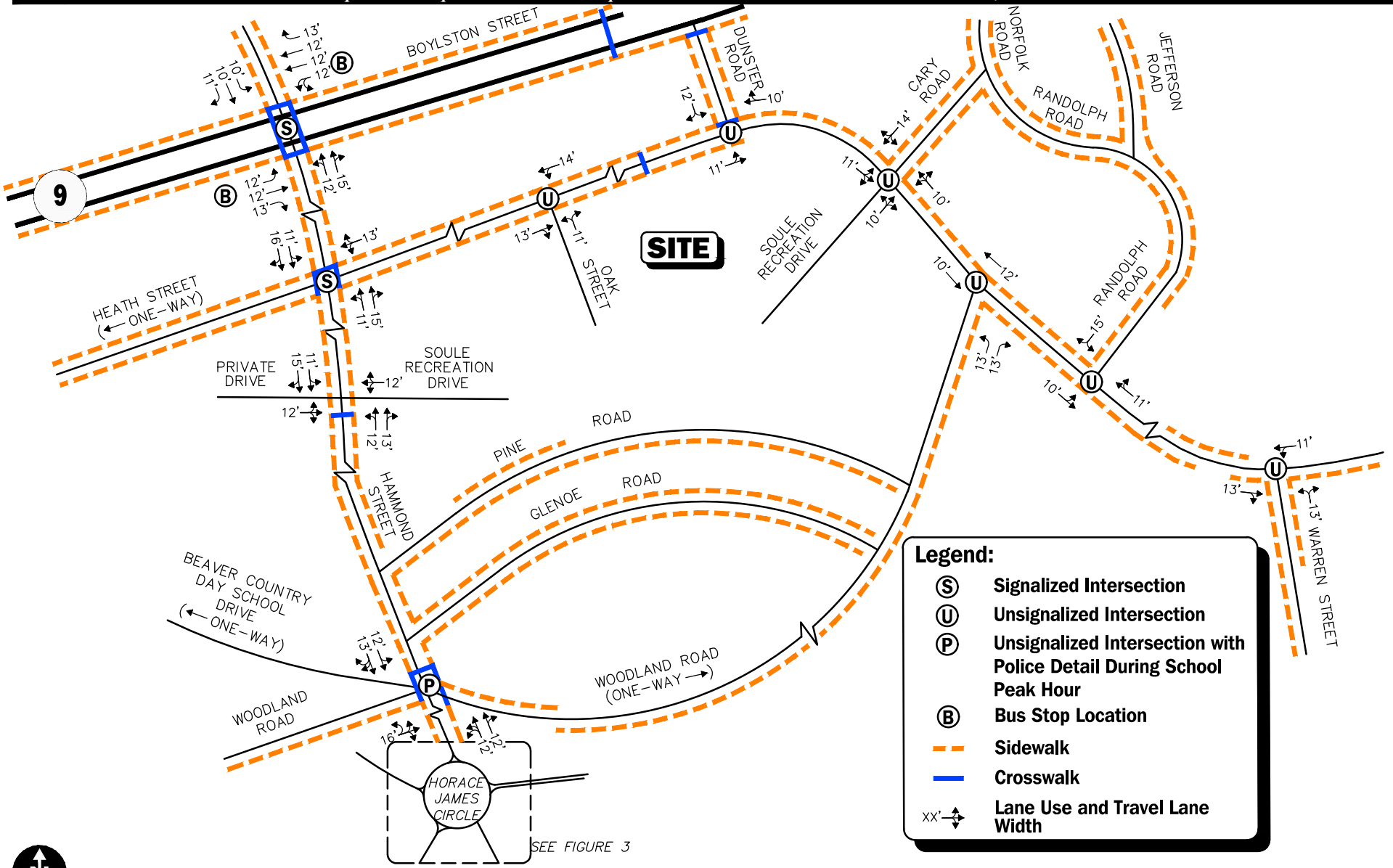

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Figure 2

Existing Intersection Lane Use, Travel Lane Width and Pedestrian Facilities

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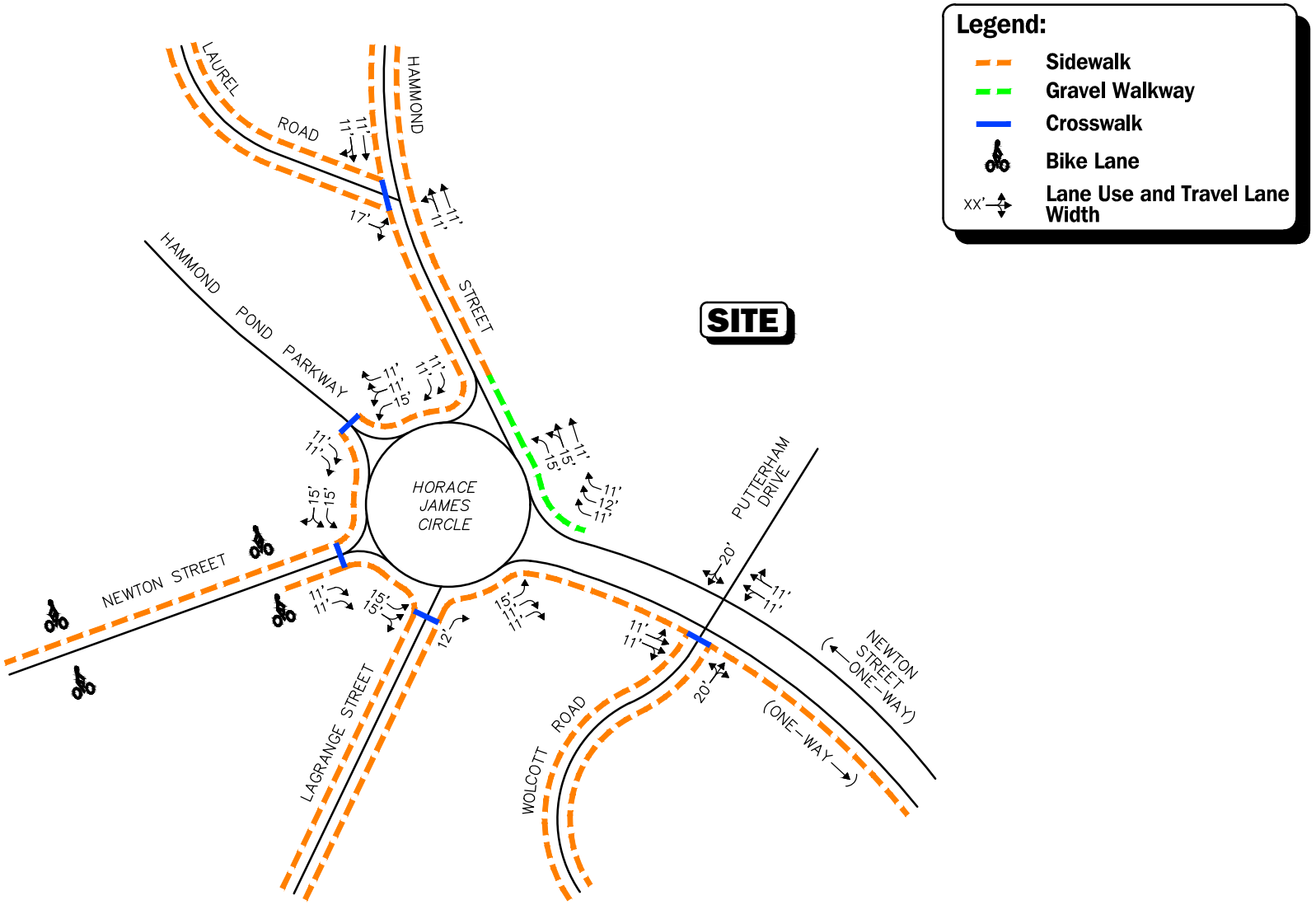

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Figure 3

Existing Intersection Lane Use, Travel Lane Width and Pedestrian Facilities

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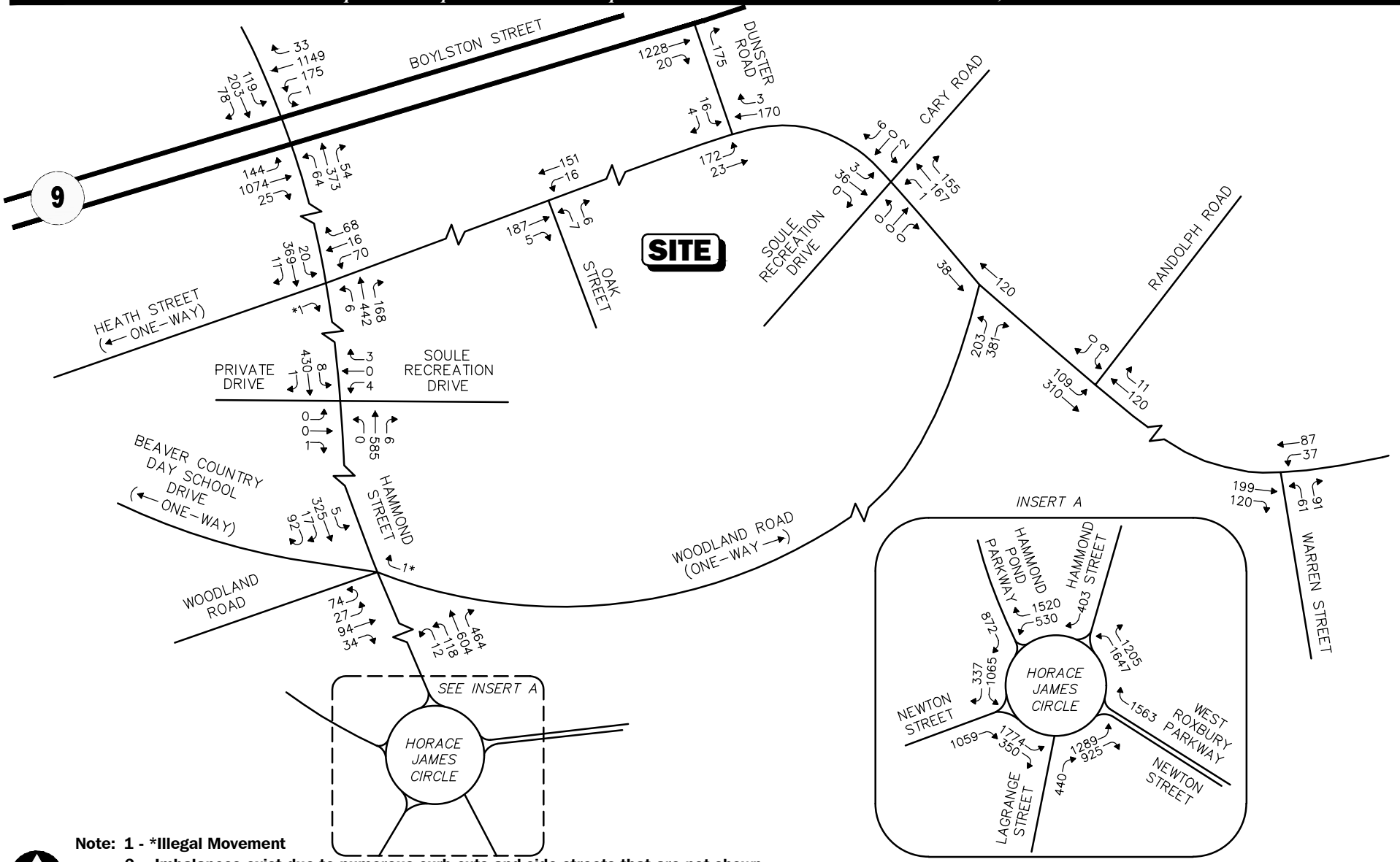

Note: 1 - *Illegal Movement
2 - Imbalances exist due to numerous curb cuts and side streets that are not shown.

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Figure 4

2018 Existing
Weekday Morning
School Peak Hour Traffic Volume
(7:00 - 8:00 AM)

Vanasse & Associates, Inc.
Transportation Engineers & Planners

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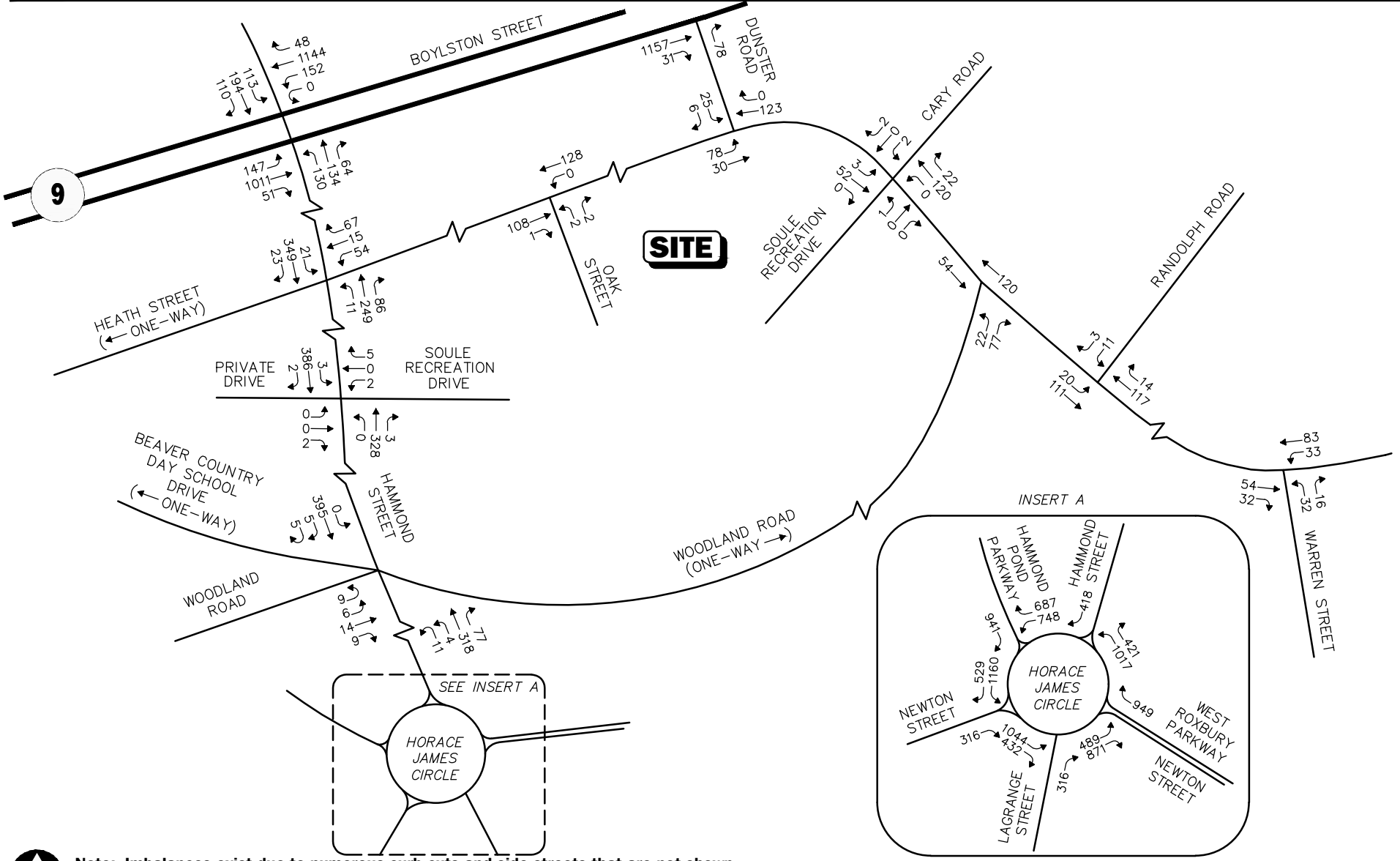

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

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Figure 5

2018 Existing
Weekday Afternoon
School Peak Hour Traffic Volume
(1:30 - 2:30 PM)

Vanasse & Associates, Inc.
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237 vph during the weekday afternoon school peak hour. Directional traffic during the morning period is in the eastbound direction and during afternoon periods is in the westbound direction.

Figure 6 graphically depicts hourly traffic volumes along Heath Street between 6:00 AM and 11:00 AM and 1:00 PM and 7:00 PM. As shown, the highest hour of traffic occurs between 8:00 and 9:00 AM and 5:00 and 6:00 PM. It is important to note that the school traffic will occur prior to these peak periods and as such minimizes the impact of the school traffic in the area.

Figures 7 and 8 depict observed queues along Heath Street from Hammond Street for 5 minutes intervals for the anticipated peak school hours. During the morning period, queues increase between 7:35 and 8:00 AM, and the longest queues were observed after 8:00 AM. During the afternoon period, Heath Street queues peaked at 2:25 PM.

Based upon several observations of traffic conditions along Heath Street, it was concluded that a slightly earlier start time would be very beneficial to traffic flow entering and exiting the school.

PEDESTRIAN AND BICYCLE FACILITIES

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in October 2018. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways and at the study intersections, as well as the location of bicycle facilities. Sidewalks are provided along both sides of Boylston Street, Hammond Street and Heath Street in the vicinity of the site. Marked crosswalks are provided along each approach to the Boylston Street at Hammond Street intersection and at the Heath Street at Hammond Street intersection, and along Hammond Street at the Soule Recreation Drive. No bicycle facilities were noted in the area. Figures 9 and 10 graphically depict the pedestrian volumes recorded in the area during the weekday morning and weekday afternoon school peak hours.

As part of the study, an inventory of existing deficiencies was completed in the immediate area of the proposed school. Figure 11 depicts existing deficiencies along the pedestrian routes within the study area. Deficiencies included non-ADA compliant ramps, utilities in sidewalks, non-compliant sidewalks and missing crosswalks. All existing area pedestrian routes including areas where teacher parking is planned, will be upgraded by the Town.

PUBLIC TRANSPORTATION

Public transportation services are provided within the study area by the Massachusetts Bay Transit Authority (MBTA). The MBTA operates fixed-route bus services in the vicinity. Bus Route 60 – Chestnut Hill – Kenmore Station via Brookline Village and Cypress Street stops at the intersection of Boylston Street at Hammond Street. The MBTA Green Line D Branch Chestnut Hill Station is located off of Hammond Street approximately 0.3 miles north of the Project site, less than a ten minute walk. The Town will actively promote staff-use of public transportation to the new school.

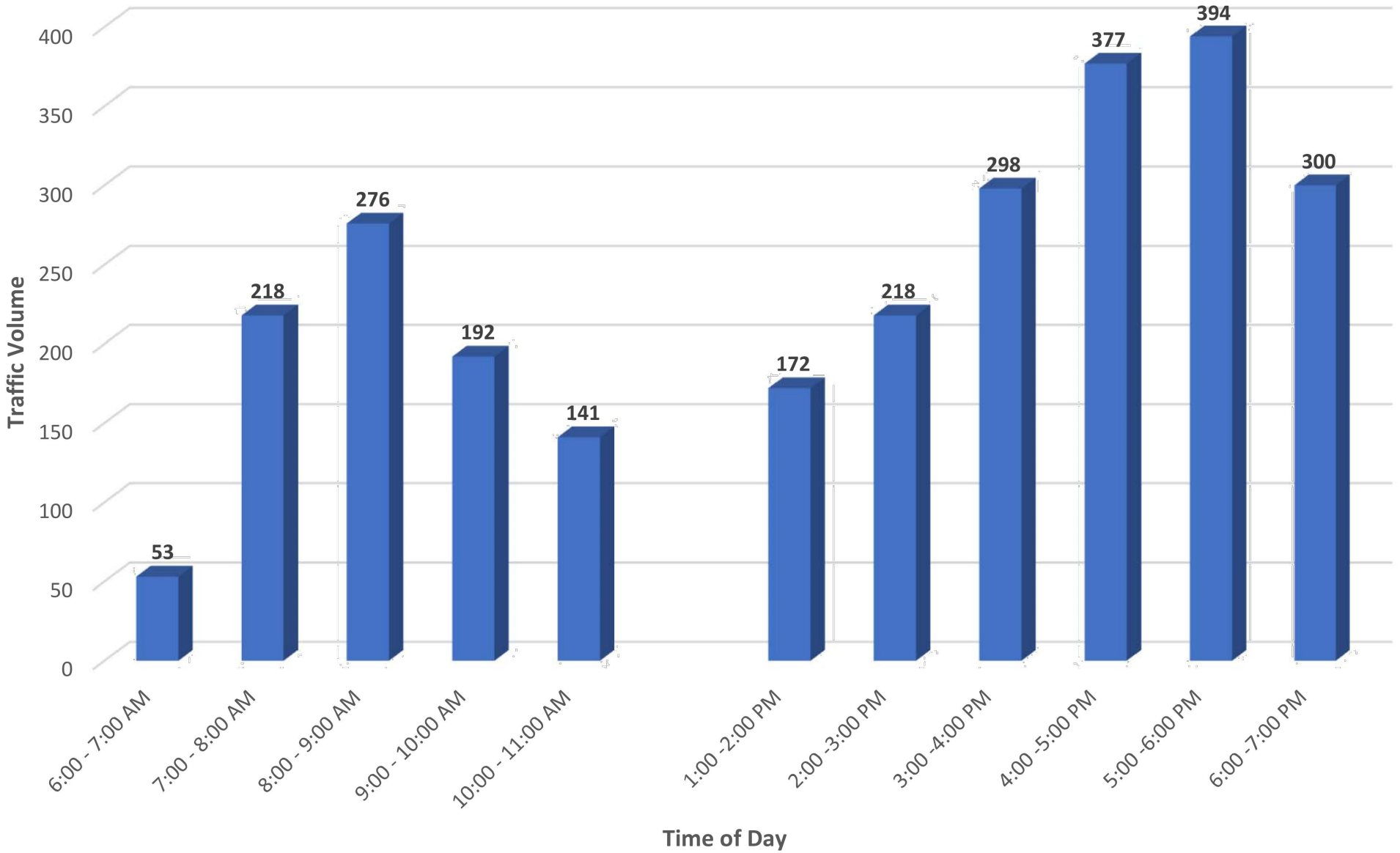

Figure 6

Existing Heath Street
Traffic Count
October 01 , 2018

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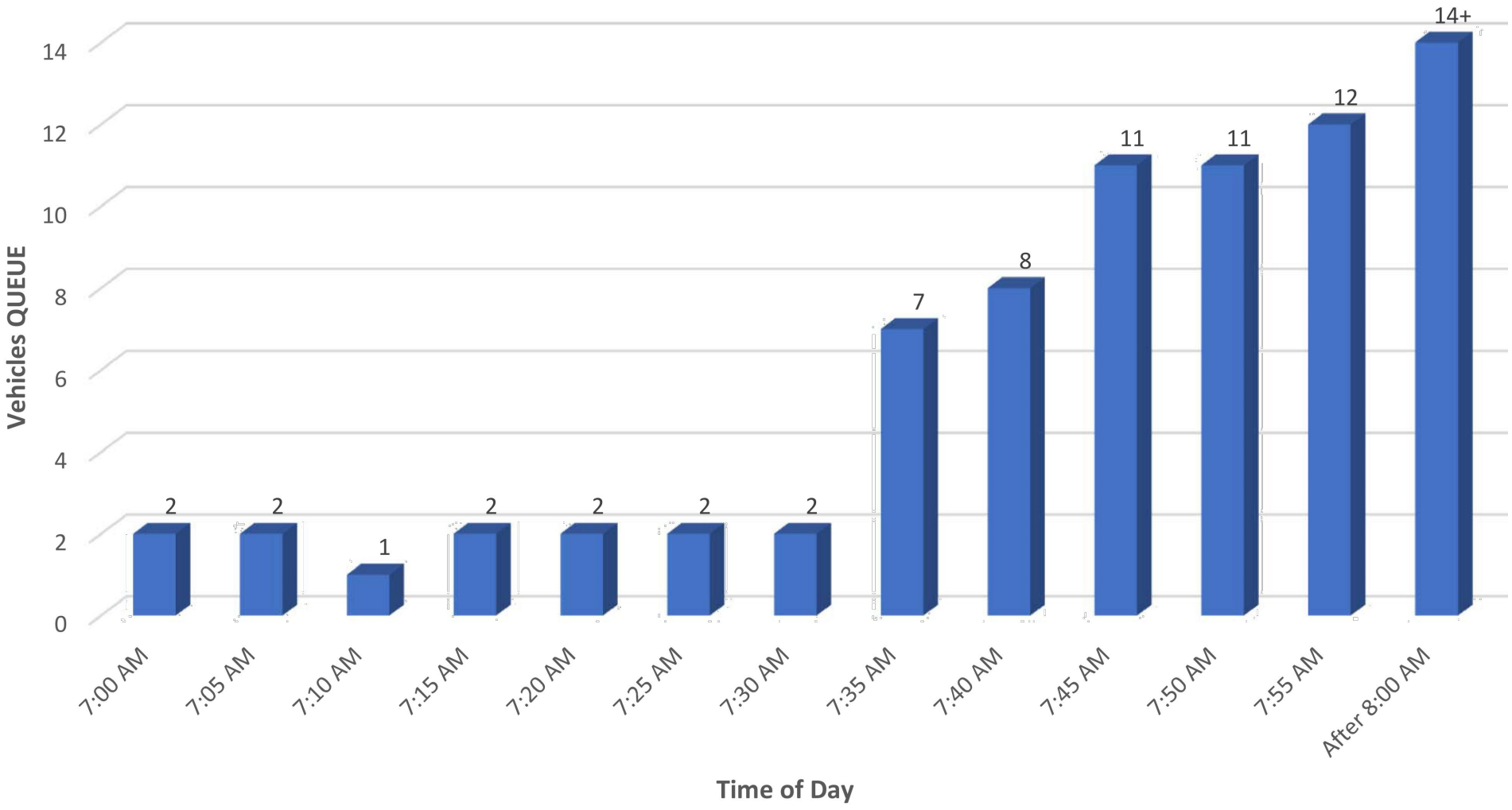

Figure 7

Vehicle Queue on Heath Street Weekday Morning October 16 , 2018

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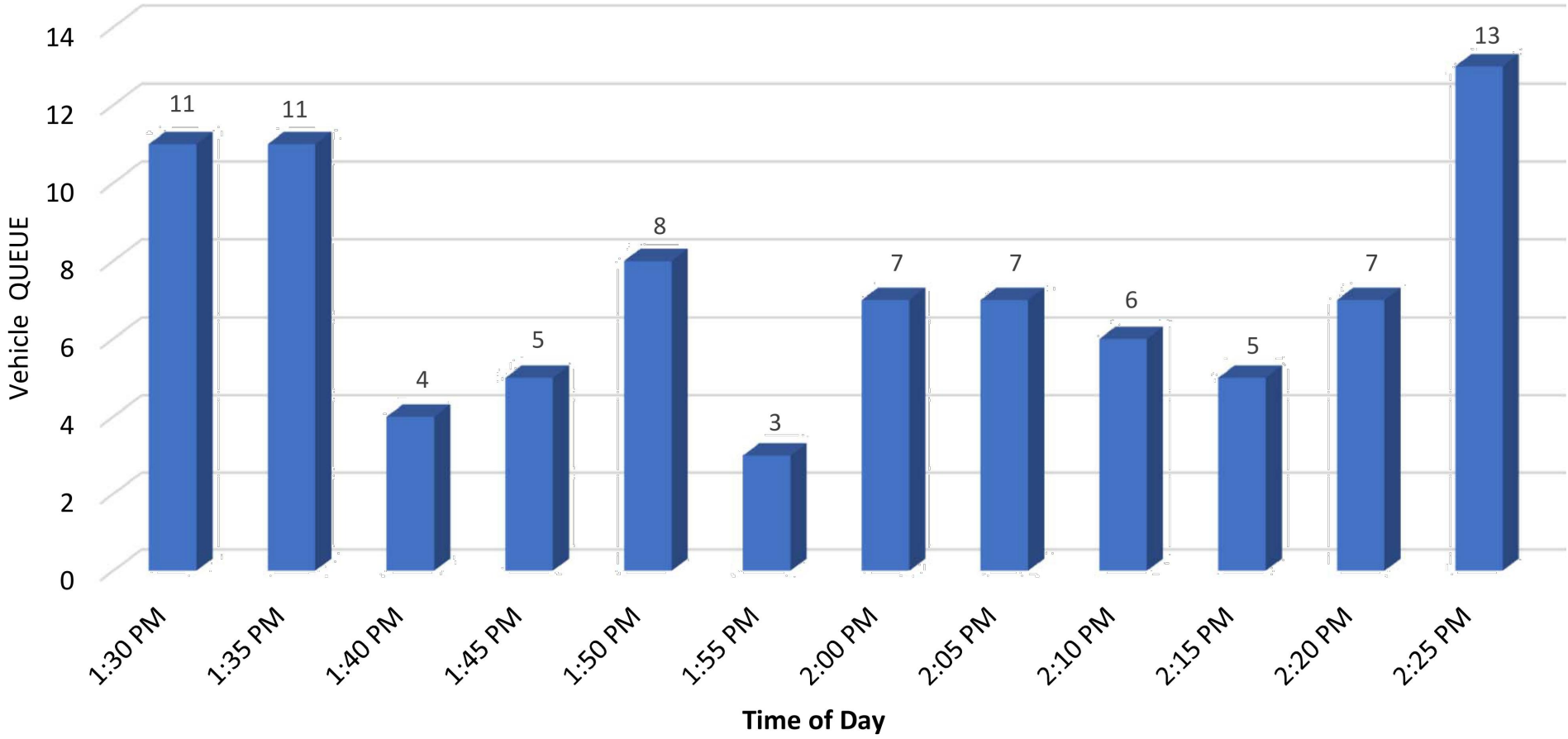

Figure 8

Vehicle Queue
Heath Street
Weekday Afternoon
October 16 , 2018

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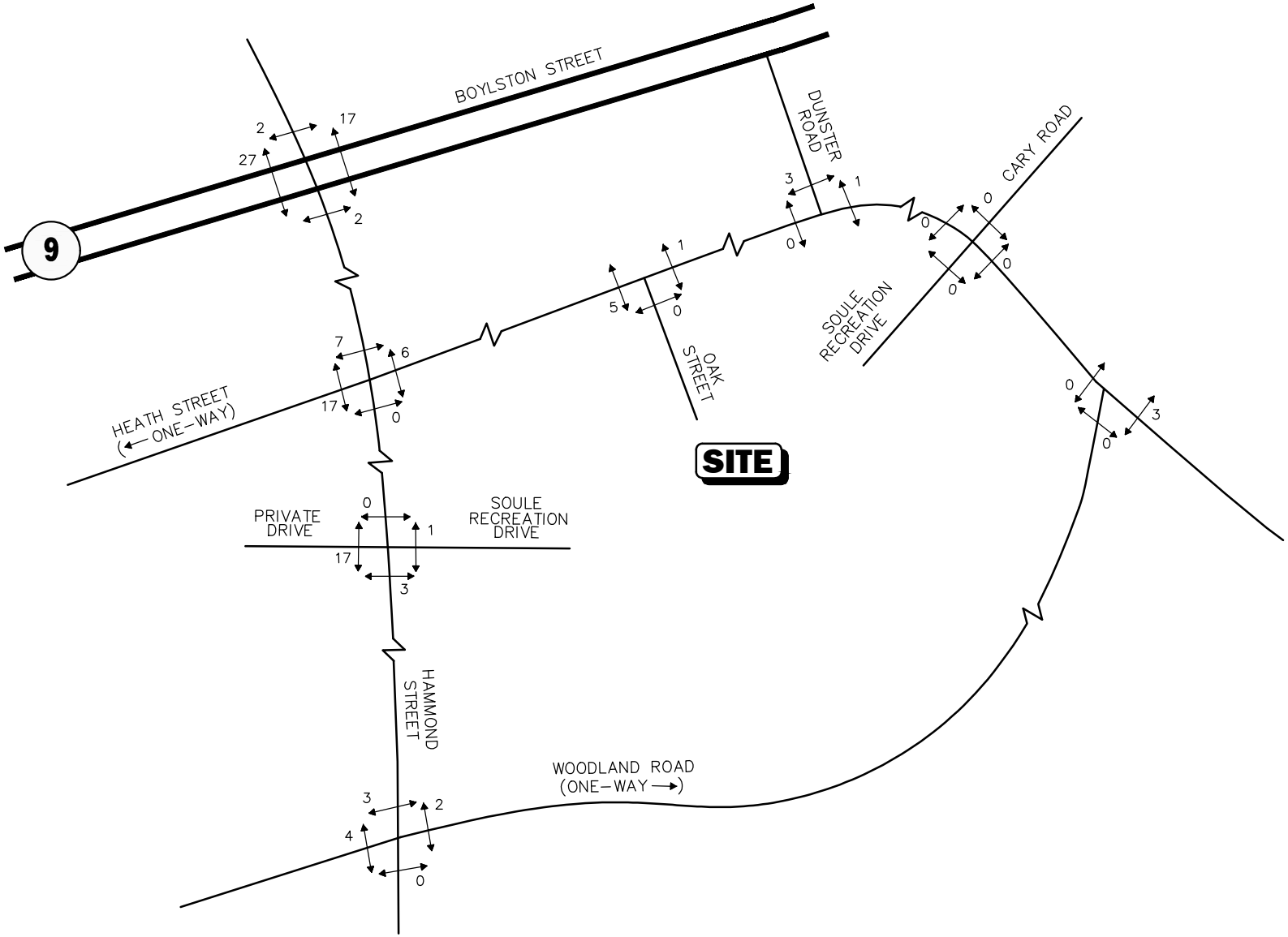

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Figure 9

2018 Existing Weekday Morning School Peak Hour Pedestrian Volume (7:00 - 8:00 AM)

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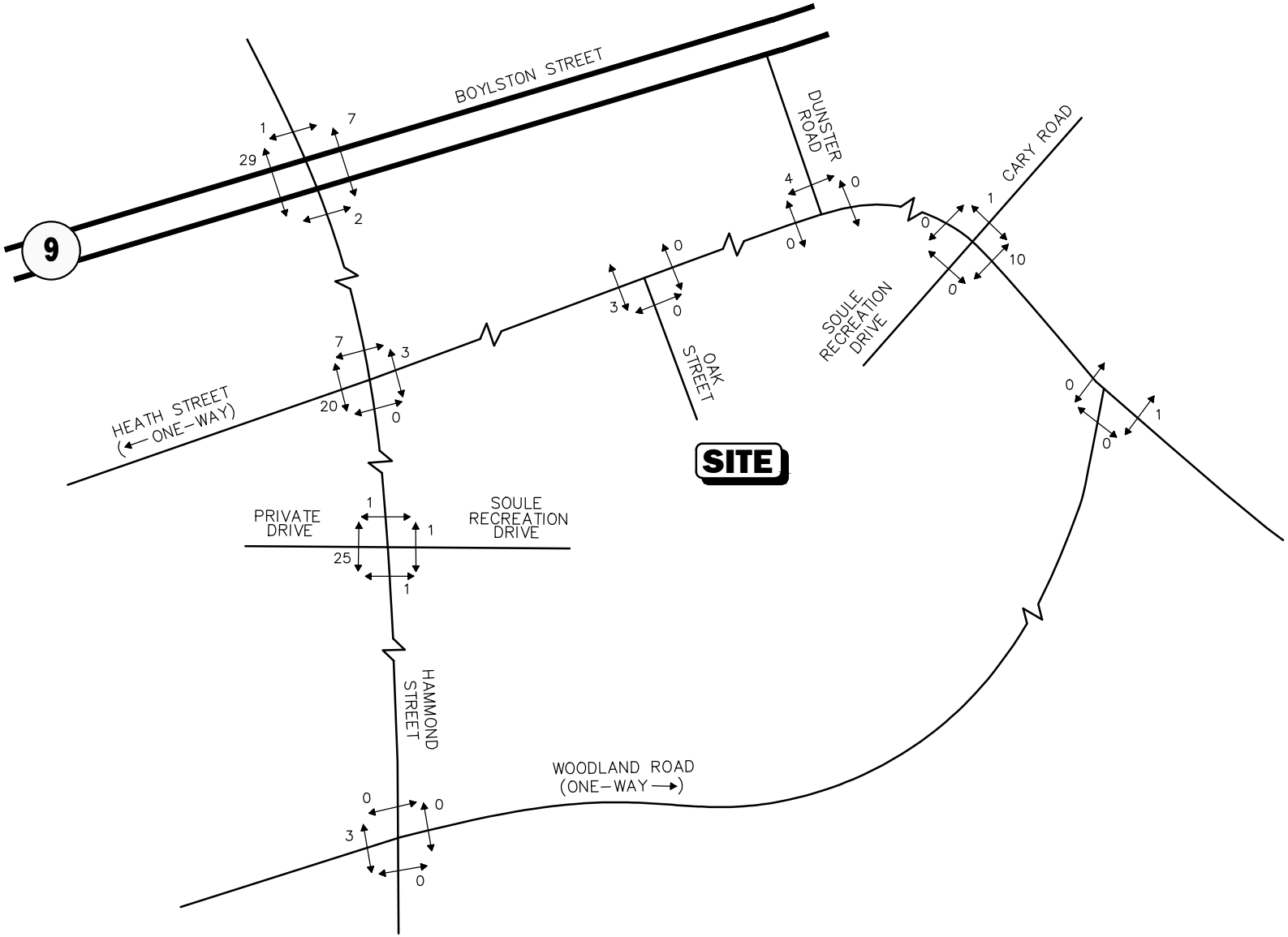

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Figure 10

2018 Existing Weekday Afternoon School Peak Hour Pedestrian Volume (1:30 - 2:30 PM)

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HAMMOND STREET

WOODLAND ROAD

GLENOE ROAD

PINE ROAD

HEATH STREET

DUNSTER ROAD

BOYLSTON STREET (ROUTE 9)

DANE PARK

BALDWIN SCHOOL

INSTALL APS PEDESTRIAN PUSH BUTTONS

Legend:

- No Wheelchair Ramp
- Non-Compliant Wheelchair Ramp
- Utility Encroaching on Sidewalk Clearance
- No Painted Crosswalk
- No Sidewalk
- Non-Compliant Sidewalk

0 100 200 Scale in Feet

Figure 11

Pedestrian Facility Deficiencies Hammond Street, Heath Street and Woodland Road

Prepared by:

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Transportation Engineers & Planners

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SPOT SPEED MEASUREMENTS

Vehicle travel speed measurements were performed on Heath Street in the vicinity of the Project site in conjunction with the ATR counts. Table 2 summarizes the vehicle travel speed measurements.

Table 2
VEHICLE TRAVEL SPEED MEASUREMENTS

	Heath Street	
	Eastbound	Westbound
Mean Travel Speed (mph)	27	28
85th Percentile Speed (mph)	30	32
Speed Limit (mph)	25*	25*

mph = miles per hour.
*Unposted

As can be seen in Table 2, the mean (average) vehicle travel speed along Heath Street in the vicinity of the proposed school was found to be approximately 27 mph in the eastbound direction and 28 mph in the westbound direction. The measured 85th percentile vehicle travel speed, or the speed at which 85th percent of the observed vehicles traveled at or below, was found to be 30 mph in the eastbound direction and 32 mph in the westbound direction. The 85th percentile speed is used as the basis of engineering design and in the evaluation of sight distances, and is often used in establishing posted speed limits.

SIGHT DISTANCE EVALUATION

Sight distance measurements were performed at the proposed school driveway exit with Heath Street in accordance with MassDOT and American Association of State Highway and Transportation Officials (AASHTO)[2] standards. In brief, Stopping Sight Distance (SSD) is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. In accordance with AASHTO and MassDOT standards, at a minimum, sufficient stopping sight distances must be provided at an intersection. Table 3 presents the measured sight distances at Oak Street where the school traffic will exit.

[2] *A Policy on Geometric Design of Highway and Streets*, 6th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2011.

Table 3
STOPPING SIGHT DISTANCE

Intersection/Sight Distance Measurement	Required Minimum (Feet) [a] 30 mph	35 mph	Measured (Feet)
Oak Street at Heath Street Exiting Sight Distance:			
Looking to the east from the driveway	200	250	360
Looking to the west from the driveway	200	250	240

[a]Recommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*, Fifth Edition; American Association of State Highway and Transportation Officials (AASHTO); 2011.

As shown in Table 3, the proposed school driveway has acceptable sight distances for over 35 mph indicating that safe operation can exist based upon the existing geometrics. It should be noted that existing vegetation to the west will need to be trimmed and maintained.

MOTOR VEHICLE CRASH DATA

Motor vehicle crash information for the study area intersections was provided by the MassDOT Safety Management/Traffic Operations Unit for the most recent five-year period available (2012 through 2016) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, pavement condition and severity in Table 4. Figure 12 graphically depicts the Accident Data at each study area intersection, by number of accidents, accidents per year and crash rate.

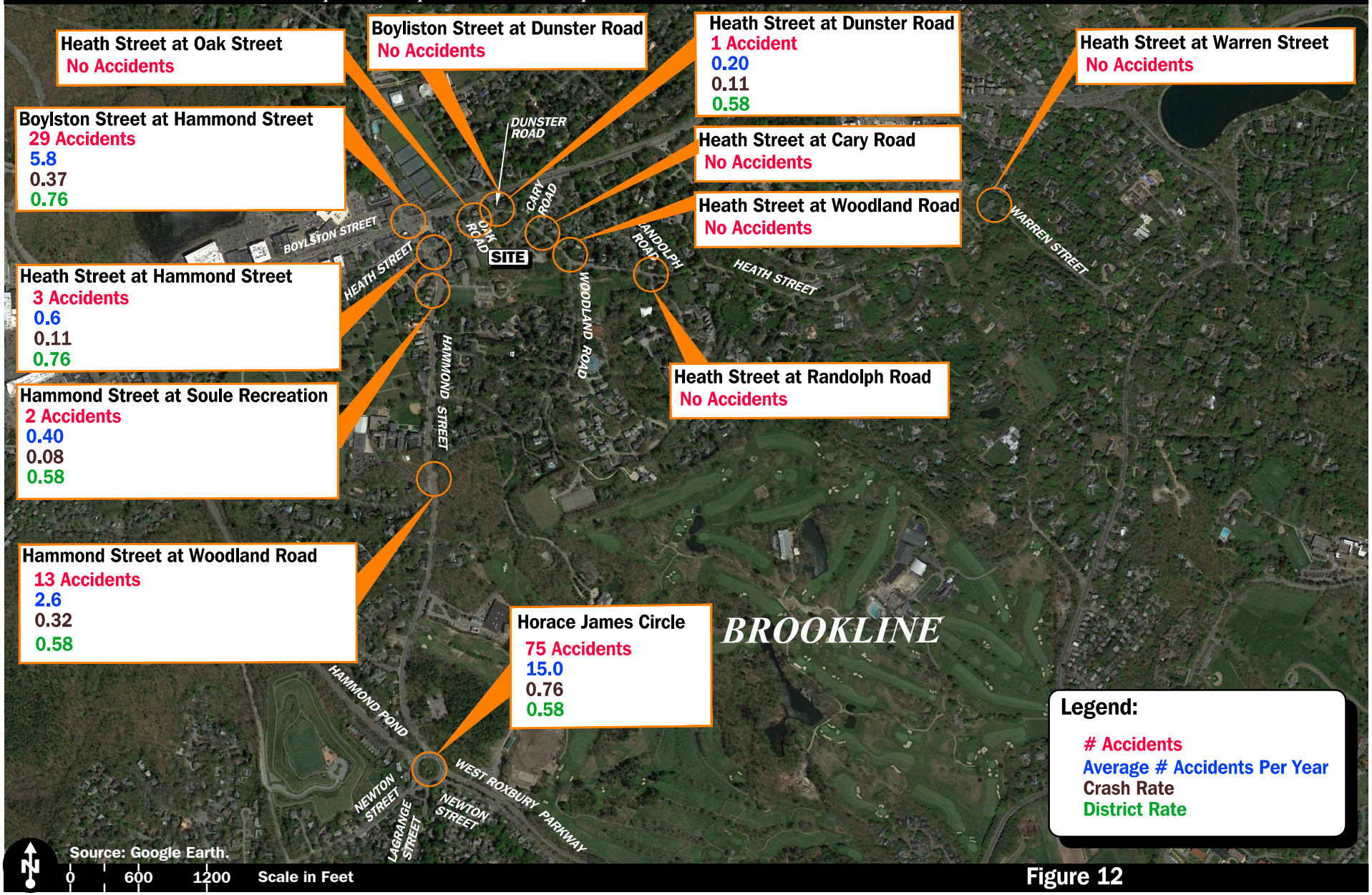

Figure 12

Accident Data

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Table 4
MOTOR VEHICLE CRASH DATA SUMMARY[a]

Scenario	Boylston Street (Route 9) at Hammond Street	Hammond Street at Heath Street	Hammond Street at Soule Rec Drive	Hammond Street at Woodland Road	Heath Street at Dunster Road	Horace James Circle
Year:						
2012	5	0	0	3	0	7
2013	4	1	0	1	0	11
2014	5	0	1	5	1	14
2015	3	1	1	2	0	15
2016	12	1	0	2	0	28
Total	29	3	2	13	0	75
Average[a]	5.80	0.60	0.40	2.60	0.20	15.0
Crash Rate[b]	0.37	0.11	0.08	0.32	0.11	0.76
Significant	No	No	No	No	No	Yes
Type:						
Angle	8	2	1	8	0	29
Rear-End	12	0	0	1	0	22
Head-On	2	0	0	1	0	0
Sideswipe	4	1	1	0	0	17
Fixed Object	2	0	0	2	1	7
Other	1	0	0	1	0	0
Total	29	3	2	13	1	75
Pavement Conditions:						
Dry	23	3	1	10	0	64
Wet	5	0	1	3	0	9
Snow/Ice	1	0	0	0	1	1
Unknown/ Other	0	0	0	0	0	1
Total	29	3	2	13	1	75
Severity:						
Property Damage Only	16	2	1	9	1	47
Personal Injury	12	1	1	4	0	27
Fatality	0	0	0	0	0	1
Unknown	1	0	0	0	0	0
Total	29	3	2	13	1	75

[a]Average crash over five-year period.
[b]Crash rate per million entering vehicles (mev).
Source: MassDOT Crash Data, 2012 through 2016.

As can be seen in Table 4, the intersection of Horace James Circle experienced a total of 75 accidents reported at the intersection over the five-year review period, averaging 15 accidents per year. All other intersections experienced less than 6 crashes per year. All of the study intersections were found to have a motor vehicle crash rate below the MassDOT average for the District 6 (0.71 for signalized intersections and 0.52 for unsignalized intersections), with the exception of Horace James Circle which had a crash rate of 0.76, which is slightly above the District average. This is typical of traffic circles with many conflict points within the circle. Pedestrian accidents were also reported at Boylston Street at Hammond Street (2), Hammond Street at Woodland Street (1), and the Horace James Circle (4). Based upon a review of the accident data, it can be concluded that safe conditions currently exist in the area of the proposal school.

FUTURE CONDITIONS

To determine the impact of school traffic volumes on the roadway network under future conditions, baseline traffic volumes in the study area were projected to the year 2025. Traffic volumes on the roadway network at that time, in the absence of the project (that is, the No-Build condition), would include existing traffic, new traffic due to general background traffic growth, and traffic related to specific development by others expected to be completed by 2025. Inclusion of these factors resulted in the development of 2025 No-Build traffic volumes. Anticipated site-generated traffic volumes were then superimposed upon these No-Build traffic-flow networks to develop the 2025 Build traffic-volume conditions.

FUTURE TRAFFIC GROWTH

Traffic growth on area roadways is a function of the expected land development in the immediate area, as well as the surrounding region. Several methods are used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This produces a more realistic estimate of growth for local traffic. However, the drawback of this procedure is that the potential growth in population and development external to the study area would not be accounted for in the traffic projections.

To provide a conservative analysis framework, both procedures were used.

General Background Growth

Traffic-volume data compiled by MassDOT from permanent count stations and historic traffic counts in the area were reviewed in order to determine general background traffic growth trends. Based on a review of this data and other area traffic studies, a 1.0 percent per year compounded annual background traffic growth rate was used in order to conservatively account for future

traffic growth and presently unforeseen development within the study area. This is consistent with previous traffic studies conducted for the area[3].

Specific Development by Others

The Town of Brookline and the City of Newton were contacted in order to determine if there are any planned or approved specific development projects within the area that would have an impact on future traffic volumes at the study intersections. Based on these discussions two projects were identified:

1180 Boylston Street. This project consists of the development of 45 age-restricted (55+) apartments and 7,000 sf of retail. The Site Generated volumes from the traffic study were added to the No-Build volumes (see distribution in appendix). This project has Route 9 access only and will not impact Hammond Street or Heath Street.

Life Time Center – 300 Boylston Street, Newton. This project is a 265,000-sf reuse of retail space to a Wellness Center including a health club and medical offices. Traffic volumes were estimated and incorporated for peak school peak times.

No other background developments were identified within the study area.

Planned Roadway Improvements

The Town of Brookline was contacted in order to determine if there are any planned roadway improvement projects expected to be completed within the study area. Based on these discussions, two projects were identified:

- ***Hammond Street at Woodland Road Intersection Improvement Study.*** Intersection alternatives have been evaluated by the team and their consultant. The preferred alternative is traffic signalization.

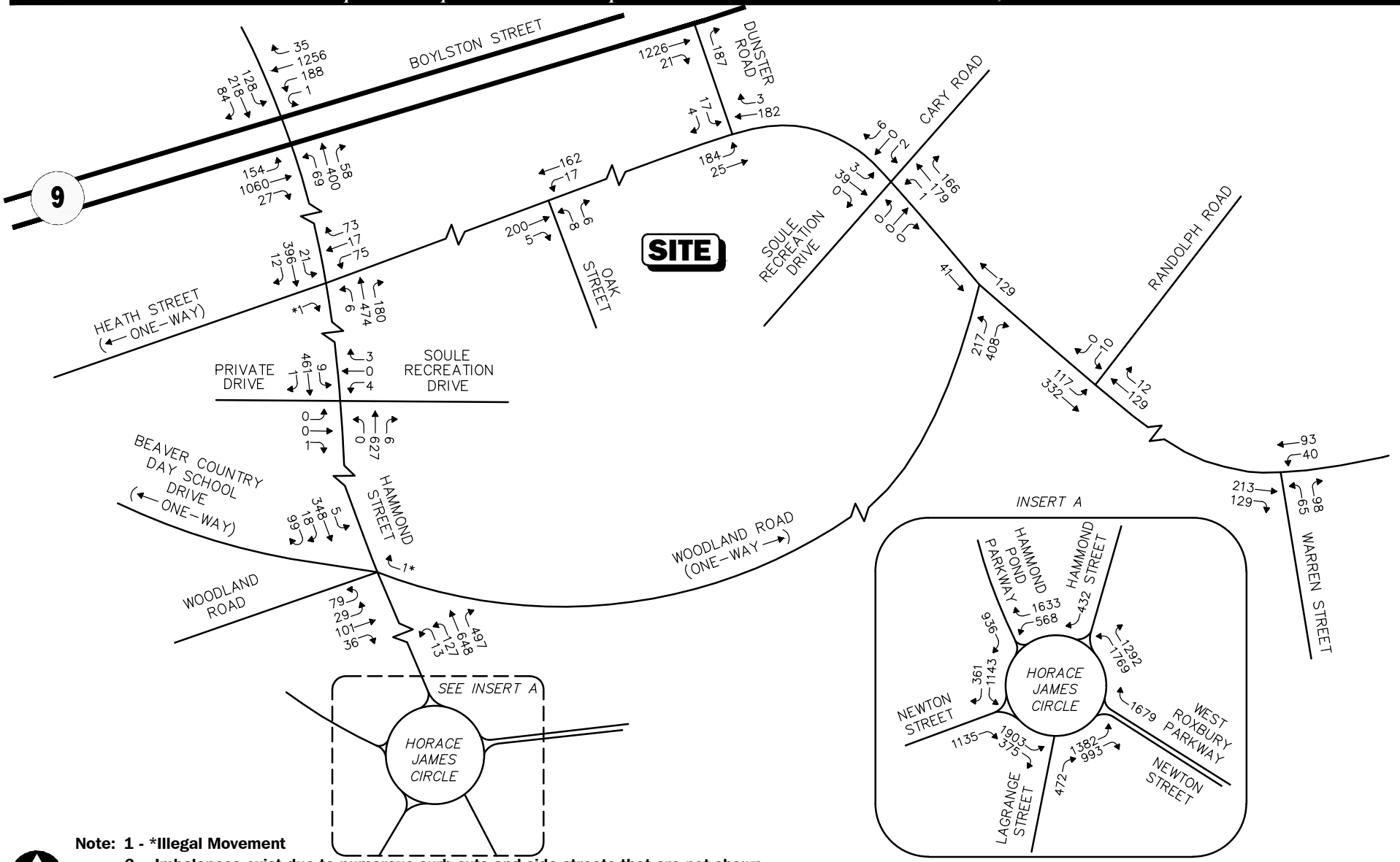
- ***Woodland Road Traffic Calming Study.*** The Town is currently assessing traffic calming measures for Woodland Road.

In addition, the Town is considering a potential "Road Diet" along Hammond Street allowing for left-turn lanes at intersections and bicycle lanes.

No-Build Traffic Volumes

The 2025 No-Build school peak-hour traffic-volume networks for weekday morning and weekday afternoon were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the Existing school peak-hour traffic volumes plus the identified background development. The resulting 2025 No-Build weekday morning and weekday afternoon school peak-hour traffic volume networks are shown on Figures 13 and 14.

[3]1180 Boylston Street, VAI March 2016.



Note: 1 - *Illegal Movement
2 - Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 13

2025 No-Build
Weekday Morning
School Peak Hour Traffic Volume
(7:00 - 8:00 AM)

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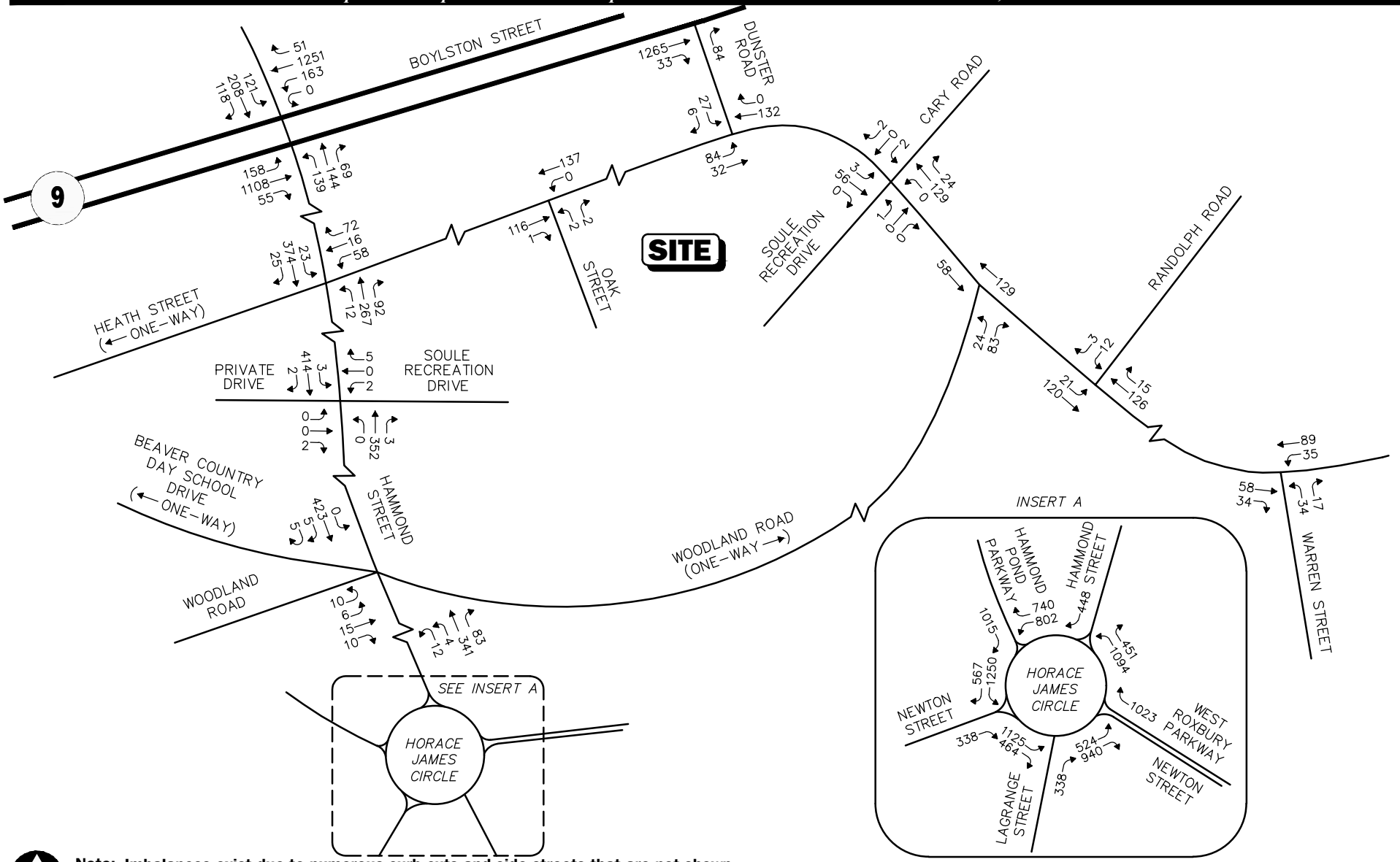

Note: **Imbalances exist due to numerous curb cuts and side streets that are not shown.**

Not To Scale

Figure 14

2025 No-Build
Weekday Afternoon
School Peak Hour Traffic Volume
(1:30 - 2:30 PM)

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PROJECT-GENERATED TRAFFIC

Design year (2025 Build) traffic volumes for the study area roadways were determined by estimating Project-generated traffic volumes and assigning these volumes on the study roadways. The following describes the methodology used to establish the traffic characteristics of the Project. As proposed, the Project will entail the construction of a 453-student elementary school. Teacher and staff levels are estimated at 86.

In order to develop the traffic characteristics of the School, trip-generation statistics published by the ITE[4] for similar land uses as those proposed were used. ITE Land Use Code (LUC) 520, *Elementary School,* with the independent variable of "Number of Students" equal to 453. It should be noted that the trip-generation statistics published by the ITE for the aforementioned land uses reflect the common modes of transportation for schools and include buses, vans/carpools, as well as students that may walk or bicycle to school. Table 5 summarizes the anticipated characteristics of the Project based upon Industry Standards.

Table 5
BALDWIN ELEMENTARY SCHOOL
TRIP GENERATION SUMMARY[a]

Time Period/Direction	Vehicle Trips[a] Elementary School (453 Students)[a]
Average Weekday Daily:	
Entering	428
Exiting	428
Total	856
Weekday Morning Peak Hour:	
Entering	167
Exiting	137
Total	304
Weekday Afternoon Peak Hour:	
Entering	69
Exiting	85
Total	154

[a]Based on ITE LUC 520, *Elementary School.*

Overall, the above ITE estimates are reasonable, but may not reflective of actual Brookline conditions. As such, an alternative approach was developed based upon the following assumption provided for the proposed school.

- 453 Students
- 86 Staff (74 Arrive in Peak Hour and 1.0 Staff Per Car)
- 4% Daily Absenteeism
- 25 METCO Students Arriving by Bus

[4]Ibid 2.

- 30 Rise Students (9 Vans)
- 45 Brookline Early Education Program Students (Arrive After 8:00 AM)
- 120 Students Bus (2 Buses)
- 50 Students Walk[5]
- Student Car Occupancy Of 1.45 Student/Car

Afternoon traffic volumes were estimated based upon the reduced traffic percentage from the ITE data. A summary of expected vehicle trip generation is summarized in Table 6 based upon the above assumptions.

Table 6
TRIP GENERATION SUMMARY

Time Period	Staff	Vans	Buses	Car Drop-off/ Pick-up	Total Trips
Weekday Morning Peak Hour:					
Entering	74	9	3	121	207
Exiting	0	9	3	121	133
Total	74	18	6	242	340
Weekday Afternoon Peak Hour:					
Entering	0	9	3	70	82
Exiting	10	9	3	70	92
Total	10	18	6	140	174

As can be seen in Table 6, the school is expected to generate approximately 340 vehicle trips (207 vehicles entering and 133 exiting) during the weekday morning peak school hour. During the weekday afternoon peak school hour, the Project is expected to generate approximately 174 vehicle trips (82 vehicles entering and 92 exiting). The above estimates were utilized for analysis purposes in assessing the overall impacts and are slightly above the industry standard projections.

It is important to note that as reduced student alternatives have been reviewed, the amount of area traffic has also been reduced. Table 7 depicts the reduction in morning traffic drop-off when comparing the original 800-student population, to 600 students to the current 453 student population.

[5]This is a conservative estimate. 195 K-8 children live within 0.5 miles of the site, so the number of children who walk to school when it opens will be higher.

Table 7
DROP-OFF TRIP GENERATION COMPARISON

Time Period	Drop-Off (800 Students)	Drop-Off (600 Students)	Drop-Off (453 Students)
Weekday Morning Peak Hour:			
Entering	330	232	121
Exiting	330	232	121
Total	660	464	242

As shown, the drop-offs have been reduced dramatically from 330 to 121 vehicles.

TRIP DISTRIBUTION AND ASSIGNMENT

Separate trip distributions were developed for staff and students. The directional distribution of the site-generated trips to the proposed development by the staff was determined based on a review of origin to workplace data for Brookline. The directional distribution for the drop-offs and pick-ups was based on existing travel patterns at the study area intersections, directional data provided by the architect and it was further assumed that 30 percent of parents dropping-off students would be traveling on to work. The weekday morning trip distribution for staff is depicted on Figure 15 and the drop-off (morning) and pick-up (afternoon) patterns are depicted in Figures 16 and 17. The weekday morning and weekday afternoon peak-hour traffic volumes expected to be generated by the school are shown on Figures 18 and 19.

FUTURE TRAFFIC VOLUMES – BUILD CONDITION

The 2025 Build condition networks consist of the 2025 No-Build traffic volumes with the anticipated site-generated traffic added to them. The 2025 Build weekday morning and weekday afternoon traffic-volume networks are graphically depicted on Figures 20 and 21.

A summary of peak-hour projected traffic-volume increases external to the study area that is the subject of this assessment is shown in Table 8. These volumes are based on the expected increases from the project.

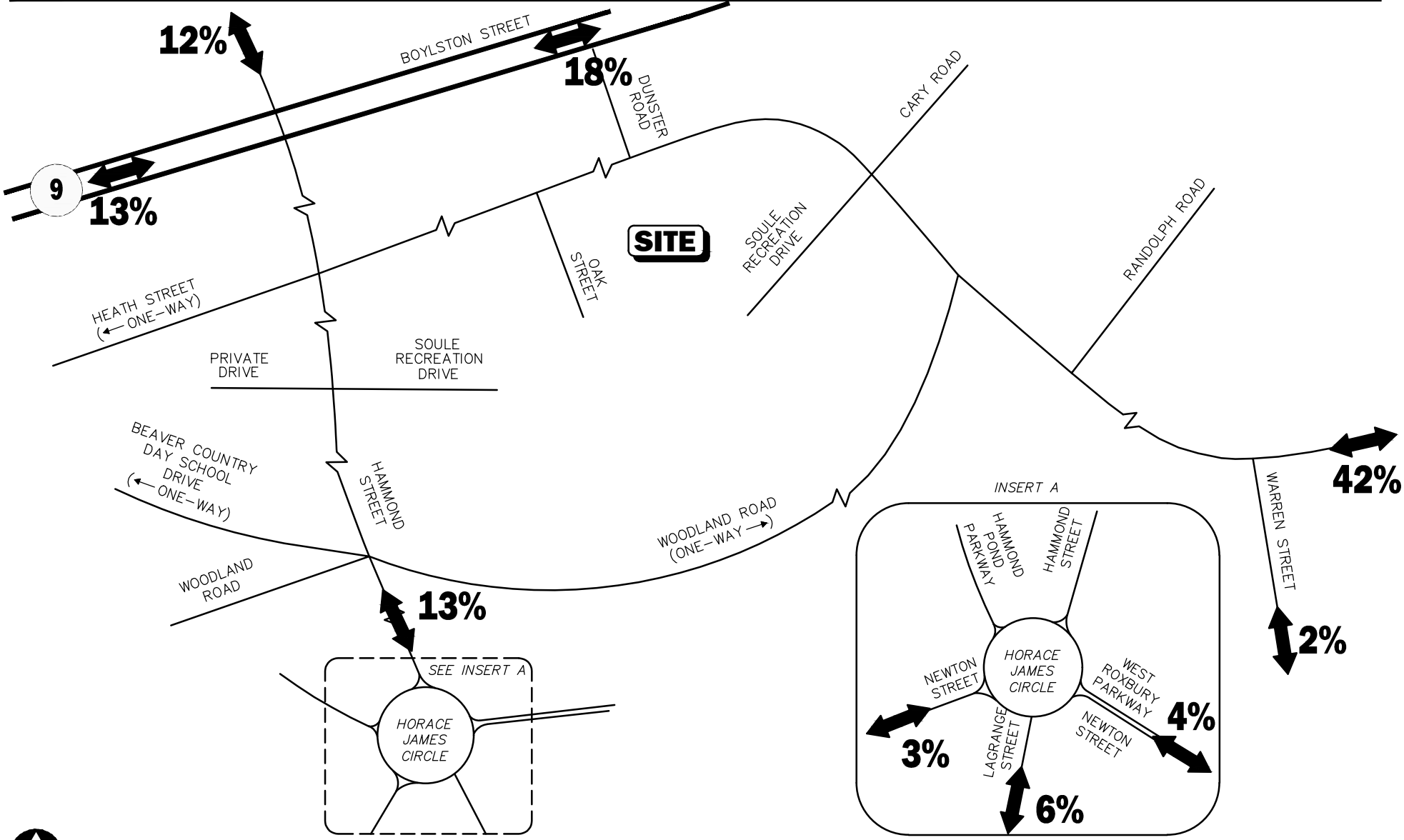

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Figure 15

Trip Distribution - Staff

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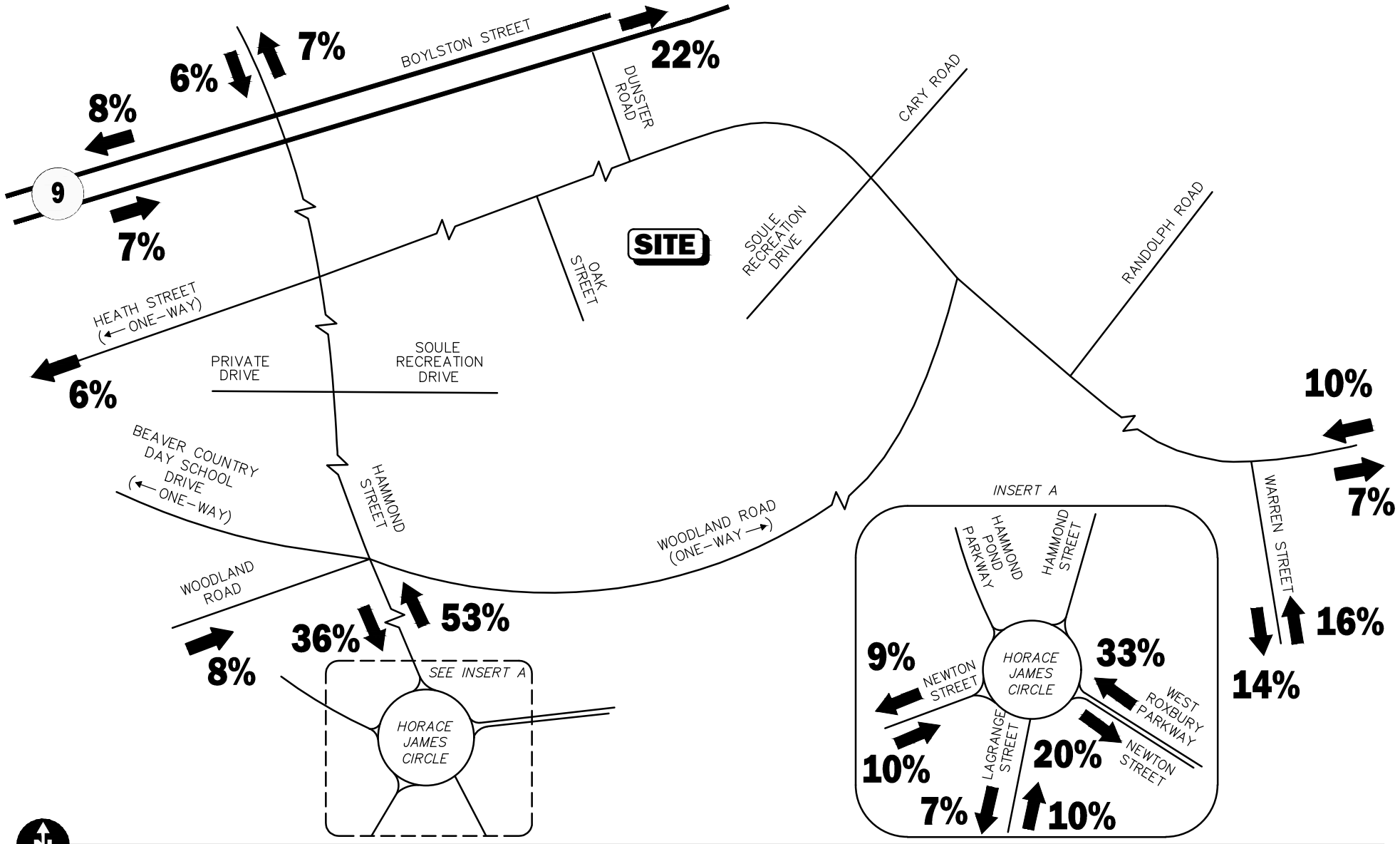

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Figure 16

Trip Distribution
Student Drop-off
Weekday Morning

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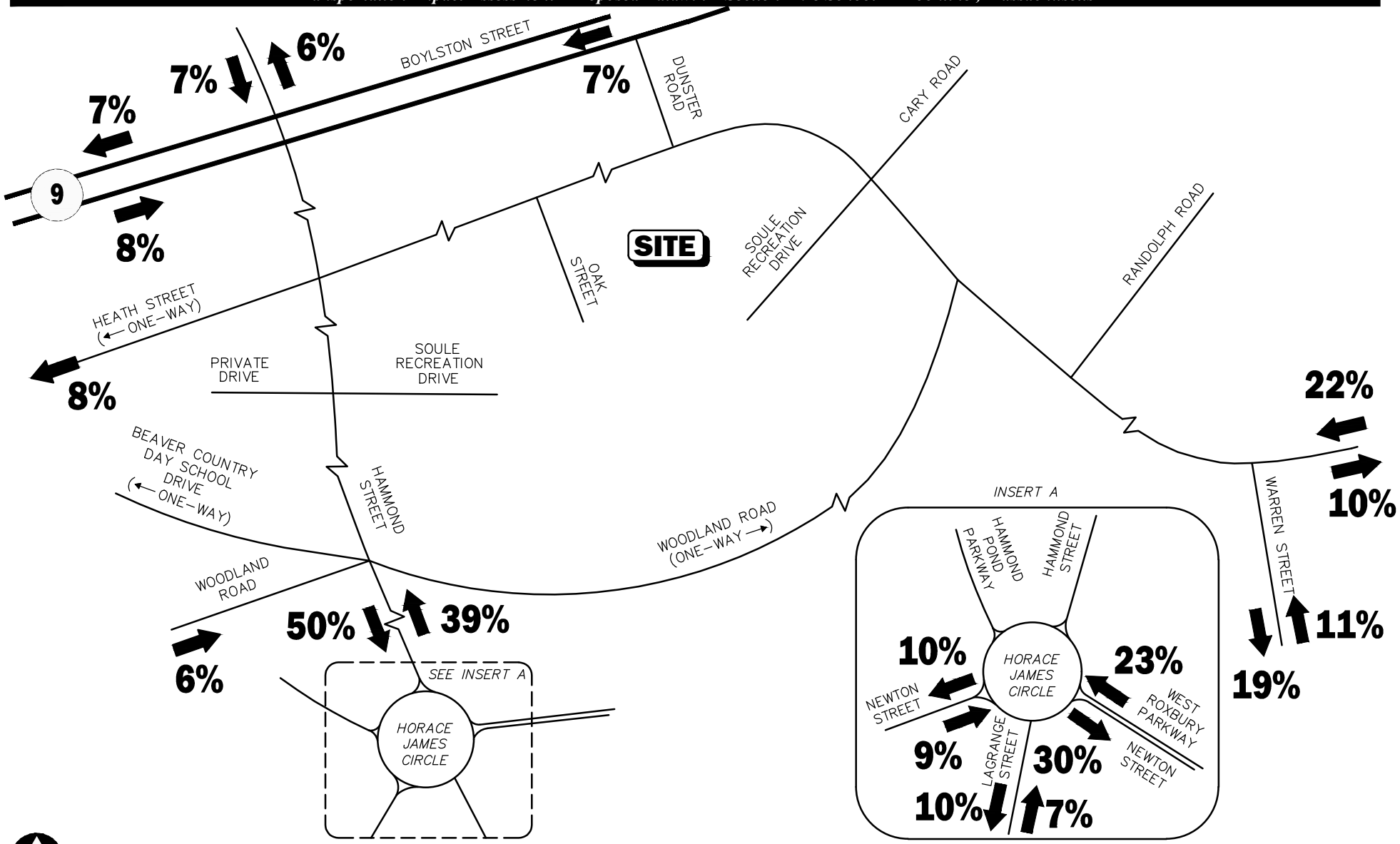

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Figure 17

Trip Distribution
Student Pick Up
Weekday Afternoon

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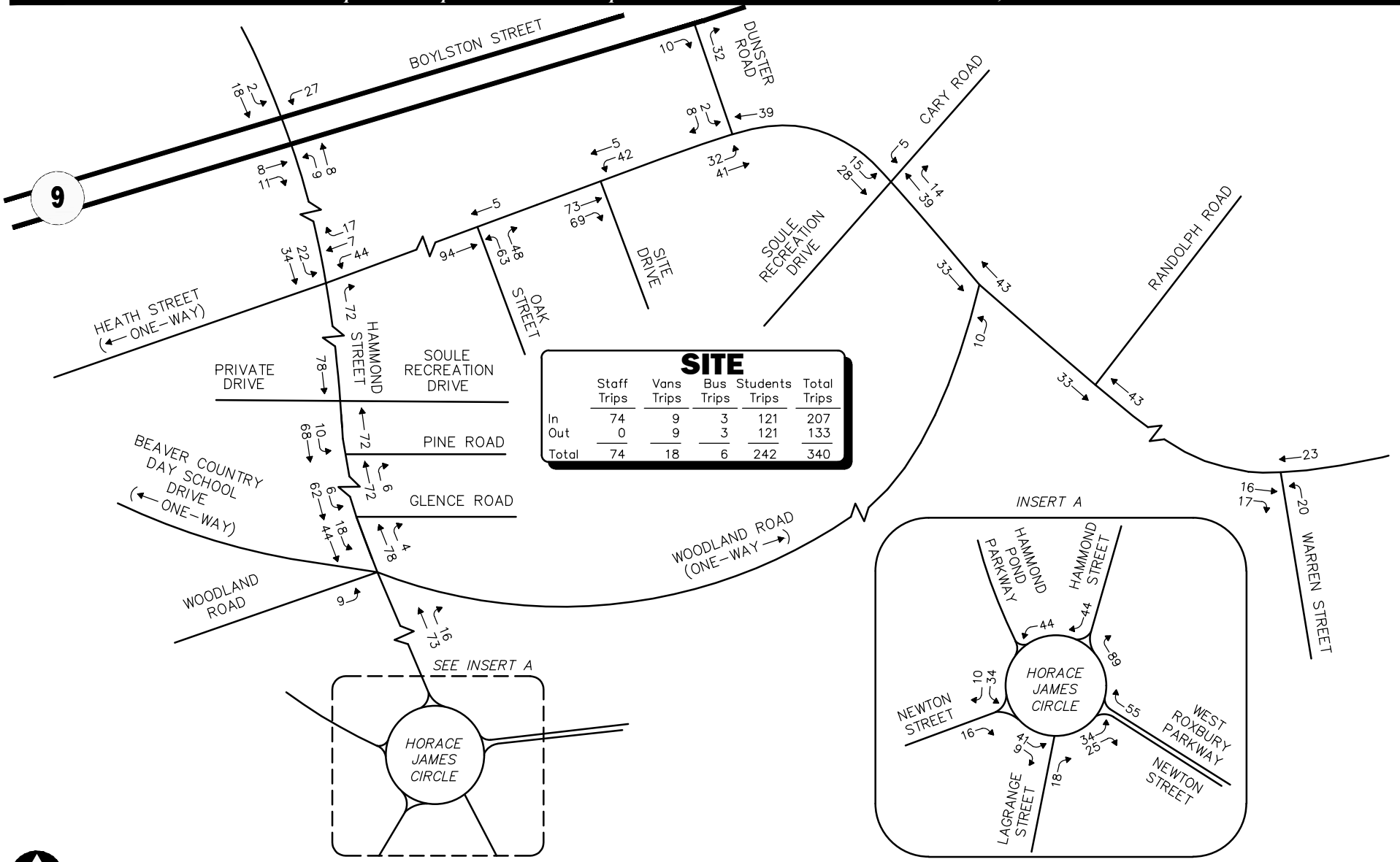

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Figure 18

Trip Generation
Weekday Morning
School Peak Hour Traffic Volume

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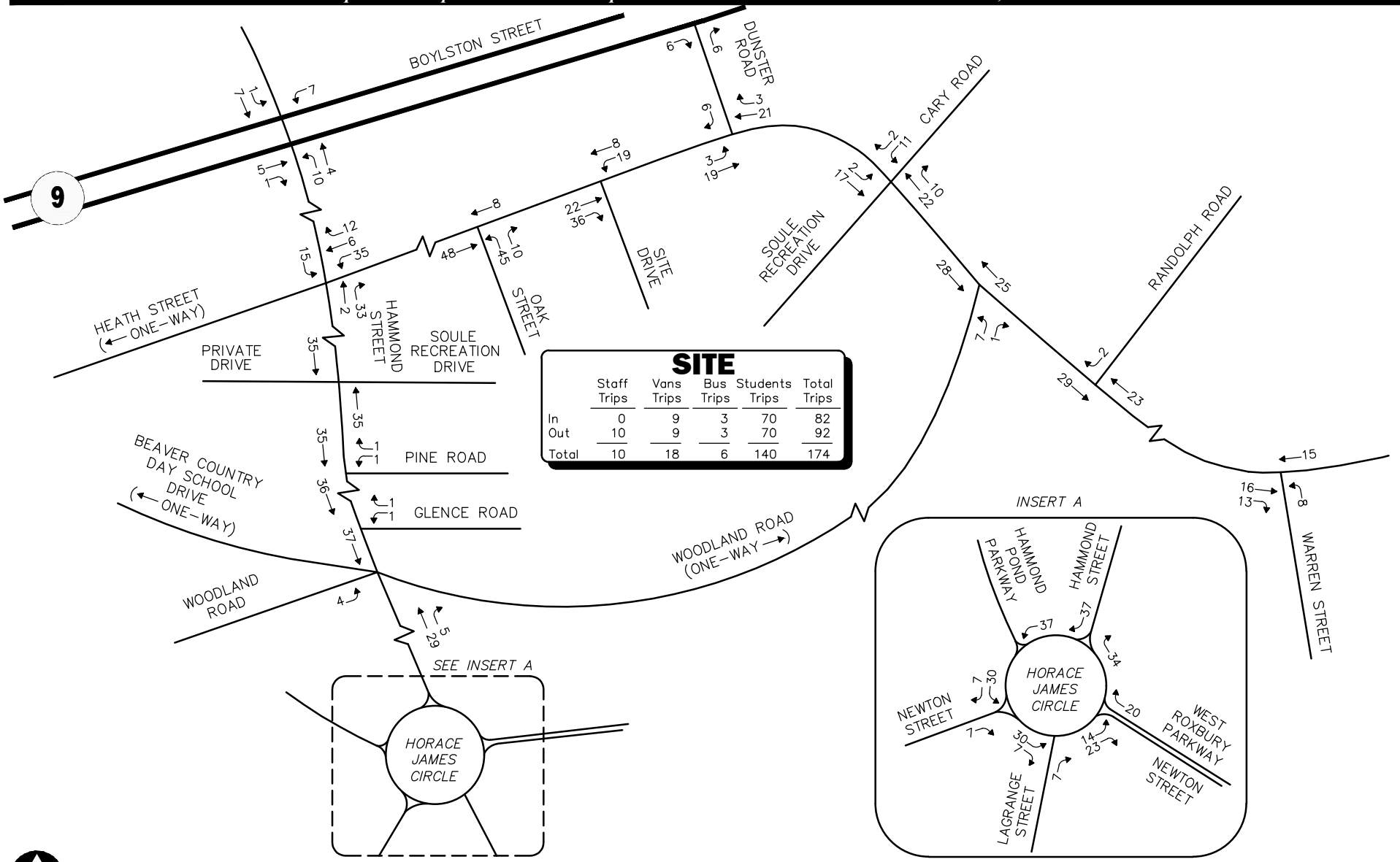

SITE

	Staff Trips	Vans Trips	Bus Trips	Students Trips	Total Trips
In	0	9	3	70	82
Out	10	9	3	70	92
Total	10	18	6	140	174

Not To Scale

Figure 19

Trip Generation
Weekday Afternoon
School Peak Hour Traffic Volume

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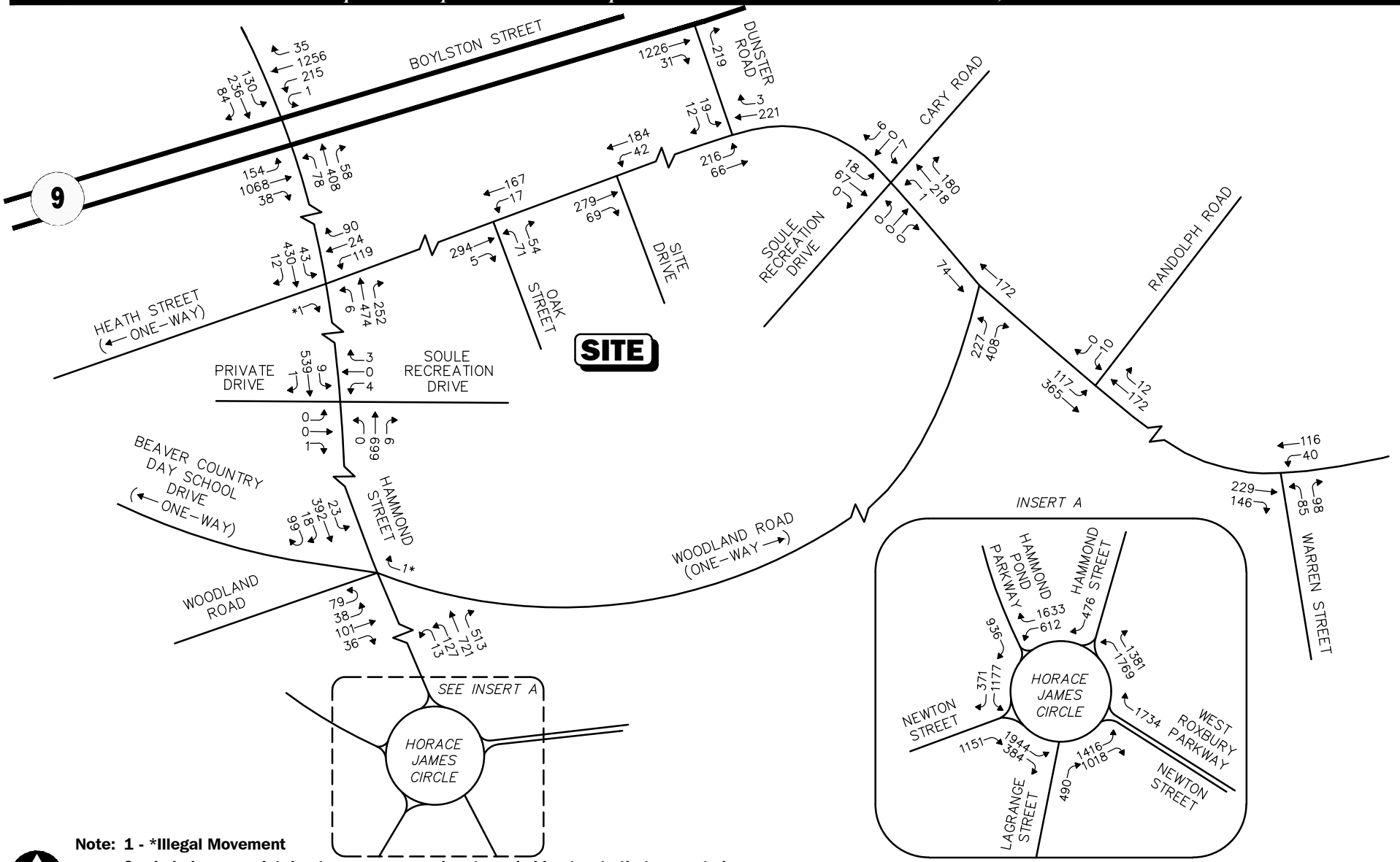

Note: 1 - *Illegal Movement

2 - Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 20

Vanasse & Associates, Inc.
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2025 Build
Weekday Morning
School Peak Hour Traffic Volume
(7:00 - 8:00 AM)

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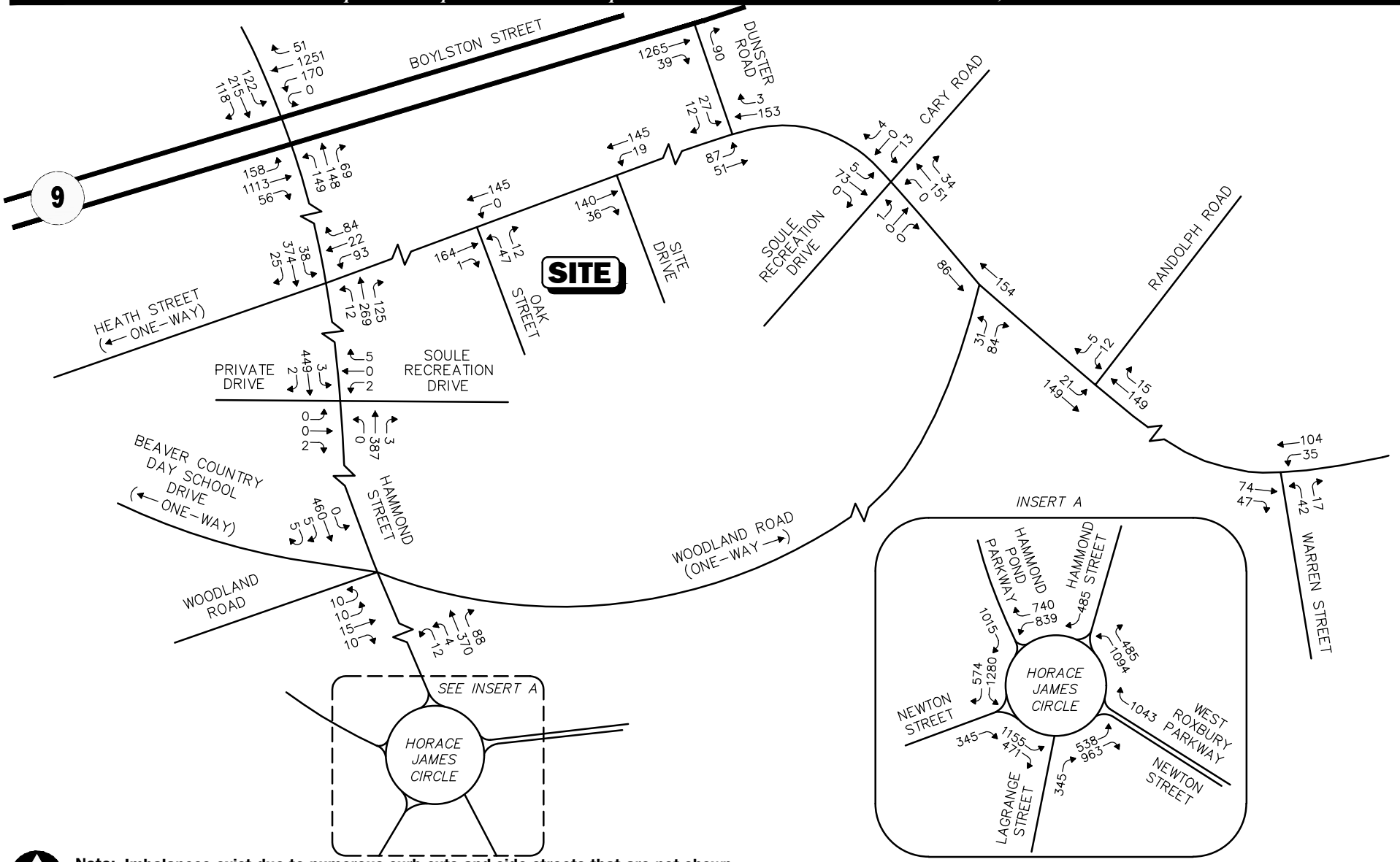

Note: **Imbalances exist due to numerous curb cuts and side streets that are not shown.**

Not To Scale

Figure 21

2025 Build
Weekday Afternoon
School Peak Hour Traffic Volume
(1:30 - 2:30 PM)

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Table 8
PEAK-HOUR TRAFFIC-VOLUME INCREASES

Location/Peak Hour	2025 No-Build	2025 Build	Traffic Volume Increase Over No-Build	Percent Increase Over No-Build
Heath Street, east of Warren Street:				
Weekday Morning	444	483	39	8.7
Weekday Afternoon	199	230	31	15.5
Boylston Street, west of Hammond Street:				
Weekday Morning	2,650	2,678	28	1.0
Weekday Afternoon	2,829	2,845	16	0.6
Heath Street, east of Hammond Street:				
Weekday Morning	366	528	162	44.2
Weekday Afternoon	261	362	101	38.7
Woodland Road, east of Hammond Street:				
Weekday Morning	604	638	34	5.6
Weekday Afternoon	98	103	5	5.1

As shown in Table 8, project-related traffic-volume increases external to the study area relative to 2025 No-Build conditions are anticipated to range from 1.0 to 44.2 percent during the peak periods.

TRAFFIC OPERATIONS ANALYSIS

Measuring existing and future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity and vehicle queue analyses were conducted under Existing, No-Build, and Build traffic-volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

METHODOLOGY

Levels of Service

A primary result of capacity analyses is the assignment of level of service to traffic facilities under various traffic-flow conditions.[6] The concept of level of service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best operating conditions and LOS F representing congested or constrained operating conditions.

Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year.

[6]The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual;* Transportation Research Board; Washington, DC; 2010.

Unsignalized Intersections

The six levels of service for unsignalized intersections may be described as follows:

- *LOS A* represents a condition with little or no control delay to minor street traffic.
- *LOS B* represents a condition with short control delays to minor street traffic.
- *LOS C* represents a condition with average control delays to minor street traffic.
- *LOS D* represents a condition with long control delays to minor street traffic.
- *LOS E* represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
- *LOS F* represents a condition where minor street demand volume exceeds capacity of an approach lane, with extreme control delays resulting.

The levels of service of unsignalized intersections are determined by application of a procedure described in the 2010 *Highway Capacity Manual*.[7] Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the *2010 Highway Capacity Manual*. Table 9 summarizes the relationship between level of service and average control delay for two way stop controlled and all-way stop controlled intersections.

Table 9
LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS[a]

Level-Of-Service by Volume-to-Capacity Ratio		Average Control Delay
v/c ≤ 1.0	v/c > 1.0	(Seconds Per Vehicle)
A	F	≤10.0
B	F	10.1 to 15.0
C	F	15.1 to 25.0
D	F	25.1 to 35.0
E	F	35.1 to 50.0
F	F	>50.0

[a]Source: *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010; page 19-2.

[7]*Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

Signalized Intersections

The six levels of service for signalized intersections may be described as follows:

- *LOS A* describes operations with very low control delay; most vehicles do not stop at all.
- *LOS B* describes operations with relatively low control delay. However, more vehicles stop than LOS A.
- *LOS C* describes operations with higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
- *LOS D* describes operations with control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop and individual cycle failures are noticeable.
- *LOS E* describes operations with high control delay values. Individual cycle failures are frequent occurrences.
- *LOS F* describes operations with high control delay values that often occur with over-saturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Levels of service for signalized intersections are calculated using the operational analysis methodology of the 2010 *Highway Capacity Manual*. This method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on delay. Level-of-service designations are based on the criterion of control or signal delay per vehicle. Control or signal delay is a measure of driver discomfort, frustration, and fuel consumption, and includes initial deceleration delay approaching the traffic signal, queue move-up time, stopped delay and final acceleration delay. Table 10 summarizes the relationship between level of service and control delay. The tabulated control delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to entire intersections.

Table 10
LEVEL-OF-SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS[a]

Level-Of-Service by Volume-to-Capacity Ratio		Average Control Delay
v/c ≤ 1.0	v/c > 1.0	(Seconds Per Vehicle)
A	F	≤10.0
B	F	10.1 to 20.0
C	F	20.1 to 35.0
D	F	35.1 to 55.0
E	F	55.1 to 80.0
F	F	>80.0

[a]Source: *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010; page 18-6.

Roundabouts

The roundabout capacity analysis is based on the procedures described in the *Traffic Signalized* and *Unsignalized Intersection Design and Research Aid* (*SIDRA*) *Intersection*.[8] The main features of the *SIDRA Intersection* method for roundabout capacity estimation are the dependence of gap acceptance parameters on rotary geometry, circulating flows and entry lane flows, and the designation of approach lanes as controlling and otherwise that have different capacity characteristics. Provision of two-lane approaches tend to substantially increase roundabout capacity. As a general rule, individual approach volumes exceeding 85 percent of the calculated capacity of that approach are considered over-saturated and indicate areas of concern.

The SIDRA analytical model calculates several components of delay. One of these, the average total delay component, produces level-of-service results based on the concepts described in the HCM. The delay ranges that define levels of service for roundabouts are shown in Table 11.

Table 11
LEVEL-OF-SERVICE CRITERIA FOR ROUNDABOUTS[a]

Level-Of-Service by Volume-to-Capacity Ratio		Control Delay Per Vehicle
v/c ≤ 1.0	v/c > 1.0	(Seconds)
A	F	≤10.0
B	F	10.1 to 15.0
C	F	15.1 to 25.0
D	F	25.1 to 35.0
E	F	35.1 to 50.0
F	F	>50.0

[a]Source: *SIDRA Intersection User Guide;* Akcelik & Associates Pty Ltd; Greythorn, Victoria 3104, Australia; November 2012.

ANALYSIS RESULTS

Level-of-service analyses were conducted for Baseline, 2025 No-Build, and 2025 Build conditions for the study area intersections. The results of the intersection capacity analysis within the study area are described below, with a tabular summary provided in Tables 12 and 13. The results of the SIDRA Rotary Capacity Analysis are summarized in Table 14.

Unsignalized Intersection Analysis Results

Hammond Street at Soule Recreation Drive

Under the all conditions, the Soule Recreation Drive operates at LOS C during the weekday morning peak hour and LOS B during the weekday afternoon peak hour. Impacts in delays at this location are in the order of 2 seconds or less.

[8]Traffic Signalized and Unsignalized Intersection Design and Research Aid, SIDRA Intersection User Guide; Akcelik & Associates Pty Ltd; Greythorn, Victoria 3104, Australia; November 2012.

Hammond Street at Woodland Road

Under Existing conditions, Woodland Road operates at LOS C during the weekday morning peak hour (under police officer control) and LOS B during the weekday afternoon peak hour. This intersection is expected to be signalized under future conditions.

Heath Street at Oak Street (School Drive)

Under Existing and No-Build conditions, Oak Street operates at LOS B or higher during both the weekday morning and weekday afternoon peak hours. Under Future Build conditions, the intersection drops to LOS C during the morning period without police officer control.

Boylston Street at Dunster Road

Under Existing and No-Build conditions, this intersection operates at LOS D or higher during both the weekday morning peak school hours and LOS C during weekday afternoon peak school hours. Under Future Build conditions, the intersection will operate under LOS E during the morning period and LOS C during weekday afternoon peak school hours.

Heath Street at Dunster Road

Under Existing conditions, Dunster Road operates at LOS B during the weekday morning and weekday afternoon peak hours. Under No-Build and Build conditions, Dunster Road operates at LOS C during the weekday morning peak hour and LOS B during the weekday afternoon peak hour. Impacts to delays at this location are in the order of 2 seconds or less.

Heath Street at Cary Road and Soule Recreation Drive

Under Existing, No-Build and Build conditions, Cary Road operates at LOS B or better during the weekday morning and weekday afternoon peak hours. Impacts to delays at this location are in the order of 2 seconds or less.

Heath Street at Woodland Road

Under Existing, No-Build and Build conditions, the intersection operates at LOS B or better. Impacts to delays at this location are minimal.

Heath Street at Randolph Road

Under all conditions, this intersection operates at LOS C during the weekday morning peak hour and at LOS B during the weekday afternoon peak hour. Impacts to delays at this location are in the order of 2 seconds or less.

Heath Street at Warren Street

During the weekday morning peak hour, Warren Street operates at LOS B under Existing conditions and at LOS C under No-Build and Build conditions. During the weekday afternoon peak hour, Warren Street operates at LOS B under all conditions. Impacts to delays at this location are 3 seconds or less.

Heath Street at Site Entrance Drive

Under Build conditions, the left-turn entering traffic is expected to operate at LOS A.

Signalized Intersection Analysis Result

Boylston Street at Hammond Street

Under Existing conditions, this intersection operates at an overall LOS E during the weekday morning period and LOS D during the weekday afternoon period. Under No-Build and Build conditions, this intersection operates at an overall LOS F during the weekday morning period and LOS D during the weekday afternoon period. Overall impacts at this location will be in the order of 5 seconds.

Hammond Street at Heath Street

Under Existing and No-Build conditions, this intersection operates at an overall LOS C during both the weekday morning and weekday afternoon periods. Under Build conditions without mitigation, this intersection operates at an overall LOS D during the weekday morning period and LOS C during weekday afternoon period.

Hammond Street at Woodland Road

The Town has created a concept plan for the signalization of Hammond Street at Woodland Road. Under all Future conditions, this signalized intersection operates at LOS B or better, during both the weekday morning and weekday afternoon peak hours.

James Horace Circle

Under Existing condition, James Horace Circle operates at LOS F, during weekday morning school periods and at LOS E during weekday afternoon school periods. Under Future conditions, James Horace Circle operates at LOS F, during both the weekday morning and weekday afternoon school periods. Delays increase of up to an overall of 8 seconds can be expected during the critical morning period.

Table 12
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

	2018 Existing				2025 No-Build				2025 Build			
Unsignalized Intersection Movements	Demand[a]	Delay[b]	LOS[c]	Queue[d]	Demand	Delay	LOS	Queue	Demand	Delay	LOS	Queue
Hammond Street at Soule Recreation Drive and Private Drive												
Weekday Morning :												
Private Drive EB LT/TH/RT	1	10	B	0.0	1	10.2	B	0.0	1	10.6	B	0.0
Soule Rec Drive WB LT/TH/RT	7	17	C	0.1	7	18.3	C	0.0	7	20.4	C	0.1
Hammond Street SB LT	8	8.8	A	0.0	9	9.0	A	0.0	9	9.1	A	0.0
Weekday Afternoon:												
Private Drive EB LT/TH/RT	2	10.6	C	0.0	2	10.8	B	0.0	2	11	B	0.0
Soule Rec Drive WB LT/TH/RT	7	10.8	B	0.0	7	11.0	B	0.0	7	11.4	B	0.0
Hammond Street SB LT	3	8.0	A	0.0	3	8.0	A	0.0	3	8.1	A	0.0
Hammond Street at Woodland Road												
Weekday Morning :												
Woodland Road EB LT/TH	--	--	--	--	--	--	--	--	--	--	--	--
Woodland Road EB RT	--	--	--	--	--	--	--	--	--	--	--	--
Hammond Street SB LT	--	--	--	--	--	--	--	--	--	--	--	--
Weekday Afternoon:												
Woodland Road EB LT/TH	23	11.7	B	0.2	--	--	--	--	--	--	--	--
Hammond Street NB LT	15	8.2	A	0.0	--	--	--	--	--	--	--	--
Heath Street at Oak Street (School Drive)												
Weekday Morning :												
Heath Street WB LT	16	7.7	A	0.0	17	7.7	A	0.1	17	8.3	A	0.0
Oak Street NB LT/RT	13	10.7	B	0.1	14	11.1	B	0.1	125	19.9	C	0.0
Weekday Afternoon:												
Heath Street WB LT	0	0.0	A	0.0	0	9.6	A	0	0	0.0	A	0.0
Oak Street NB LT/RT	4	9.5	A	0.0	4	0.0	A	0	59	12.3	B	0.6

See notes at end of table.

Table 12 (Continued)
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

	2018 Existing				2025 No-Build				2025 Build			
Unsignalized Intersection Movements	Demand[a]	Delay[b]	LOS[c]	Queue[d]	Demand	Delay	LOS	Queue	Demand	Delay	LOS	Queue
Boylston Street at Dunster Road												
Weekday Morning :												
Dunster Street NB RT	175	29.6	D	4.1	187	32.3	D	4.7	219	44.2	E	6.8
Weekday Afternoon:												
Dunster Street NB RT	78	16.3	C	0.9	84	18.0	C	1.1	90	18.6	C	1.3
Heath Street at Dunster Road												
Weekday Morning :												
Heath Street EB LT	172	8.1	A	0.5	184	8.2	A	0.6	216	8.5	A	0.7
Dunster Road SB LT/RT	20	14.2	B	0.2	21	15.1	C	0.2	31	16.8	C	0.4
Weekday Afternoon:												
Heath Street EB LT	78	7.6	A	0.2	84	7.7	A	0.2	87	7.8	A	0.2
Dunster Road SB LT/RT	31	10.9	B	0.2	33	11.1	B	0.2	39	11.4	B	0.3
Heath Street at Cary Road and Soule Recreation Drive												
Weekday Morning :												
Heath Street EB LT	3	8.2	A	0.0	3	8.2	A	0.0	18	8.5	A	0.1
Heath Street WB LT	1	7.3	A	0.0	1	7.3	A	0.0	1	7.5	A	0.0
Cary Road SB LT/TH/RT	8	10.4	B	0.0	8	10.6	B	0.1	13	12.2	B	0.1
Weekday Afternoon:												
Heath Street EB LT	3	7.5	A	0.0	3	7.6	A	0.0	5	7.7	A	0.0
Soule Recreation NB LT/TH/RT	1	9.9	A	0.0	1	10.0	B	0.0	0	10.5	B	0.0
Cary Road SB LT/TH/RT	4	9.5	A	0.0	4	9.6	A	0.0	15	10.5	B	0.1

See notes at end of table.

Table 12 (Continued)
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

	2018 Existing				2025 No-Build				2025 Build			
Unsignalized Intersection Movements	Demand[a]	Delay[b]	LOS[c]	Queue[d]	Demand	Delay	LOS	Queue	Demand	Delay	LOS	Queue
Heath Street at Woodland Road												
Weekday Morning :												
Woodland Road NB LT/RT	584	9.6	A	2.9	625	10	B	3.3	635	10.5	B	3.8
Weekday Afternoon:												
Woodland Road NB LT/RT	99	8.1	A	0.3	107	8.1	A	0.3	115	8.0	A	0.4
Heath Street at Randolph Road												
Weekday Morning :												
Heath Street EB LT	109	7.9	A	0.3	117	7.9	A	0.4	117	8.1	A	0.4
Randolph Road SB LT/RT	9	18.4	C	0.1	10	20.1	C	0.2	10	22.7	C	0.2
Weekday Afternoon:												
Heath Street EB LT	20	7.9	A	0.1	21	7.6	A	0.1	21	7.7	A	0.1
Randolph Road SB LT/RT	14	11.4	B	0.1	15	10.6	B	0.1	17	10.9	B	0.1
Heath Street at Warren Street												
Weekday Morning :												
Heath Street WB LT	37	8.3	A	0.1	40	8.4	A	0.1	40	8.5	A	0.2
Warren Street NB LT/RT	152	14.2	B	1.5	163	15.2	C	1.8	183	18.1	C	2.5
Weekday Afternoon:												
Heath Street WB LT/TH	33	7.4	A	0.1	35	7.5	A	0.1	35	7.5	A	0.1
Warren Street NB LT	48	10	B	0.2	52	10.1	B	0.2	59	10.5	B	0.3
Heath Street at Site Drive												
Weekday Morning :												
Heath Street EB LT	--	--	--	--	--	--	--	--	42	2.2	A	0.2
Weekday Afternoon:												
Heath Street EB LT	--	--	--	--	--	--	--	--	19	1.1	A	0.0

[a]Demand in vehicles per hour.
[b]Delay in seconds per vehicle.
[c]Level of service.
[d]Queue Length in Vehicles.
*Geometry only existing under Build conditions with construction of Site Driveway. NB = northbound; WB = westbound; LT = left-turning movements; RT = right-turning movements

Table 13
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

	2018 Existing				2025 No-Build				2025 Build			
Signalized Intersection Movements	V/C[a]	Delay[b]	LOS[c]	Queue	V/C	Delay	LOS	Queue	V/C	Delay	LOS	Queue
Boylston Street at Hammond Street												
Weekday Morning:												
Boylston Street EB LT	0.78	79.2	E	136/249	0.83	>80.0	F	148/270	0.94	>80.0	F	149/270
Boylston Street EB TH/RT	1.06	>80.0	F	615/713	1.05	>80.0	F	603/700	1.07	>80.0	F	625/722
Boylston Street WB LT	0.95	>80.0	F	170/322	1.05	>80.0	F	214/352	1.22	>80.0	F	280/414
Boylston Street WB TH	1.12	>80.0	F	708/754	1.23	>80.0	F	825/864	1.23	65.6	F	825/864
Boylston Street WB RT	0.04	0.30	A	0/0	0.05	0.40	A	0/1	0.05	0.4	A	0/1
Hammond Street NB LT/TH/RT	0.73	20.0	C	99/103	0.77	2.80	C	83/110	0.79	25.2	C	98/121
Hammond Street SB LT/TH	0.66	53.2	D	178/188	0.70	54.6	D	192/202	0.73	55.8	E	202/213
Hammond Street SB RT	0.17	6.70	A	3/25	0.18	7.70	A	7/30	0.18	8.6	A	10/34
Overall	**1.12**	**77.7**	**E**	--	**1.23**	**>80.0**	**F**	--	**1.23**	**>80.0**	**F**	--
Weekday Afternoon:												
Boylston Street EB LT	0.66	66.2	E	128/194	0.70	68.0	E	138/211	0.70	68.4	E	138/212
Boylston Street EB TH/RT	0.80	41.2	D	440/726	0.92	50.6	D	531/827	0.95	55.0	D	545/835
Boylston Street WB LT	0.65	64.3	E	130/200	0.68	35.8	E	138/215	0.70	66.7	E	145/225
Boylston Street WB TH	0.84	42.4	D	476/795	0.96	55.6	E	577/901	0.97	58.9	E	584/901
Boylston Street WB RT	0.05	0.9.	A	0/6	0.06	1.00	A	0/6	0.06	1.00	A	0/6
Hammond Street NB LT/TH/RT	0.68	76.5	E	183/210	0.69	30.0	C	180/210	0.71	27.6	C	148/170
Hammond Street SB LT/TH	0.63	56.5	E	136/178	0.65	56.3	E	145/188	0.65	56.1	E	148/192
Hammond Street SB RT	0.20	5.10	A	0/37	0.20	4.90	A	0/38	0.20	4.90	A	0/38
Overall	**0.84**	**47.4**	**D**	--	**0.96**	**49.8**	**D**	--	**0.97**	**52.0**	**D**	--
Hammond Street at Heath Street												
Weekday Morning:												
Heath Street WB LT/TH.RT	0.69	56.2	E	143/171	0.72	57.4	E	155/183	0.86	69.9	E	236/273
Hammond Street NB LT/TH/RT	0.69	44.0	D	247/341	0.76	47.2	D	275/398	0.93	65.0	E	322/455
Hammond Street SB LT/TH/RT	0.20	0.09	A	7/10	0.23	1.00	A	8/10	0.28	1.40	A	14/13
Overall	**0.69**	**29.5**	**C**	--	**0.76**	**31.2**	**C**	--	**0.93**	**42.5**	**D**	--
Weekday Afternoon:												
Heath Street WB LT/TH.RT	0.65	52.3	D	107/152	0.66	52.8	D	117/161	0.73	56.0	E	176/218
Hammond Street NB LT/TH/RT	0.34	29.9	C	114/169	0.37	31.3	C	126/185	0.46	35.0	**C**	144/212
Hammond Street SB LT/TH/RT	0.18	2.60	A	9/24	0.19	2.50	A	16/52	0.22	3.40	**A**	20/66
Overall	**0.65**	**21.0**	**C**	--	**0.66**	**21.5**	**C**	--	**0.73**	**25.6**	**C**	--

See notes at end of table.

Table 13 (Continued)
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

	2018 Existing				2025 No-Build**				2025 Build**			
Signalized Intersection Movements	V/C[a]	Delay[b]	LOS[c]	Queue[d]	V/C	Delay	LOS	Queue	V/C	Delay	LOS	Queue
Hammond Street at Woodland Road*												
Weekday Morning:												
Woodland Road EB LT/TH/RT	0.54	24.1	C	57/82	0.56	24.3	C	61/88	0.58	24.7	C	65/94
Hammond Street NB LT/TH/	0.71	6.90	C	76/157	0.78	9.40	C	98205	0.86	13.6	B	137/358
Hammond Street SB LT/TH/RT	0.25	3.40	A	23/38	0.27	3.60	A	27/44	0.34	4.50	A	36/57
Overall	**0.71**	**7.50**	**A**	--	**0.78**	**9.30**	**A**	--	**0.86**	**12.1**	**B**	--
Weekday Afternoon:												
Woodland Road EB LT/TH/RT	--	--	--	--	0.10	6.8	A	1/14	0.10	6.9	A	1/15
Hammond Street NB LT/TH/	--	--	--	--	0.16	1.3	A	0/30	0.17	1.3	A	0/33
Hammond Street SB LT/TH/RT	--	--	--	--	0.14	1.4	A	33/809	0.14	1.4	A	0/33
Overall					**0.16**	**1.6**	**A**		**0.17**	**1.6**	**A**	--

[a]Volume to Capacity
[b]Delay in seconds per vehicle.
[c]Level of service.
[d]Queue Length in Feet (50th/95th percentile)
NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.
*Police Detail During Weekday Morning School Peak Hour.

Table 14
SIDRA ROUNDABOUT CAPACITY ANALYSIS SUMMARY

	2018 Existing				2025 No-Build				2025 Build			
Critical Movement/Peak Hour	Demand[a]	Delay[b]	LOS[c]	Queue[d]	Demand	Delay	LOS	Queue	Demand	Delay	LOS	Queue
James Horace Circle												
Weekday Morning:												
Hammond Street SWB	403	28.3	D	75.4	432	34	D	90.4	476	40.6	E	101.9
Hammond Pond Parkway SEB	872	96.8	F	1274.1	936	139.3	F	1899.5	936	159	F	2101.6
Newton Street EB	1,059	168.5	F	3343.8	1,135	192	E	3880.7	1,151	181.1	F	3826.2
LaGrange Street NB	440	646.7	F	2376.8	472	732	F	2681.4	490	775.6	F	2845.4
Newton Street NB	1,563	190.2	F	2137.7	1,679	231.8	F	2595.3	1,734	251.7	F	2782.1
Overall	--	**188.7**	**F**	--		**223.9**	**F**	--	--	**232**	**F**	--
Weekday Afternoon:												
Hammond Street SWB	418	17	C	45.3	448	20.2	C	54.4	485	22.2	C	66.2
Hammond Pond Parkway SEB	941	70	F	842.65	1,015	107.8	F	1457.1	1,015	118.6	F	1581
Newton Street EB	316	12.1	B	91.0	338	18.8	B	108.1	345	13.4	B	108.6
LaGrange Street NB	316	106.7	F	448.3	338	137.5	F	657.4	345	155.2	F	762.5
Newton Street NB	949	17.2	C	42.5	1,023	13.5	C	48.0	1,043	19.5	C	48.7
Overall	--	**42.2**	**E**	--	**--**	**58.8**	**F**	--	--	**63.8**	**F**	--

[a]Demand in Vehicles per Hour.
[b]Delay in seconds per vehicle.
[c]Level of service.
[d]Queue Length in Feet.
NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.
*Assume Concept Plan has Northbound Right Turn Lane on Hammond Street

In order to facilitate improved traffic operations and safety conditions, crossing guard control is proposed at both the school exit drive at Oak Street and at Hammond Street at Heath Street. The signal timing and phasing will be modified to provide an exclusive pedestrian phase and more green time to Heath Street. This analysis is presented in Table 15.

Table 15
BUILD MITIGATED/ CROSSING GUARD/ NEW TIMINGS

	2025 Build - Mitigated			
Signalized Intersection Movements	V/C	Delay	LOS	Queue
Hammond Street at Heath Street				
Weekday Morning:				
Heath Street WB LT/TH.RT	0.62	44.2	D	213/246
Hammond Street NB LT/TH/RT	0.92	67.5	E	316/436
Hammond Street SB LT/TH/RT	0.59	14.2	B	27/144
Overall	**0.92**	**43.7**	**D**	**--**
Weekday Afternoon:				
Heath Street WB LT/TH.RT	0.57	44.8	D	164/221
Hammond Street NB LT/TH/RT	0.67	47.8	D	167/211
Hammond Street SB LT/TH/RT	0.37	13.5	B	38/178
Overall	**0.67**	**32.5**	**C**	**--**
Heath Street at Oak Street				
Weekday Afternoon:				
Heath Street EB TH	0.59	11.1	B	43/83
Heath Street WB LT/TH	0.41	8.8	A	26/50
Oak Street NB LT /RT	0.50	8.7	A	21/16
Overall	**0.59**	**9.8**	**A**	
Weekday Morning:				
Heath Street EB TH	0.37	7.6	A	16/31
Heath Street WB LT/TH	0.36	7.5	A	27/295
Oak Street NB LT /RT	0.15	6.1	A	12/201
Overall	**0.37**	**7.3**	**A**	

[a]Volume to Capacity
[b]Delay in seconds per vehicle.
[c]Level of service.
[d]Queue Length in Feet ($50^{th}/95^{th}$ percentile)
NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

As shown, with crossing guard control the intersection of Hammond Street at Heath Street will operate at LOS D during the weekday morning peak school periods and at LOS C during the weekday evening peak school periods. The school exit driveway will operate at LOS A. While Heath Street queues will increase to 221-246 feet, they will be less than the 310 feet distance available.

PARKING

As previously stated, a minimum of 10 parking spaces will be available on site for visitor and handicap parking. As depicted in Figure 22, parent on-street parking will be available on Heath Street, Cary Road, and Randolph Road. Staff parking is under consideration by the Transportation Board and potential locations for staff parking are depicted in Figure 23 and will be subject to further review.

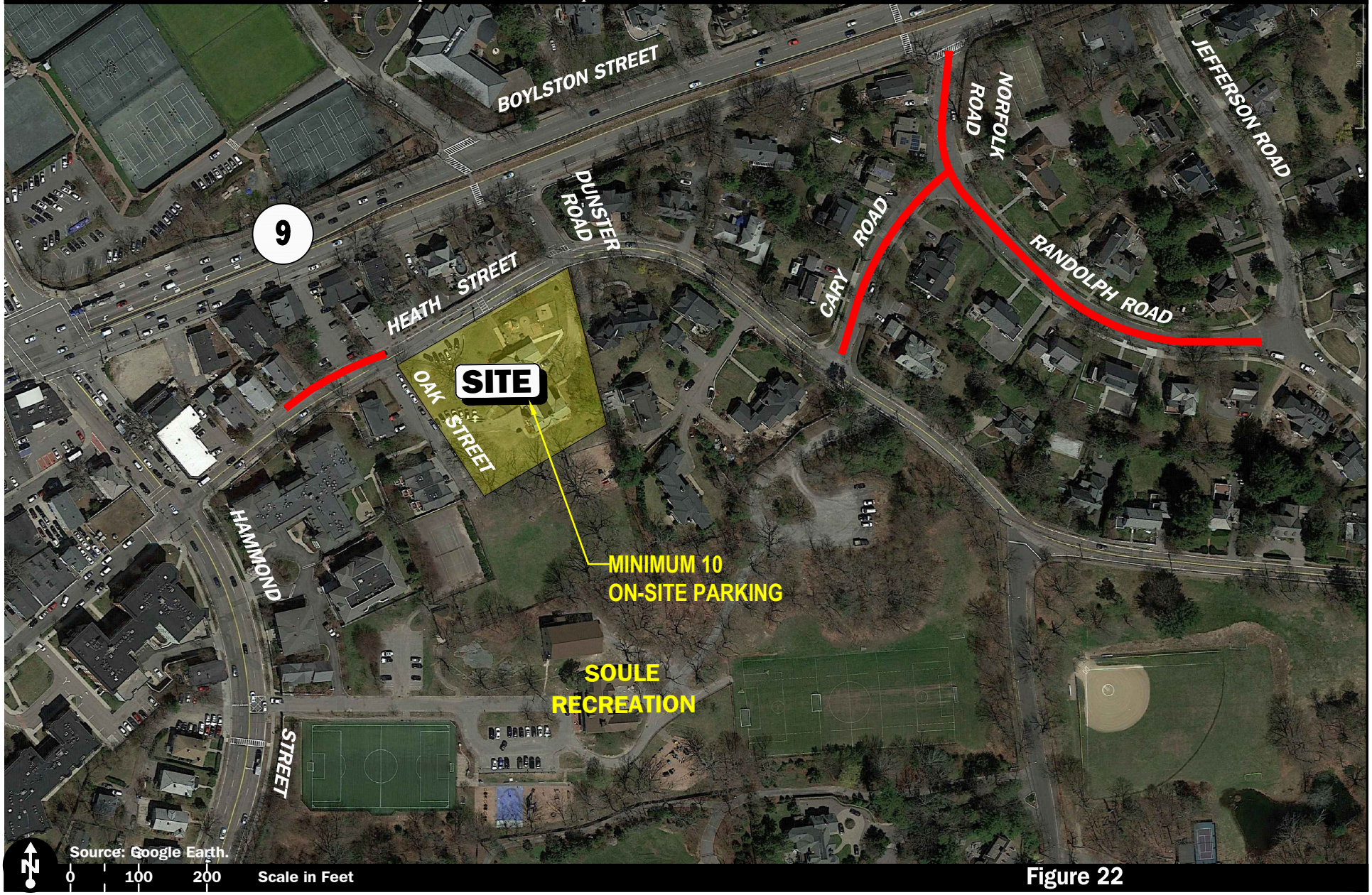

Figure 22

Parent On-Street Parking

Vanasse & Associates, Inc.
Transportation Engineers & Planners

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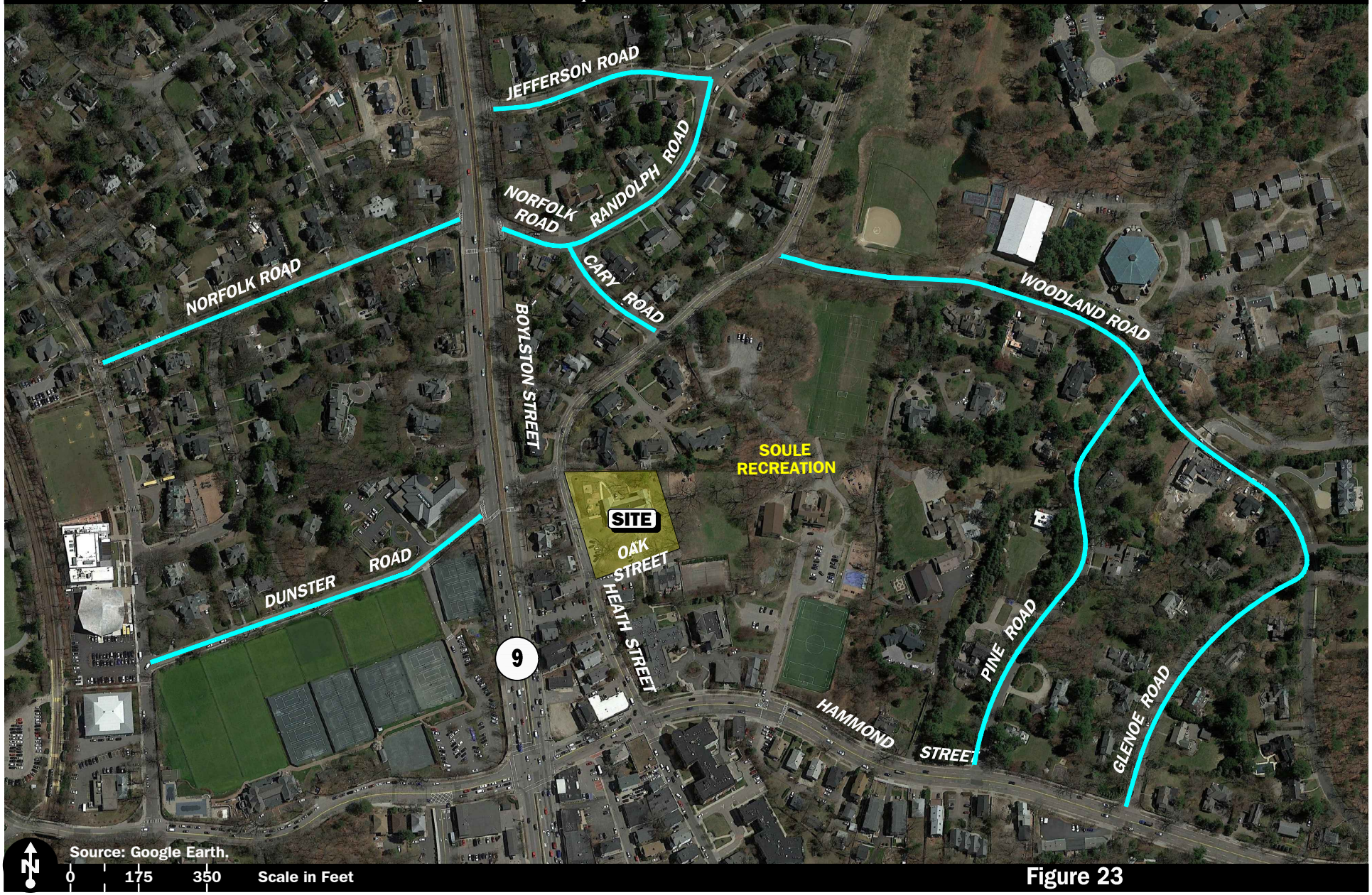

Figure 23

On-Street Parking Option (Currently Under Review on the Transportation Board)

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Transportation Engineers & Planners

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SCHOOL COMPARISONS

VAI has conducted observations and surveys at comparable schools in Brookline. Where schools are located, there is a reality that during a 15-20 minute period during the drop-off and pick-up times, there will be increased congestion in the area and on neighboring streets. Observations were conducted at three (3) schools including the Runkle School, Lincoln School, and the Driscoll School for comparison purposes. A summary of the data collected is contained in Table 16.

Table 16
SCHOOL COMPARISON ANALYSIS

	Proposed Baldwin School	Runkle School	Lincoln School	Driscoll School
Students	453	581	581	632
Buses (Students in Buses)	2(120)	4(15)	4(18)	2(20)
Estimated Walkers	50	132	140	425
Teachers	86	132	113	99
Neighborhood Street Teacher Parking	86	120	33	53
Traffic Generation[a]				
Weekday Morning period	340	355	272	305
Weekday Afternoon period	174	142	193	165
Queueing Area	on-site	Druce Street	Kennard Road	Washington St./ Westbourne Terrace
Delays	2-3 minutes[b]	2-5 minutes	3-5 minutes	3-5 minutes

[a]Total vehicles in and out of the school area.
[b]Currently one minute.

As shown, the proposed Baldwin 2 section PK-8 School is expected to have similar traffic volumes to the Driscoll School and Runkle School. All schools have same level of queues and delays with delays less than 5 minutes.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

VAI has completed a detailed assessment of the potential impacts on the transportation infrastructure associated with the proposed Baldwin 2 Section PK-8 School to be located off Heath Street in Brookline, Massachusetts. The proposed School will accommodate up to 453 students with 86 staff. The school size has been reduced from 800 students to the current 453 students which will significantly reduce the overall impact to the area. This assessment has been completed in accordance with State and Town standards and those of the Traffic Engineering and Transportation Planning professions for the preparation of such reports. The following specific areas have been evaluated as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

- Based upon a safety assessment of the area, the school can be safely accommodated with the design as planned.

- The impact of the proposed school will be very similar to conditions experienced at other schools in Brookline. Impacts are limited to a short 15-20-minute period during parents' drop-off and pick-up times.

- The school is expected to generate approximately 340 vehicle trips (207 entering/ 133 exiting) during the weekday morning peak-hour and 174 vehicle trips (82 entering/ 92 exiting) during the weekday afternoon peak-hour.

- During the peak period in the morning, only 71 vehicles turn left from the school driveway onto Heath Street over a one-hour period.

- The proposed driveway off Oak Street has adequate sight distances for safe and efficient operations.

- Safe conditions can be achieved with sidewalks, crosswalks and crossing guards at appropriate locations for students walking to school. The town will implement safety improvements to the area sidewalks.

- The Project will increase traffic in the morning and afternoon periods with increased delays and queues at locations within the study area. These delays and queues will be confined to limited and distinct periods during the morning drop-off and afternoon pick-up periods (15-20 minutes at peaks) and these periods are non-coincident with the peak periods of the adjacent roadways.

In summary, the proposed site is a good location for a new school and a safe environment can be maintained with traffic conditions at manageable levels. While the school can be safely accommodated, there will be delays and queues during limited period of the day, and improvements will be necessary to minimize the impacts and enhance safety conditions.

RECOMMENDATIONS

A detailed transportation improvement program has been developed that is designed to maintain safe and efficient access to the school and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements, as depicted in Figure 24, have been recommended as a part of this evaluation and will be completed in coordination with the Town.

School Start Time

Based upon observations of area traffic it is recommended that the school start time begin prior to 8:00 AM in advance of peak traffic volumes. Even a 15-minute adjustment to a 7:45 AM start will significantly improve conditions.

Project Access and Circulation

The school driveways were planned such that traffic impacts to the area are minimized and safe and efficient access and egress is provided. As currently planned, an entrance driveway will be located along Heath Street at Dunster Street with an exit driveway at Oak Street. The on-site circulation includes a 650-foot drop-off area for queuing.

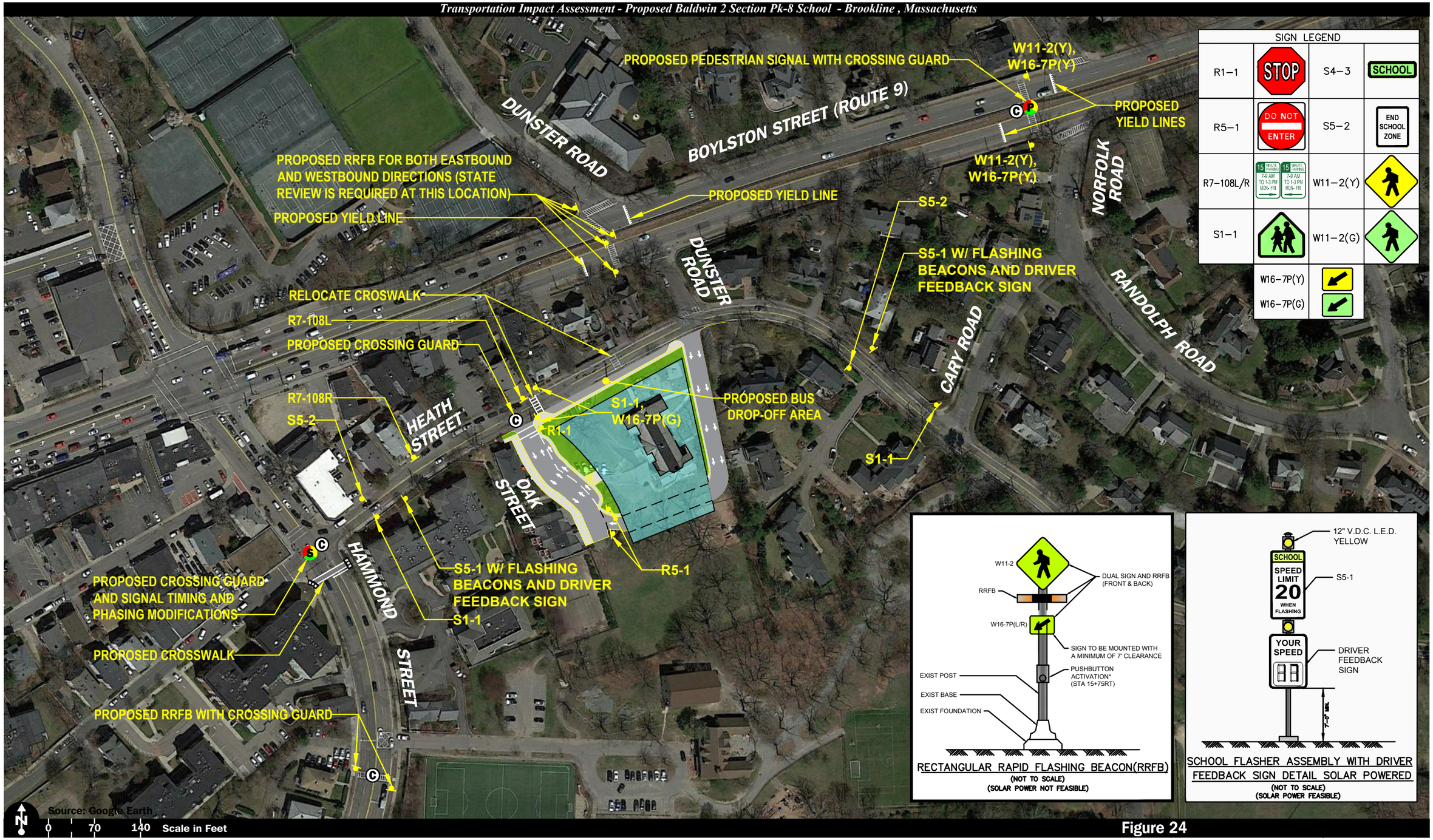
The following recommendations are offered with respect to the design and operation of the school site driveways:

- The main entrance driveway should have a minimum 24-foot entrance and will be illuminated. The driveway will provide two lanes with a drop-off/pick-up lane and a separate by-pass lane.

- The Oak Street driveway will be a minimum of 24-feet wide accommodating two-way traffic and will be under stop control and illuminated. During peak drop-off and pick-up periods this location will be placed under crossing guard control.

- A bus pull-off area is recommended off Heath Street and shall be designed such that buses pull-off from Heath Street to safely drop-off and pick-up students.

- School Zone signs, pavement markings and traffic control devices (i.e., flashing school speed limit signs) should be provided along Heath Street.



RECTANGULAR RAPID FLASHING BEACON(RRFB)
(NOT TO SCALE)
(SOLAR POWER NOT FEASIBLE)

SCHOOL FLASHER ASSEMBLY WITH DRIVER FEEDBACK SIGN DETAIL SOLAR POWERED
(NOT TO SCALE)
(SOLAR POWER FEASIBLE)

Figure 24

Conceptual Improvement Plan
Pedestrian Access and School Signage Plan

Vanasse & Associates, Inc.
Transportation Engineers & Planners

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- All signs and other pavement markings to be installed within the Project site shall conform to the applicable standards of the current Manual on Uniform Traffic Devices (MUTCD).[9]

- Signs and landscaping adjacent to the Project site driveway intersections should be designed and maintained so as not to restrict lines of sight.

Pedestrian Improvements

New crosswalks are proposed along Heath Street and Hammond Street. The new Heath Street crosswalk is located near Oak Street where the sight lines are better. Sidewalks entering the site will be provided along the bus pull-off area and entering the site. In addition, all of the identified existing pedestrian deficiencies should be addressed by the Town including all pedestrian routes which are anticipated to accommodate teacher parking. ADA-complaint sidewalks should be provided in the area. The desirable sidewalk minimum width is five (5) feet and a 3-foot clearance at point objects. Further review of the pedestrian improvements will be required.

Proposed Rectangular Rapid Flashing Beacon (RRFB) signs are proposed along Route 9 at Dunster Road in the both directions and Hammond Street to alert drivers of the crossings and enhance safety for the school children. A pedestrian traffic signal is also proposed at Route 9 and Norfolk Road.

Off-Site

Hammond Street at Route 9 and Hammond Street at Heath Street

The Heath Street and Hammond Street signalized intersections will be retimed to include an exclusive pedestrian phase and reallocated green time to Heath Street approach to better facilitate peak traffic movements associated with the school. The new phasing and timing can better serve the peak school demand in comparison to the current signal timing and phasing. The Heath Street approach to Hammond Street will operate at LOS D, an acceptable peak condition. Hammond Street at Boylston Street (Route 9) will remain unchanged.

Traffic Enforcement

Increased traffic enforcement along Heath Street is recommended to enforce the school speed zone.

Parking

Designated teacher parking on local street must be approved by the Transportation Board. In addition, existing Heath Street on-street parking should be considered for 15-minute parking during parent drop-off and pick-up times. A minimum of 10 parking spaces should be provided on-site for visitors and handicap parking. An EV installation should be considered. Similar to other schools in Brookline, off-site parent parking can be found on local residential streets a short walking distance from the school.

[9] *Manual on Uniform Traffic Control Devices (MUTCD); Federal Highway Administration; Washington, D.C.; 2009*

Bicycle Considerations

The following should be incorporated into the site plan.

- Bicycle racks should be provided proximate to the building entrance in a visible location.
- Interior bicycle storage and shower facilities should be provided.
- Bicycle enhancements by the Town should be reviewed for both Heath Street and Woodland Road.

Transit Usage

While public transit usage will be limited to staff, the school should actively promote staff usage of public transportation to the school. This should be incorporated into a school Travel Demand Management Plan.

School Drop-Off and Pick-Up Traffic Management Plan

A central feature of the Project is the implementation of a traffic and parking management plan for school drop-off and pick-up activities. The Project site and the site access and off-site improvements detailed herein have been developed to facilitate access to the school campus for pedestrians, bicyclists, school buses and parents/caregivers in a safe and efficient manner. The traffic and parking management plan has been designed to build-upon this created infrastructure and will consist of the following major elements, all of which are overseen by school staff:

- A crossing guard should be located at the Oak Street school driveway in order to manage the flow of vehicles exiting the school and pedestrian crossings.
- School staff should be stationed at the drop-off areas to manage traffic within the site and along the driveway, as well as to facilitate the safety of pedestrians and bicyclists.
- A designated drop-off/pick-up area should be designed to facilitate these movements.
- A lane along the entryway should remain unobstructed during student drop-off and pick-up times.
- Parents and caregivers should be given information on school drop-off and pick-up times and procedures at the beginning of the school year, with periodic updates and reminders provided as may be necessary.

The elements of the traffic and parking management plan for school drop-off and pick-up activities should be reviewed and updated as may be necessary in order to ensure the safety of students.

Regional Traffic in the Area

Regional traffic was observed to utilize Heath Street to access Route 9 and contribute to area delays. While not required for this project, neighborhood conditions can be improved with the following considerations:

- Implement peak hour on-way flow on Heath Street in the westbound direction.
- Closure of Dunster Road

These measures can be considered by the Town to reduce regional impacts to the immediate area.

Construction Management Plan

A detailed Construction Management Plan should be prepared and reviewed by the Town.

Traffic Monitoring

Within three months after school opening, a traffic monitoring study should be completed to review traffic counts at the school driveways and evaluate the traffic condition within the area.

Annually, the school should assess conditions and evaluate pedestrian safety, crossing guards, and evaluate the level of student busing and make adjustments, as necessary.

CONCLUSION

Overall, a safe environment to the school can be maintained and the increased traffic conditions with respect to delays and queues will be limited to short periods in the morning and afternoon.

Technical Appendix

Proposed Baldwin 2 Section Pk-8 School

Brookline, Massachusetts

Prepared for:

Jonathan Levi Architects
Boston, Massachusetts

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Transportation Engineers & Planners
35 New England Business Center Drive
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Andover, MA 01810-1066

APPENDIX

TURNING MOVEMENT COUNTS
SEASONAL ADJUSTMENTS
AUTOMATIC TRAFFIC RECORDER COUNTS
SPEEDS
TRANSIT INFORMATION
CRASH DATA
BACKGROUND DEVELOPMENT
VEHICLE OCCUPANY RATIO
TRIP GENERATION
CAPACITY ANALYSIS

TURNING MOVEMENT COUNTS

Traffic Count

School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VA\7990\79900001.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 79900001
Comment 1: N/S Street : Hammond Street
Comment 2: E/W Street: Boylston Street
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Hammond St From North				Boylston St From East				Hammond St From South				Boylston St From West				Hammond St From North	Boylston St From East	Hammond St From South	Boylston St From West
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	U-TR	Left	Thru	Right	Peds	Left	Thru	Right	U-TR	Phf by approach			
07:00 AM	23	24	23	0	19	256	11	0	18	70	14	0	32	317	8	0	70	286	102	357
07:15 AM	30	44	13	0	45	294	9	0	12	85	22	0	25	241	7	0	87	348	119	273
07:30 AM	31	56	19	0	63	333	7	0	13	116	5	0	41	274	5	0	106	403	134	320
07:45 AM	35	79	23	0	48	266	6	1	21	102	13	0	46	242	5	0	137	321	136	293
	119	203	78	0	175	1149	33	1	64	373	54	0	144	1074	25	0	400	1358	491	1243
No Build	128	218	84		188	1232	35	1	69	400	58		154	1151	27	0				
PHF	0.85	0.64	0.85		0.69	0.86	0.75	0.25	0.76	0.80	0.61		0.78	0.85	0.78	0.00	0.73	0.84	0.90	0.87
Truck	0	1	0		7	20	0	0	2	0	8		1	26	5	0				
% Truck	0.0%	0.5%	0.0%		4.0%	1.7%	0.0%	0.0%	3.1%	0.0%	14.8%		0.7%	2.4%	20.0%	0.0%				
bike/ ped	1	1	0	2	0	0	0	17	0	4	1	2	0	1	0	27				
01:30 PM	20	54	25	0	32	293	11	0	40	30	15	0	32	280	12	0	99	336	85	324
01:45 PM	32	55	23	0	52	256	17	0	20	22	17	0	39	232	12	0	110	325	59	283
02:00 PM	29	48	24	0	37	274	13	0	31	38	13	1	33	232	16	0	101	324	82	261
02:15 PM	32	37	38	0	31	321	7	0	39	44	19	0	43	267	11	0	107	359	102	321
	113	194	110	0	152	1144	48	0	130	134	64	1	147	1011	51	0	417	1344	328	1209
No Build	121	208	118		163	1227	51	0	139	144	69		158	1084	55	0				
PHF	0.88	0.88	0.72		0.73	0.89	0.71	0.00	0.81	0.76	0.84		0.85	0.90	0.80	0.00	0.95	0.94	0.80	0.93
Truck	0	3	0		4	23	0	0	3	0	9		1	13	1	0				
% Truck	0.0%	1.5%	0.0%		2.6%	2.0%	0.0%	0.0%	2.3%	0.0%	14.1%		0.7%	1.3%	2.0%	0.0%				
PED	0	3	0	1	0	0	0	7	0	2	0	2	0	1	0	29				

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Hammond St From North			Boylston St From East				Hammond St From South			Boylston St From West				
Start Time	Left	Thru	Right	Left	Thru	Right	U-TR	Left	Thru	Right	Left	Thru	Right	U-TR	Int. Total
07:00 AM	23	24	23	19	256	11	0	18	70	14	32	317	8	0	815
07:15 AM	30	44	13	45	294	9	0	12	85	22	25	241	7	0	827
07:30 AM	31	56	19	63	333	7	0	13	116	5	41	274	5	0	963
07:45 AM	35	79	23	48	266	6	1	21	102	13	46	242	5	0	887
Total	119	203	78	175	1149	33	1	64	373	54	144	1074	25	0	3492
08:00 AM	37	70	38	48	299	9	0	35	90	22	39	239	12	1	939
08:15 AM	23	36	28	54	339	5	0	39	93	11	45	266	12	0	951
08:30 AM	29	40	23	48	275	13	0	36	74	26	43	263	5	0	875
08:45 AM	24	36	15	46	215	11	1	35	79	17	41	250	6	0	776
Total	113	182	104	196	1128	38	1	145	336	76	168	1018	35	1	3541
Grand Total	232	385	182	371	2277	71	2	209	709	130	312	2092	60	1	7033
Apprch %	29	48.2	22.8	13.6	83.7	2.6	0.1	19.9	67.7	12.4	12.7	84.9	2.4	0	
Total %	3.3	5.5	2.6	5.3	32.4	1	0	3	10.1	1.8	4.4	29.7	0.9	0	
Cars	230	384	181	358	2234	69	2	202	706	115	306	2030	53	1	6871
% Cars	99.1	99.7	99.5	96.5	98.1	97.2	100	96.7	99.6	88.5	98.1	97	88.3	100	97.7
Trucks	2	1	1	13	43	2	0	7	3	15	6	62	7	0	162
% Trucks	0.9	0.3	0.5	3.5	1.9	2.8	0	3.3	0.4	11.5	1.9	3	11.7	0	2.3

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

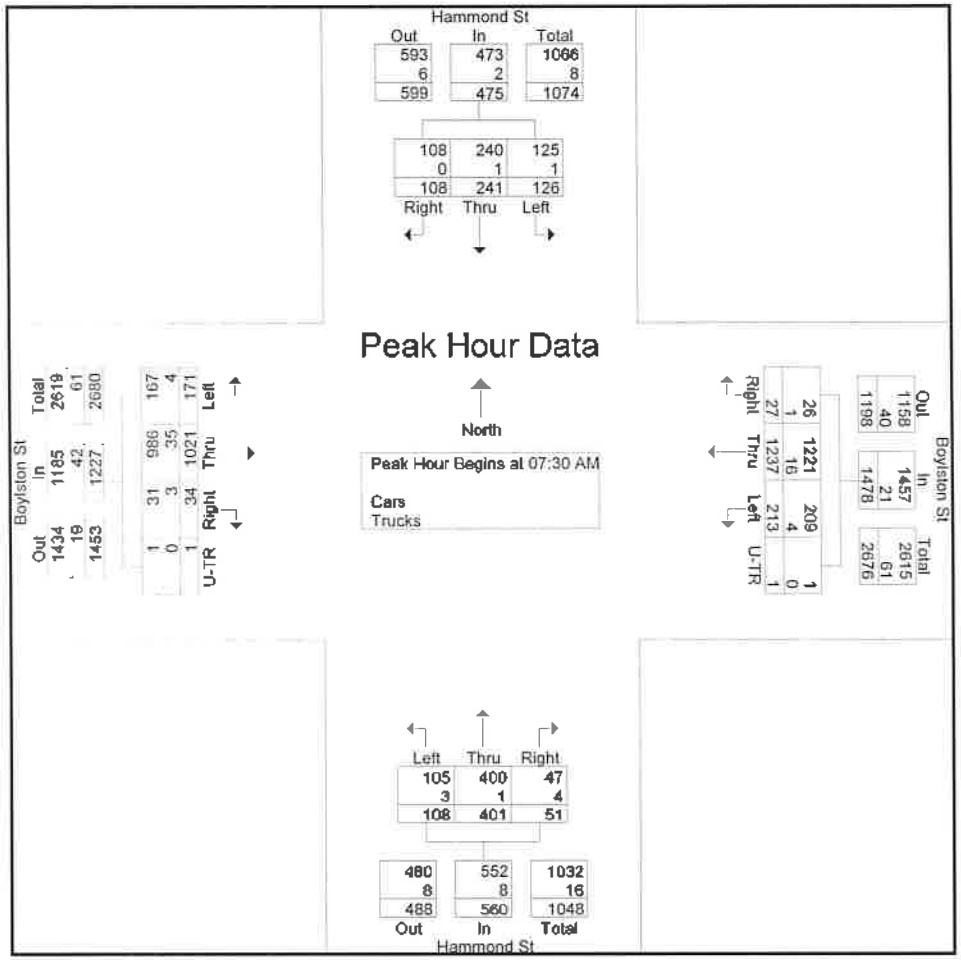
File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 2

	Hammond St From North				Boylston St From East					Hammond St From South				Boylston St From West					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	31	56	19	106	63	333	7	0	403	13	116	5	134	41	274	5	0	320	963
07:45 AM	35	79	23	137	48	266	6	1	321	21	102	13	136	46	242	5	0	293	887
08:00 AM	37	70	38	145	48	299	9	0	356	35	90	22	147	39	239	12	1	291	939
08:15 AM	23	36	28	87	54	339	5	0	398	39	93	11	143	45	266	12	0	323	951
Total Volume	126	241	108	475	213	1237	27	1	1478	108	401	51	560	171	1021	34	1	1227	3740
% App. Total	26.5	50.7	22.7		14.4	83.7	1.8	0.1		19.3	71.6	9.1		13.9	83.2	2.8	0.1		
PHF	.851	.763	.711	.819	.845	.912	.750	.250	.917	.692	.864	.580	.952	.929	.932	.708	.250	.950	.971
Cars	125	240	108	473	209	1221	26	1	1457	105	400	47	552	167	986	31	1	1185	3667
% Cars	99.2	99.6	100	99.6	98.1	98.7	96.3	100	98.6	97.2	99.8	92.2	98.6	97.7	96.6	91.2	100	96.6	98.0
Trucks	1	1	0	2	4	16	1	0	21	3	1	4	8	4	35	3	0	42	73
% Trucks	0.8	0.4	0	0.4	1.9	1.3	3.7	0	1.4	2.8	0.2	7.8	1.4	2.3	3.4	8.8	0	3.4	2.0

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM					07:45 AM				07:00 AM				
+0 mins.	30	44	13	87	63	333	7	0	403	21	102	13	136	32	317	8	0	357
+15 mins.	31	56	19	106	48	266	6	1	321	35	90	22	147	25	241	7	0	273
+30 mins.	35	79	23	137	48	299	9	0	356	39	93	11	143	41	274	5	0	320
+45 mins.	37	70	38	145	54	339	5	0	398	36	74	26	136	46	242	5	0	293
Total Volume	133	249	93	475	213	1237	27	1	1478	131	359	72	562	144	1074	25	0	1243
% App. Total	28	52.4	19.6		14.4	83.7	1.8	0.1		23.3	63.9	12.8		11.6	86.4	2	0	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 1

Groups Printed- Bikes Peds

	Hammond St From North				Boylston St From East				Hammond St From South				Boylston St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	0	0	0	0	5	0	0	0	0	0	0	0	2	7	1	8
07:15 AM	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	3	7	0	7
07:30 AM	1	0	0	0	0	0	0	2	0	1	1	2	0	1	0	7	11	4	15
07:45 AM	0	0	0	2	0	0	0	6	0	3	0	0	0	0	0	15	23	3	26
Total	1	1	0	2	0	0	0	17	0	4	1	2	0	1	0	27	48	8	56
08:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	6	8	0	8
08:15 AM	0	0	0	0	0	0	0	8	0	0	0	3	1	0	0	5	16	1	17
08:30 AM	0	0	0	0	0	0	0	4	1	0	0	3	0	0	0	5	12	1	13
08:45 AM	0	0	0	0	0	0	0	2	0	1	0	1	0	0	0	8	11	1	12
Total	0	0	0	0	0	0	0	16	1	1	0	7	1	0	0	24	47	3	50
Grand Total	1	1	0	2	0	0	0	33	1	5	1	9	1	1	0	51	95	11	106
Apprch %	50	50	0		0	0	0		14.3	71.4	14.3		50	50	0				
Total %	9.1	9.1	0		0	0	0		9.1	45.5	9.1		9.1	9.1	0		89.6	10.4	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
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City/State : Brookline, MA
Weather : Cloudy

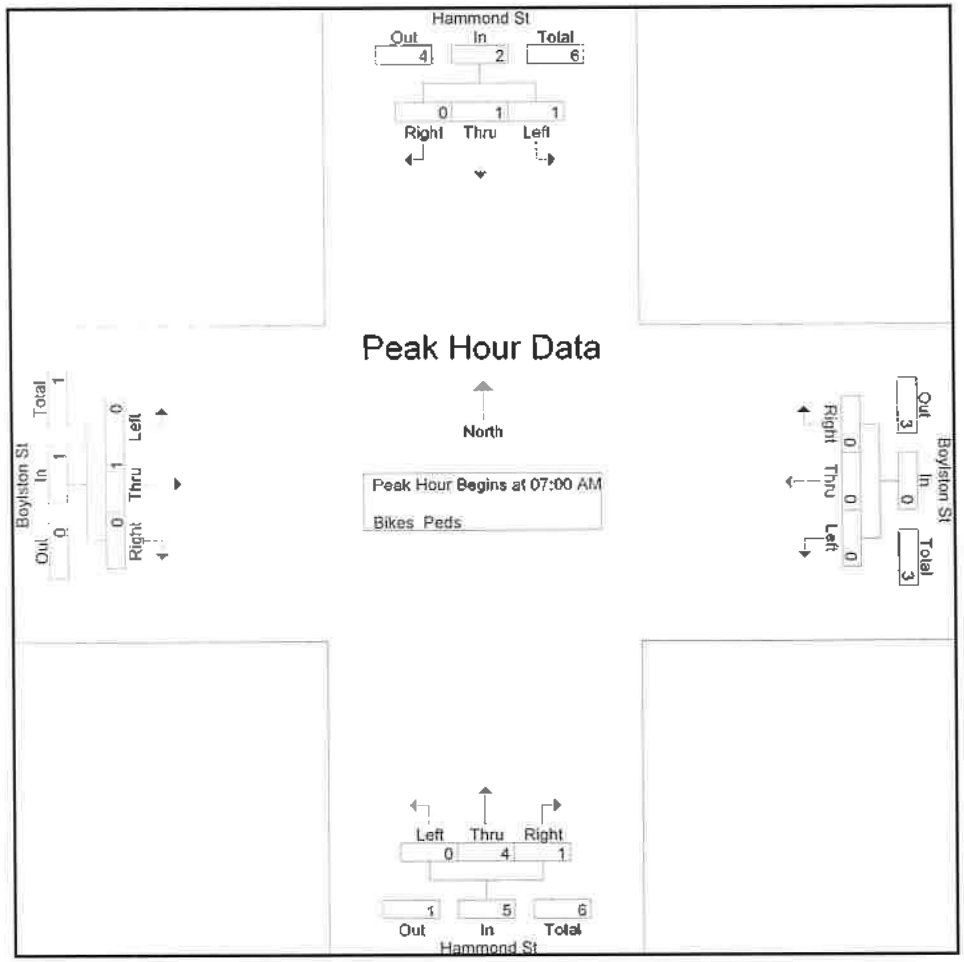
File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 2

	Hammond St From North				Boylston St From East				Hammond St From South				Boylston St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	1	0	0	1	0	0	0	0	0	1	1	2	0	1	0	1	4
07:45 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
Total Volume	1	1	0	2	0	0	0	0	0	4	1	5	0	1	0	1	8
% App. Total	50	50	0		0	0	0		0	80	20		0	100	0		
PHF	.250	.250	.000	.500	.000	.000	.000	.000	.000	.333	.250	.417	.000	.250	.000	.250	.500

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	1	0	0	1	0	0	0	0	0	1	1	2	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	3	0	3	1	0	0	1
Total Volume	1	1	0	2	0	0	0	0	0	4	1	5	1	1	0	2
% App. Total	50	50	0		0	0	0		0	80	20		50	50	0	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Hammond St From North			Boylston St From East				Hammond St From South			Boylston St From West				
Start Time	Left	Thru	Right	Left	Thru	Right	U-TR	Left	Thru	Right	Left	Thru	Right	U-TR	Int. Total
01:00 PM	39	31	33	46	282	7	0	29	31	15	40	208	5	0	766
01:15 PM	30	32	11	40	263	15	2	35	25	22	41	230	12	0	758
01:30 PM	20	54	25	32	293	11	0	40	30	15	32	280	12	0	844
01:45 PM	32	55	23	52	256	17	0	20	22	17	39	232	12	0	777
Total	121	172	92	170	1094	50	2	124	108	69	152	950	41	0	3145
02:00 PM	29	48	24	37	274	13	0	31	38	13	33	232	16	0	788
02:15 PM	32	37	38	31	321	7	0	39	44	19	43	267	11	0	889
02:30 PM	21	60	29	38	312	13	0	30	44	17	43	216	21	1	845
02:45 PM	40	71	28	49	296	13	0	36	50	13	43	226	10	0	875
Total	122	216	119	155	1203	46	0	136	176	62	162	941	58	1	3397
03:00 PM	36	62	33	47	331	18	2	28	46	11	49	250	17	0	930
03:15 PM	30	100	38	49	300	19	1	36	84	11	42	226	9	0	945
03:30 PM	27	77	37	55	315	6	0	26	50	12	51	277	12	1	946
03:45 PM	29	95	28	28	346	10	1	30	52	12	35	272	13	0	951
Total	122	334	136	179	1292	53	4	120	232	46	177	1025	51	1	3772
Grand Total	365	722	347	504	3589	149	6	380	516	177	491	2916	150	2	10314
Apprch %	25.5	50.3	24.2	11.9	84.5	3.5	0.1	35.4	48.1	16.5	13.8	81.9	4.2	0.1	
Total %	3.5	7	3.4	4.9	34.8	1.4	0.1	3.7	5	1.7	4.8	28.3	1.5	0	
Cars	364	714	346	491	3522	148	6	374	513	163	485	2875	145	2	10148
% Cars	99.7	98.9	99.7	97.4	98.1	99.3	100	98.4	99.4	92.1	98.8	98.6	96.7	100	98.4
Trucks	1	8	1	13	67	1	0	6	3	14	6	41	5	0	166
% Trucks	0.3	1.1	0.3	2.6	1.9	0.7	0	1.6	0.6	7.9	1.2	1.4	3.3	0	1.6

Accurate Counts

978-664-2565

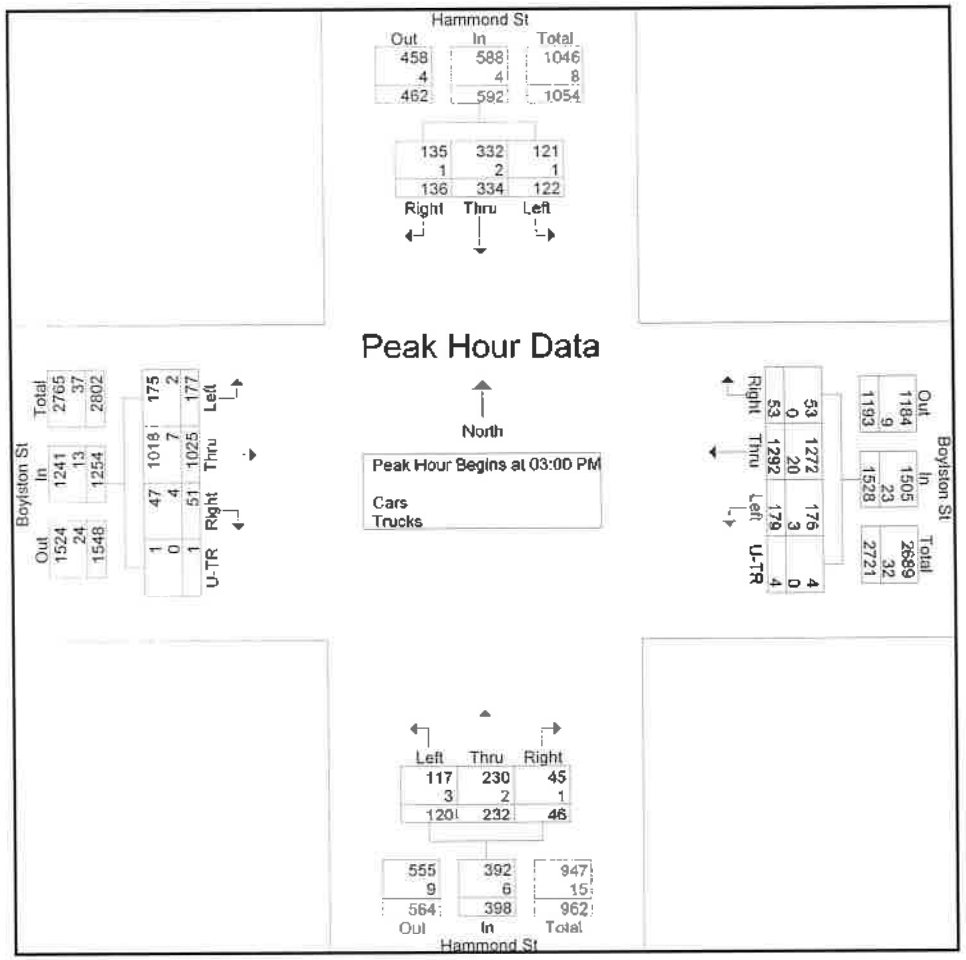
N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 2

	Hammond St From North				Boylston St From East					Hammond St From South				Boylston St From West					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:00 PM																			
03:00 PM	36	62	33	131	47	331	18	2	398	28	46	11	85	49	250	17	0	316	930
03:15 PM	30	100	38	168	49	300	19	1	369	36	84	11	131	42	226	9	0	277	945
03:30 PM	27	77	37	141	55	315	6	0	376	26	50	12	88	51	277	12	1	341	946
03:45 PM	29	95	28	152	28	346	10	1	385	30	52	12	94	35	272	13	0	320	951
Total Volume	122	334	136	592	179	1292	53	4	1528	120	232	46	398	177	1025	51	1	1254	3772
% App. Total	20.6	56.4	23		11.7	84.6	3.5	0.3		30.2	58.3	11.6		14.1	81.7	4.1	0.1		
PHF	.847	.835	.895	.881	.814	.934	.697	.500	.960	.833	.690	.958	.760	.868	.925	.750	.250	.919	.992
Cars	121	332	135	588	176	1272	53	4	1505	117	230	45	392	175	1018	47	1	1241	3726
% Cars	99.2	99.4	99.3	99.3	98.3	98.5	100	100	98.5	97.5	99.1	97.8	98.5	98.9	99.3	92.2	100	99.0	98.8
Trucks	1	2	1	4	3	20	0	0	23	3	2	1	6	2	7	4	0	13	46
% Trucks	0.8	0.6	0.7	0.7	1.7	1.5	0	0	1.5	2.5	0.9	2.2	1.5	1.1	0.7	7.8	0	1.0	1.2

N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM					02:30 PM				03:00 PM				
+0 mins.	36	62	33	131	47	331	18	2	398	30	44	17	91	49	250	17	0	316
+15 mins.	30	100	38	168	49	300	19	1	369	36	50	13	99	42	226	9	0	277
+30 mins.	27	77	37	141	55	315	6	0	376	28	46	11	85	51	277	12	1	341
+45 mins.	29	95	28	152	28	346	10	1	385	36	84	11	131	35	272	13	0	320
Total Volume	122	334	136	592	179	1292	53	4	1528	130	224	52	406	177	1025	51	1	1254
% App. Total	20.6	56.4	23		11.7	84.6	3.5	0.3		32	55.2	12.8		14.1	81.7	4.1	0.1	
PHF	.847	.835	.895	.881	.814	.934	.697	.500	.960	.903	.667	.765	.775	.868	.925	.750	.250	.919

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 1

Groups Printed- Bikes Peds

	Hammond St From North				Boylston St From East				Hammond St From South				Boylston St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	2	0	0	0	4	0	0	0	3	0	1	0	11	20	1	21
01:15 PM	0	1	0	1	0	0	0	2	0	1	0	0	0	0	0	10	13	2	15
01:30 PM	0	1	0	1	0	0	0	2	0	0	0	0	0	1	0	4	7	2	9
01:45 PM	0	1	0	0	0	0	0	3	0	0	0	2	0	0	0	9	14	1	15
Total	0	3	0	4	0	0	0	11	0	1	0	5	0	2	0	34	54	6	60
02:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	8	8	2	10
02:15 PM	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	8	10	1	11
02:30 PM	0	1	0	0	0	0	0	1	0	0	0	2	0	0	0	13	16	1	17
02:45 PM	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	6	9	1	10
Total	0	3	0	0	0	0	0	6	0	2	0	2	0	0	0	35	43	5	48
03:00 PM	0	1	0	1	0	0	0	3	0	0	0	0	0	0	0	10	14	1	15
03:15 PM	0	1	0	1	1	0	0	5	0	0	0	1	0	0	0	14	21	2	23
03:30 PM	0	1	0	1	0	1	0	1	0	1	0	0	0	0	0	7	9	3	12
03:45 PM	0	0	0	0	0	0	0	4	0	1	0	1	0	0	0	7	12	1	13
Total	0	3	0	3	1	1	0	13	0	2	0	2	0	0	0	38	56	7	63
Grand Total	0	9	0	7	1	1	0	30	0	5	0	9	0	2	0	107	153	18	171
Apprch %	0	100	0		50	50	0		0	100	0		0	100	0				
Total %	0	50	0		5.6	5.6	0		0	27.8	0		0	11.1	0		89.5	10.5	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

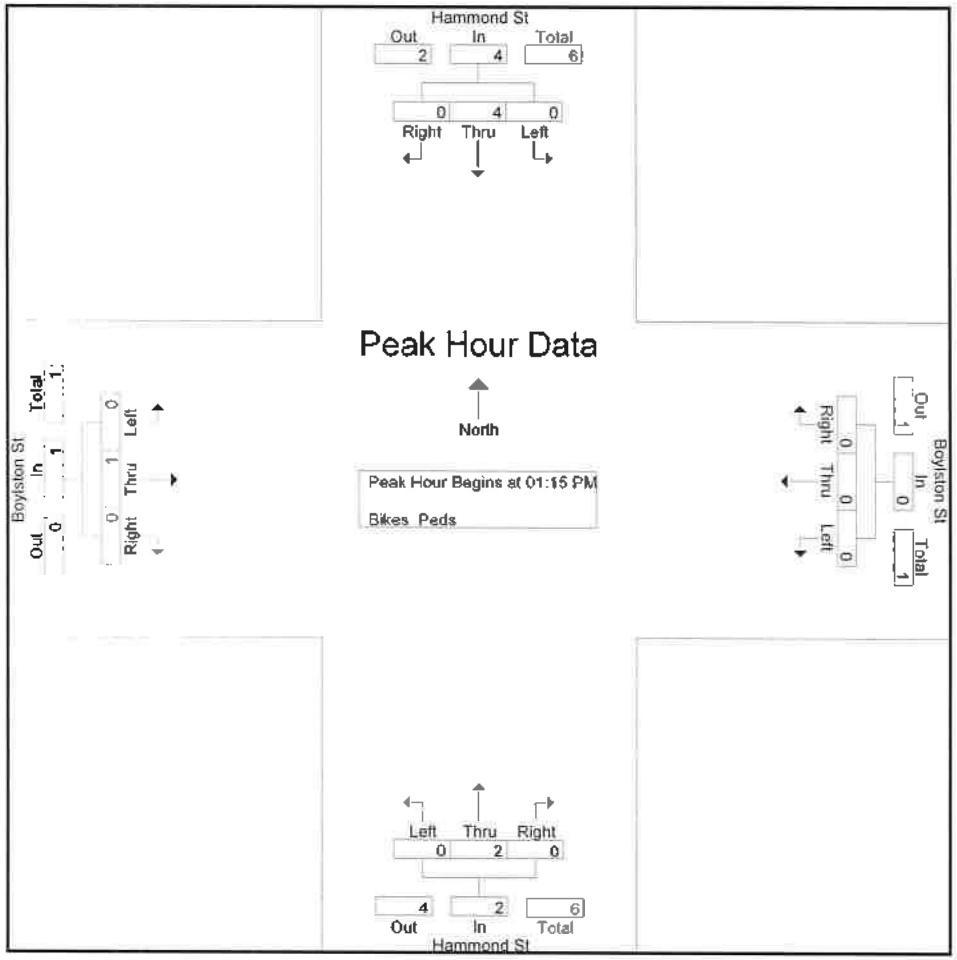
File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 2

	Hammond St From North				Boylston St From East				Hammond St From South				Boylston St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 01:15 PM																	
01:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
01:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
01:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	4	0	4	0	0	0	0	0	2	0	2	0	1	0	1	7
% App. Total	0	100	0		0	0	0		0	100	0		0	100	0		
PHF	.000	1.00	.000	1.00	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.000	.250	.875

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street: Boylston Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900001
Site Code : 79900001
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	01:15 PM				02:45 PM				01:15 PM				01:00 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	1	0	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0
Total Volume	0	4	0	4	1	1	0	2	0	2	0	2	0	2	0	2
% App. Total	0	100	0		50	50	0		0	100	0		0	100	0	
PHF	.000	1.000	.000	1.000	.250	.250	.000	.500	.000	.500	.000	.500	.000	.500	.000	.500

School Peak Hour Traffic Volumes

File Name: C:\Users\steve\Documents\2018\Petra\Brookline, MA\VAI\7990\79900002.ppd
Start Date: 9/25/2018
Start Time: 7:00:00 AM
Site Code: 79900002
Comment 1: N/S Street : Hammond Street
Comment 2: E/W Street: Heath Street
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Hammond St From North				Heath St From East				Hammond St From South				Heath St From West				Hammond St From North	Heath St From East	Hammond St From South	Heath St From West
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Phf by approach			
07:00 AM	7	45	0	0	5	5	6	0	1	106	50	0	0	0	0	0	52	16	157	0
07:15 AM	5	84	1	0	11	2	11	0	1	96	39	0	0	0	0	0	90	24	136	0
07:30 AM	5	118	3	0	19	4	17	0	0	124	34	0	0	0	0	0	126	40	158	0
07:45 AM	3	122	7	0	35	5	34	0	4	116	45	0	0	0	1	0	132	74	165	1
	20	369	11	0	70	16	68	0	6	442	168	0	0	0	1	0	400	154	616	1
No Build	21	396	12		75	17	73		6	474	180		0	0	1					
PHF	0.71	0.76	0.39		0.50	0.80	0.50		0.38	0.89	0.84		0.00	0.00	0.25		0.76	0.52	0.93	0.25
Truck	2	8	0		1	1	0		0	10	1		0	0	1					
% Truck	10.0%	2.2%	0.0%		1.4%	6.3%	0.0%		0.0%	2.3%	0.6%		0.0%	0.0%	100.0%					
PED	0	1	0	7	1	0	0	6	0	5	0	0	0	0	0	17				
01:30 PM	5	85	8	0	13	5	24	0	3	51	24	0	0	0	0	0	98	42	78	0
01:45 PM	6	105	7	0	12	6	7	0	0	63	18	0	0	0	0	0	116	25	81	0
02:00 PM	4	85	5	0	13	2	20	0	7	63	20	0	0	0	0	0	94	35	90	0
02:15 PM	6	74	3	0	16	2	16	0	1	72	24	0	0	0	0	0	83	34	97	0
	21	349	23	0	54	15	67	0	11	249	86	0	0	0	0	0	393	136	346	0
No Build	23	374	25		58	16	72		12	267	92		0	0	0					
PHF	0.88	0.83	0.72		0.84	0.63	0.70		0.39	0.86	0.90		0.00	0.00	0.00		0.83	0.81	0.89	#DIV/0!
Truck	0	8	0		1	0	2		0	10	0		0	0	0					
% Truck	0.0%	2.3%	0.0%		1.9%	0.0%	3.0%		0.0%	4.0%	0.0%		0.0%	0.0%	0.0%					
PED	1	2	0	7	0	0	1	3	0	1	0	0	0	0	0	20				

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Hammond St From North			Heath St From East			Hammond St From South			Heath St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	7	45	0	5	5	6	1	106	50	0	0	0	225
07:15 AM	5	84	1	11	2	11	1	96	39	0	0	0	250
07:30 AM	5	118	3	19	4	17	0	124	34	0	0	0	324
07:45 AM	3	122	7	35	5	34	4	116	45	0	0	1	372
Total	20	369	11	70	16	68	6	442	168	0	0	1	1171
08:00 AM	9	106	8	18	10	21	5	103	29	0	0	0	309
08:15 AM	9	97	7	16	9	32	8	109	22	0	0	0	309
08:30 AM	9	80	7	12	13	31	11	112	35	0	0	0	310
08:45 AM	3	71	7	15	11	27	2	95	19	0	0	0	250
Total	30	354	29	61	43	111	26	419	105	0	0	0	1178
Grand Total	50	723	40	131	59	179	32	861	273	0	0	1	2349
Apprch %	6.2	88.9	4.9	35.5	16	48.5	2.7	73.8	23.4	0	0	100	
Total %	2.1	30.8	1.7	5.6	2.5	7.6	1.4	36.7	11.6	0	0	0	
Cars	48	706	40	129	58	178	32	837	272	0	0	0	2300
% Cars	96	97.6	100	98.5	98.3	99.4	100	97.2	99.6	0	0	0	97.9
Trucks	2	17	0	2	1	1	0	24	1	0	0	1	49
% Trucks	4	2.4	0	1.5	1.7	0.6	0	2.8	0.4	0	0	100	2.1

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 2

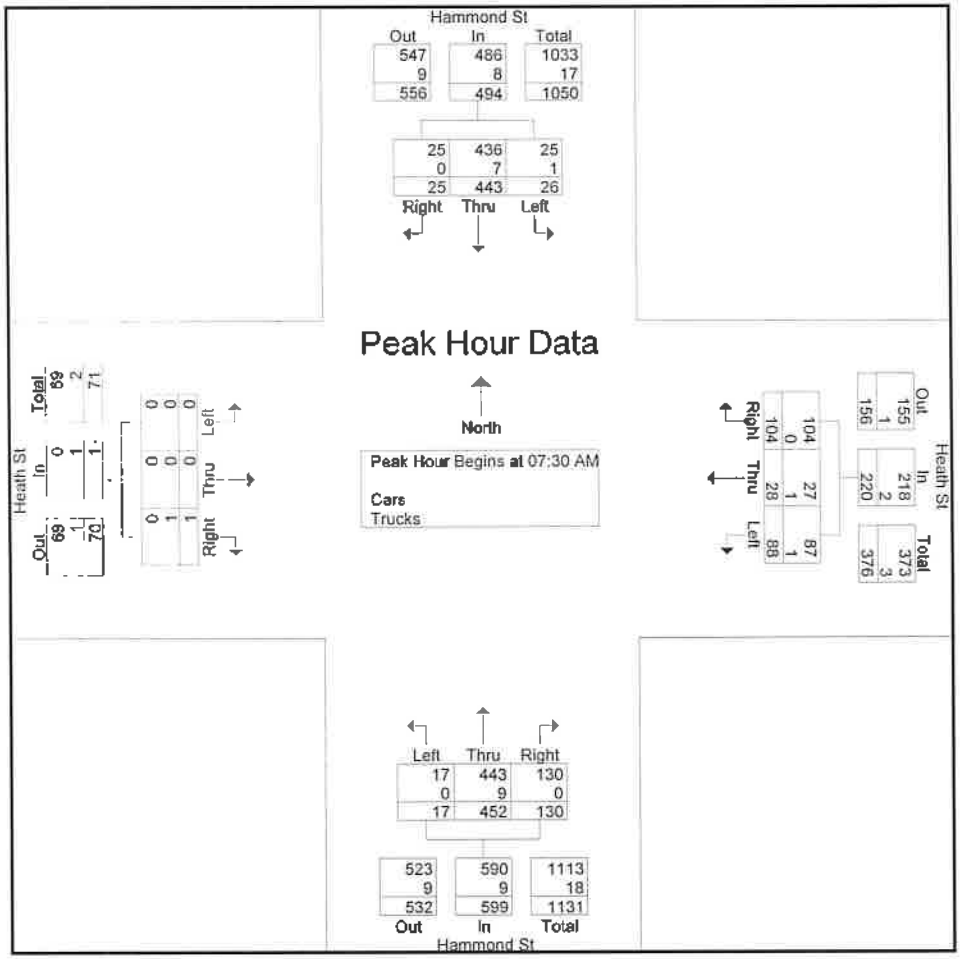
	Hammond St From North				Heath St From East				Hammond St From South				Heath St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	118	3	126	19	4	17	40	0	124	34	158	0	0	0	0	324
07:45 AM	3	122	7	132	35	5	34	74	4	116	45	165	0	0	1	1	372
08:00 AM	9	106	8	123	18	10	21	49	5	103	29	137	0	0	0	0	309
08:15 AM	9	97	7	113	16	9	32	57	8	109	22	139	0	0	0	0	309
Total Volume	26	443	25	494	88	28	104	220	17	452	130	599	0	0	1	1	1314
% App. Total	5.3	89.7	5.1		40	12.7	47.3		2.8	75.5	21.7		0	0	100		
PHF	.722	.908	.781	.936	.629	.700	.765	.743	.531	.911	.722	.908	.000	.000	.250	.250	.883
Cars	25	436	25	486	87	27	104	218	17	443	130	590	0	0	0	0	1294
% Cars	96.2	98.4	100	98.4	98.9	96.4	100	99.1	100	98.0	100	98.5	0	0	0	0	98.5
Trucks	1	7	0	8	1	1	0	2	0	9	0	9	0	0	1	1	20
% Trucks	3.8	1.6	0	1.6	1.1	3.6	0	0.9	0	2.0	0	1.5	0	0	100	100	1.5

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:00 AM				07:00 AM			
+0 mins.	5	118	3	126	**35**	5	**34**	**74**	1	106	**50**	157	0	0	0	0
+15 mins.	3	**122**	7	**132**	18	10	21	49	1	96	39	136	0	0	0	0
+30 mins.	**9**	106	8	123	16	9	32	57	0	**124**	34	158	0	0	0	0
+45 mins.	9	97	7	113	12	**13**	31	56	**4**	116	45	**165**	0	0	**1**	1
Total Volume	26	443	25	494	81	37	118	236	6	442	168	616	0	0	1	1
% App. Total	5.3	89.7	5.1		34.3	15.7	50		1	71.8	27.3		0	0	100	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 13

Groups Printed- Bikes Peds

	Hammond St From North				Heath St From East				Hammond St From South				Heath St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	1	3	1	4
01:15 PM	0	0	0	7	0	0	0	3	0	1	0	0	0	0	0	1	11	1	12
01:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	8	9	1	10
01:45 PM	1	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	6	1	7
Total	1	1	0	12	0	0	0	5	0	2	0	0	0	0	0	12	29	4	33
02:00 PM	0	1	0	2	0	0	1	1	0	0	0	0	0	0	0	9	12	2	14
02:15 PM	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	1	3	1	4
02:30 PM	0	0	0	10	0	1	0	1	0	0	0	0	0	0	0	0	11	1	12
02:45 PM	0	1	0	4	0	0	0	1	0	0	0	0	0	0	0	2	7	1	8
Total	0	2	0	18	0	1	1	3	0	1	0	0	0	0	0	12	33	5	38
03:00 PM	0	1	0	2	0	0	0	1	0	0	0	0	0	0	0	0	3	1	4
03:15 PM	0	1	0	5	1	0	0	0	0	0	0	0	0	0	0	4	9	2	11
03:30 PM	0	2	0	11	0	0	1	11	0	0	0	1	0	0	0	4	27	3	30
03:45 PM	0	0	0	8	0	0	0	5	0	2	0	1	0	0	0	1	15	2	17
Total	0	4	0	26	1	0	1	17	0	2	0	2	0	0	0	9	54	8	62
Grand Total	1	7	0	56	1	1	2	25	0	5	0	2	0	0	0	33	116	17	133
Apprch %	12.5	87.5	0		25	25	50		0	100	0		0	0	0				
Total %	5.9	41.2	0		5.9	5.9	11.8		0	29.4	0		0	0	0		87.2	12.8	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 14

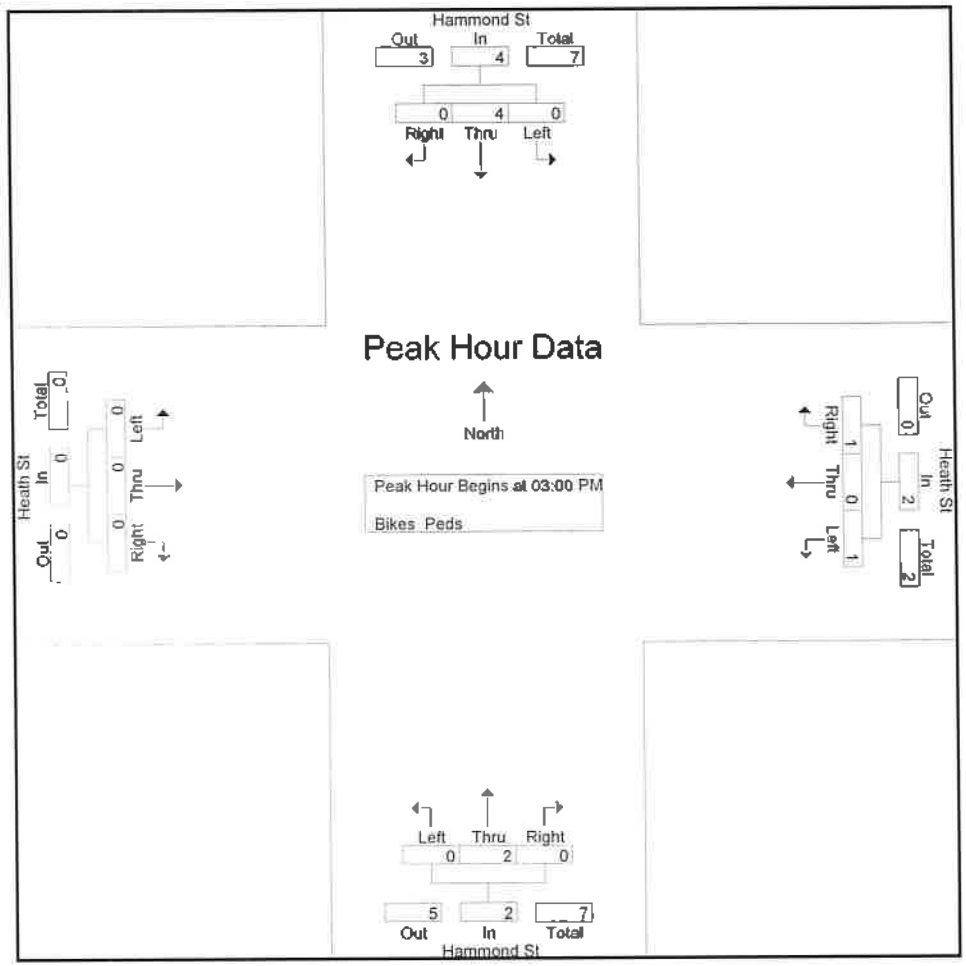
	Hammond St From North				Heath St From East				Hammond St From South				Heath St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
03:30 PM	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
03:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total Volume	0	4	0	4	1	0	1	2	0	2	0	2	0	0	0	0	8
% App. Total	0	100	0		50	0	50		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.250	.000	.250	.500	.000	.250	.000	.250	.000	.000	.000	.000	.667

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 15



Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	02:45 PM				01:45 PM				01:00 PM				01:00 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	5	0	5	0	1	1	2	0	2	0	2	0	0	0	0
% App. Total	0	100	0		0	50	50		0	100	0		0	0	0	
PHF	.000	.625	.000	.625	.000	.250	.250	.500	.000	.500	.000	.500	.000	.000	.000	.000

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Hammond St From North			Heath St From East			Hammond St From South			Heath St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
01:00 PM	3	77	7	21	6	15	3	60	11	0	0	0	203
01:15 PM	4	72	4	11	3	18	3	63	15	0	0	0	193
01:30 PM	5	85	8	13	5	24	3	51	24	0	0	0	218
01:45 PM	6	105	7	12	6	7	0	63	18	0	0	0	224
Total	18	339	26	57	20	64	9	237	68	0	0	0	838
02:00 PM	4	85	5	13	2	20	7	63	20	0	0	0	219
02:15 PM	6	74	3	16	2	16	1	72	24	0	0	0	214
02:30 PM	5	105	8	17	7	21	5	88	26	0	0	0	282
02:45 PM	13	109	4	34	8	21	5	70	22	0	0	0	286
Total	28	373	20	80	19	78	18	293	92	0	0	0	1001
03:00 PM	6	125	8	36	5	18	6	68	26	0	0	0	298
03:15 PM	1	136	10	43	6	22	4	106	24	0	0	0	352
03:30 PM	6	144	4	38	9	21	5	71	22	0	0	0	320
03:45 PM	9	125	2	44	12	12	3	70	16	0	0	0	293
Total	22	530	24	161	32	73	18	315	88	0	0	0	1263
Grand Total	68	1242	70	298	71	215	45	845	248	0	0	0	3102
Apprch %	4.9	90	5.1	51	12.2	36.8	4	74.3	21.8	0	0	0	
Total %	2.2	40	2.3	9.6	2.3	6.9	1.5	27.2	8	0	0	0	
Cars	68	1216	70	295	71	212	44	823	248	0	0	0	3047
% Cars	100	97.9	100	99	100	98.6	97.8	97.4	100	0	0	0	98.2
Trucks	0	26	0	3	0	3	1	22	0	0	0	0	55
% Trucks	0	2.1	0	1	0	1.4	2.2	2.6	0	0	0	0	1.8

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 2

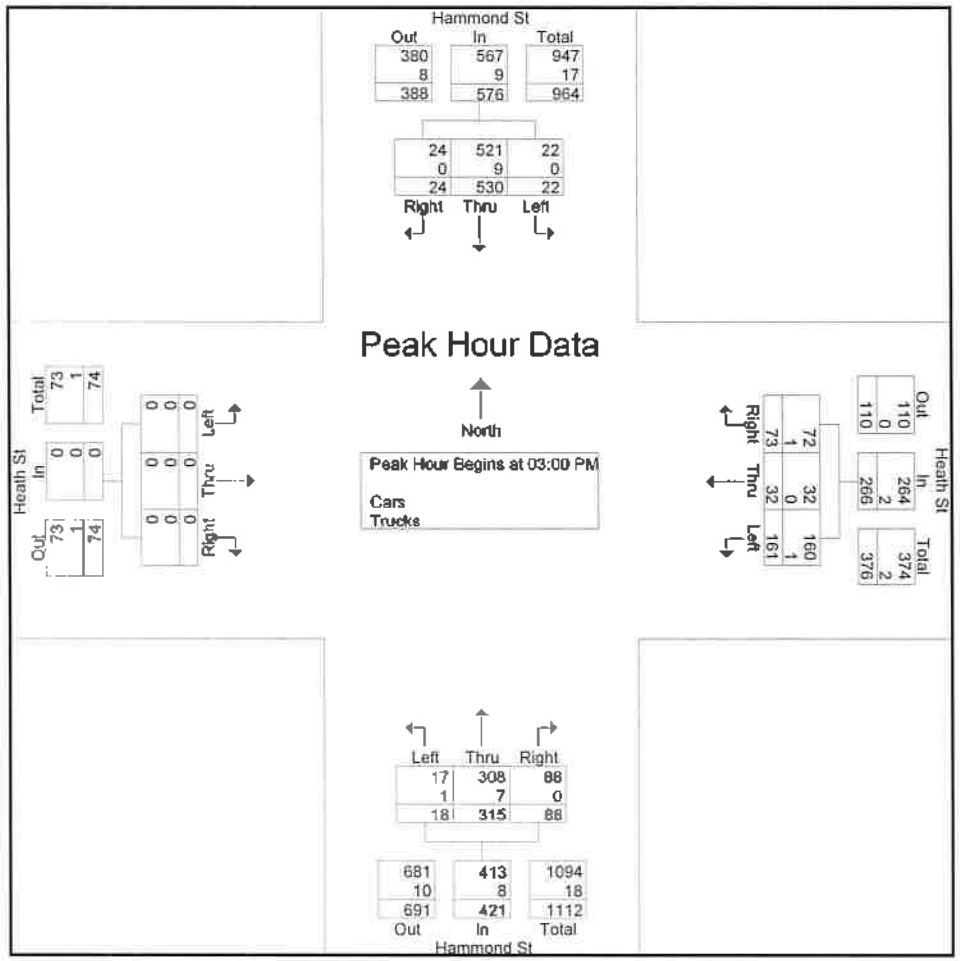
	Hammond St From North				Heath St From East				Hammond St From South				Heath St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	6	125	8	139	36	5	18	59	6	68	26	100	0	0	0	0	298
03:15 PM	1	136	10	147	43	6	22	71	4	106	24	134	0	0	0	0	352
03:30 PM	6	144	4	154	38	9	21	68	5	71	22	98	0	0	0	0	320
03:45 PM	9	125	2	136	44	12	12	68	3	70	16	89	0	0	0	0	293
Total Volume	22	530	24	576	161	32	73	266	18	315	88	421	0	0	0	0	1263
% App. Total	3.8	92	4.2		60.5	12	27.4		4.3	74.8	20.9		0	0	0		
PHF	.611	.920	.600	.935	.915	.667	.830	.937	.750	.743	.846	.785	.000	.000	.000	.000	.897
Cars	22	521	24	567	160	32	72	264	17	308	88	413	0	0	0	0	1244
% Cars	100	98.3	100	98.4	99.4	100	98.6	99.2	94.4	97.8	100	98.1	0	0	0	0	98.5
Trucks	0	9	0	9	1	0	1	2	1	7	0	8	0	0	0	0	19
% Trucks	0	1.7	0	1.6	0.6	0	1.4	0.8	5.6	2.2	0	1.9	0	0	0	0	1.5

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				02:30 PM				01:00 PM			
+0 mins.	6	125	8	139	36	5	18	59	5	88	**26**	119	0	0	0	0
+15 mins.	1	136	**10**	147	43	6	**22**	**71**	5	70	22	97	0	0	0	0
+30 mins.	6	**144**	4	**154**	38	9	21	68	6	68	26	100	0	0	0	0
+45 mins.	**9**	125	2	136	**44**	**12**	12	68	4	**106**	24	**134**	0	0	0	0
Total Volume	22	530	24	576	**161**	32	73	266	20	332	98	450	0	0	0	0
% App. Total	3.8	92	4.2		60.5	12	27.4		4.4	73.8	21.8		0	0	0	
PHF	.611	.920	.600	.935	.915	.667	.830	.937	.833	.783	.942	.840	.000	.000	.000	.000

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 13

Groups Printed- Bikes Peds

	Hammond St From North				Heath St From East				Hammond St From South				Heath St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	2	0	0	0	5	0	0	0	0	0	0	0	5	12	1	13
07:15 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	6	9	0	9
07:30 AM	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	1	2	3	5
07:45 AM	0	0	0	1	0	0	0	1	0	3	0	0	0	0	0	5	7	3	10
Total	0	1	0	7	1	0	0	6	0	5	0	0	0	0	0	17	30	7	37
08:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	2	1	3
08:15 AM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	4	0	4
08:30 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	5	0	5
08:45 AM	0	0	0	2	0	0	0	0	0	1	0	0	0	1	0	1	3	2	5
Total	0	0	0	6	1	0	0	1	0	1	0	0	0	1	0	7	14	3	17
Grand Total	0	1	0	13	2	0	0	7	0	6	0	0	0	1	0	24	44	10	54
Apprch %	0	100	0		100	0	0		0	100	0		0	100	0				
Total %	0	10	0		20	0	0		0	60	0		0	10	0		81.5	18.5	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

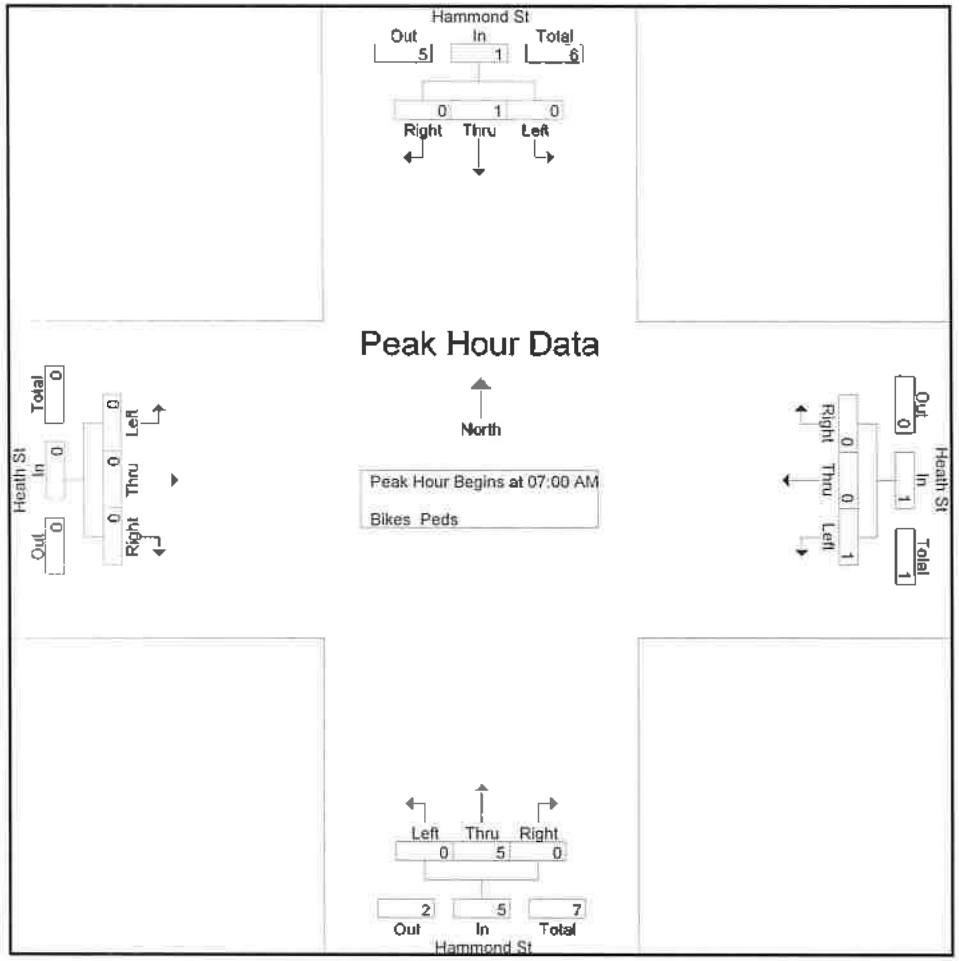
File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 14

	Hammond St From North				Heath St From East				Hammond St From South				Heath St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	1	0	0	1	0	2	0	2	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
Total Volume	0	1	0	1	1	0	0	1	0	5	0	5	0	0	0	0	7
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.250	.000	.000	.250	.000	.417	.000	.417	.000	.000	.000	.000	.583

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900002
Site Code : 79900002
Start Date : 9/26/2018
Page No : 15



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:00 AM				08:00 AM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	0	0	0	1	0	0	1	0	3	0	3	0	1	0	1
Total Volume	0	1	0	1	2	0	0	2	0	5	0	5	0	1	0	1
% App. Total	0	100	0		100	0	0		0	100	0		0	100	0	

School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VA\17990\79900003.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 79900003
Comment 1: N/S Street : Hammond Street
Comment 2: E/W Street: Recreation Rd / Driveway
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Hammond St From North				Recreation Rd From East				Hammond St From South				Drwy From West				Hammond St From North	Recreation Rd From East	Hammond St From South	Drwy From West
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Phf by approach			
07:00 AM	3	44	0	0	1	0	1	0	0	145	2	0	0	0	0	0	47	2	148	0
07:15 AM	2	96	0	0	0	0	2	0	0	130	1	0	0	0	0	0	98	2	131	0
07:30 AM	1	131	1	0	2	0	0	0	0	152	1	0	0	0	0	0	133	2	153	0
07:45 AM	2	159	0	0	1	0	0	0	0	157	2	0	0	0	1	0	161	1	159	1
	8	430	1	0	4	0	3	0	0	585	6	0	0	0	1	0	439	7	591	1
2025 No-Build	9	461	1		4	0	3		0	627	6		0	0	1					
PHF	0.67	0.88	0.25		0.50	0.00	0.38		0.00	0.93	0.75		0.00	0.00	0.25		0.88	0.88	0.93	0.25
Truck	0	12	0		0	0	0		0	12	0		0	0	0					
% Truck	0.0%	2.8%	0.0%		0.0%	0.0%	0.0%		0.0%	2.1%	0.0%		0.0%	0.0%	0.0%					
PED	0	2	0	0	1	0	0	1	0	1	0	3	0	0	0	17				
01:30 PM	1	91	0	0	1	0	0	0	0	69	0	0	0	0	1	0	92	1	69	1
01:45 PM	2	114	0	0	0	0	1	0	0	82	2	0	0	0	1	0	116	1	84	1
02:00 PM	0	95	2	0	0	0	2	0	0	88	1	0	0	0	0	0	97	2	89	0
02:15 PM	0	86	0	0	1	0	2	0	0	89	0	0	0	0	0	0	86	3	89	0
	3	386	2	0	2	0	5	0	0	328	3	0	0	0	2	0	391	7	331	2
2025 No-Build	3	414	2		2	0	5		0	352	3		0	0	2					
PHF	0.38	0.85	0.25		0.50	0.00	0.63		0.00	0.92	0.38		0.00	0.00	0.50		0.84	0.58	0.93	0.50
Truck	0	10	0		0	0	0		0	10	0		0	0	1					
% Truck	0.0%	2.6%	0.0%		0.0%	0.0%	0.0%		0.0%	3.0%	0.0%		0.0%	0.0%	50.0%					
PED	0	2	0	1	0	0	0	1	0	1	0	1	0	0	0	25				

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Hammond St From North			Recreation Rd From East			Hammond St From South			Drwy From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	3	46	0	1	0	1	0	150	2	0	0	0	203
07:15 AM	2	101	0	0	0	2	0	134	1	0	0	0	240
07:30 AM	1	133	1	2	0	0	0	153	1	0	0	0	291
07:45 AM	2	162	0	1	0	0	0	160	2	0	0	1	328
Total	8	442	1	4	0	3	0	597	6	0	0	1	1062
08:00 AM	14	113	2	4	0	4	0	136	9	0	0	1	283
08:15 AM	8	99	0	8	0	12	0	119	8	0	0	0	254
08:30 AM	2	90	0	6	0	5	0	138	3	0	0	0	244
08:45 AM	2	91	0	1	0	2	0	131	3	0	0	0	230
Total	26	393	2	19	0	23	0	524	23	0	0	1	1011
Grand Total	34	835	3	23	0	26	0	1121	29	0	0	2	2073
Apprch %	3.9	95.8	0.3	46.9	0	53.1	0	97.5	2.5	0	0	100	
Total %	1.6	40.3	0.1	1.1	0	1.3	0	54.1	1.4	0	0	0.1	
Cars	34	813	3	23	0	26	0	1093	29	0	0	2	2023
% Cars	100	97.4	100	100	0	100	0	97.5	100	0	0	100	97.6
Trucks	0	22	0	0	0	0	0	28	0	0	0	0	50
% Trucks	0	2.6	0	0	0	0	0	2.5	0	0	0	0	2.4

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

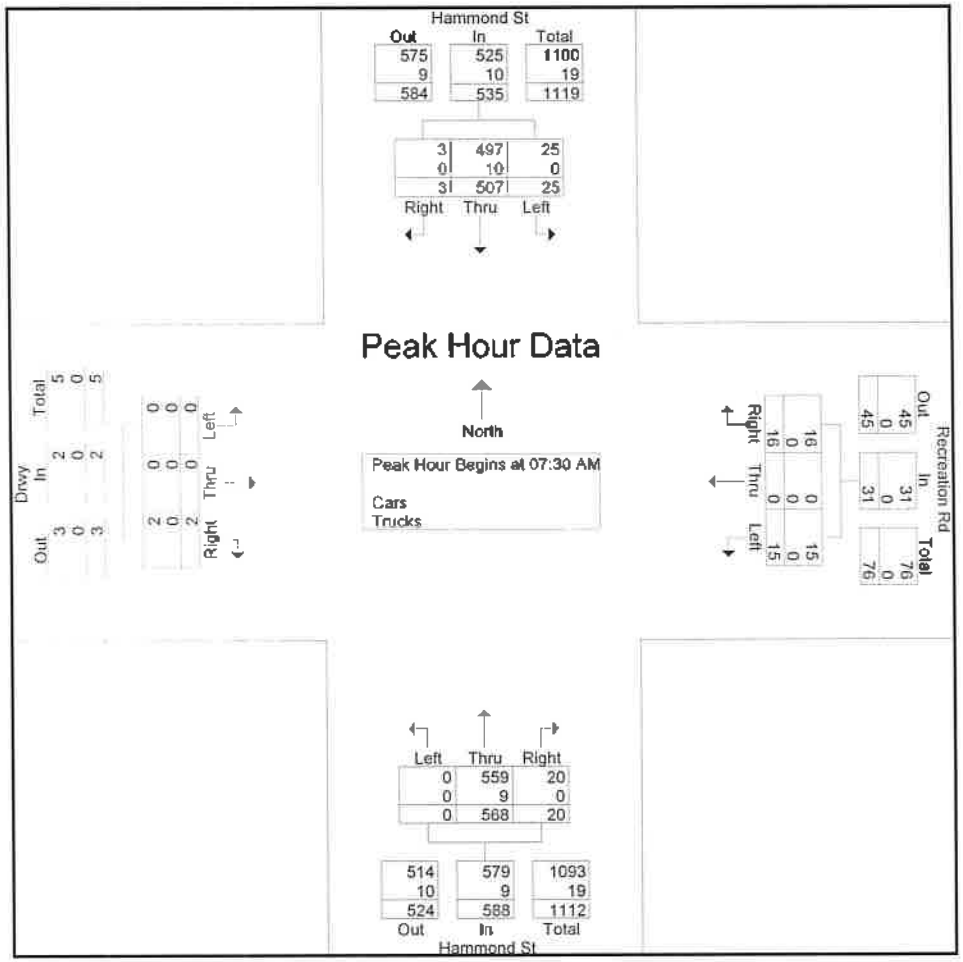
File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018

	Hammond St From North				Recreation Rd From East				Hammond St From South				Drwy From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	133	1	135	2	0	0	2	0	153	1	154	0	0	0	0	291
07:45 AM	2	162	0	164	1	0	0	1	0	160	2	162	0	0	1	1	328
08:00 AM	14	113	2	129	4	0	4	8	0	136	9	145	0	0	1	1	283
08:15 AM	8	99	0	107	8	0	12	20	0	119	8	127	0	0	0	0	254
Total Volume	25	507	3	535	15	0	16	31	0	568	20	588	0	0	2	2	1156
% App. Total	4.7	94.8	0.6		48.4	0	51.6		0	96.6	3.4		0	0	100		
PHF	.446	.782	.375	.816	.469	.000	.333	.388	.000	.888	.556	.907	.000	.000	.500	.500	.881
Cars	25	497	3	525	15	0	16	31	0	559	20	579	0	0	2	2	1137
% Cars	100	98.0	100	98.1	100	0	100	100	0	98.4	100	98.5	0	0	100	100	98.4
Trucks	0	10	0	10	0	0	0	0	0	9	0	9	0	0	0	0	19
% Trucks	0	2.0	0	1.9	0	0	0	0	0	1.6	0	1.5	0	0	0	0	1.6

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				07:00 AM				07:15 AM			
+0 mins.	1	133	1	135	4	0	4	8	0	150	2	152	0	0	0	0
+15 mins.	2	162	0	164	8	0	12	20	0	134	1	135	0	0	0	0
+30 mins.	14	113	2	129	6	0	5	11	0	153	1	154	0	0	1	1
+45 mins.	8	99	0	107	1	0	2	3	0	160	2	162	0	0	1	1
Total Volume	25	507	3	535	19	0	23	42	0	597	6	603	0	0	2	2
% App. Total	4.7	94.8	0.6		45.2	0	54.8		0	99	1		0	0	100	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018
Page No : 13

Groups Printed- Bikes Peds

	Hammond St From North				Recreation Rd From East				Hammond St From South				Drwy From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	1	4
07:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	6	6	1	7
07:30 AM	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	1	3	1	4
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	7	9	1	10
Total	0	2	0	0	1	0	0	1	0	1	0	3	0	0	0	17	21	4	25
08:00 AM	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	2	4	1	5
08:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	3	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	2	0	0	0	6	9	1	10
Grand Total	0	3	0	1	1	0	0	1	0	1	0	5	0	0	0	23	30	5	35
Apprch %	0	100	0		100	0	0		0	100	0		0	0	0				
Total %	0	60	0		20	0	0		0	20	0		0	0	0		85.7	14.3	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018
Page No : 14

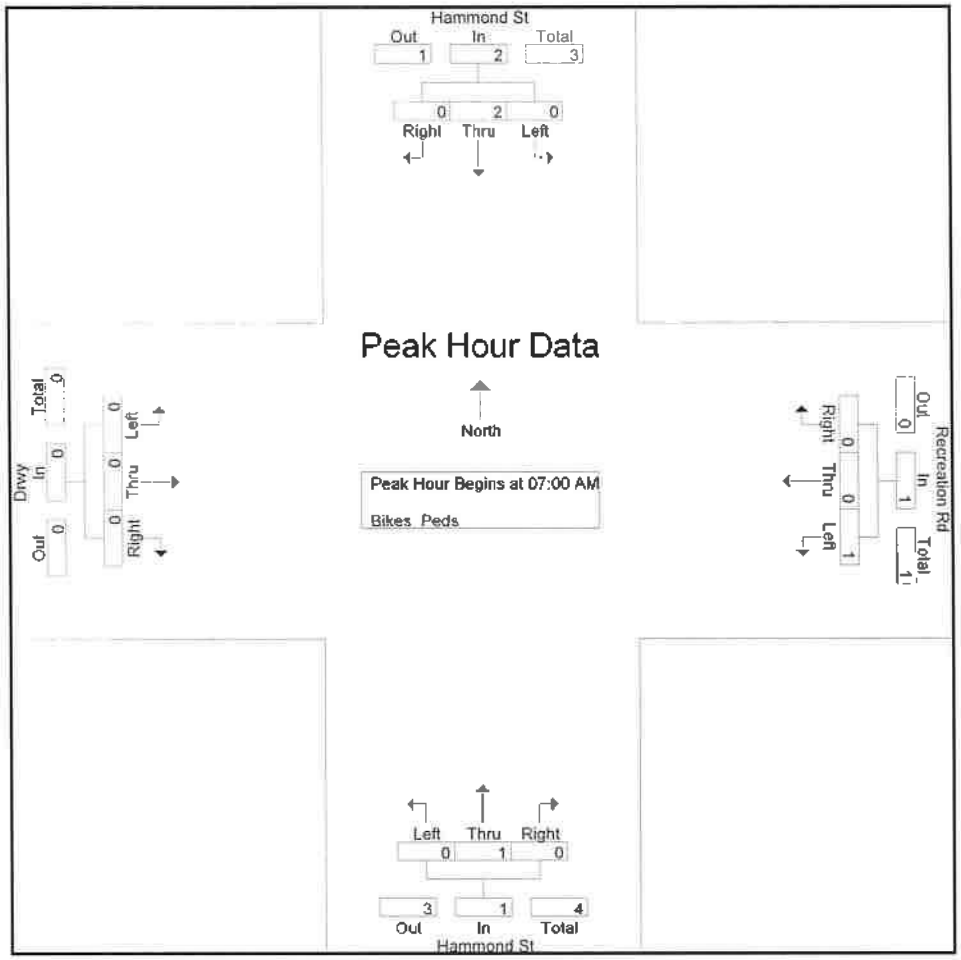
	Hammond St From North				Recreation Rd From East				Hammond St From South				Drwy From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	2	0	2	1	0	0	1	0	1	0	1	0	0	0	0	4
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.250	.000	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	1.00

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018
Page No : 15



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
Total Volume	0	2	0	2	1	0	0	1	0	1	0	1	0	0	0	0
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Hammond St From North			Recreation Rd From East			Hammond St From South			Drwy From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
01:00 PM	2	94	1	3	0	3	0	71	0	0	0	0	174
01:15 PM	0	83	1	2	0	0	0	81	0	0	0	0	167
01:30 PM	1	96	0	1	0	0	0	74	0	0	0	2	174
01:45 PM	2	116	0	0	0	1	0	84	2	0	0	1	206
Total	5	389	2	6	0	4	0	310	2	0	0	3	721
02:00 PM	0	97	2	0	0	2	0	90	1	0	0	0	192
02:15 PM	0	87	0	1	0	2	0	90	0	0	0	0	180
02:30 PM	0	118	0	1	0	1	0	119	1	0	0	0	240
02:45 PM	0	149	0	0	0	0	0	95	3	0	0	0	247
Total	0	451	2	2	0	5	0	394	5	0	0	0	859
03:00 PM	4	146	0	2	0	0	0	111	1	0	0	0	264
03:15 PM	3	190	0	1	0	1	0	118	1	0	0	0	314
03:30 PM	3	165	0	2	0	1	0	96	1	0	0	0	268
03:45 PM	4	160	1	3	0	3	0	89	5	0	0	0	265
Total	14	661	1	8	0	5	0	414	8	0	0	0	1111
Grand Total	19	1501	5	16	0	14	0	1118	15	0	0	3	2691
Apprch %	1.2	98.4	0.3	53.3	0	46.7	0	98.7	1.3	0	0	100	
Total %	0.7	55.8	0.2	0.6	0	0.5	0	41.5	0.6	0	0	0.1	
Cars	19	1471	4	16	0	14	0	1095	15	0	0	2	2636
% Cars	100	98	80	100	0	100	0	97.9	100	0	0	66.7	98
Trucks	0	30	1	0	0	0	0	23	0	0	0	1	55
% Trucks	0	2	20	0	0	0	0	2.1	0	0	0	33.3	2

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

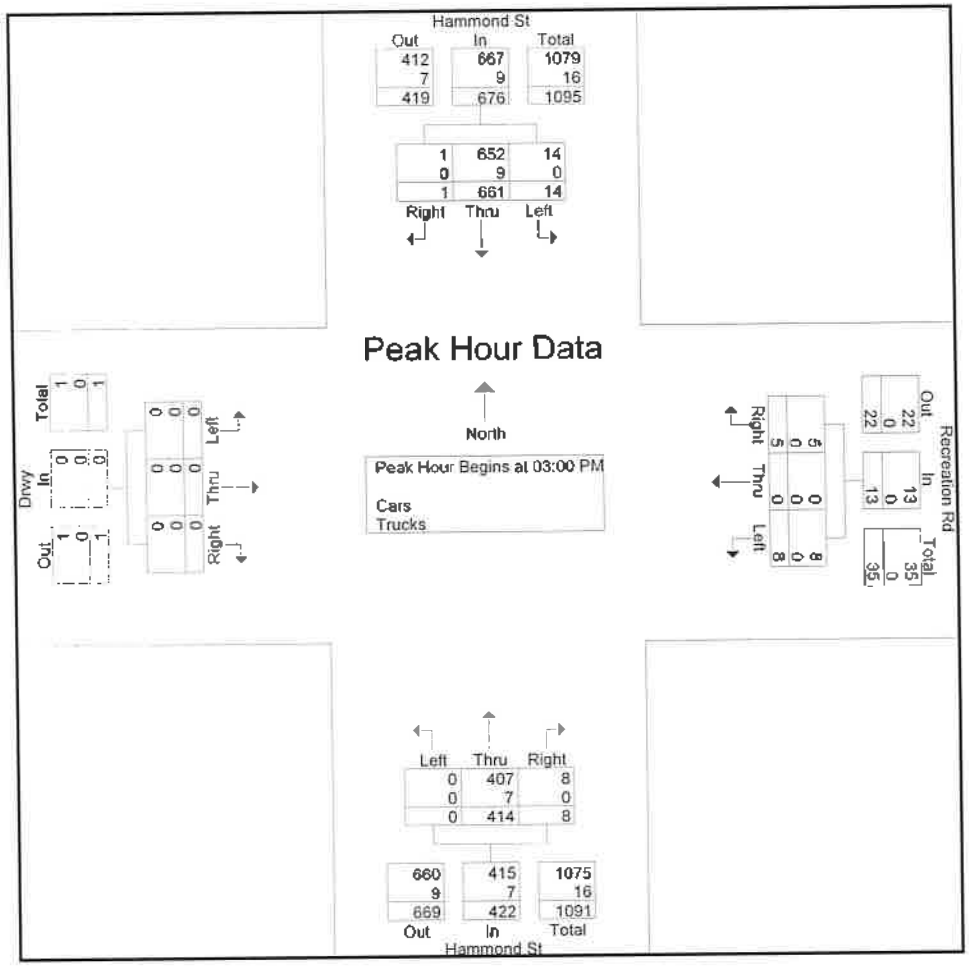
File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018
Page No : 2

	Hammond St From North				Recreation Rd From East				Hammond St From South				Drwy From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	4	146	0	150	2	0	0	2	0	111	1	112	0	0	0	0	264
03:15 PM	3	190	0	193	1	0	1	2	0	118	1	119	0	0	0	0	314
03:30 PM	3	165	0	168	2	0	1	3	0	96	1	97	0	0	0	0	268
03:45 PM	4	160	1	165	3	0	3	6	0	89	5	94	0	0	0	0	265
Total Volume	14	661	1	676	8	0	5	13	0	414	8	422	0	0	0	0	1111
% App. Total	2.1	97.8	0.1		61.5	0	38.5		0	98.1	1.9		0	0	0		
PHF	.875	.870	.250	.876	.667	.000	.417	.542	.000	.877	.400	.887	.000	.000	.000	.000	.885
Cars	14	652	1	667	8	0	5	13	0	407	8	415	0	0	0	0	1095
% Cars	100	98.6	100	98.7	100	0	100	100	0	98.3	100	98.3	0	0	0	0	98.6
Trucks	0	9	0	9	0	0	0	0	0	7	0	7	0	0	0	0	16
% Trucks	0	1.4	0	1.3	0	0	0	0	0	1.7	0	1.7	0	0	0	0	1.4

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				02:30 PM				01:00 PM			
+0 mins.	4	146	0	150	2	0	0	2	0	119	1	120	0	0	0	0
+15 mins.	3	190	0	193	1	0	1	2	0	95	3	98	0	0	0	0
+30 mins.	3	165	0	168	2	0	1	3	0	111	1	112	0	0	2	2
+45 mins.	4	160	1	165	3	0	3	6	0	118	1	119	0	0	1	1
Total Volume	14	661	1	676	8	0	5	13	0	443	6	449	0	0	3	3
% App. Total	2.1	97.8	0.1		61.5	0	38.5		0	98.7	1.3		0	0	100	
PHF	.875	.870	.250	.876	.667	.000	.417	.542	.000	.931	.500	.935	.000	.000	.375	.375

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018

Groups Printed- Bikes Peds

	Hammond St From North				Recreation Rd From East				Hammond St From South				Drwy From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3	4	1	5
01:15 PM	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0	3	5	2	7
01:30 PM	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	12	13	1	14
01:45 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3	5	0	5
Total	0	2	0	1	0	0	0	3	0	2	0	2	0	0	0	21	27	4	31
02:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	1	11
02:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
02:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	2
02:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	5
Total	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	14	14	5	19
03:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03:15 PM	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	5	6	2	8
03:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	2	8
03:45 PM	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	6	8	1	9
Total	0	5	0	0	0	0	0	1	0	1	0	2	0	0	0	17	20	6	26
Grand Total	0	10	0	1	0	0	0	4	0	5	0	4	0	0	0	52	61	15	76
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0				
Total %	0	66.7	0		0	0	0		0	33.3	0		0	0	0		80.3	19.7	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018
Page No : 14

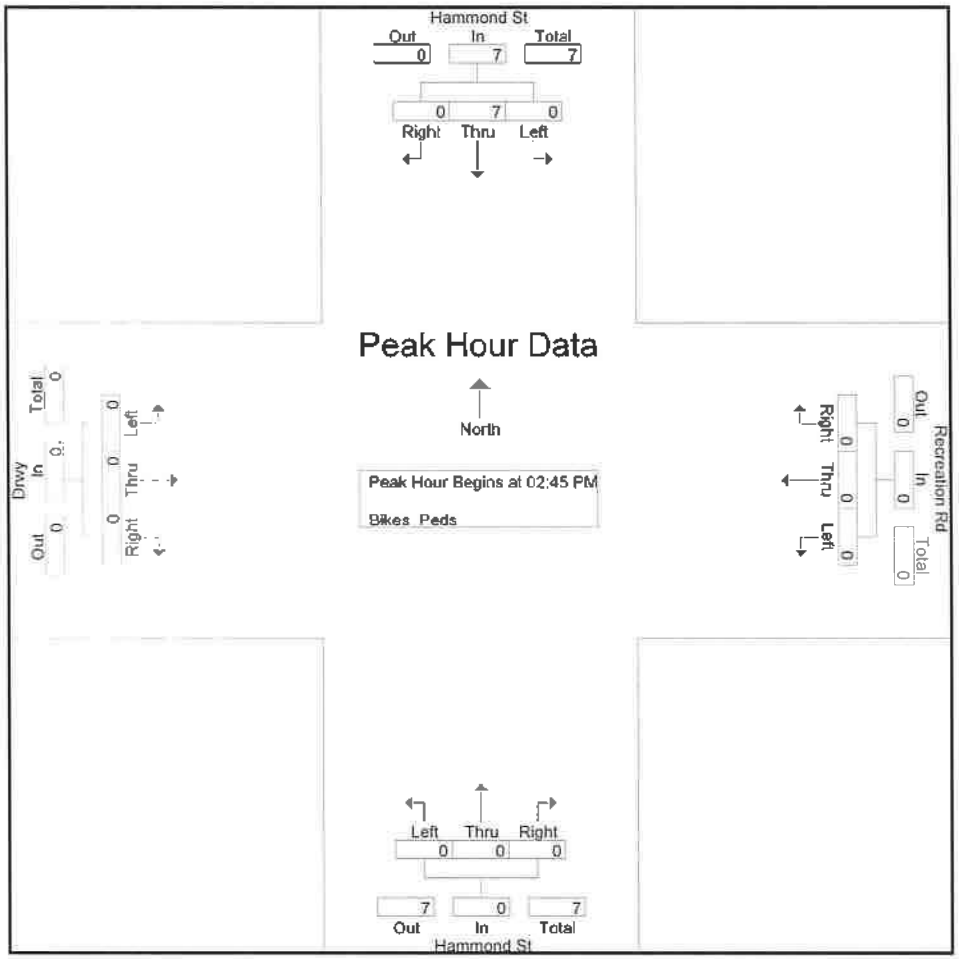
	Hammond St From North				Recreation Rd From East				Hammond St From South				Drwy From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.875	.000	.875	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.875

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street: Recreation Rd / Driveway
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900003
Site Code : 79900003
Start Date : 9/26/2018
Page No : 15



Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	02:45 PM				01:00 PM				01:00 PM				01:00 PM			
+0 mins.	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	7	0	7	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.875	.000	.875	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

Traffic Count

School Peak Hour Traffic Volumes

File Name: C:\Users\atevi\Documents\2018\Petra\Brookline, MA\[redacted].pgo
Start Date: [redacted]
Start Time: 7:45:00 AM
Site Code: [redacted]
Comment 1: N/S Street : Hammond Street
Comment 2: E/W Street : Woodland Rd / School Dwy
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Hammond St From North					Woodland Rd From East					Hammond St From South					Woodland Rd From West					School Dwy From Northwest					Hammond St From North	Woodland Rd From East	Hammond St From South	Woodland Rd From West	School Dwy From Northwest
Start Time	Left	Thru	Right	HdRt	Peds	Left	Thru	BrRt	Right	Peds	Left	BrLt	Thru	Right	Peds	HdLt	Left	Thru	Right	Peds	HdLt	BrLt	BrRt	HdRt	Peds	PHf by approach				
07:00 AM	0	41	2	4	0	0	0	0	0	0	3	6	149	78	0	2	1	12	1	0	0	0	0	0	0	67	0	236	16	0
07:15 AM	2	73	3	14	0	0	0	0	0	0	4	11	150	106	0	15	5	15	7	0	0	0	0	0	0	92	0	271	45	0
07:30 AM	1	110	6	28	0	0	0	0	1	0	2	39	178	136	0	22	11	28	3	0	0	0	0	0	0	148	1	354	84	0
07:45 AM	2	101	6	45	0	0	0	0	0	0	3	62	127	145	0	35	10	36	23	0	0	0	0	0	0	154	0	337	104	0
	5	325	17	92	0	0	0	0	1	0	12	118	604	464	0	74	27	91	34	0	0	0	0	0	0	439	1	1198	229	0
No Build	5	348	16	99		0	0	0	1		13	127	648	497		79	29	101	36		0	0	0	0						
PHF	0.63	0.74	0.71	0.51		0	0	0	0.25		0.75	0.48	0.85	0.80		0.53	0.51	0.85	0.37		0	0	0	0		0.71	0.25	0.86	0.56	0.00
Truck	1	12	0	0		0	0	0	0		0	0	14	5		0	0	1	0		0	0	0	0						
% Truck	20.0%	3.7%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	2.3%	1.1%		0.0%	0.0%	1.1%	0.0%		0.0%	0.0%	0.0%	0.0%						
PED	0	2	0	0	3	0	0	0	0	2	0	0	4	0	0	0	0	0	0	4	0	0	0	0	1					
01:30 PM	0	97	1	2	0	0	0	0	0	0	2	1	67	20	0	1	2	3	3	0	0	0	0	0	0	100	0	90	9	0
01:45 PM	0	104	3	2	0	0	0	0	0	0	2	1	66	17	0	0	0	3	2	0	0	0	0	0	0	109	0	108	5	0
02:00 PM	0	95	1	1	0	0	0	0	0	0	5	1	77	22	0	4	2	2	0	0	0	0	0	0	0	97	0	105	8	0
02:15 PM	0	99	0	0	0	0	0	0	0	0	2	1	88	18	0	4	2	6	4	0	0	0	0	0	0	99	0	109	16	0
	0	395	5	5	0	0	0	0	0	0	11	4	318	77	0	9	6	14	9	0	0	0	0	0	0	405	0	410	38	0
No Build	0	423	5	5		0	0	0	0		12	4	341	83		10	6	15	10		0	0	0	0						
PHF	0	0.95	0.42	0.63		0	0	0	0		0.55	1.00	0.90	0.98		0.56	0.75	0.58	0.58		0	0	0	0		0.93	#DIV/0!	0.94	0.59	#DIV/0!
Truck	0	9	0	0		0	0	0	0		0	0	11	0		0	0	0	0		0	0	0	0						
% Truck		2.3%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	3.5%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%						
PED	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	3	0	0	0	0	3					

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Hammond St From North				Woodland Rd From East				Hammond St From South				Woodland Rd From West				School Dwy From Northwest				
Start Time	Left	Thru	Right	HdRt	Left	Thru	BrRt	Right	Left	BrLt	Thru	Right	HdLt	Left	Thru	Right	HdLt	BrLt	BrRt	HdRt	Int. Total
07:00 AM	0	41	2	4	0	0	0	0	3	6	149	78	2	1	12	1	0	0	0	0	299
07:15 AM	2	73	3	14	0	0	0	0	4	11	150	106	15	5	18	7	0	0	0	0	408
07:30 AM	1	110	6	29	0	0	0	1	2	39	178	135	22	11	28	3	0	0	0	0	565
07:45 AM	2	101	6	45	0	0	0	0	3	62	127	145	35	10	36	23	0	0	0	0	595
Total	5	325	17	92	0	0	0	1	12	118	604	464	74	27	94	34	0	0	0	0	1867
08:00 AM	1	105	3	6	0	0	0	0	8	10	140	134	13	9	27	9	0	0	0	0	465
08:15 AM	2	106	1	3	0	0	0	0	8	4	127	110	2	4	28	7	0	0	0	0	402
08:30 AM	1	88	5	0	0	0	0	0	4	2	169	91	0	9	22	2	0	0	0	0	393
08:45 AM	1	83	4	0	0	0	0	4	11	2	155	72	1	2	8	2	0	0	0	0	345
Total	5	382	13	9	0	0	0	4	31	18	591	407	16	24	85	20	0	0	0	0	1605
Grand Total	10	707	30	101	0	0	0	5	43	136	1195	871	90	51	179	54	0	0	0	0	3472
Apprch %	1.2	83.4	3.5	11.9	0	0	0	100	1.9	6.1	53.2	38.8	24.1	13.6	47.9	14.4	0	0	0	0	
Total %	0.3	20.4	0.9	2.9	0	0	0	0.1	1.2	3.9	34.4	25.1	2.6	1.5	5.2	1.6	0	0	0	0	
Cars	9	686	30	101	0	0	0	5	43	136	1165	864	90	51	178	54	0	0	0	0	3412
% Cars	90	97	100	100	0	0	0	100	100	100	97.5	99.2	100	100	99.4	100	0	0	0	0	98.3
Trucks	1	21	0	0	0	0	0	0	0	0	30	7	0	0	1	0	0	0	0	0	60
% Trucks	10	3	0	0	0	0	0	0	0	0	2.5	0.8	0	0	0.6	0	0	0	0	0	1.7

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

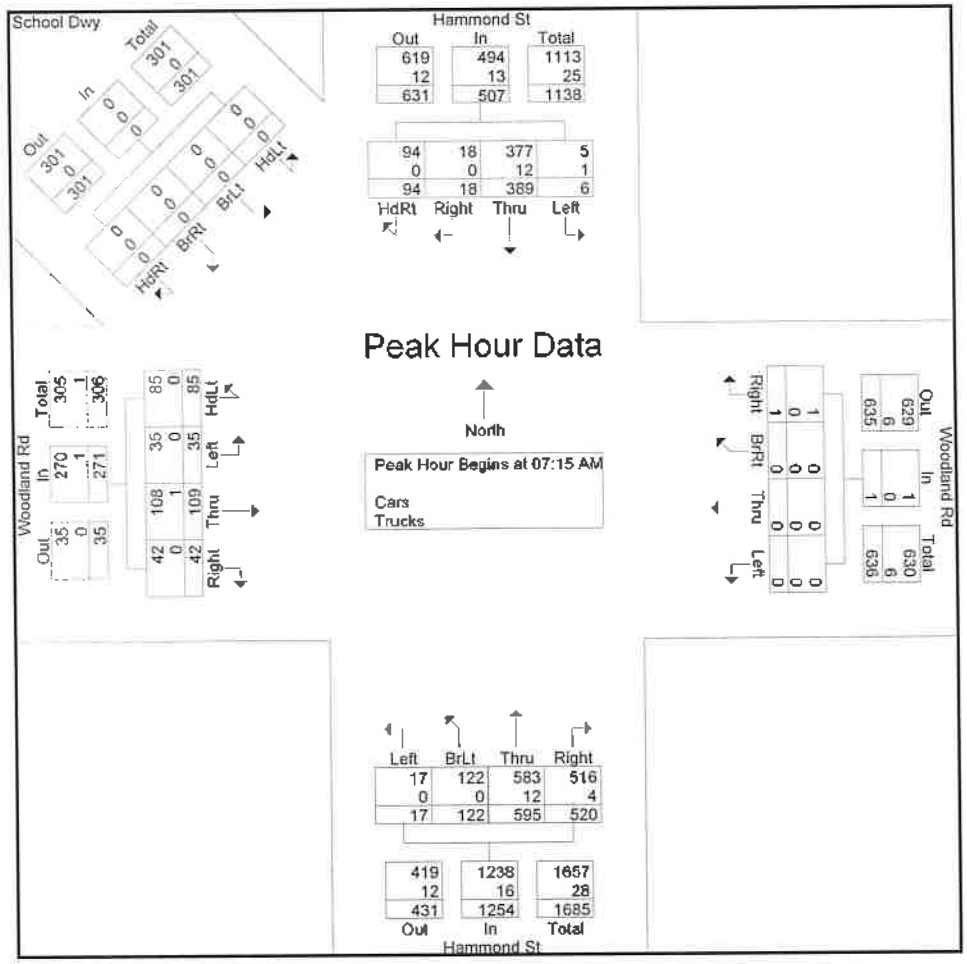
File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018
Page No : 2

	Hammond St From North					Woodland Rd From East					Hammond St From South					Woodland Rd From West					School Dwy From Northwest					
Start Time	Left	Thru	Right	HdRt	App. Total	Left	Thru	BrRt	Right	App. Total	Left	BrLt	Thru	Right	App. Total	HdLt	Left	Thru	Right	App. Total	HdLt	BrLt	BrRt	HdRt	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:15 AM																										
07:15 AM	**2**	73	3	14	92	0	0	0	0	0	4	11	150	106	271	15	5	18	7	45	0	0	0	0	0	408
07:30 AM	1	**110**	6	29	146	0	0	0	**1**	**1**	2	39	**178**	135	**354**	22	**11**	28	3	64	0	0	0	0	0	565
07:45 AM	2	101	6	**45**	**154**	0	0	0	0	0	3	**62**	127	**145**	337	**35**	10	**36**	**23**	**104**	0	0	0	0	0	**595**
08:00 AM	1	105	3	6	115	0	0	0	0	0	**8**	10	140	134	292	13	9	27	9	58	0	0	0	0	0	465
Total Volume	6	389	18	94	507	0	0	0	**1**	1	17	122	595	520	1254	85	35	109	42	271	0	0	0	0	0	2033
% App. Total	1.2	76.7	3.6	18.5		0	0	0	100		1.4	9.7	47.4	41.5		31.4	12.9	40.2	15.5		0	0	0	0		
PHF	.750	.884	.750	.522	.823	.000	.000	.000	.250	.250	.531	.492	.836	.897	.886	.607	.795	.757	.457	.651	.000	.000	.000	.000	.000	.854
Cars	5	377	18	94	494	0	0	0	1	1	17	122	583	516	1238	85	35	108	42	270	0	0	0	0	0	2003
% Cars	83.3	96.9	100	100	97.4	0	0	0	100	100	100	100	98.0	99.2	98.7	100	100	99.1	100	99.6	0	0	0	0	0	98.5
Trucks	1	12	0	0	13	0	0	0	0	0	0	0	12	4	16	0	0	1	0	1	0	0	0	0	0	30
% Trucks	16.7	3.1	0	0	2.6	0	0	0	0	0	0	0	2.0	0.8	1.3	0	0	0.9	0	0.4	0	0	0	0	0	1.5

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM					08:00 AM					07:15 AM					07:15 AM					07:00 AM				
+0 mins.	1	110	6	29	146	0	0	0	0	0	4	11	150	106	271	15	5	18	7	45	0	0	0	0	0
+15 mins.	2	101	6	45	154	0	0	0	0	0	2	39	178	135	354	22	11	28	3	64	0	0	0	0	0
+30 mins.	1	105	3	6	115	0	0	0	0	0	3	62	127	145	337	35	10	36	23	104	0	0	0	0	0
+45 mins.	2	106	1	3	112	0	0	0	4	4	8	10	140	134	292	13	9	27	9	58	0	0	0	0	0
Total Volume	6	422	16	83	527	0	0	0	4	4	17	122	595	520	1254	85	35	109	42	271	0	0	0	0	0
% App. Total	1.1	80.1	3	15.7		0	0	0	100		1.4	9.7	47.4	41.5		31.4	12.9	40.2	15.5		0	0	0	0	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018

Groups Printed- Bikes Peds

	Hammond St From North					Woodland Rd From East					Hammond St From South					Woodland Rd From West					School Dwy From Northwest							
Start Time	Left	Thru	Right	HdRt	Peds	Left	Thru	BrRt	Right	Peds	Left	BrLt	Thru	Right	Peds	HdLt	Left	Thru	Right	Peds	HdLt	BrLt	BrRt	HdRt	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	1	4
07:15 AM	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	4
07:30 AM	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3
07:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	2	3	5
Total	0	2	0	0	3	0	0	0	0	2	0	0	4	0	0	0	0	0	0	4	0	0	0	0	1	10	6	16
08:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2	2	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	1	2
08:30 AM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	3
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	0	1	0	0	2	0	0	0	0	2	0	0	1	2	0	0	0	0	0	2	0	0	0	0	1	7	4	11
Grand Total	0	3	0	0	5	0	0	0	0	4	0	0	5	2	0	0	0	0	0	6	0	0	0	0	2	17	10	27
Apprch %	0	100	0	0		0	0	0	0		0	0	71.4	28.6		0	0	0	0		0	0	0	0				
Total %	0	30	0	0		0	0	0	0		0	0	50	20		0	0	0	0		0	0	0	0		63	37	

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018

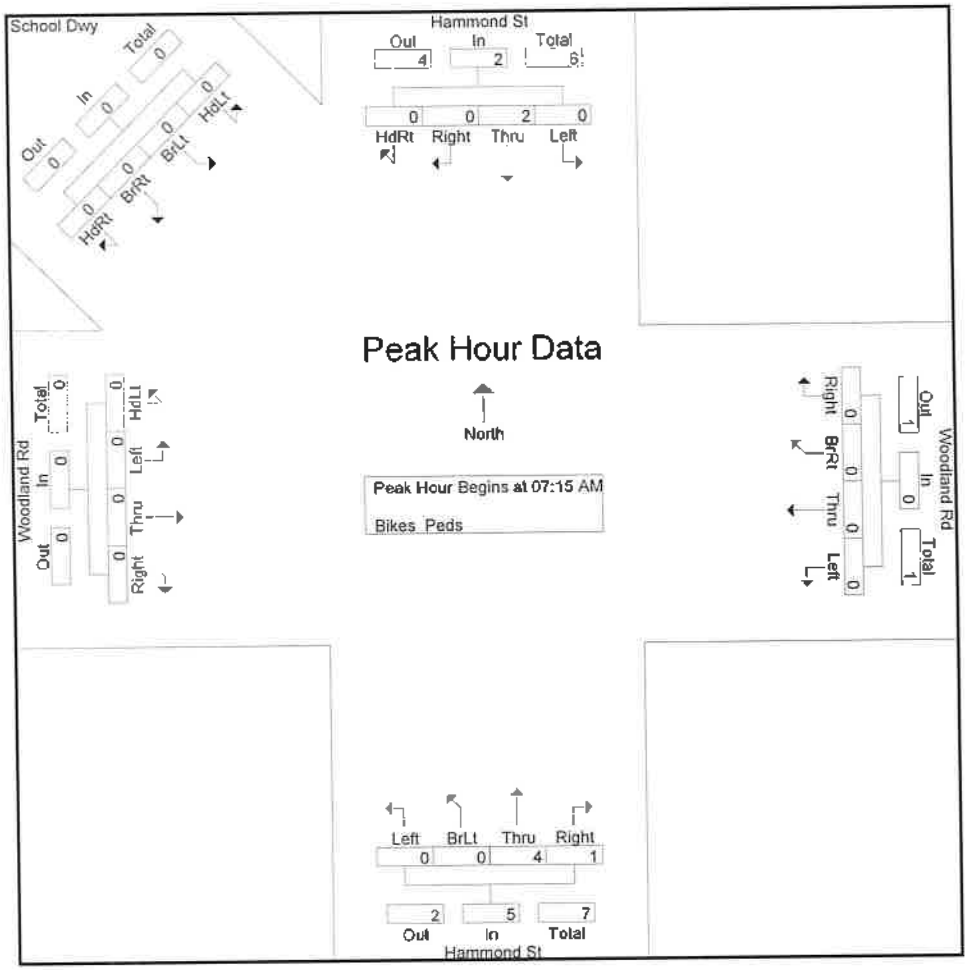
	Hammond St From North					Woodland Rd From East					Hammond St From South					Woodland Rd From West					School Dwy From Northwest					
Start Time	Left	Thru	Right	HdRt	App. Total	Left	Thru	BrRt	Right	App. Total	Left	BrLt	Thru	Right	App. Total	HdLt	Left	Thru	Right	App. Total	HdLt	BrLt	BrRt	HdRt	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:15 AM																										
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
08:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	2	0	0	2	0	0	0	0	0	0	0	4	1	5	0	0	0	0	0	0	0	0	0	0	7
% App. Total	0	100	0	0		0	0	0	0		0	0	80	20		0	0	0	0		0	0	0	0		
PHF	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.333	.250	.417	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.583

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018
Page No : 15



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM					07:00 AM					07:30 AM					07:00 AM					07:00 AM				
+0 mins.	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	0	1	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	2	0	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0		0	0	0	0		0	0	66.7	33.3		0	0	0	0		0	0	0	0	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Hammond St From North				Woodland Rd From East				Hammond St From South				Woodland Rd From West				School Dwy From Northwest				
Start Time	Left	Thru	Right	HdRt	Left	Thru	BrRt	Right	Left	BrLt	Thru	Right	HdLt	Left	Thru	Right	HdLt	BrLt	BrRt	HdRt	Int. Total
01:00 PM	0	89	1	3	0	0	0	0	2	0	70	14	1	2	7	0	0	0	0	0	189
01:15 PM	2	74	1	2	0	0	0	0	4	2	90	16	3	3	6	5	0	0	0	0	208
01:30 PM	0	97	1	2	0	0	0	0	2	1	67	20	1	2	3	3	0	0	0	0	199
01:45 PM	0	104	3	2	0	0	0	0	2	1	86	17	0	0	3	2	0	0	0	0	220
Total	2	364	6	9	0	0	0	0	10	4	313	67	5	7	19	10	0	0	0	0	816
02:00 PM	0	95	1	1	0	0	0	0	5	1	77	22	4	2	2	0	0	0	0	0	210
02:15 PM	0	99	0	0	0	0	0	0	2	1	88	18	4	2	6	4	0	0	0	0	224
02:30 PM	1	107	2	4	0	0	0	0	5	3	114	15	5	3	6	5	0	0	0	0	270
02:45 PM	0	133	4	3	0	0	0	0	2	3	94	16	4	1	3	7	0	0	0	0	270
Total	1	434	7	8	0	0	0	0	14	8	373	71	17	8	17	16	0	0	0	0	974
03:00 PM	1	149	4	6	0	0	0	0	9	1	112	24	3	9	4	7	0	0	0	0	329
03:15 PM	3	161	5	6	0	0	0	0	5	15	111	22	10	3	5	15	0	0	0	0	361
03:30 PM	0	144	5	14	0	0	0	0	3	9	87	18	15	7	9	13	0	0	0	0	324
03:45 PM	0	161	3	10	0	0	0	0	2	5	86	15	6	10	7	22	0	0	0	0	327
Total	4	615	17	36	0	0	0	0	19	30	396	79	34	29	25	57	0	0	0	0	1341
Grand Total	7	1413	30	53	0	0	0	0	43	42	1082	217	56	44	61	83	0	0	0	0	3131
Apprch %	0.5	94	2	3.5	0	0	0	0	3.1	3	78.2	15.7	23	18	25	34	0	0	0	0	
Total %	0.2	45.1	1	1.7	0	0	0	0	1.4	1.3	34.6	6.9	1.8	1.4	1.9	2.7	0	0	0	0	
Cars	5	1387	28	53	0	0	0	0	43	42	1057	215	56	44	61	81	0	0	0	0	3072
% Cars	71.4	98.2	93.3	100	0	0	0	0	100	100	97.7	99.1	100	100	100	97.6	0	0	0	0	98.1
Trucks	2	26	2	0	0	0	0	0	0	0	25	2	0	0	0	2	0	0	0	0	59
% Trucks	28.6	1.8	6.7	0	0	0	0	0	0	0	2.3	0.9	0	0	0	2.4	0	0	0	0	1.9

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

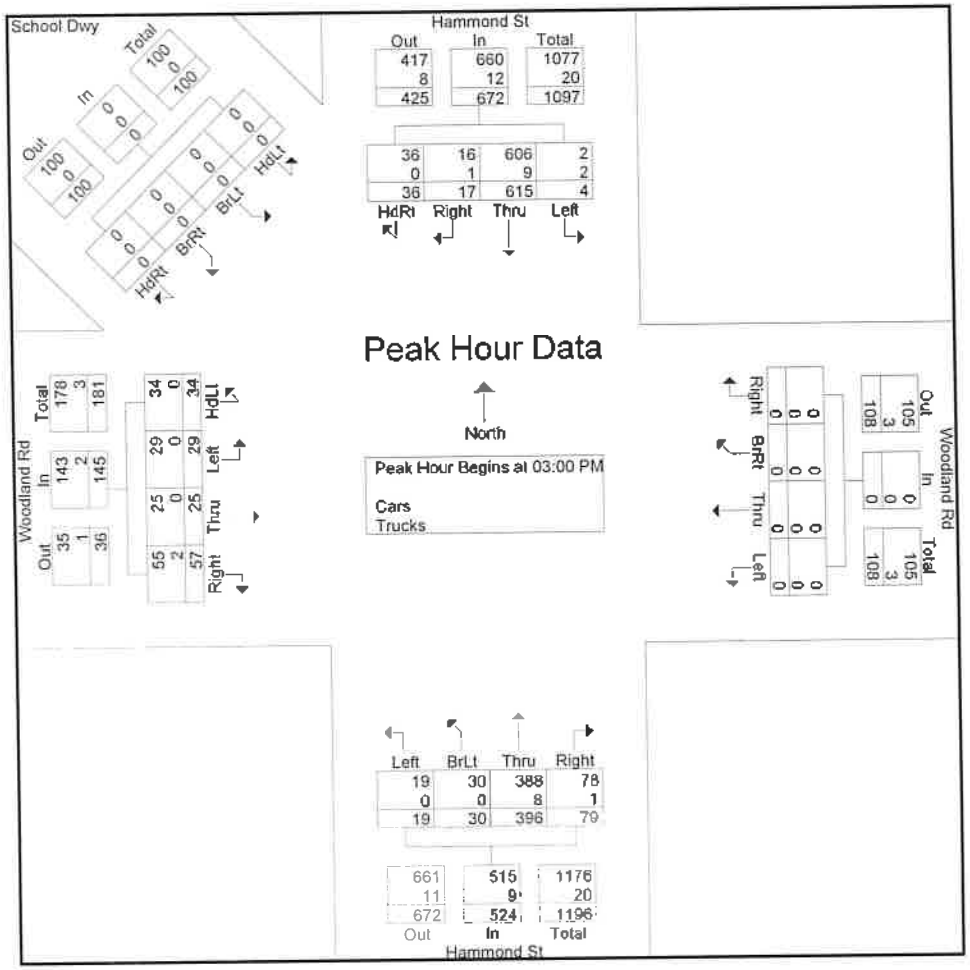
File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018

	Hammond St From North					Woodland Rd From East					Hammond St From South					Woodland Rd From West					School Dwy From Northwest					
Start Time	Left	Thru	Right	HdRt	App. Total	Left	Thru	BrRt	Right	App. Total	Left	BrLt	Thru	Right	App. Total	HdLt	Left	Thru	Right	App. Total	HdLt	BrLt	BrRt	HdRt	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 03:00 PM																										
03:00 PM	1	149	4	6	160	0	0	0	0	0	9	1	112	24	146	3	9	4	7	23	0	0	0	0	0	329
03:15 PM	3	161	5	6	175	0	0	0	0	0	5	15	111	22	153	10	3	5	15	33	0	0	0	0	0	361
03:30 PM	0	144	5	14	163	0	0	0	0	0	3	9	87	18	117	15	7	9	13	44	0	0	0	0	0	324
03:45 PM	0	161	3	10	174	0	0	0	0	0	2	5	86	15	108	6	10	7	22	45	0	0	0	0	0	327
Total Volume	4	615	17	36	672	0	0	0	0	0	19	30	396	79	524	34	29	25	57	145	0	0	0	0	0	1341
% App. Total	0.6	91.5	2.5	5.4		0	0	0	0		3.6	5.7	75.6	15.1		23.4	20	17.2	39.3		0	0	0	0		
PHF	.333	.955	.850	.643	.960	.000	.000	.000	.000	.000	.528	.500	.884	.823	.856	.567	.725	.694	.648	.806	.000	.000	.000	.000	.000	.929
Cars	2	606	16	36	660	0	0	0	0	0	19	30	388	78	515	34	29	25	55	143	0	0	0	0	0	1318
% Cars	50.0	98.5	94.1	100	98.2	0	0	0	0	0	100	100	98.0	98.7	98.3	100	100	100	96.5	98.6	0	0	0	0	0	98.3
Trucks	2	9	1	0	12	0	0	0	0	0	0	0	8	1	9	0	0	0	2	2	0	0	0	0	0	23
% Trucks	50.0	1.5	5.9	0	1.8	0	0	0	0	0	0	0	2.0	1.3	1.7	0	0	0	3.5	1.4	0	0	0	0	0	1.7

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:00 PM					01:00 PM					02:30 PM					03:00 PM					01:00 PM				
+0 mins.	1	149	4	6	160	0	0	0	0	0	5	3	**114**	15	137	3	9	4	7	23	0	0	0	0	0
+15 mins.	**3**	**161**	**5**	6	**175**	0	0	0	0	0	2	3	94	**16**	115	10	3	5	15	33	0	0	0	0	0
+30 mins.	0	144	5	**14**	163	0	0	0	0	0	**9**	**1**	112	**24**	146	**15**	7	**9**	13	44	0	0	0	0	0
+45 mins.	0	161	3	10	174	0	0	0	0	0	5	**15**	111	22	**153**	6	**10**	7	**22**	**45**	0	0	0	0	0
Total Volume	4	615	17	36	672	0	0	0	0	0	21	22	431	77	551	34	29	25	57	145	0	0	0	0	0
% App Total	0.6	91.5	2.5	5.4		0	0	0	0		3.8	4	78.2	14		23.4	20	17.2	39.3		0	0	0	0	
PHF	.333	.955	.850	.643	.960	.000	.000	.000	.000	.000	.583	.367	.945	.802	.900	.567	.725	.694	.648	.806	.000	.000	.000	.000	.000
Cars	2	606	16	36	660	0	0	0	0	0	21	22	426	76	545	34	29	25	55	143	0	0	0	0	0

Accurate Counts

978-564-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018
Page No : 13

Groups Printed- Bikes Peds

	Hammond St From North					Woodland Rd From East					Hammond St From South					Woodland Rd From West					School Dwy From Northwest							
Start Time	Left	Thru	Right	HdRt	Peds	Left	Thru	BrRt	Right	Peds	Left	BrLt	Thru	Right	Peds	HdLt	Left	Thru	Right	Peds	HdLt	BrLt	BrRt	HdRt	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	6	1	7
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
01:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	2	2	4
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	2
Total	0	2	0	0	0	0	0	0	0	2	0	0	1	1	0	0	0	0	0	6	0	0	0	0	2	10	4	14
02:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	1	3
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	20	0	0	0	0	20	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	40	1	41
Total	0	1	0	0	20	0	0	0	0	20	0	0	1	1	0	0	0	0	0	1	0	0	0	0	1	42	3	45
03:00 PM	0	1	0	0	6	0	0	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	10	2	12
03:15 PM	0	1	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4	1	5
03:30 PM	0	3	0	0	20	0	1	0	0	20	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	41	4	45
03:45 PM	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	4	1	5
Total	0	5	0	0	29	0	1	0	0	26	0	0	1	1	0	0	0	0	0	4	0	0	0	0	0	59	8	67
Grand Total	0	8	0	0	49	0	1	0	0	48	0	0	3	3	0	0	0	0	0	11	0	0	0	0	3	111	15	126
Apprch %	0	100	0	0		0	100	0	0		0	0	50	50		0	0	0	0		0	0	0	0			
Total %	0	53.3	0	0		0	6.7	0	0		0	0	20	20		0	0	0	0		0	0	0	0		88.1	11.9	

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

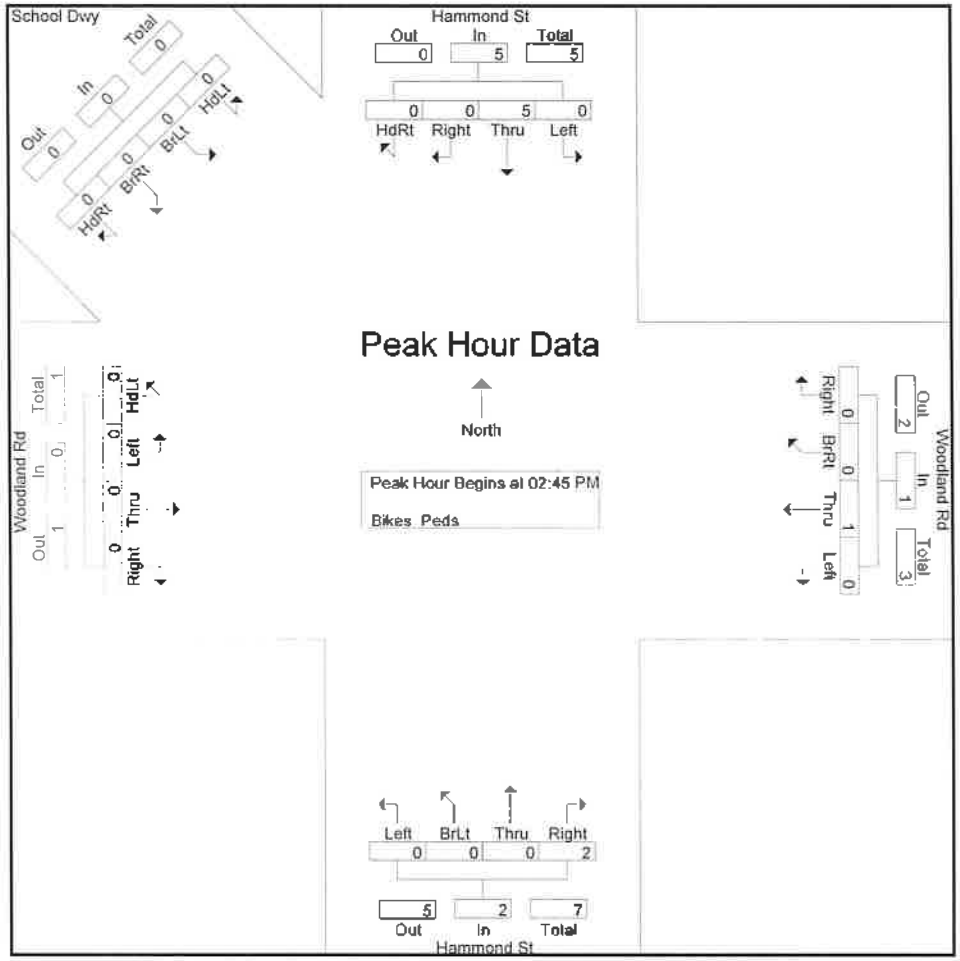
File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018
Page No : 14

	Hammond St From North					Woodland Rd From East					Hammond St From South					Woodland Rd From West					School Dwy From Northwest					
Start Time	Left	Thru	Right	HdRt	App. Total	Left	Thru	BrRt	Right	App. Total	Left	BrLt	Thru	Right	App. Total	HdLt	Left	Thru	Right	App. Total	HdLt	BrLt	BrRt	HdRt	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 02:45 PM																										
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
03:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
03:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	5	0	0	5	0	1	0	0	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	8
% App. Total	0	100	0	0		0	100	0	0		0	0	0	100		0	0	0	0		0	0	0	0		
PHF	.000	.417	.000	.000	.417	.000	.250	.000	.000	.250	.000	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street : Woodland Rd / School Dwy
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900004
Site Code : 79900004
Start Date : 9/26/2018
Page No : 15



Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM					02:45 PM					02:15 PM					01:00 PM					01:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**0**	**1**	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	0	1	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	**3**	0	0	**3**	0	**1**	0	0	**1**	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Total Volume	0	5	0	0	5	0	1	0	0	1	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0		0	100	0	0		0	0	33.3	66.7		0	0	0	0		0	0	0	0	
PHF	.000	.417	.000	.000	.417	.000	.250	.000	.000	.250	.000	.000	.250	.500	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Traffic Count

School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VA\7990\79900005.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 77900005
Comment 1: N/S Street : Oak Street
Comment 2: E/W Street: Heath Street
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Heath St From East			Oak St From South			Heath St From West			Heath St From East	Oak St From South	Heath St From West
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Phf by approach		
07:00 AM	3	13	0	0	0	0	56	1	0	16	0	57
07:15 AM	1	24	0	2	2	0	40	4	0	25	4	44
07:30 AM	6	51	0	2	3	0	42	0	0	57	5	42
07:45 AM	6	63	0	3	1	0	49	0	0	69	4	49
	16	151	0	7	6	0	187	5	0	167	13	192
No Build	17	162		8	6		200	5				
PHF	0.67	0.60		0.58	0.50		0.83	0.31		0.61	0.65	0.84
Truck	0	2		0	0		4	0				
% Truck	0.0%	1.3%		0.0%	0.0%		2.1%	0.0%				
PED	0	1	1	0	0	0	0	0	5			
01:30 PM	0	35	0	0	1	0	27	1	0	35	1	28
01:45 PM	0	26	0	0	0	0	27	0	0	26	0	27
02:00 PM	0	32	0	0	0	0	28	0	0	32	0	28
02:15 PM	0	35	0	2	1	0	26	0	0	35	3	26
	0	128	0	2	2	0	108	1	0	128	4	109
No Build	0	137		2	2		116	1				
PHF	0.00	0.91		0.25	0.50		0.96	0.25		0.91	0.33	0.97
Truck	0	2		0	0		0	0				
% Truck	0.0%	1.6%		0.0%	0.0%		0.0%	0.0%				
PED	0	1	0	0	0	0	1	0	3			

Accurate Counts

978-664-2565

N/S Street : Oak Street
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900005
Site Code : 77900005
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Heath St From East		Oak St From South		Heath St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	3	13	0	0	56	1	73
07:15 AM	1	24	2	2	40	4	73
07:30 AM	6	51	2	3	42	0	104
07:45 AM	6	63	3	1	49	0	122
Total	16	151	7	6	187	5	372
08:00 AM	3	48	1	1	39	1	93
08:15 AM	0	61	2	1	33	1	98
08:30 AM	1	47	2	1	37	2	90
08:45 AM	4	51	0	0	33	0	88
Total	8	207	5	3	142	4	369
Grand Total	24	358	12	9	329	9	741
Apprch %	6.3	93.7	57.1	42.9	97.3	2.7	
Total %	3.2	48.3	1.6	1.2	44.4	1.2	
Cars	24	354	12	9	325	9	733
% Cars	100	98.9	100	100	98.8	100	98.9
Trucks	0	4	0	0	4	0	8
% Trucks	0	1.1	0	0	1.2	0	1.1

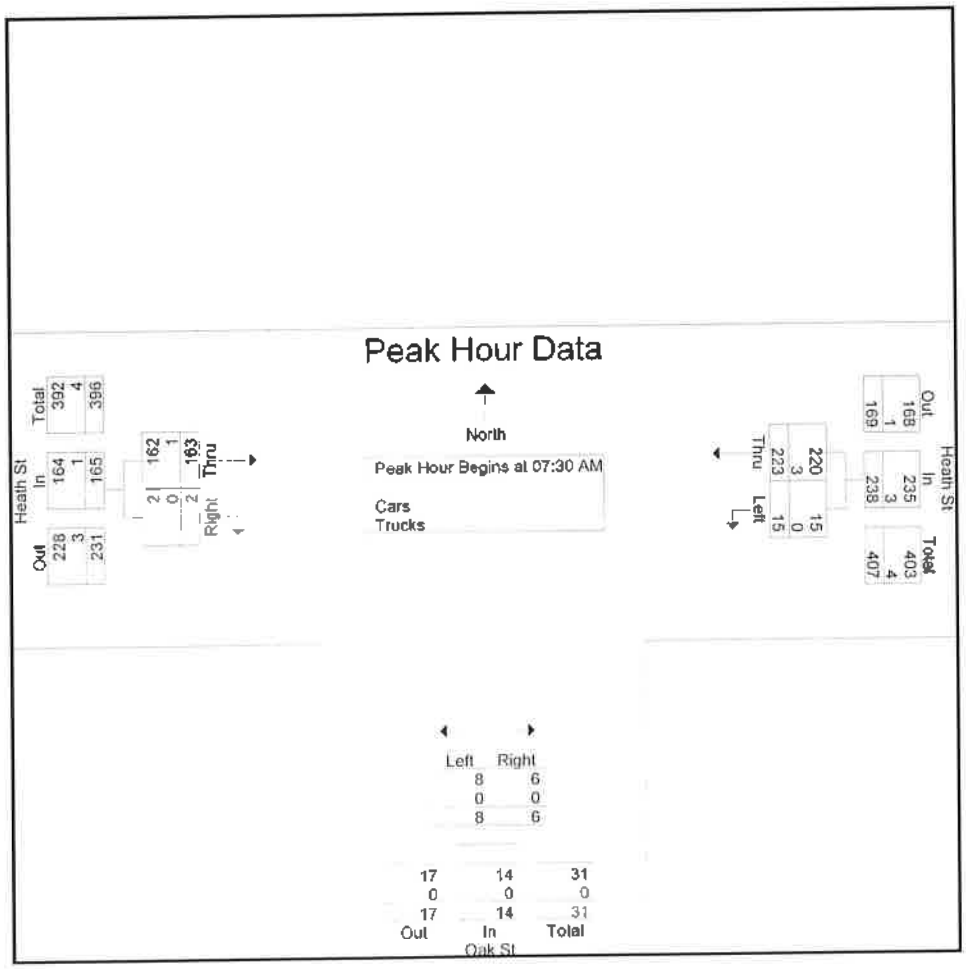
Accurate Counts

978-664-2565

N/S Street : Oak Street
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900005
Site Code : 77900005
Start Date : 9/26/2018
Page No : 2

	Heath St From East			Oak St From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	6	51	57	2	3	5	42	0	42	104
07:45 AM	6	63	69	3	1	4	49	0	49	122
08:00 AM	3	48	51	1	1	2	39	1	40	93
08:15 AM	0	61	61	2	1	3	33	1	34	98
Total Volume	15	223	238	8	6	14	163	2	165	417
% App. Total	6.3	93.7		57.1	42.9		98.8	1.2		
PHF	.625	.885	.862	.667	.500	.700	.832	.500	.842	.855
Cars	15	220	235	8	6	14	162	2	164	413
% Cars	100	98.7	98.7	100	100	100	99.4	100	99.4	99.0
Trucks	0	3	3	0	0	0	1	0	1	4
% Trucks	0	1.3	1.3	0	0	0	0.6	0	0.6	1.0



Accurate Counts

978-664-2565

N/S Street : Oak Street
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900005
Site Code : 77900005
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Heath St From East			Oak St From South			Heath St From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	0	0	0	0	0	2	3	0	3
07:15 AM	0	0	0	0	0	0	0	0	1	1	0	1
07:30 AM	0	1	0	0	0	0	0	0	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	2	2	0	2
Total	0	1	1	0	0	0	0	0	5	6	1	7
08:00 AM	0	1	0	0	0	0	0	0	0	0	1	1
08:15 AM	0	1	0	0	0	0	0	0	0	0	1	1
08:30 AM	0	0	0	0	0	1	0	0	1	2	0	2
08:45 AM	0	0	0	0	0	0	1	0	2	2	1	3
Total	0	2	0	0	0	1	1	0	3	4	3	7
Grand Total	0	3	1	0	0	1	1	0	8	10	4	14
Apprch %	0	100		0	0		100	0				
Total %	0	75		0	0		25	0		71.4	28.6	

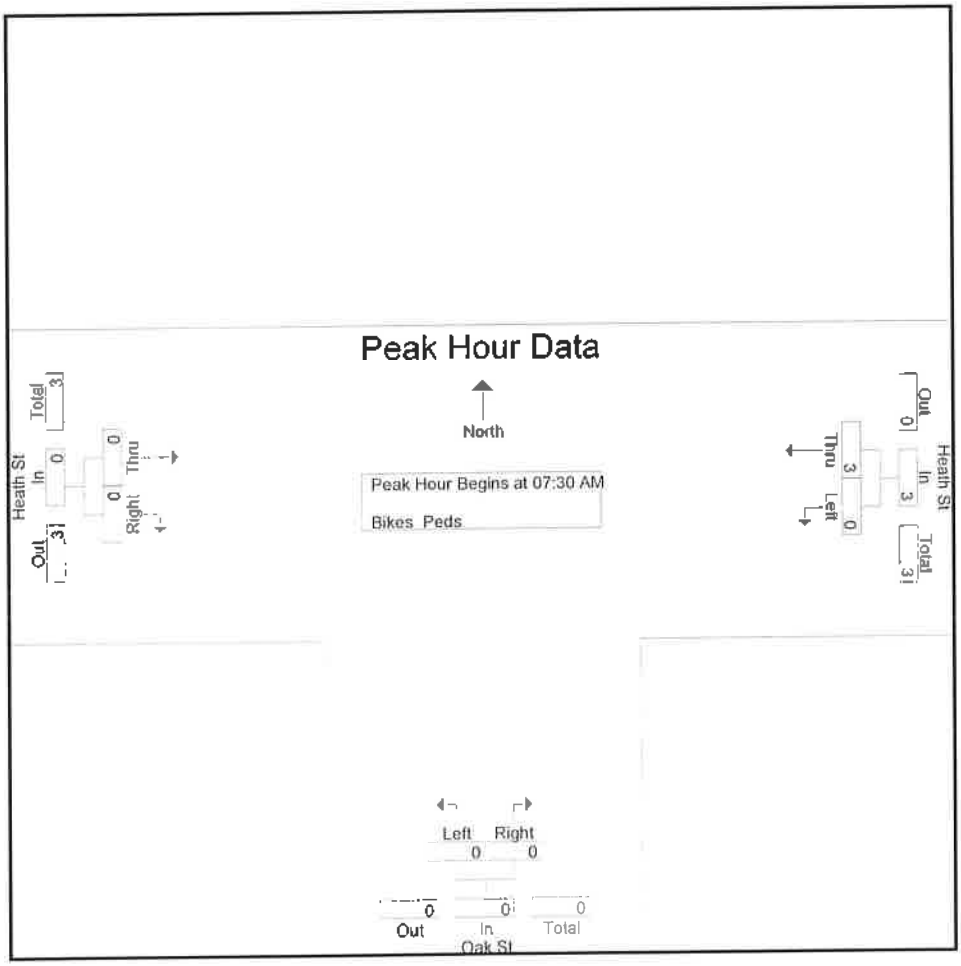
Accurate Counts

978-664-2565

N/S Street : Oak Street
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900005
Site Code : 77900005
Start Date : 9/26/2018
Page No : 11

	Heath St From East			Oak St From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	1	1	0	0	0	0	0	0	1
08:15 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	3	3	0	0	0	0	0	0	3
% App. Total	0	100		0	0		0	0		
PHF	.000	.750	.750	.000	.000	.000	.000	.000	.000	.750



Accurate Counts

978-664-2565

N/S Street : Oak Street
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900005
Site Code : 77900005
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

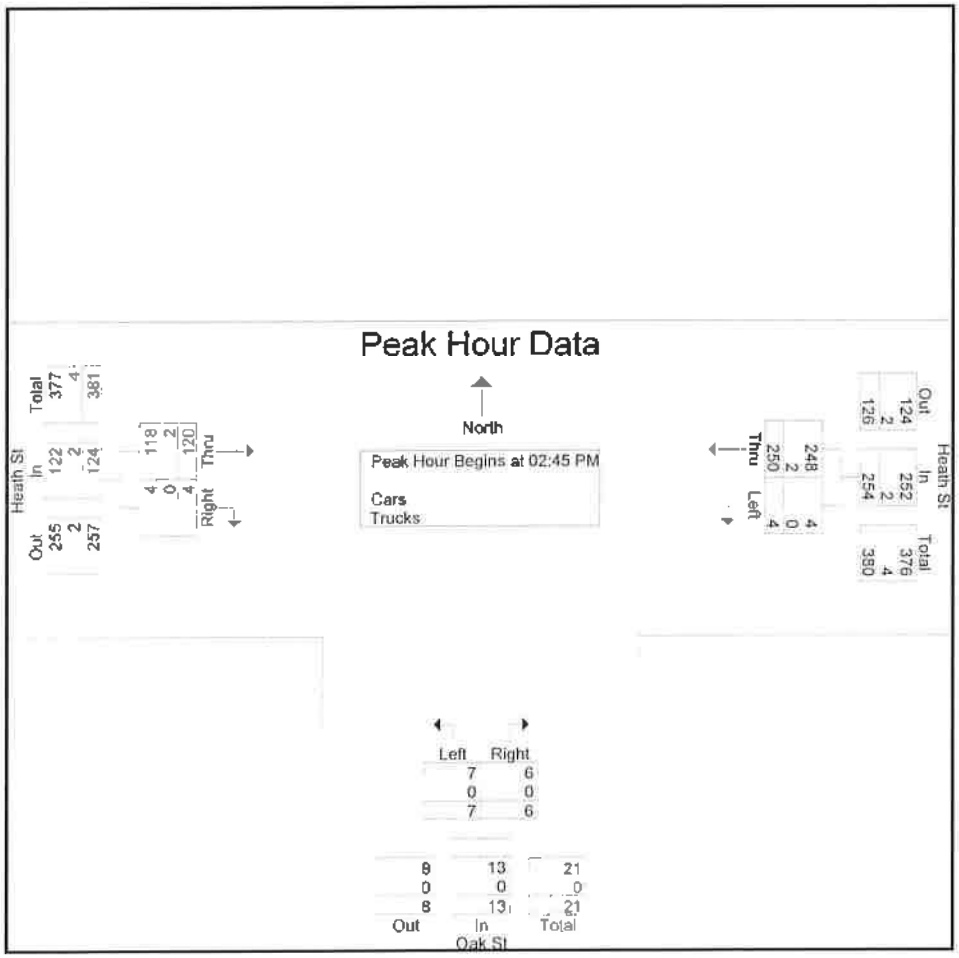
	Heath St From East		Oak St From South		Heath St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
01:00 PM	0	32	1	0	13	0	46
01:15 PM	0	38	0	0	20	0	58
01:30 PM	0	35	0	1	27	1	64
01:45 PM	0	26	0	0	27	0	53
Total	0	131	1	1	87	1	221
02:00 PM	0	32	0	0	28	0	60
02:15 PM	0	35	2	1	26	0	64
02:30 PM	0	45	0	0	31	0	76
02:45 PM	1	65	1	1	35	1	104
Total	1	177	3	2	120	1	304
03:00 PM	1	52	2	3	35	2	95
03:15 PM	2	66	3	0	23	1	95
03:30 PM	0	67	1	2	27	0	97
03:45 PM	5	70	1	0	21	3	100
Total	8	255	7	5	106	6	387
Grand Total	9	563	11	8	313	8	912
Apprch %	1.6	98.4	57.9	42.1	97.5	2.5	
Total %	1	61.7	1.2	0.9	34.3	0.9	
Cars	9	555	11	8	311	8	902
% Cars	100	98.6	100	100	99.4	100	98.9
Trucks	0	8	0	0	2	0	10
% Trucks	0	1.4	0	0	0.6	0	1.1

Accurate Counts
978-664-2565

N/S Street : Oak Street
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900005
Site Code : 77900005
Start Date : 9/26/2018
Page No : 2

	Heath St From East			Oak St From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	1	65	66	1	1	2	**35**	1	36	**104**
03:00 PM	1	52	53	2	**3**	**5**	35	**2**	**37**	95
03:15 PM	**2**	66	**68**	**3**	0	3	23	1	24	95
03:30 PM	0	**67**	67	1	2	3	27	0	27	97
Total Volume	4	250	254	7	6	13	120	4	124	391
% App. Total	1.6	98.4		53.8	46.2		96.8	3.2		
PHF	.500	.933	.934	.583	.500	.650	.857	.500	.838	.940
Cars	4	248	252	7	6	13	118	4	122	387
% Cars	100	99.2	99.2	100	100	100	98.3	100	98.4	99.0
Trucks	0	2	2	0	0	0	2	0	2	4
% Trucks	0	0.8	0.8	0	0	0	1.7	0	1.6	1.0



Accurate Counts

978-664-2565

N/S Street : Oak Street
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900005
Site Code : 77900005
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Heath St From East			Oak St From South			Heath St From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	0	0	0	0	0	1	1	0	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	2	2	0	2
01:45 PM	0	0	0	0	0	0	1	0	1	1	1	2
Total	0	0	0	0	0	0	1	0	4	4	1	5
02:00 PM	0	1	0	0	0	0	0	0	0	0	1	1
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	1	0	0	0	1	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	1	0	0	0	2	2
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	3	0	0	0	0	0	1	4	0	4
03:30 PM	0	1	0	0	0	0	0	0	1	1	1	2
03:45 PM	0	0	0	0	0	0	0	0	1	1	0	1
Total	0	1	3	0	0	0	0	0	3	6	1	7
Grand Total	0	2	3	0	0	0	2	0	7	10	4	14
Apprch %	0	100		0	0		100	0				
Total %	0	50		0	0		50	0		71.4	28.6	

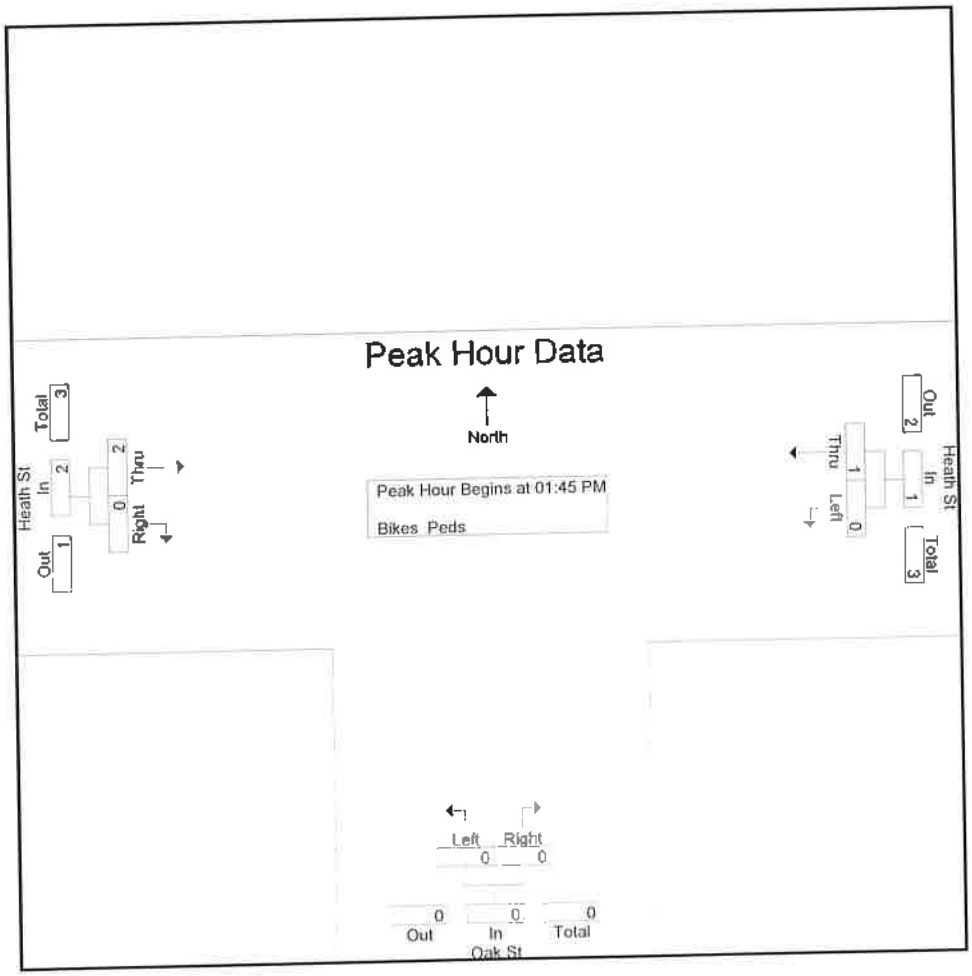
Accurate Counts

978-664-2565

N/S Street : Oak Street
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900005
Site Code : 77900005
Start Date : 9/26/2018
Page No : 11

	Heath St From East			Oak St From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 01:45 PM										
01:45 PM	0	0	0	0	0	0	1	0	1	1
02:00 PM	0	1	1	0	0	0	0	0	0	1
02:15 PM	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	1	1	0	0	0	2	0	2	3
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500	.750



Traffic Count

School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VA\7990\79900006.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 79900006
Comment 1: N/S Street : Dunster Road
Comment 2: E/W Street: Heath Street
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Dunster Rd From North			Heath St From East			Heath St From West			Dunster Rd From North	Heath St From East	Heath St From West
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Phf by approach		
07:00 AM	0	1	0	14	0	0	48	8	0	1	14	56
07:15 AM	2	1	0	30	0	0	42	5	0	3	30	47
07:30 AM	6	0	0	55	2	0	39	3	0	6	57	42
07:45 AM	8	2	0	67	1	0	43	7	0	10	68	50
	16	4	0	166	3	0	172	23	0	20	169	195
No Build	17	4		182 178	3		184	25				
PHF	0.50	0.50		0.62	0.38		0.90	0.72		0.50	0.62	0.87
Truck	0	0		2	0		1	2				
% Truck	0.0%	0.0%		1.2%	0.0%		0.6%	8.7%				
PED	0	0	3	1	1	1	0	0	0			
01:30 PM	7	2	0	34	0	0	18	6	0	9	34	24
01:45 PM	5	0	0	21	0	0	21	5	0	5	21	26
02:00 PM	7	3	0	30	0	0	17	11	0	10	30	28
02:15 PM	6	1	0	36	0	0	22	7	0	7	36	29
	25	6	0	121	0	0	78	29	0	31	121	107
No Build	27	6		132 130	0		84	31 32				
PHF	0.89	0.50		0.84	0.00		0.89	0.66		0.78	0.84	0.92
Truck	0	0		2	0		0	0				
% Truck	0.0%	0.0%		1.7%	0.0%		0.0%	0.0%				
PED	0	1	4	1	0	0	0	1	0			

Accurate Counts

978-664-2565

N/S Street : Dunster Road
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900006
Site Code : 79900006
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Dunster Rd From North		Heath St From East		Heath St From West		
Start Time	Left	Right	Thru	Right	Left	Thru	Int. Total
07:00 AM	0	1	14	0	48	8	71
07:15 AM	2	1	30	0	42	5	80
07:30 AM	6	0	55	2	39	3	105
07:45 AM	8	2	67	1	43	7	128
Total	16	4	166	3	172	23	384
08:00 AM	9	2	51	1	27	12	102
08:15 AM	7	0	57	1	21	9	95
08:30 AM	11	0	51	0	30	14	106
08:45 AM	5	2	53	1	24	11	96
Total	32	4	212	3	102	46	399
Grand Total	48	8	378	6	274	69	783
Apprch %	85.7	14.3	98.4	1.6	79.9	20.1	
Total %	6.1	1	48.3	0.8	35	8.8	
Cars	47	8	373	6	272	67	773
% Cars	97.9	100	98.7	100	99.3	97.1	98.7
Trucks	1	0	5	0	2	2	10
% Trucks	2.1	0	1.3	0	0.7	2.9	1.3

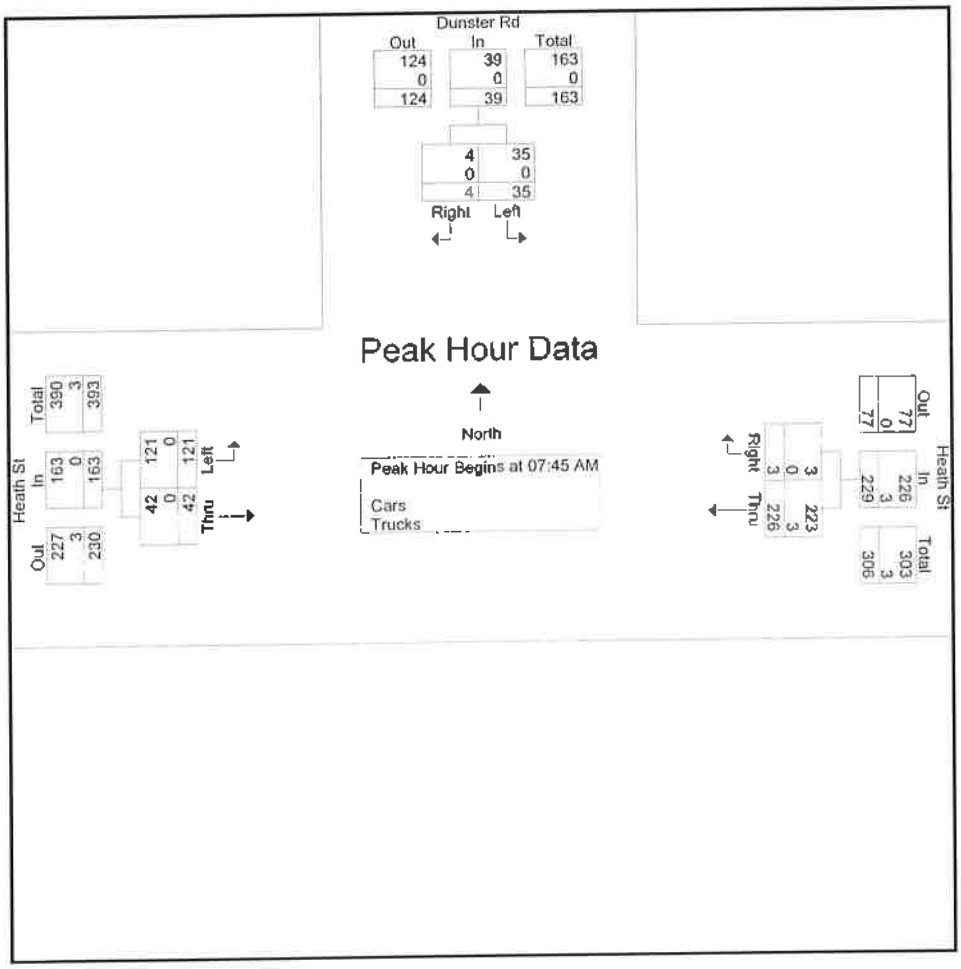
Accurate Counts

978-664-2565

N/S Street : Dunster Road
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900006
Site Code : 79900006
Start Date : 9/26/2018
Page No : 2

	Dunster Rd From North			Heath St From East			Heath St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	8	2	10	67	1	68	43	7	50	128
08:00 AM	9	2	11	51	1	52	27	12	39	102
08:15 AM	7	0	7	57	1	58	21	9	30	95
08:30 AM	11	0	11	51	0	51	30	14	44	106
Total Volume	35	4	39	226	3	229	121	42	163	431
% App. Total	89.7	10.3		98.7	1.3		74.2	25.8		
PHF	.795	.500	.886	.843	.750	.842	.703	.750	.815	.842
Cars	35	4	39	223	3	226	121	42	163	428
% Cars	100	100	100	98.7	100	98.7	100	100	100	99.3
Trucks	0	0	0	3	0	3	0	0	0	3
% Trucks	0	0	0	1.3	0	1.3	0	0	0	0.7



Accurate Counts

978-664-2565

N/S Street : Dunster Road
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900006
Site Code : 79900006
Start Date : 9/26/2018

Groups Printed- Bikes Peds

	Dunster Rd From North			Heath St From East			Heath St From West					
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	0	0	1	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	1	1	1	0	0	0	0	1	2	3
07:45 AM	0	0	2	0	0	0	0	0	0	2	0	2
Total	0	0	3	1	1	1	0	0	0	4	2	6
08:00 AM	0	0	0	1	0	0	0	0	0	0	1	1
08:15 AM	2	0	0	1	0	1	0	0	0	1	3	4
08:30 AM	0	0	1	0	0	0	0	0	0	1	0	1
08:45 AM	0	0	3	0	0	0	0	0	0	3	0	3
Total	2	0	4	2	0	1	0	0	0	5	4	9
Grand Total	2	0	7	3	1	2	0	0	0	9	6	15
Apprch %	100	0		75	25		0	0				
Total %	33.3	0		50	16.7		0	0		60	40	

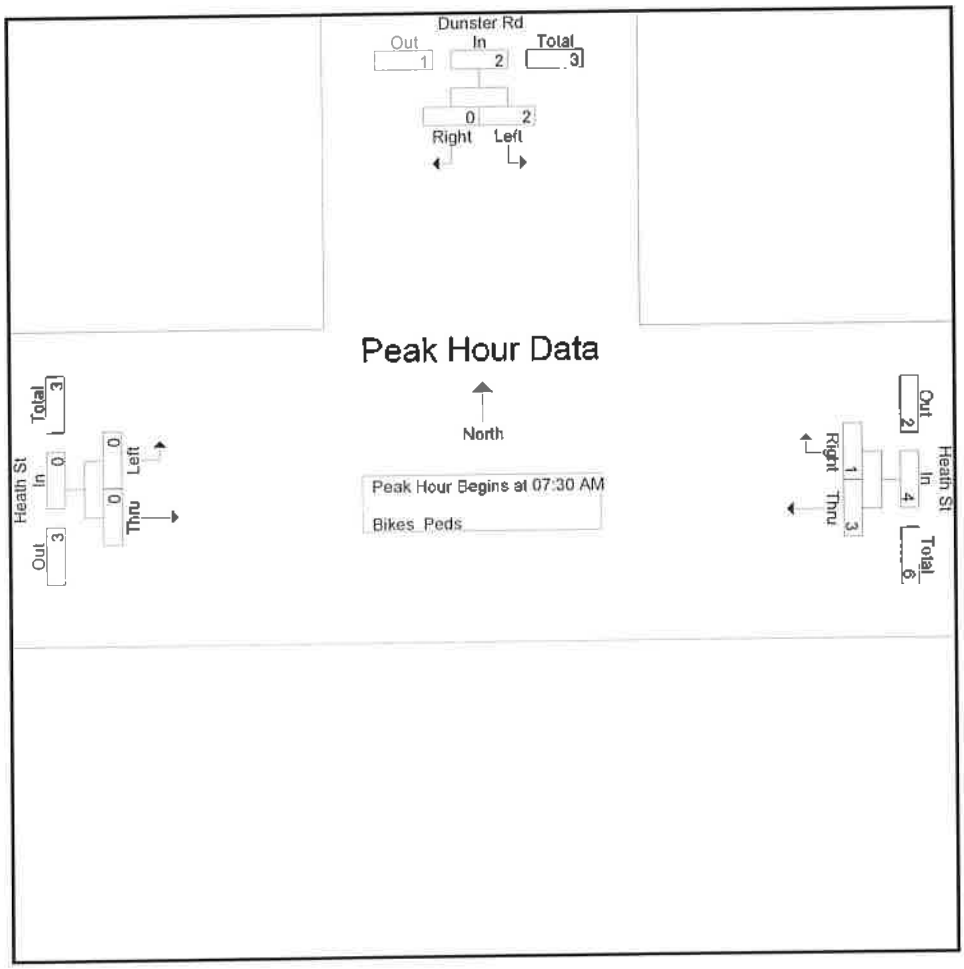
Accurate Counts

978-664-2565

N/S Street : Dunster Road
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900006
Site Code : 79900006
Start Date : 9/26/2018
Page No : 11

	Dunster Rd From North			Heath St From East			Heath St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	1	1	2	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	1	0	1	0	0	0	1
08:15 AM	2	0	2	1	0	1	0	0	0	3
Total Volume	2	0	2	3	1	4	0	0	0	6
% App. Total	100	0		75	25		0	0		
PHF	.250	.000	.250	.750	.250	.500	.000	.000	.000	.500



Accurate Counts

978-664-2565

N/S Street : Dunster Road
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900006
Site Code : 79900006
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Dunster Rd From North		Heath St From East		Heath St From West		
Start Time	Left	Right	Thru	Right	Left	Thru	Int. Total
01:00 PM	5	2	28	1	8	5	49
01:15 PM	6	2	37	1	14	8	68
01:30 PM	7	2	34	0	18	6	67
01:45 PM	5	0	21	0	21	5	52
Total	23	6	120	2	61	24	236
02:00 PM	7	3	30	0	17	11	68
02:15 PM	6	1	36	0	22	7	72
02:30 PM	2	2	46	2	21	8	81
02:45 PM	11	1	65	0	24	14	115
Total	26	7	177	2	84	40	336
03:00 PM	5	1	49	0	31	4	90
03:15 PM	6	1	74	2	17	6	106
03:30 PM	5	2	60	1	21	9	98
03:45 PM	1	3	69	0	13	6	92
Total	17	7	252	3	82	25	386
Grand Total	66	20	549	7	227	89	958
Apprch %	76.7	23.3	98.7	1.3	71.8	28.2	
Total %	6.9	2.1	57.3	0.7	23.7	9.3	
Cars	66	20	540	7	225	89	947
% Cars	100	100	98.4	100	99.1	100	98.9
Trucks	0	0	9	0	2	0	11
% Trucks	0	0	1.6	0	0.9	0	1.1

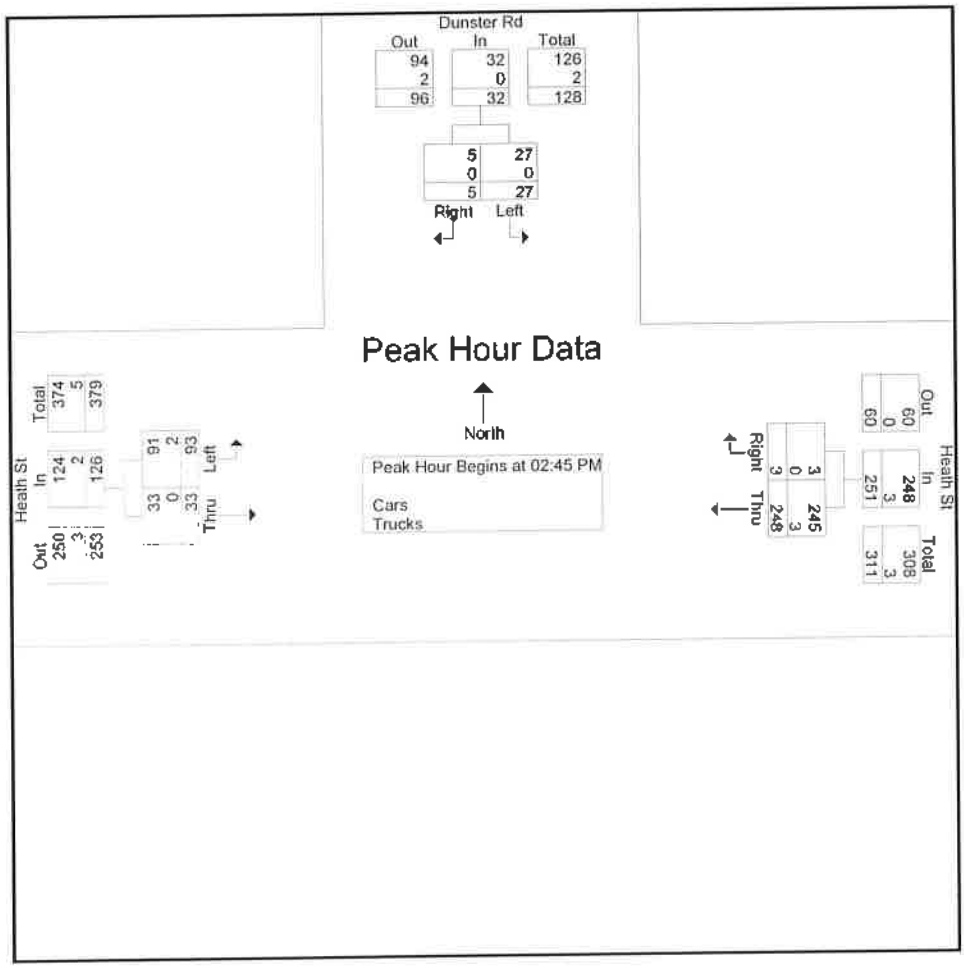
Accurate Counts

978-664-2565

N/S Street : Dunster Road
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900006
Site Code : 79900006
Start Date : 9/26/2018
Page No : 2

	Dunster Rd From North			Heath St From East			Heath St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	**11**	1	**12**	65	0	65	24	**14**	**38**	**115**
03:00 PM	5	1	6	49	0	49	**31**	4	35	90
03:15 PM	6	1	7	**74**	**2**	**76**	17	6	23	106
03:30 PM	5	**2**	7	60	1	61	21	9	30	98
Total Volume	27	5	32	248	3	251	93	33	126	409
% App. Total	84.4	15.6		98.8	1.2		73.8	26.2		
PHF	.614	.625	.667	.838	.375	.826	.750	.589	.829	.889
Cars	27	5	32	245	3	248	91	33	124	404
% Cars	100	100	100	98.8	100	98.8	97.8	100	98.4	98.8
Trucks	0	0	0	3	0	3	2	0	2	5
% Trucks	0	0	0	1.2	0	1.2	2.2	0	1.6	1.2



Accurate Counts

978-664-2565

N/S Street : Dunster Road
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900006
Site Code : 79900006
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Dunster Rd From North			Heath St From East			Heath St From West					
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	3	0	0	0	0	0	0	3	0	3
01:15 PM	1	0	2	0	0	0	0	0	0	2	1	3
01:30 PM	0	0	1	0	0	0	0	0	0	1	0	1
01:45 PM	0	0	0	0	0	0	0	1	0	0	1	1
Total	1	0	6	0	0	0	0	1	0	6	2	8
02:00 PM	0	0	1	1	0	0	0	0	0	1	1	2
02:15 PM	0	1	2	0	0	0	0	0	0	2	1	3
02:30 PM	0	0	0	0	0	0	0	1	1	1	1	2
02:45 PM	0	0	2	0	1	0	0	0	2	4	1	5
Total	0	1	5	1	1	0	0	1	3	8	4	12
03:00 PM	0	0	3	0	0	0	0	0	0	3	0	3
03:15 PM	0	0	2	1	0	0	0	0	0	2	1	3
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	2	0	0	0	0	0	1	3	0	3
Total	0	0	7	1	0	0	0	0	1	8	1	9
Grand Total	1	1	18	2	1	0	0	2	4	22	7	29
Apprch %	50	50		66.7	33.3		0	100				
Total %	14.3	14.3		28.6	14.3		0	28.6		75.9	24.1	

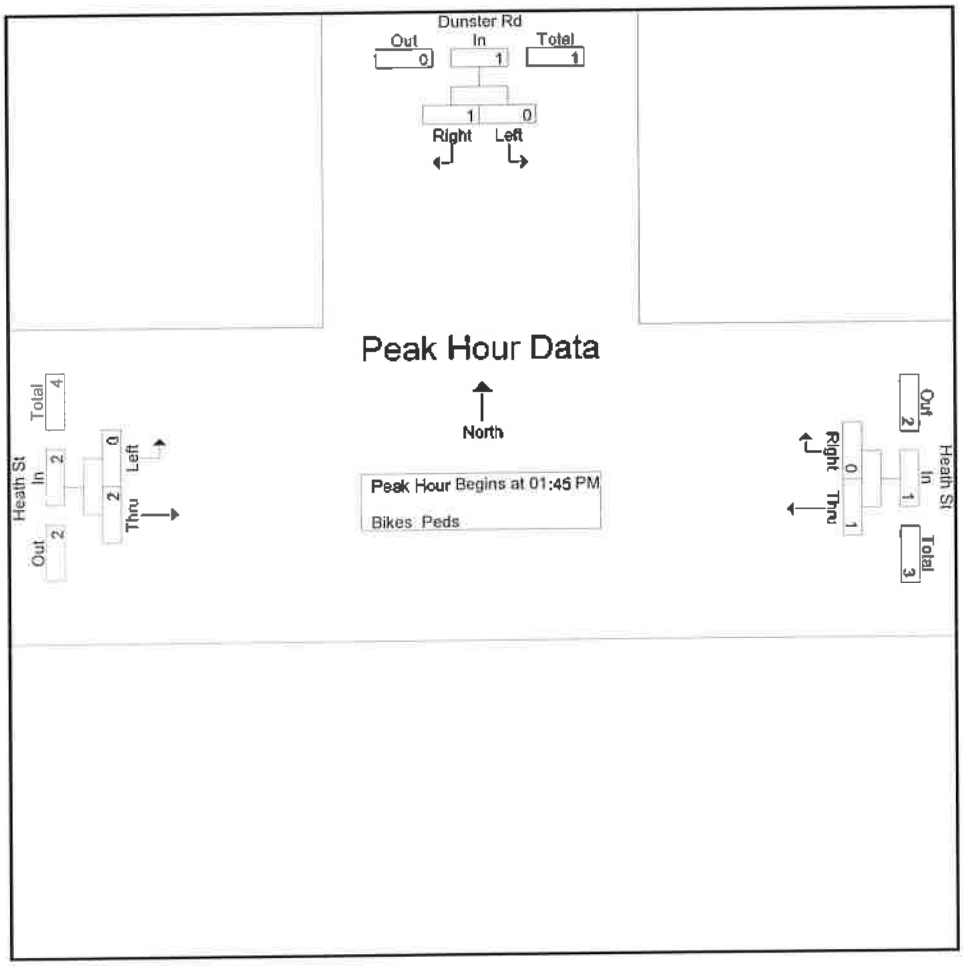
Accurate Counts

978-664-2565

N/S Street : Dunster Road
E/W Street: Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900006
Site Code : 79900006
Start Date : 9/26/2018
Page No : 11

	Dunster Rd From North			Heath St From East			Heath St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 01:45 PM										
01:45 PM	0	0	0	0	0	0	0	1	1	1
02:00 PM	0	0	0	1	0	1	0	0	0	1
02:15 PM	0	1	1	0	0	0	0	0	0	1
02:30 PM	0	0	0	0	0	0	0	1	1	1
Total Volume	0	1	1	1	0	1	0	2	2	4
% App. Total	0	100		100	0		0	100		
PHF	.000	.250	.250	.250	.000	.250	.000	.500	.500	1.00



School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VA\7990\79900007.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 77900007
Comment 1: N/S Street : Cary Rd / Recreation Dr
Comment 2: E/W Street : Hammond Street
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Cary Rd From North				Heath St From East				Recreation Dr From South				Heath St From West				Cary Rd From North	Heath St From East	Recreation Dr From South	Heath St From West
																	Phf by approach			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds				
07:00 AM	1	0	1	0	1	13	16	0	0	0	0	0	2	6	0	0	2	30	0	8
07:15 AM	1	0	2	1	0	24	30	0	0	0	0	0	0	6	0	0	3	54	0	6
07:30 AM	0	0	2	2	0	55	61	0	0	0	0	0	0	9	0	0	2	116	0	9
07:45 AM	0	0	1	3	0	70	45	0	0	0	0	0	1	13	0	0	1	115	0	14
	2	0	6	6	1	162	152	0	0	0	0	0	3	34	0	0	8	315	0	37
No Build	2	0	6		1	169 174	163 166		0	0	0		3	36	0					
PHF	0.50	0.00	0.75		0.25	0.58	0.62		0.00	0.00	0.00		0.38	0.65	0.00		0.67	0.68	0.00	0.66
Truck	0	0	0		0	1	0		0	0	0		0	2	0					
% Truck	0.0%	0.0%	0.0%		0.0%	0.6%	0.0%		0.0%	0.0%	0.0%		0.0%	5.9%	0.0%					
PED	0	0	0	0	2	0	0	0	0	0	1	0	0	0	1	0				
01:30 PM	0	0	0	0	0	32	6	0	1	0	0	0	1	13	0	0	0	38	1	14
01:45 PM	1	0	2	10	0	23	3	1	0	0	0	0	0	10	0	0	3	26	0	10
02:00 PM	1	0	0	0	0	30	6	0	0	0	0	0	1	15	0	0	1	36	0	16
02:15 PM	0	0	0	4	0	35	7	0	0	0	0	0	1	14	0	0	0	42	0	15
	2	0	2	14	0	120	22	1	1	0	0	0	3	52	0	0	4	142	1	55
No Build	2	0	2		0	129	24		1	0	0		3	56	0					
PHF	0.50	0.00	0.25		0.00	0.86	0.79		0.25	0.00	0.00		0.75	0.87	0.00		0.33	0.85	0.00	0.86
Truck	0	0	0		0	0	0		0	0	0		0	0	0					
% Truck	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0%0	0.0%		0%0	0.0%	0.0%					
PED	0	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0				

Accurate Counts

978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Cary Rd From North			Heath St From East			Recreation Dr From South			Heath St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	1	0	1	1	13	16	0	0	0	2	6	0	40
07:15 AM	1	0	2	0	24	30	0	0	0	0	6	0	63
07:30 AM	0	0	2	0	55	61	0	0	0	0	9	0	127
07:45 AM	0	0	1	0	70	45	0	0	0	1	13	0	130
Total	2	0	6	1	162	152	0	0	0	3	34	0	360
08:00 AM	1	0	1	1	45	51	0	0	0	0	19	0	118
08:15 AM	2	0	0	0	57	34	0	0	0	0	21	0	114
08:30 AM	0	0	2	0	51	28	0	0	0	1	23	0	105
08:45 AM	0	0	2	0	49	37	0	0	0	1	14	0	103
Total	3	0	5	1	202	150	0	0	0	2	77	0	440
Grand Total	5	0	11	2	364	302	0	0	0	5	111	0	800
Apprch %	31.2	0	68.8	0.3	54.5	45.2	0	0	0	4.3	95.7	0	
Total %	0.6	0	1.4	0.2	45.5	37.8	0	0	0	0.6	13.9	0	
Cars	5	0	11	2	363	299	0	0	0	5	109	0	794
% Cars	100	0	100	100	99.7	99	0	0	0	100	98.2	0	99.2
Trucks	0	0	0	0	1	3	0	0	0	0	2	0	6
% Trucks	0	0	0	0	0.3	1	0	0	0	0	1.8	0	0.8

Accurate Counts

978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

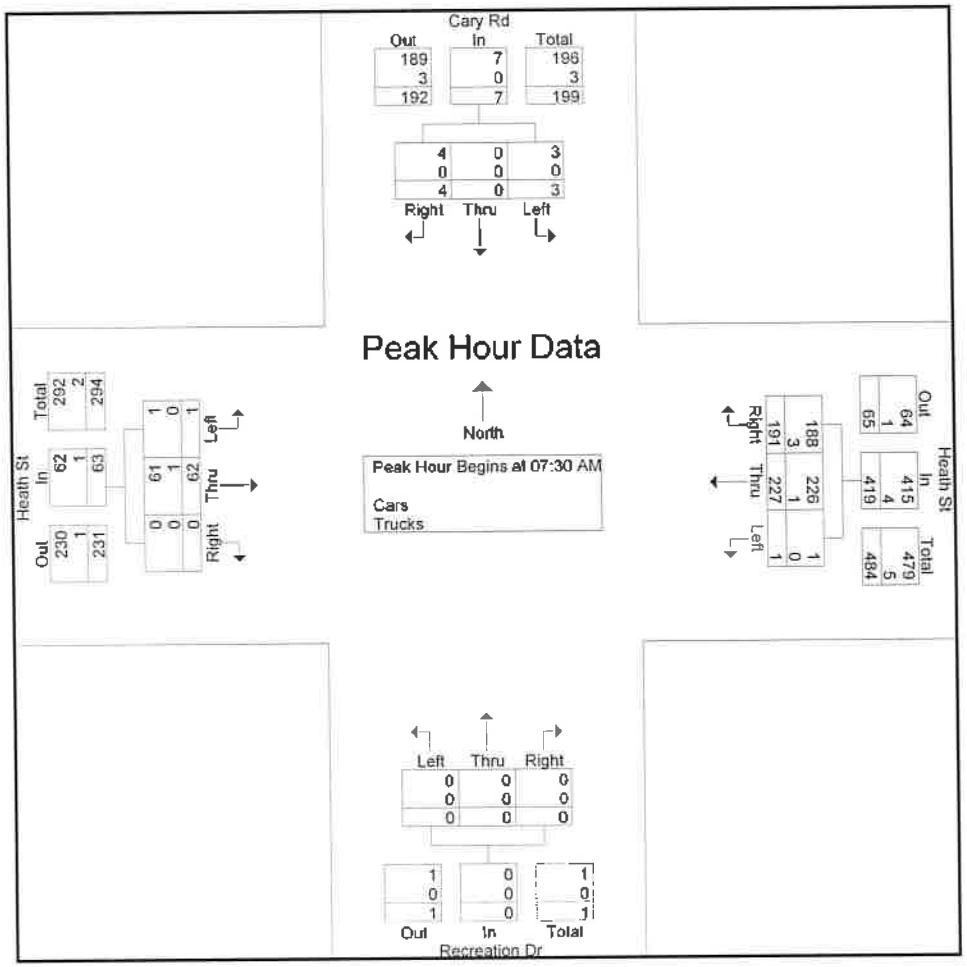
File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 2

	Cary Rd From North				Heath St From East				Recreation Dr From South				Heath St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	**2**	**2**	0	55	**61**	**116**	0	0	0	0	0	9	0	9	127
07:45 AM	0	0	1	1	0	**70**	45	115	0	0	0	0	**1**	13	0	**14**	**130**
08:00 AM	1	0	1	2	**1**	45	51	97	0	0	0	0	0	19	0	19	118
08:15 AM	**2**	0	0	2	0	57	34	91	0	0	0	0	0	**21**	0	**21**	114
Total Volume	3	0	4	7	1	227	191	419	0	0	0	0	1	62	0	63	489
% App. Total	42.9	0	57.1		0.2	54.2	45.6		0	0	0		1.6	98.4	0		
PHF	.375	.000	.500	.875	.250	.811	.783	.903	.000	.000	.000	.000	.250	.738	.000	.750	.940
Cars	3	0	4	7	1	226	188	415	0	0	0	0	1	61	0	62	484
% Cars	100	0	100	100	100	99.6	98.4	99.0	0	0	0	0	100	98.4	0	98.4	99.0
Trucks	0	0	0	0	0	1	3	4	0	0	0	0	0	1	0	1	5
% Trucks	0	0	0	0	0	0.4	1.6	1.0	0	0	0	0	0	1.6	0	1.6	1.0

Accurate Counts
978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				07:00 AM				08:00 AM			
+0 mins.	1	0	1	2	0	55	61	116	0	0	0	0	0	19	0	19
+15 mins.	1	0	2	3	0	70	45	115	0	0	0	0	0	21	0	21
+30 mins.	0	0	2	2	1	45	51	97	0	0	0	0	1	23	0	24
+45 mins.	0	0	1	1	0	57	34	91	0	0	0	0	1	14	0	15
Total Volume	2	0	6	8	1	227	191	419	0	0	0	0	2	77	0	79
% App. Total	25	0	75		0.2	54.2	45.6		0	0	0		2.5	97.5	0	

Accurate Counts

978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 13

Groups Printed- Bikes Peds

	Cary Rd From North				Heath St From East				Recreation Dr From South				Heath St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	0	0	0	0	2	0	0	0	0	0	1	0	0	0	1	0	0	4	4
08:00 AM	0	0	0	0	3	0	0	0	1	0	1	0	0	0	0	0	0	5	5
08:15 AM	0	0	0	0	4	0	0	0	3	0	1	0	0	0	0	0	0	8	8
08:30 AM	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3	3
08:45 AM	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	2
Total	0	0	0	0	8	0	0	0	6	0	4	0	0	0	0	0	0	18	18
Grand Total	0	0	0	0	10	0	0	0	6	0	5	0	0	0	1	0	0	22	22
Apprch %	0	0	0		100	0	0		54.5	0	45.5		0	0	100				
Total %	0	0	0		45.5	0	0		27.3	0	22.7		0	0	4.5		0	100	

Accurate Counts

978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

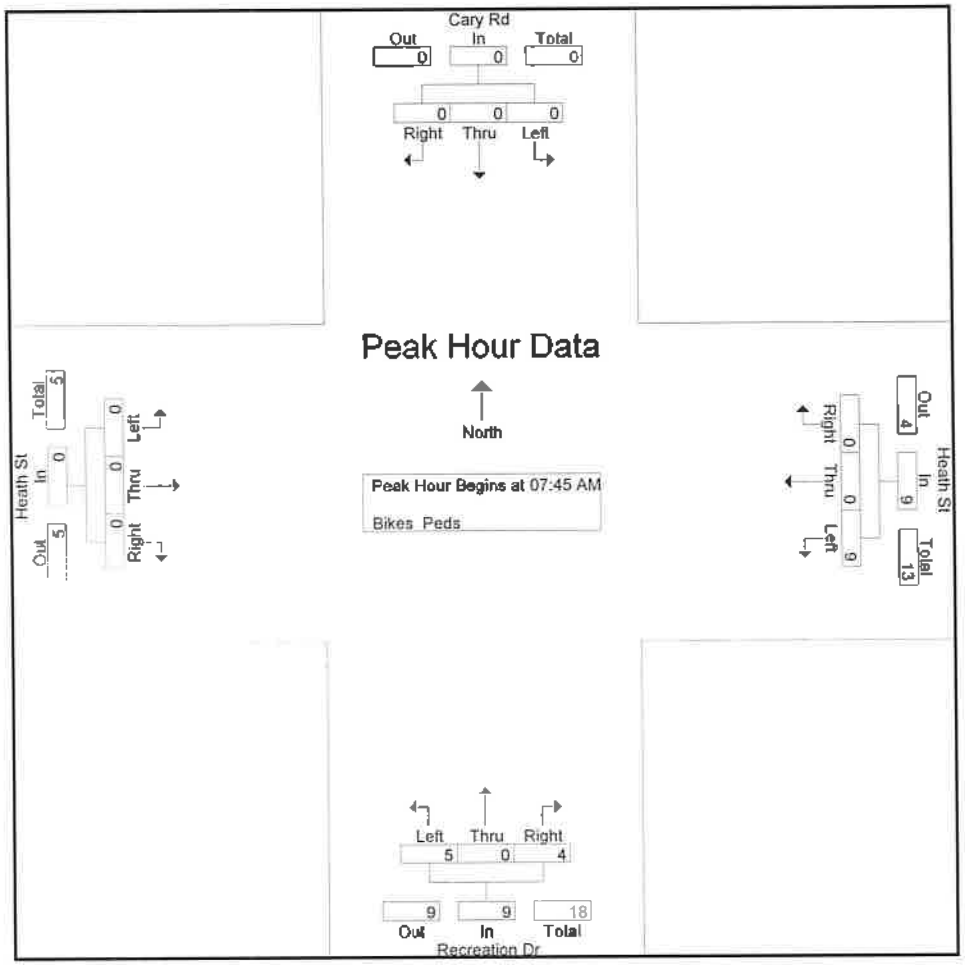
File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 14

	Cary Rd From North				Heath St From East				Recreation Dr From South				Heath St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	3	0	0	3	1	0	1	2	0	0	0	0	5
08:15 AM	0	0	0	0	4	0	0	4	3	0	1	4	0	0	0	0	8
08:30 AM	0	0	0	0	0	0	0	0	1	0	2	3	0	0	0	0	3
Total Volume	0	0	0	0	9	0	0	9	5	0	4	9	0	0	0	0	18
% App. Total	0	0	0		100	0	0		55.6	0	44.4		0	0	0		
PHF	.000	.000	.000	.000	.563	.000	.000	.563	.417	.000	.500	.563	.000	.000	.000	.000	.563

Accurate Counts
978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 15



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				08:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	1	0	1	2	0	0	1	1
+15 mins.	0	0	0	0	2	0	0	2	3	0	1	4	0	0	0	0
+30 mins.	0	0	0	0	3	0	0	3	1	0	2	3	0	0	0	0
+45 mins.	0	0	0	0	4	0	0	4	1	0	0	1	0	0	0	0
Total Volume	0	0	0	0	9	0	0	9	6	0	4	10	0	0	1	1
% App. Total	0	0	0		100	0	0		60	0	40		0	0	100	

Accurate Counts

978-664-2565

File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 1

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

Groups Printed- Cars - Trucks

	Cary Rd From North			Heath St From East			Recreation Dr From South			Heath St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
01:00 PM	0	0	0	0	29	6	0	0	0	1	9	0	45
01:15 PM	1	0	1	0	27	4	0	0	0	1	12	0	46
01:30 PM	0	0	0	0	32	6	1	0	0	1	13	0	53
01:45 PM	1	0	2	0	23	3	0	0	0	0	10	0	39
Total	2	0	3	0	111	19	1	0	0	3	44	0	183
02:00 PM	1	0	0	0	30	6	0	0	0	1	15	0	53
02:15 PM	0	0	0	0	35	7	0	0	0	1	14	0	57
02:30 PM	1	0	1	0	43	4	0	0	0	0	7	0	56
02:45 PM	0	0	0	0	60	1	0	0	0	1	22	0	84
Total	2	0	1	0	168	18	0	0	0	3	58	0	250
03:00 PM	0	0	0	0	46	7	0	0	0	0	9	0	62
03:15 PM	0	0	2	0	65	4	0	0	0	1	10	0	82
03:30 PM	0	0	0	0	63	4	0	0	0	1	13	0	81
03:45 PM	0	0	0	0	64	4	1	0	0	0	6	0	75
Total	0	0	2	0	238	19	1	0	0	2	38	0	300
Grand Total	4	0	6	0	517	56	2	0	0	8	140	0	733
Apprch %	40	0	60	0	90.2	9.8	100	0	0	5.4	94.6	0	
Total %	0.5	0	0.8	0	70.5	7.6	0.3	0	0	1.1	19.1	0	
Cars	4	0	6	0	515	56	2	0	0	8	140	0	731
% Cars	100	0	100	0	99.6	100	100	0	0	100	100	0	99.7
Trucks	0	0	0	0	2	0	0	0	0	0	0	0	2
% Trucks	0	0	0	0	0.4	0	0	0	0	0	0	0	0.3

Accurate Counts

978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 2

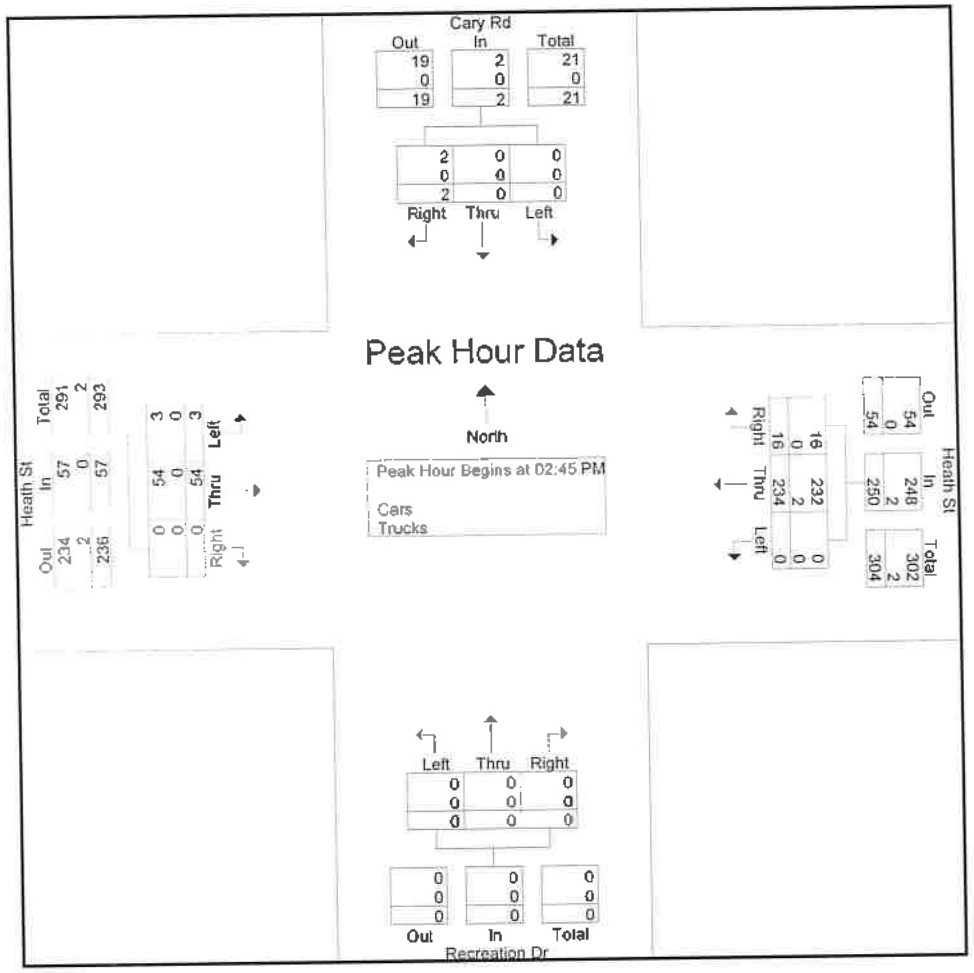
	Cary Rd From North				Heath St From East				Recreation Dr From South				Heath St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	0	0	0	0	60	1	61	0	0	0	0	1	22	0	23	84
03:00 PM	0	0	0	0	0	46	7	53	0	0	0	0	0	9	0	9	62
03:15 PM	0	0	2	2	0	65	4	69	0	0	0	0	1	10	0	11	82
03:30 PM	0	0	0	0	0	63	4	67	0	0	0	0	1	13	0	14	81
Total Volume	0	0	2	2	0	234	16	250	0	0	0	0	3	54	0	57	309
% App. Total	0	0	100		0	93.6	6.4		0	0	0		5.3	94.7	0		
PHF	.000	.000	.250	.250	.000	.900	.571	.906	.000	.000	.000	.000	.750	.614	.000	.620	.920
Cars	0	0	2	2	0	232	16	248	0	0	0	0	3	54	0	57	307
% Cars	0	0	100	100	0	99.1	100	99.2	0	0	0	0	100	100	0	100	99.4
Trucks	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
% Trucks	0	0	0	0	0	0.9	0	0.8	0	0	0	0	0	0	0	0	0.6

Accurate Counts

978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 3



Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	01:15 PM				03:00 PM				01:00 PM				02:00 PM			
+0 mins.	1	0	1	2	0	46	7	53	0	0	0	0	1	15	0	16
+15 mins.	0	0	0	0	0	65	4	69	0	0	0	0	1	14	0	15
+30 mins.	1	0	2	3	0	63	4	67	1	0	0	1	0	7	0	7
+45 mins.	1	0	0	1	0	64	4	68	0	0	0	0	1	22	0	23
Total Volume	3	0	3	6	0	238	19	257	1	0	0	1	3	58	0	61
% App. Total	50	0	50		0	92.6	7.4		100	0	0		4.9	95.1	0	
PHF	.750	.000	.375	.500	.000	.915	.679	.931	.250	.000	.000	.250	.750	.659	.000	.663

Accurate Counts

978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 13

Groups Printed- Bikes Peds

	Cary Rd From North				Heath St From East				Recreation Dr From South				Heath St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2
02:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	2
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	2
03:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2	2
03:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3	3
03:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	3	0	0	0	0	0	3	0	0	0	1	0	0	7	7
Grand Total	0	0	0	1	4	0	0	0	1	0	3	0	0	0	2	0	1	10	11
Apprch %	0	0	0		100	0	0		25	0	75		0	0	100				
Total %	0	0	0		40	0	0		10	0	30		0	0	20		9.1	90.9	

Accurate Counts

978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

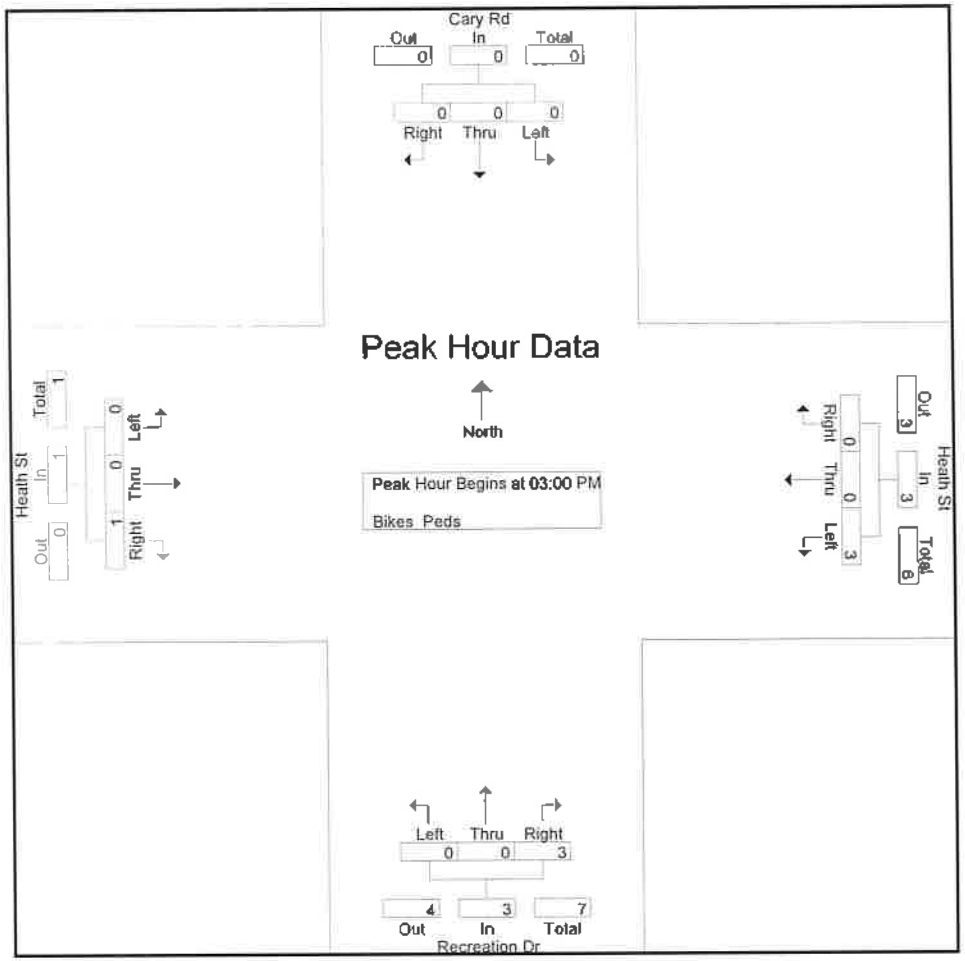
File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 14

	Cary Rd From North				Heath St From East				Recreation Dr From South				Heath St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
03:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	1	1	3
03:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	3	0	0	3	0	0	3	3	0	0	1	1	7
% App. Total	0	0	0		100	0	0		0	0	100		0	0	100		
PHF	.000	.000	.000	.000	.750	.000	.000	.750	.000	.000	.375	.375	.000	.000	.250	.250	.583

Accurate Counts
978-664-2565

N/S Street : Cary Rd / Recreation Dr
E/W Street : Hammond Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900007
Site Code : 77900007
Start Date : 9/26/2018
Page No : 15



Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	01:00 PM				03:00 PM				02:45 PM				01:15 PM			
+0 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	1	0	0	**1**	0	0	**2**	**2**	0	0	**1**	**1**
Total Volume	0	0	0	0	3	0	0	3	0	0	3	3	0	0	1	1
% App. Total	0	0	0		100	0	0		0	0	100		0	0	100	
PHF	.000	.000	.000	.000	.750	.000	.000	.750	.000	.000	.375	.375	.000	.000	.250	.250

School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VA\7990\79900009.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 77900009
Comment 1: N/S Street : Woodland Road
Comment 2: E/W Street : Heath Street
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Heath St From East			Woodland Rd From South			Heath St From West			Heath St From East	Woodland Rd From South	Heath St From West
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Phf by approach		
07:00 AM	0	9	0	20	62	0	6	0	0	9	82	6
07:15 AM	0	21	0	35	90	0	8	0	0	21	125	8
07:30 AM	0	39	0	76	100	0	9	0	0	39	176	9
07:45 AM	0	51	0	72	129	0	13	0	0	51	201	13
	0	120	0	203	381	0	36	0	0	120	584	36
No Build	0	129	128	218	408		39	0				
PHF	0.00	0.59		0.67	0.74		0.69	0.00		0.59	0.73	0.69
Truck	0	1		1	3		2	0				
% Truck	0.0%	0.8%		0.5%	0.8%		5.6%	0.0%				
PED	0	0	3	0	0	0	0	0	0			
01:30 PM	0	30	0	8	23	0	12	0	0	30	31	12
01:45 PM	0	25	0	1	20	0	12	0	0	25	21	12
02:00 PM	0	30	0	6	14	0	14	0	0	30	20	14
02:15 PM	0	35	0	7	20	0	14	0	0	35	27	14
	0	120	0	22	77	0	52	0	0	120	99	52
No Build	0	129		24	83		58 56	0				
PHF	0.00	0.86		0.69	0.84		0.93	0.00		0.86	0.80	0.93
Truck	0	0		0	0		0	0				
% Truck	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%				
PED	0	1	1	0	1	0	1	0	0			

Accurate Counts

978-664-2565

N/S Street : Woodland Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900009
Site Code : 77900009
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

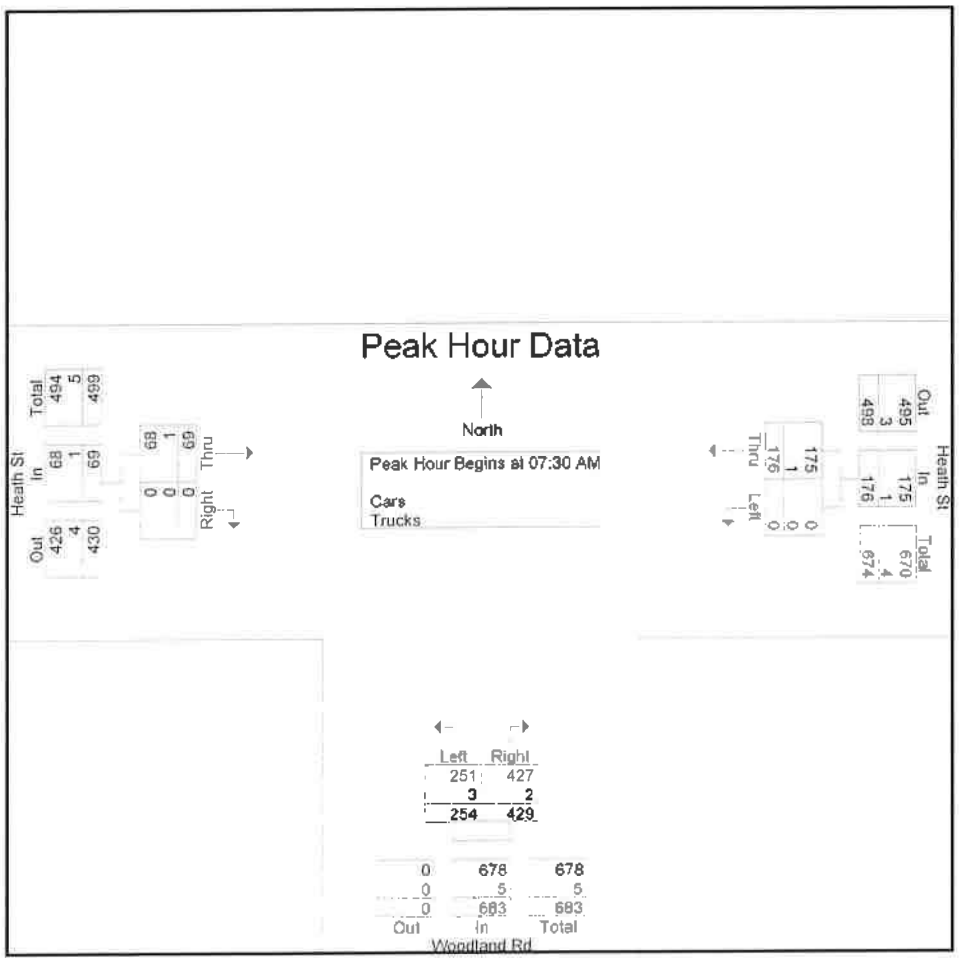
	Heath St From East		Woodland Rd From South		Heath St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	0	9	20	62	6	0	97
07:15 AM	0	21	35	90	8	0	154
07:30 AM	0	39	76	100	9	0	224
07:45 AM	0	51	72	129	13	0	265
Total	0	120	203	381	36	0	740
08:00 AM	0	37	63	99	22	0	221
08:15 AM	0	49	43	101	25	0	218
08:30 AM	0	43	39	79	30	0	191
08:45 AM	0	42	44	64	13	0	163
Total	0	171	189	343	90	0	793
Grand Total	0	291	392	724	126	0	1533
Apprch %	0	100	35.1	64.9	100	0	
Total %	0	19	25.6	47.2	8.2	0	
Cars	0	289	389	721	124	0	1523
% Cars	0	99.3	99.2	99.6	98.4	0	99.3
Trucks	0	2	3	3	2	0	10
% Trucks	0	0.7	0.8	0.4	1.6	0	0.7

Accurate Counts
978-664-2565

N/S Street : Woodland Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900009
Site Code : 77900009
Start Date : 9/26/2018
Page No : 2

	Heath St From East			Woodland Rd From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	39	39	**76**	100	176	9	0	9	224
07:45 AM	0	**51**	**51**	72	**129**	**201**	13	0	13	**265**
08:00 AM	0	37	37	63	99	162	22	0	22	221
08:15 AM	0	49	49	43	101	144	**25**	0	**25**	218
Total Volume	0	176	176	254	429	683	69	0	69	928
% App. Total	0	100		37.2	62.8		100	0		
PHF	.000	.863	.863	.836	.831	.850	.690	.000	.690	.875
Cars	0	175	175	251	427	678	68	0	68	921
% Cars	0	99.4	99.4	98.8	99.5	99.3	98.6	0	98.6	99.2
Trucks	0	1	1	3	2	5	1	0	1	7
% Trucks	0	0.6	0.6	1.2	0.5	0.7	1.4	0	1.4	0.8



Accurate Counts

978-664-2565

N/S Street : Woodland Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900009
Site Code : 77900009
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Heath St From East			Woodland Rd From South			Heath St From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	1	0	0	0	0	0	0	1	0	1
07:45 AM	0	0	2	0	0	0	0	0	0	2	0	2
Total	0	0	3	0	0	0	0	0	0	3	0	3
08:00 AM	0	0	4	0	0	0	0	0	0	4	0	4
08:15 AM	0	1	0	0	1	0	2	0	0	0	4	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	1	0	0	0	0	0	0	1	0	1
Total	0	1	5	0	1	0	2	0	0	5	4	9
Grand Total	0	1	8	0	1	0	2	0	0	8	4	12
Apprch %	0	100		0	100		100	0				
Total %	0	25		0	25		50	0		66.7	33.3	

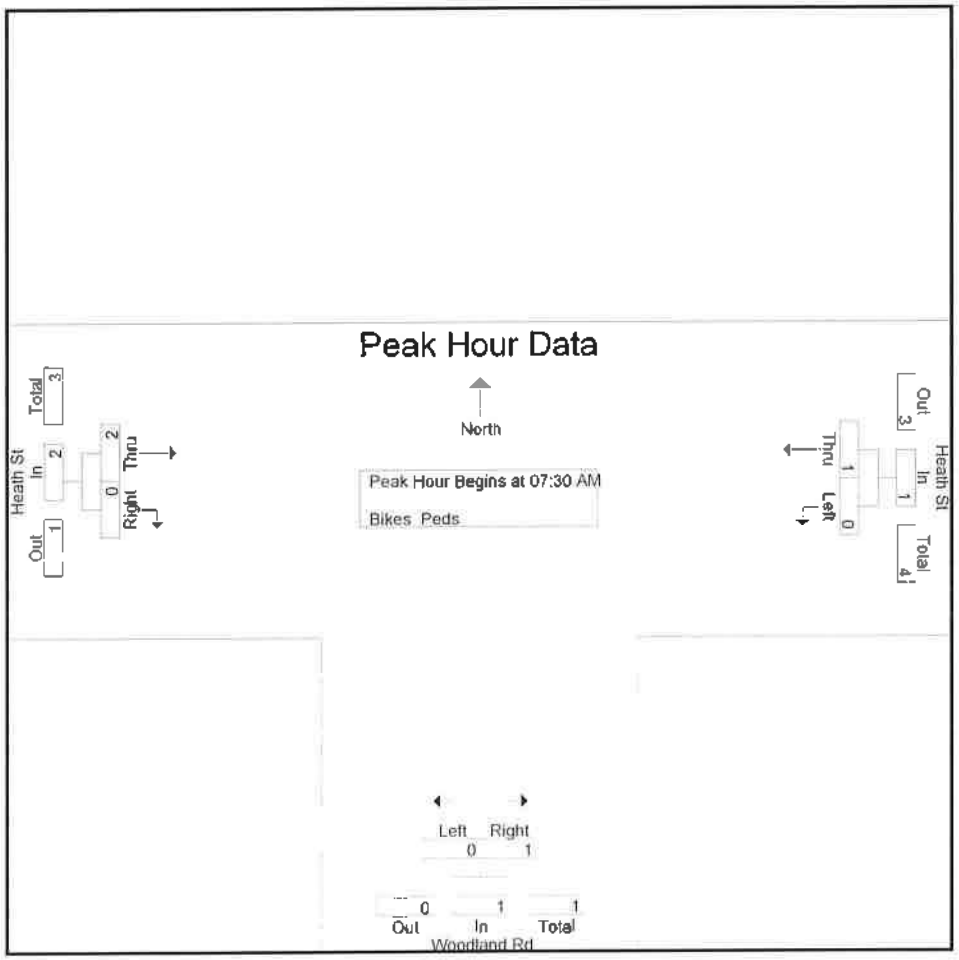
Accurate Counts

978-664-2565

N/S Street : Woodland Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900009
Site Code : 77900009
Start Date : 9/26/2018
Page No : 11

	Heath St From East			Woodland Rd From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	1	1	2	0	2	4
Total Volume	0	1	1	0	1	1	2	0	2	4
% App. Total	0	100		0	100		100	0		
PHF	.000	.250	.250	.000	.250	.250	.250	.000	.250	.250



Accurate Counts

978-664-2565

N/S Street : Woodland Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900009
Site Code : 77900009
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Heath St From East		Woodland Rd From South		Heath St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
01:00 PM	0	27	7	20	8	0	62
01:15 PM	0	31	7	19	13	0	70
01:30 PM	0	30	8	23	12	0	73
01:45 PM	0	25	1	20	12	0	58
Total	0	113	23	82	45	0	263
02:00 PM	0	30	6	14	14	0	64
02:15 PM	0	35	7	20	14	0	76
02:30 PM	0	39	9	18	9	0	75
02:45 PM	0	61	4	15	24	0	104
Total	0	165	26	67	61	0	319
03:00 PM	0	49	8	20	10	0	87
03:15 PM	0	62	8	22	10	0	102
03:30 PM	0	63	6	23	13	0	105
03:45 PM	0	56	10	12	9	0	87
Total	0	230	32	77	42	0	381
Grand Total	0	508	81	226	148	0	963
Apprch %	0	100	26.4	73.6	100	0	
Total %	0	52.8	8.4	23.5	15.4	0	
Cars	0	506	81	223	148	0	958
% Cars	0	99.6	100	98.7	100	0	99.5
Trucks	0	2	0	3	0	0	5
% Trucks	0	0.4	0	1.3	0	0	0.5

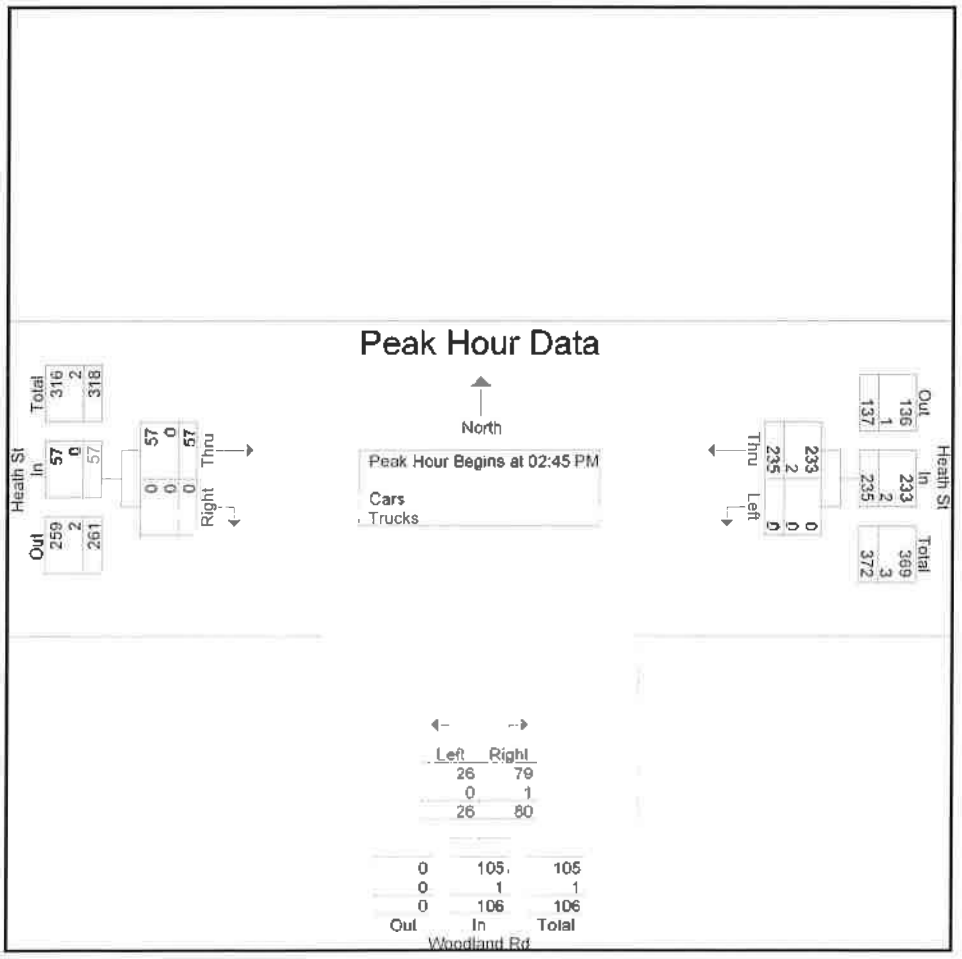
Accurate Counts

978-664-2565

N/S Street : Woodland Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900009
Site Code : 77900009
Start Date : 9/26/2018
Page No : 2

	Heath St From East			Woodland Rd From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	0	61	61	4	15	19	**24**	0	**24**	104
03:00 PM	0	49	49	**8**	20	28	10	0	10	87
03:15 PM	0	62	62	8	22	**30**	10	0	10	102
03:30 PM	0	**63**	**63**	6	**23**	29	13	0	13	**105**
Total Volume	0	235	235	26	80	106	57	0	57	398
% App. Total	0	100		24.5	75.5		100	0		
PHF	.000	.933	.933	.813	.870	.883	.594	.000	.594	.948
Cars	0	233	233	26	79	105	57	0	57	395
% Cars	0	99.1	99.1	100	98.8	99.1	100	0	100	99.2
Trucks	0	2	2	0	1	1	0	0	0	3
% Trucks	0	0.9	0.9	0	1.3	0.9	0	0	0	0.8



Accurate Counts
978-664-2565

N/S Street : Woodland Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900009
Site Code : 77900009
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

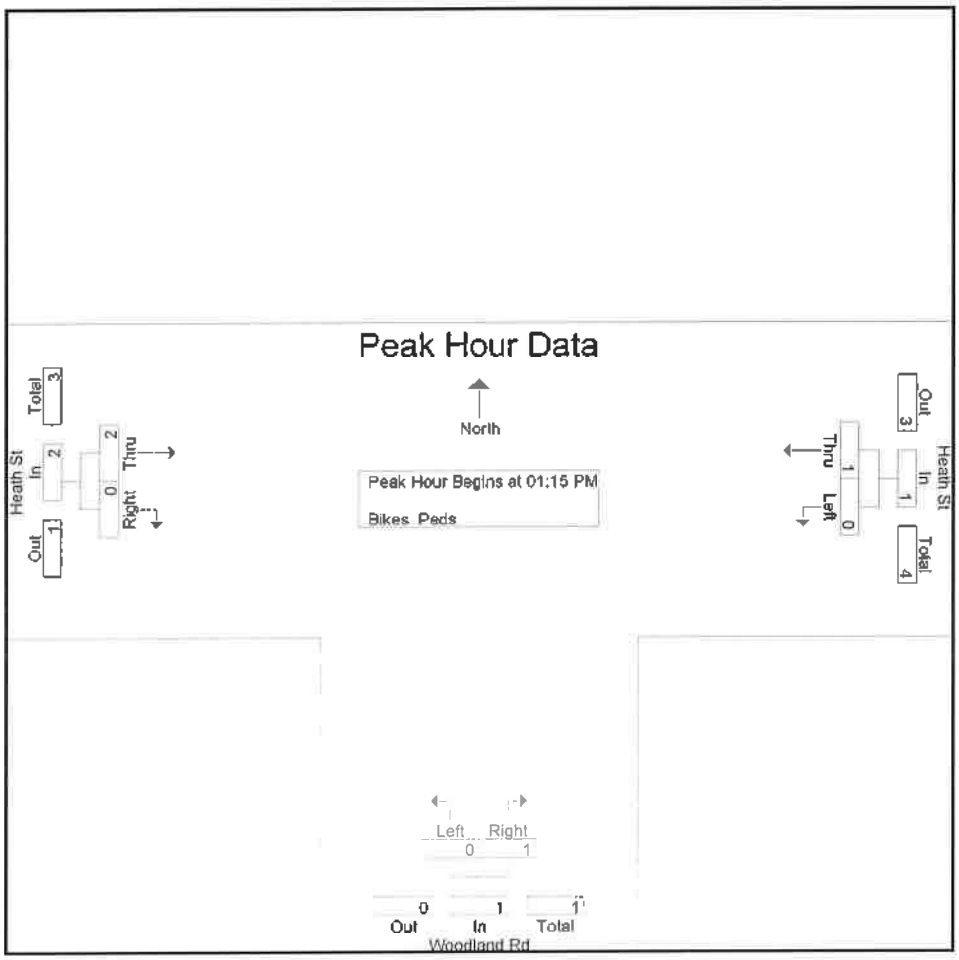
	Heath St From East			Woodland Rd From South			Heath St From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	1	0	0	0	1	1
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	1	0	1	0	0	0	2	2
Total	0	0	0	0	1	0	2	0	0	0	3	3
02:00 PM	0	1	0	0	0	0	0	0	0	0	1	1
02:15 PM	0	0	1	0	0	0	0	0	0	1	0	1
02:30 PM	0	0	0	0	0	0	1	0	0	0	1	1
02:45 PM	0	1	0	0	0	0	0	0	0	0	1	1
Total	0	2	1	0	0	0	1	0	0	1	3	4
03:00 PM	0	0	3	0	1	0	0	0	0	3	1	4
03:15 PM	0	0	1	0	0	1	0	0	1	3	0	3
03:30 PM	0	0	0	0	0	2	0	0	2	4	0	4
03:45 PM	0	0	3	0	0	1	0	0	0	4	0	4
Total	0	0	7	0	1	4	0	0	3	14	1	15
Grand Total	0	2	8	0	2	4	3	0	3	15	7	22
Apprch %	0	100		0	100		100	0				
Total %	0	28.6		0	28.6		42.9	0		68.2	31.8	

Accurate Counts
978-664-2565

N/S Street : Woodland Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900009
Site Code : 77900009
Start Date : 9/26/2018
Page No : 11

	Heath St From East			Woodland Rd From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 01:15 PM										
01:15 PM	0	0	0	0	0	0	1	0	1	1
01:30 PM	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	1	1	1	0	1	2
02:00 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	1	1	0	1	1	2	0	2	4
% App. Total	0	100		0	100		100	0		
PHF	.000	.250	.250	.000	.250	.250	.500	.000	.500	.500



Traffic Count

School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VAI\7990\79900010.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 77900010
Comment 1: N/S Street : Randolph Road
Comment 2: E/W Street : Heath Street
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Randolph Rd From North			Heath St From East			Heath St From West			Randolph Rd From North	Heath St From East	Heath St From West
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Phf by approach		
07:00 AM	0	0	0	9	1	0	19	50	0	0	10	69
07:15 AM	2	0	0	20	1	0	12	87	0	2	21	99
07:30 AM	3	0	0	34	5	0	17	88	0	3	39	105
07:45 AM	4	0	0	45	4	0	61	85	0	4	49	146
	9	0	0	108	11	0	109	310	0	9	119	419
No Build	10	0		129 116	12		117	332				
PHF	0.56	0.00		0.60	0.55		0.45	0.88		0.56	0.61	0.72
Truck	0	0		1	0		3	3				
% Truck	0.0%	0.0%		0.9%	0.0%		2.8%	1.0%				
PED	0	0	0	0	0	0	0	0	0			
01:30 PM	2	2	0	31	1	0	8	30	0	4	32	38
01:45 PM	4	1	0	22	4	0	4	29	0	5	26	33
02:00 PM	2	0	0	30	2	0	3	24	0	2	32	27
02:15 PM	3	0	0	34	7	0	5	28	0	3	41	33
	11	3	0	117	14	0	20	111	0	14	131	131
No Build	12	3		126 125	15		21	119 120				
PHF	0.69	0.38		0.86	0.50		0.63	0.93		0.70	0.80	0.86
Truck	0	0		0	0		0	0				
% Truck	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%				
PED	0	0	0	1	0	1	0	2	3			

Traffic Count

School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VAI\7990\79900011.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 77900011
Comment 1: N/S Street : Warren Street
Comment 2: E/W Street : Heath Street
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Heath St From East			Warren St From South			Heath St From West			Heath St From East	Warren St From South	Heath St From West
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Phf by approach		
07:00 AM	11	8	0	2	7	0	28	23	0	19	9	51
07:15 AM	6	20	0	15	16	0	41	35	0	26	31	76
07:30 AM	8	33	0	17	21	0	58	30	0	41	38	88
07:45 AM	12	26	0	27	47	0	72	32	0	38	74	104
	37	87	0	61	91	0	199	120	0	124	152	319
No Build	40	93		65	98		213	129				
PHF	0.77	0.66		0.56	0.48		0.69	0.86		0.76	0.51	0.77
Truck	0	2		0	1		0	1				
% Truck	0.0%	2.3%		0.0%	1.1%		0.0%	0.8%				
PED	0	0	0	0	1	1	0	0	0			
01:30 PM	8	22	0	4	7	0	11	7	0	30	11	18
01:45 PM	13	22	0	6	3	0	20	4	0	35	9	24
02:00 PM	6	13	0	12	2	0	9	11	0	19	14	20
02:15 PM	6	26	0	10	4	0	14	10	0	32	14	24
	33	83	0	32	16	0	54	32	0	116	48	86
No Build	35	89		34	17		58	34				
PHF	0.63	0.80		0.67	0.57		0.68	0.73		0.83	0.86	0.90
Truck	0	1		1	0		1	0				
% Truck	0.0%	1.2%		3.1%	0.0%		1.9%	0.0%				
PED	0	0	0	1	0	3	0	0	0			

Accurate Counts

978-664-2565

N/S Street : Randolph Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900010
Site Code : 77900010
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Randolph Rd From North		Heath St From East		Heath St From West		
Start Time	Left	Right	Thru	Right	Left	Thru	Int. Total
07:00 AM	0	0	9	1	19	50	79
07:15 AM	2	0	20	1	12	87	122
07:30 AM	3	0	34	5	17	88	147
07:45 AM	4	0	45	4	61	85	199
Total	9	0	108	11	109	310	547
08:00 AM	4	0	36	7	36	89	172
08:15 AM	4	0	50	8	19	105	186
08:30 AM	2	0	45	9	13	99	168
08:45 AM	0	0	41	9	19	58	127
Total	10	0	172	33	87	351	653
Grand Total	19	0	280	44	196	661	1200
Apprch %	100	0	86.4	13.6	22.9	77.1	
Total %	1.6	0	23.3	3.7	16.3	55.1	
Cars	19	0	277	44	193	658	1191
% Cars	100	0	98.9	100	98.5	99.5	99.2
Trucks	0	0	3	0	3	3	9
% Trucks	0	0	1.1	0	1.5	0.5	0.8

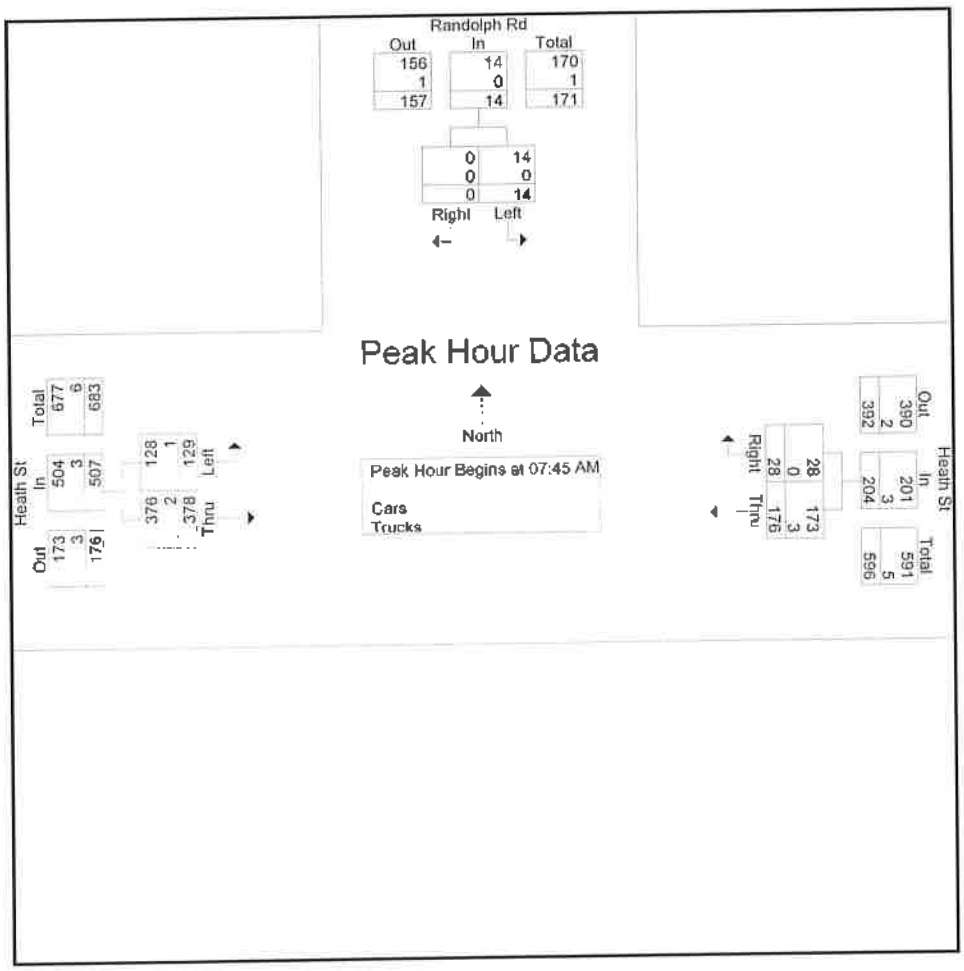
Accurate Counts

978-664-2565

N/S Street : Randolph Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900010
Site Code : 77900010
Start Date : 9/26/2018
Page No : 2

	Randolph Rd From North			Heath St From East			Heath St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	4	0	4	45	4	49	61	85	146	199
08:00 AM	4	0	4	36	7	43	36	89	125	172
08:15 AM	4	0	4	50	8	58	19	105	124	186
08:30 AM	2	0	2	45	9	54	13	99	112	168
Total Volume	14	0	14	176	28	204	129	378	507	725
% App. Total	100	0		86.3	13.7		25.4	74.6		
PHF	.875	.000	.875	.880	.778	.879	.529	.900	.868	.911
Cars	14	0	14	173	28	201	128	376	504	719
% Cars	100	0	100	98.3	100	98.5	99.2	99.5	99.4	99.2
Trucks	0	0	0	3	0	3	1	2	3	6
% Trucks	0	0	0	1.7	0	1.5	0.8	0.5	0.6	0.8



Accurate Counts

978-664-2565

N/S Street : Randolph Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900010
Site Code : 77900010
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Randolph Rd From North			Heath St From East			Heath St From West					
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	1	1	0	1
08:15 AM	0	0	0	1	0	0	0	3	0	0	4	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	3	1	1	4	5
Grand Total	0	0	0	1	0	0	0	3	1	1	4	5
Apprch %	0	0		100	0		0	100				
Total %	0	0		25	0		0	75		20	80	

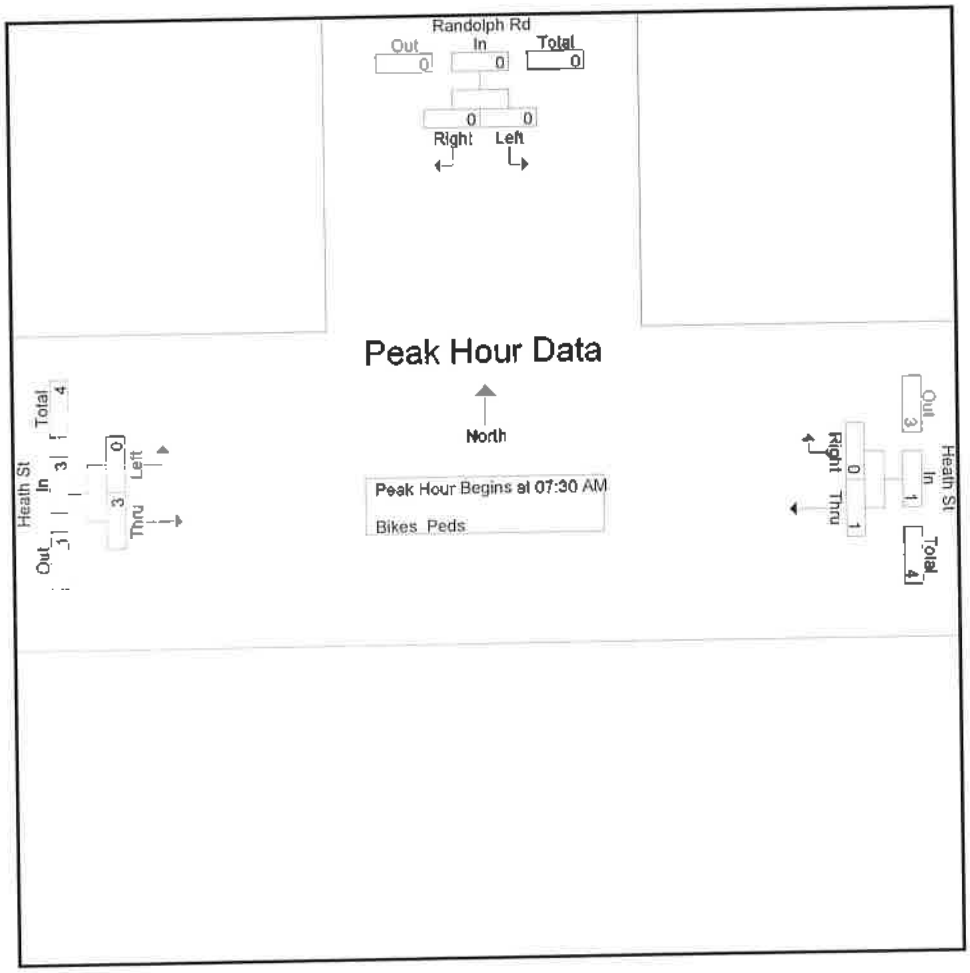
Accurate Counts

978-664-2565

N/S Street : Randolph Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900010
Site Code : 77900010
Start Date : 9/26/2018
Page No : 11

	Randolph Rd From North			Heath St From East			Heath St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	1	0	1	0	3	3	4
Total Volume	0	0	0	1	0	1	0	3	3	4
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.250	.000	.250	.000	.250	.250	.250



Accurate Counts

978-664-2565

N/S Street : Randolph Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900010
Site Code : 77900010
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Randolph Rd From North		Heath St From East		Heath St From West		
Start Time	Left	Right	Thru	Right	Left	Thru	Int. Total
01:00 PM	2	0	27	5	5	22	61
01:15 PM	0	0	31	1	6	27	65
01:30 PM	2	2	31	1	8	30	74
01:45 PM	4	1	22	4	4	29	64
Total	8	3	111	11	23	108	264
02:00 PM	2	0	30	2	3	24	61
02:15 PM	3	0	34	7	5	28	77
02:30 PM	0	1	38	7	4	23	73
02:45 PM	1	2	61	8	6	33	111
Total	6	3	163	24	18	108	322
03:00 PM	4	1	48	3	5	25	86
03:15 PM	0	0	65	5	2	30	102
03:30 PM	3	0	63	5	6	26	103
03:45 PM	3	2	64	7	2	20	98
Total	10	3	240	20	15	101	389
Grand Total	24	9	514	55	56	317	975
Apprch %	72.7	27.3	90.3	9.7	15	85	
Total %	2.5	0.9	52.7	5.6	5.7	32.5	
Cars	24	9	511	55	54	316	969
% Cars	100	100	99.4	100	96.4	99.7	99.4
Trucks	0	0	3	0	2	1	6
% Trucks	0	0	0.6	0	3.6	0.3	0.6

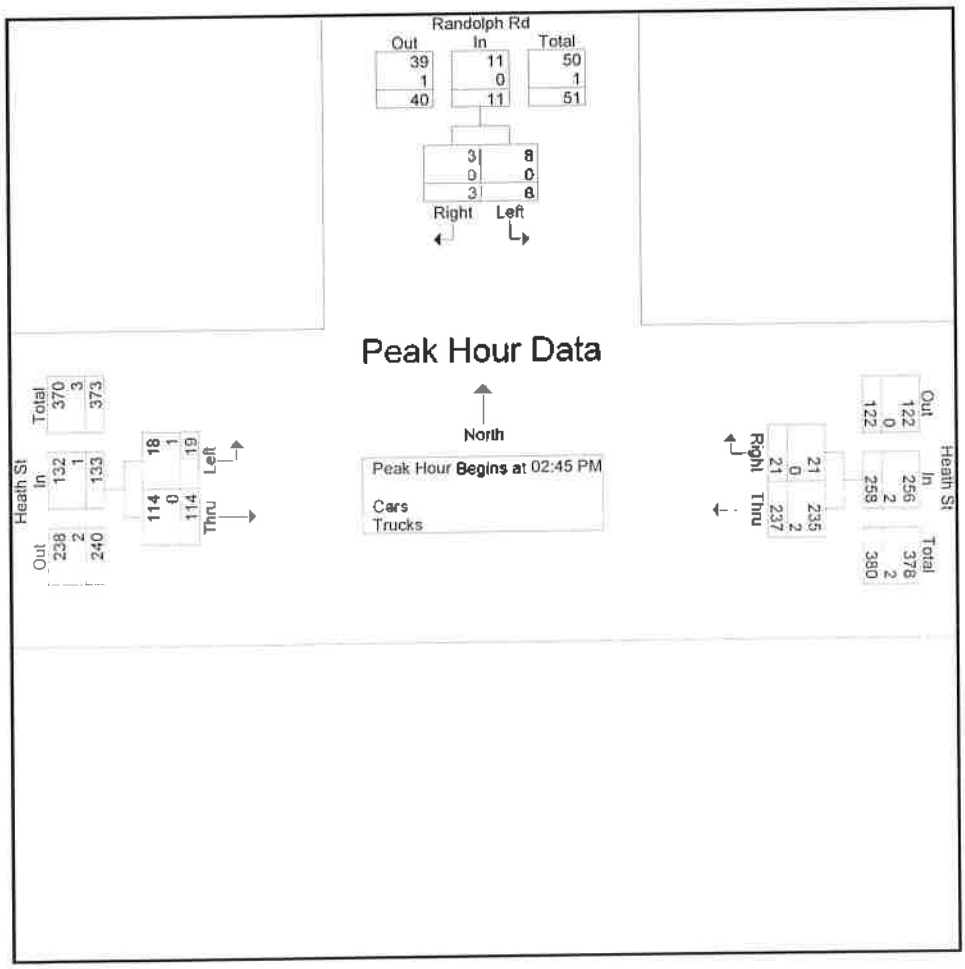
Accurate Counts

978-664-2565

N/S Street : Randolph Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900010
Site Code : 77900010
Start Date : 9/26/2018
Page No : 2

	Randolph Rd From North			Heath St From East			Heath St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	1	2	3	61	8	69	6	33	39	111
03:00 PM	4	1	5	48	3	51	5	25	30	86
03:15 PM	0	0	0	65	5	70	2	30	32	102
03:30 PM	3	0	3	63	5	68	6	26	32	103
Total Volume	8	3	11	237	21	258	19	114	133	402
% App. Total	72.7	27.3		91.9	8.1		14.3	85.7		
PHF	.500	.375	.550	.912	.656	.921	.792	.864	.853	.905
Cars	8	3	11	235	21	256	18	114	132	399
% Cars	100	100	100	99.2	100	99.2	94.7	100	99.2	99.3
Trucks	0	0	0	2	0	2	1	0	1	3
% Trucks	0	0	0	0.8	0	0.8	5.3	0	0.8	0.7



Accurate Counts

978-664-2565

N/S Street : Randolph Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900010
Site Code : 77900010
Start Date : 9/26/2018

Groups Printed- Bikes Peds

	Randolph Rd From North			Heath St From East			Heath St From West					
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	1	0	0	1	1
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	2	2	2	2	4
Total	0	0	0	0	0	0	0	3	2	2	3	5
02:00 PM	0	0	0	1	0	1	0	0	0	1	1	2
02:15 PM	0	0	0	0	0	0	0	0	1	1	0	1
02:30 PM	0	0	0	0	0	0	0	1	0	0	1	1
02:45 PM	0	0	0	1	0	0	0	1	0	0	2	2
Total	0	0	0	2	0	1	0	2	1	2	4	6
03:00 PM	0	0	0	0	0	0	0	1	0	0	1	1
03:15 PM	0	0	0	1	0	0	0	0	0	0	1	1
03:30 PM	0	0	0	0	0	1	0	0	0	1	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	0	1	0	1	2	3
Grand Total	0	0	0	3	0	2	0	6	3	5	9	14
Apprch %	0	0		100	0		0	100				
Total %	0	0		33.3	0		0	66.7		35.7	64.3	

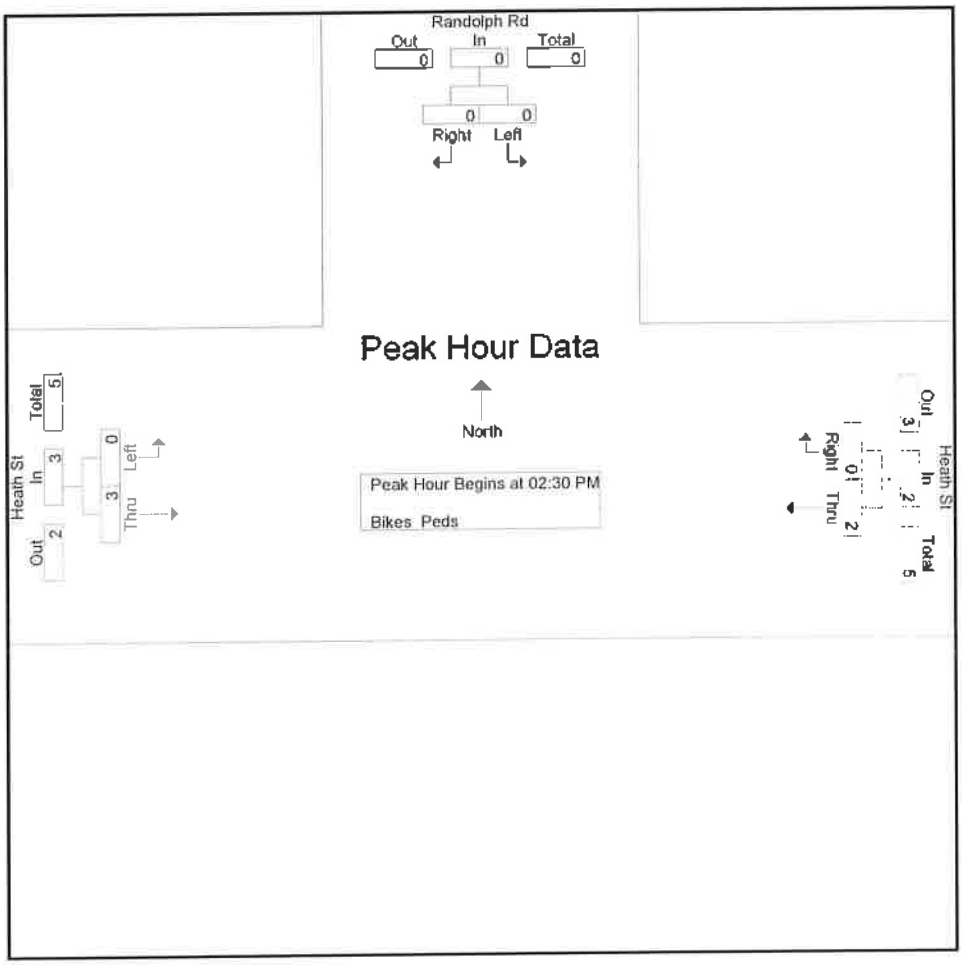
Accurate Counts

978-664-2565

N/S Street : Randolph Road
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900010
Site Code : 77900010
Start Date : 9/26/2018
Page No : 11

	Randolph Rd From North			Heath St From East			Heath St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:30 PM										
02:30 PM	0	0	0	0	0	0	0	1	1	1
02:45 PM	0	0	0	1	0	1	0	1	1	2
03:00 PM	0	0	0	0	0	0	0	1	1	1
03:15 PM	0	0	0	1	0	1	0	0	0	1
Total Volume	0	0	0	2	0	2	0	3	3	5
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.500	.000	.500	.000	.750	.750	.625



Traffic Count

School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VAI\7990\7990012A.ppd

Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 7990012A
Comment 1: N/S Street : Hammond Street
Comment 2: E/W Street : Rotary
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Hammond St From North			Rotary From East			Rotary From West			Hammond St From North	Rotary From East	Rotary From West
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Phf by approach		
07:00 AM	0	47	0	391	232	0	0	0	0	47	623	0
07:15 AM	0	90	0	433	275	0	0	0	0	90	708	0
07:30 AM	0	127	0	388	363	0	0	0	0	127	751	0
07:45 AM	0	139	0	435	335	0	0	0	0	139	770	0
	0	403	0	1647	1205	0	0	0	0	403	2852	0
No Build	0	432		1766	1292		0	0				
PHF	0.00	0.72		0.95	0.83		0.00	0.00		0.72	0.93	0.00
Truck	0	16		23	19		0	0				
% Truck	0.0%	4.0%		1.4%	1.6%		0.0%	0.0%				
PED	0	2	0	3	4	0	0	0	0			
01:30 PM	0	91	0	223	91	0	0	0	0	91	314	0
01:45 PM	0	115	0	266	104	0	0	0	0	115	370	0
02:00 PM	0	111	0	241	104	0	0	0	0	111	345	0
02:15 PM	0	101	0	287	122	0	0	0	0	101	409	0
	0	418	0	1017	421	0	0	0	0	418	1438	0
No Build	0	448		1090	451		0	0				
PHF	0.00	0.91		0.89	0.86		0.00	0.00		0.91	0.88	0.00
Truck	0	11		11	13		0	0				
% Truck	0.0%	2.6%		1.1%	3.1%		0.0%	0.0%				
PED	0	2	0	0	2	0	0	0	0			

Accurate Counts

978-664-2565

N/S Street : Warren Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900011
Site Code : 77900011
Start Date : 9/26/2018

Groups Printed- Cars - Trucks

	Heath St From East		Warren St From South		Heath St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	11	8	2	7	28	23	79
07:15 AM	6	20	15	16	41	35	133
07:30 AM	8	33	17	21	58	30	167
07:45 AM	12	26	27	47	72	32	216
Total	37	87	61	91	199	120	595
08:00 AM	12	28	32	40	57	24	193
08:15 AM	7	31	29	39	62	29	197
08:30 AM	3	28	28	28	46	39	172
08:45 AM	6	24	26	12	25	15	108
Total	28	111	115	119	190	107	670
Grand Total	65	198	176	210	389	227	1265
Apprch %	24.7	75.3	45.6	54.4	63.1	36.9	
Total %	5.1	15.7	13.9	16.6	30.8	17.9	
Cars	64	196	176	209	389	225	1259
% Cars	98.5	99	100	99.5	100	99.1	99.5
Trucks	1	2	0	1	0	2	6
% Trucks	1.5	1	0	0.5	0	0.9	0.5

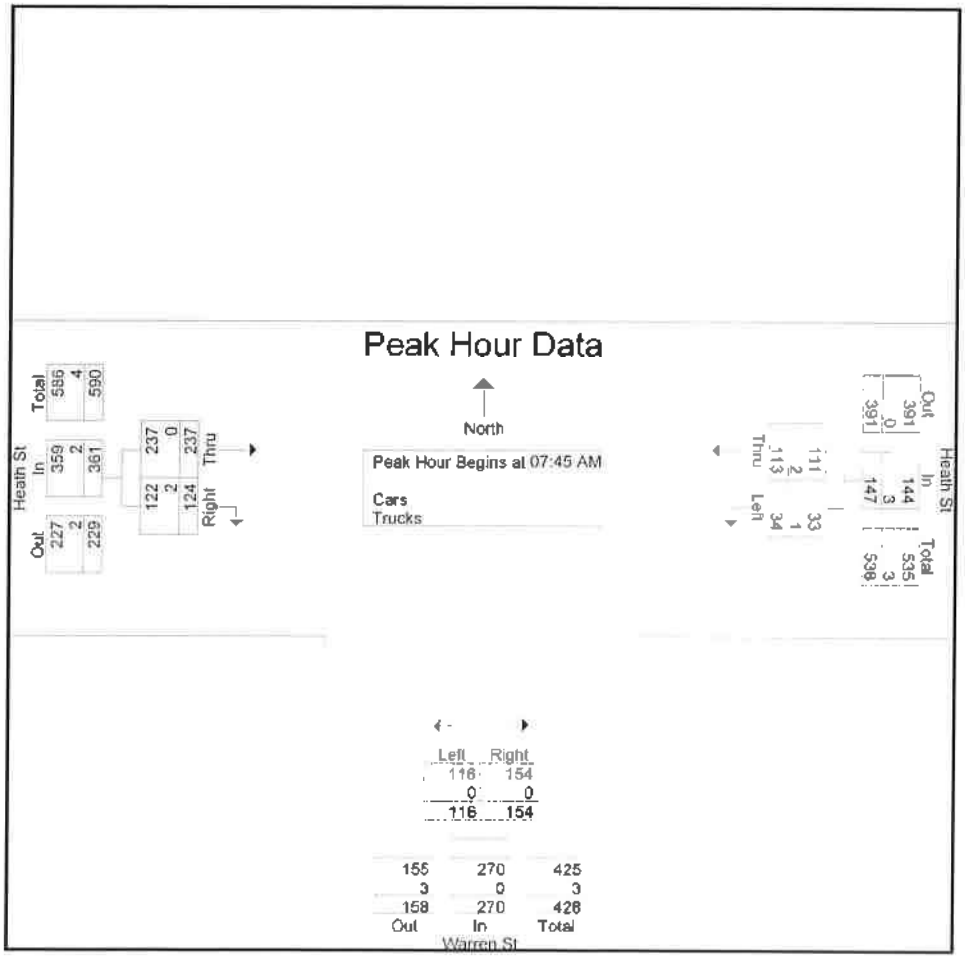
Accurate Counts

978-664-2565

N/S Street : Warren Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900011
Site Code : 77900011
Start Date : 9/26/2018
Page No : 2

	Heath St From East			Warren St From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	**12**	26	38	27	**47**	**74**	72	32	**104**	**216**
08:00 AM	12	28	**40**	**32**	40	72	57	24	81	193
08:15 AM	7	**31**	38	29	39	68	62	29	91	197
08:30 AM	3	28	31	28	28	56	46	**39**	85	172
Total Volume	34	113	147	116	154	270	237	124	361	778
% App. Total	**23.1**	76.9		43	57		65.7	**34.3**		
PHF	.708	.911	.919	.906	.819	.912	.823	.795	.868	.900
Cars	33	111	144	116	**154**	270	237	122	359	773
% Cars	97.1	98.2	98.0	100	100	100	100	98.4	99.4	99.4
Trucks	1	2	3	0	0	0	0	2	2	5
% Trucks	2.9	1.8	2.0	0	0	0	0	1.6	0.6	0.6



Accurate Counts

978-664-2565

N/S Street : Warren Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900011
Site Code : 77900011
Start Date : 9/26/2018

Groups Printed- Bikes Peds

	Heath St From East			Warren St From South			Heath St From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	1	0	0	0	1	1	2
Total	0	0	0	0	1	1	0	0	0	1	1	2
08:00 AM	1	0	0	0	2	0	0	0	0	0	3	3
08:15 AM	0	0	0	1	0	1	0	0	0	1	1	2
08:30 AM	0	0	0	0	0	1	0	0	0	1	0	1
08:45 AM	0	0	0	0	0	1	0	0	0	1	0	1
Total	1	0	0	1	2	3	0	0	0	3	4	7
Grand Total	1	0	0	1	3	4	0	0	0	4	5	9
Apprch %	100	0		25	75		0	0				
Total %	20	0		20	60		0	0		44.4	55.6	

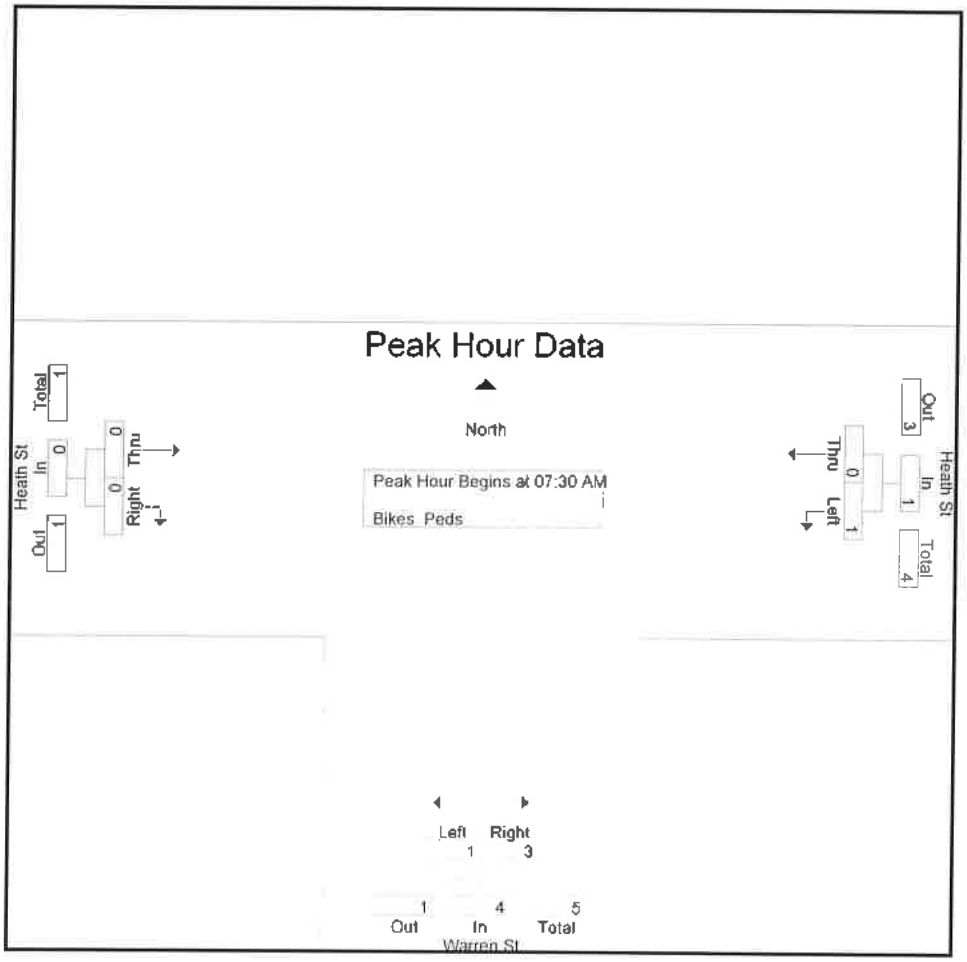
Accurate Counts

978-664-2565

N/S Street : Warren Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900011
Site Code : 77900011
Start Date : 9/26/2018
Page No : 11

	Heath St From East			Warren St From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	1	0	0	0	1
08:00 AM	1	0	1	0	2	2	0	0	0	3
08:15 AM	0	0	0	1	0	1	0	0	0	1
Total Volume	1	0	1	1	3	4	0	0	0	5
% App. Total	100	0		25	75		0	0		
PHF	.250	.000	.250	.250	.375	.500	.000	.000	.000	.417



Accurate Counts

976-664-2565

N/S Street : Warren Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900011
Site Code : 77900011
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Heath St From East		Warren St From South		Heath St From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
01:00 PM	7	17	7	2	15	11	59
01:15 PM	5	19	9	8	10	8	59
01:30 PM	8	22	4	7	11	7	59
01:45 PM	13	22	6	3	20	4	68
Total	33	80	26	20	56	30	245
02:00 PM	6	13	12	2	9	11	53
02:15 PM	6	26	10	4	14	10	70
02:30 PM	6	24	13	4	17	13	77
02:45 PM	11	44	15	4	20	15	109
Total	29	107	50	14	60	49	309
03:00 PM	9	39	11	4	14	14	91
03:15 PM	10	42	19	5	19	9	104
03:30 PM	5	43	25	6	16	10	105
03:45 PM	10	42	17	3	17	12	101
Total	34	166	72	18	66	45	401
Grand Total	96	353	148	52	182	124	955
Apprch %	21.4	78.6	74	26	59.5	40.5	
Total %	10.1	37	15.5	5.4	19.1	13	
Cars	95	351	145	52	179	124	946
% Cars	99	99.4	98	100	98.4	100	99.1
Trucks	1	2	3	0	3	0	9
% Trucks	1	0.6	2	0	1.6	0	0.9

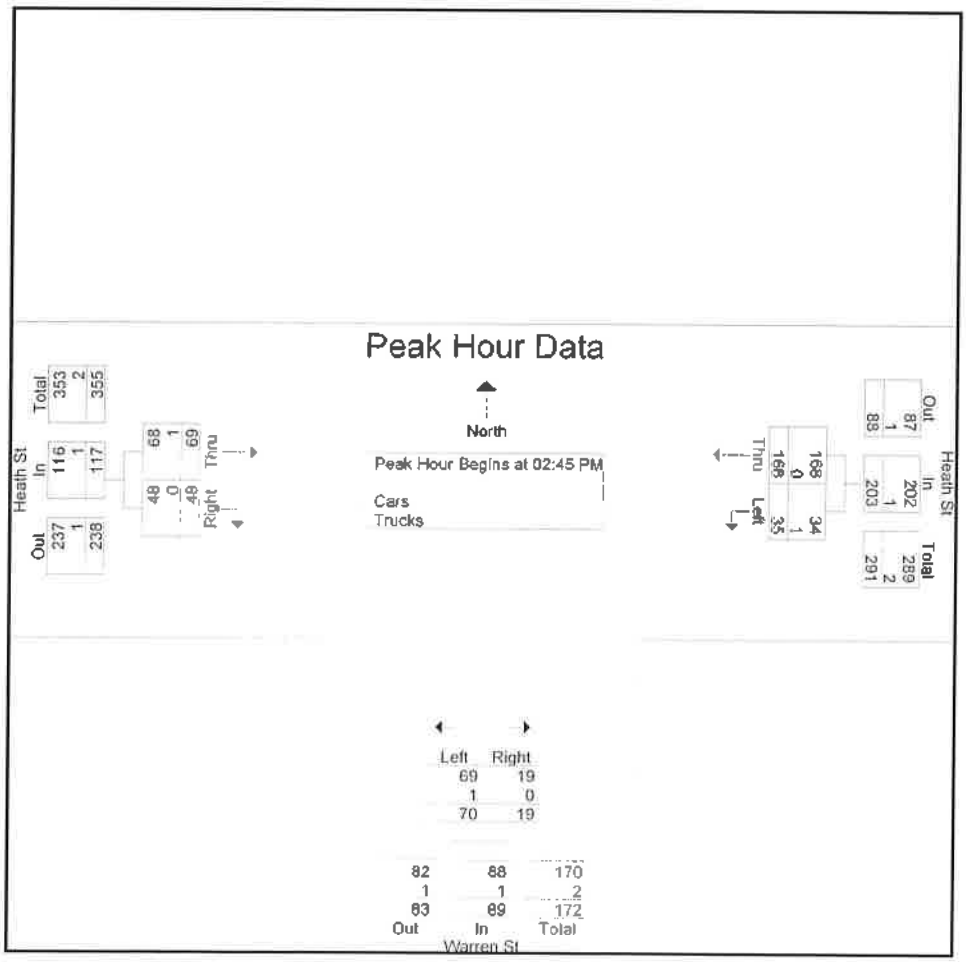
Accurate Counts

978-664-2565

N/S Street : Warren Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900011
Site Code : 77900011
Start Date : 9/26/2018
Page No : 2

	Heath St From East			Warren St From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	**11**	**44**	**55**	15	4	19	**20**	**15**	**35**	**109**
03:00 PM	9	39	48	11	4	15	14	14	28	91
03:15 PM	10	42	52	19	5	24	19	9	28	104
03:30 PM	5	43	48	**25**	**6**	**31**	16	10	26	105
Total Volume	35	168	203	70	19	89	69	48	117	409
% App. Total	17.2	82.8		78.7	21.3		59	41		
PHF	.795	.955	.923	.700	.792	.718	.863	.800	.836	.938
Cars	34	168	202	69	19	88	68	48	116	406
% Cars	97.1	100	99.5	98.6	100	98.9	98.6	100	99.1	99.3
Trucks	1	0	1	1	0	1	1	0	1	3
% Trucks	2.9	0	0.5	1.4	0	1.1	1.4	0	0.9	0.7



Accurate Counts

978-664-2565

N/S Street : Warren Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900011
Site Code : 77900011
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Heath St From East			Warren St From South			Heath St From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	1	0	0	0	1	0	1
Total	0	0	0	0	0	1	0	0	0	1	0	1
02:00 PM	0	0	0	1	0	0	0	0	0	0	1	1
02:15 PM	0	0	0	0	0	2	0	0	0	2	0	2
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	2	0	0	0	2	1	3
03:00 PM	0	0	0	0	0	0	1	0	0	0	1	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	1	0	0	0	0	0	0	1	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	1	0	0	1	1	2
Grand Total	0	0	1	1	0	3	1	0	0	4	2	6
Apprch %	0	0		100	0		100	0				
Total %	0	0		50	0		50	0		66.7	33.3	

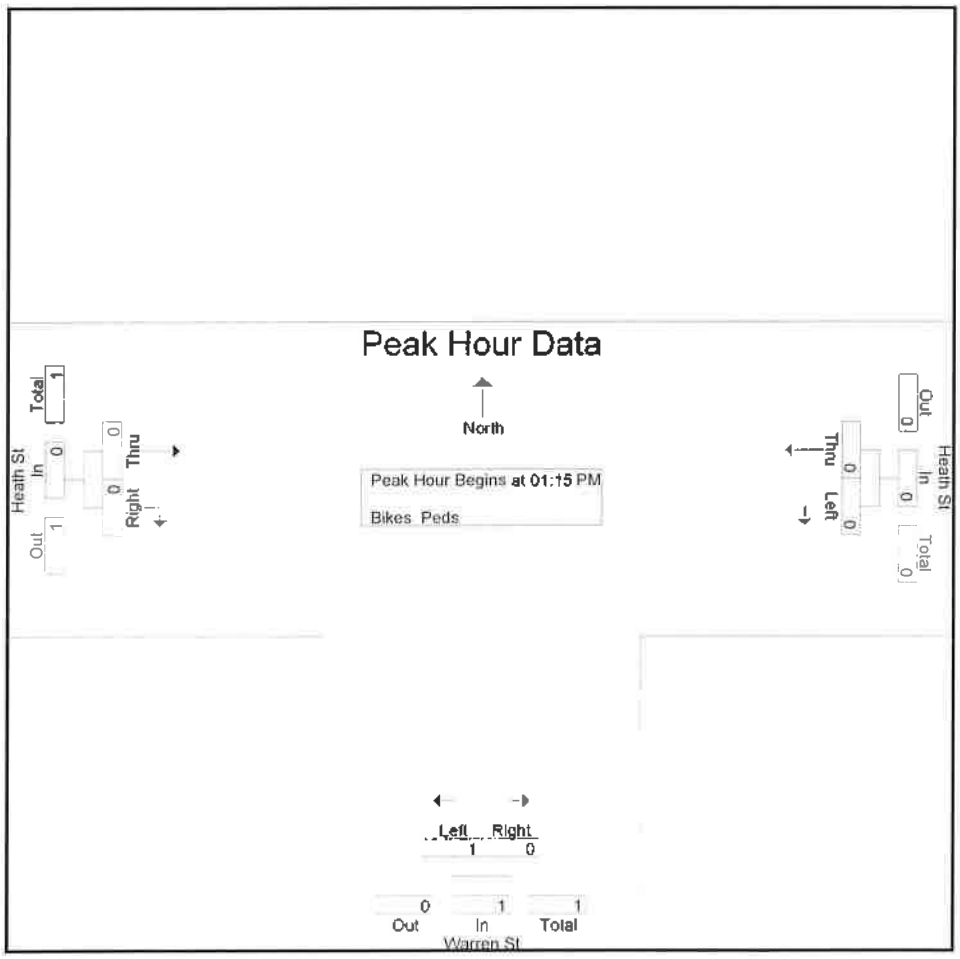
Accurate Counts

978-664-2565

N/S Street : Warren Street
E/W Street : Heath Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 79900011
Site Code : 77900011
Start Date : 9/26/2018
Page No : 11

	Heath St From East			Warren St From South			Heath St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 01:15 PM										
01:15 PM	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	1	0	1	0	0	0	1
Total Volume	0	0	0	1	0	1	0	0	0	1
% App. Total	0	0		100	0		0	0		
PHF	.000	.000	.000	.250	.000	.250	.000	.000	.000	.250



Traffic Count

School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VAI\7990\7990012A.ppd

Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 7990012A
Comment 1: N/S Street : Hammond Street
Comment 2: E/W Street : Rotary
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Hammond St From North			Rotary From East			Rotary From West			Hammond St From North	Rotary From East	Rotary From West
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Phf by approach		
07:00 AM	0	47	0	391	232	0	0	0	0	47	623	0
07:15 AM	0	90	0	433	275	0	0	0	0	90	708	0
07:30 AM	0	127	0	388	363	0	0	0	0	127	751	0
07:45 AM	0	139	0	435	335	0	0	0	0	139	770	0
	0	403	0	1647	1205	0	0	0	0	403	2852	0
No Build	0	432		1766	1292		0	0				
PHF	0.00	0.72		0.95	0.83		0.00	0.00		0.72	0.93	0.00
Truck	0	16		23	19		0	0				
% Truck	0.0%	4.0%		1.4%	1.6%		0.0%	0.0%				
PED	0	2	0	3	4	0	0	0	0			
01:30 PM	0	91	0	223	91	0	0	0	0	91	314	0
01:45 PM	0	115	0	266	104	0	0	0	0	115	370	0
02:00 PM	0	111	0	241	104	0	0	0	0	111	345	0
02:15 PM	0	101	0	287	122	0	0	0	0	101	409	0
	0	418	0	1017	421	0	0	0	0	418	1438	0
No Build	0	448		1090	451		0	0				
PHF	0.00	0.91		0.89	0.86		0.00	0.00		0.91	0.88	0.00
Truck	0	11		11	13		0	0				
% Truck	0.0%	2.6%		1.1%	3.1%		0.0%	0.0%				
PED	0	2	0	0	2	0	0	0	0			

Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012A
Site Code : 7990012A
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

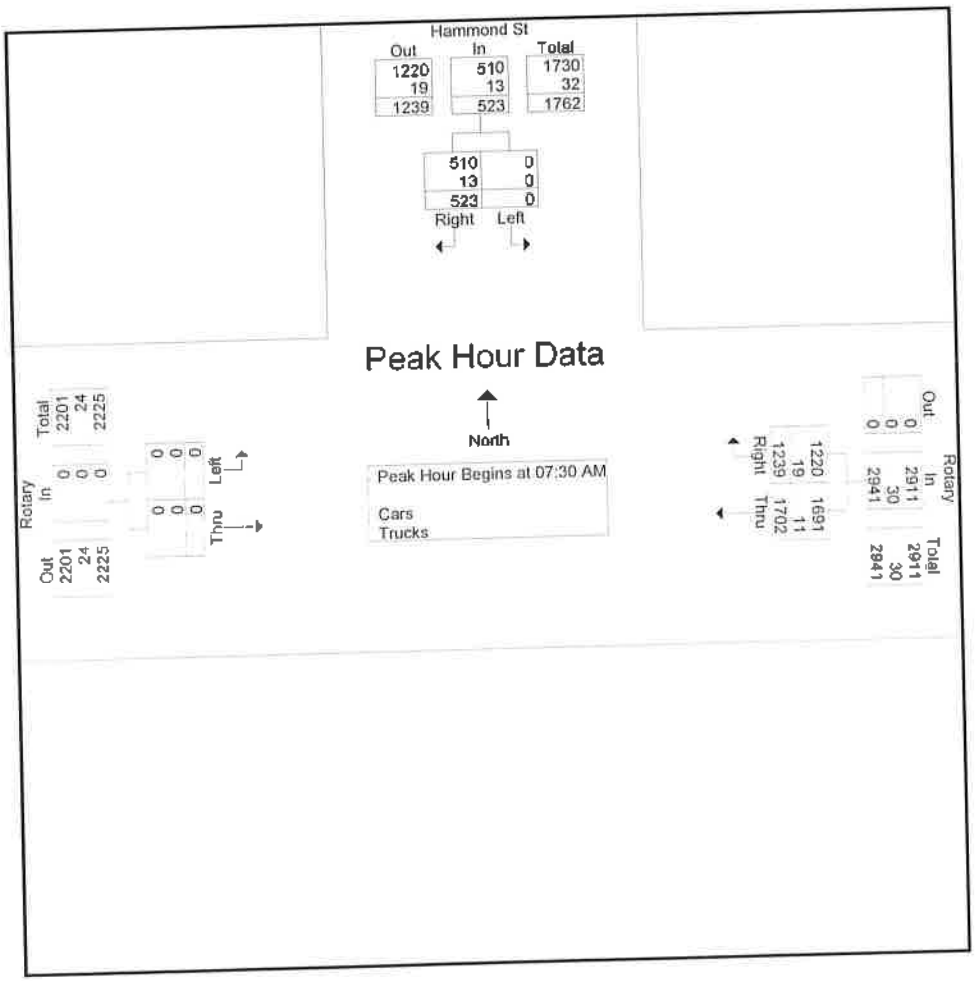
	Hammond St From North		Rotary From East		Rotary From West		
Start Time	Left	Right	Thru	Right	Left	Thru	Int. Total
07:00 AM	0	47	391	232	0	0	670
07:15 AM	0	90	433	275	0	0	798
07:30 AM	0	127	388	363	0	0	878
07:45 AM	0	139	435	335	0	0	909
Total	0	403	1647	1205	0	0	3255
08:00 AM	0	136	442	287	0	0	865
08:15 AM	0	121	437	254	0	0	812
08:30 AM	0	93	415	265	0	0	773
08:45 AM	0	101	426	220	0	0	747
Total	0	451	1720	1026	0	0	3197
Grand Total	0	854	3367	2231	0	0	6452
Apprch %	0	100	60.1	39.9	0	0	
Total %	0	13.2	52.2	34.6	0	0	
Cars	0	827	3339	2191	0	0	6357
% Cars	0	96.8	99.2	98.2	0	0	98.5
Trucks	0	27	28	40	0	0	95
% Trucks	0	3.2	0.8	1.8	0	0	1.5

Accurate Counts
978-664-2565

N/S Street : Hammond Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012A
Site Code : 7990012A
Start Date : 9/26/2018
Page No : 2

	Hammond St From North			Rotary From East			Rotary From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	127	127	388	363	751	0	0	0	878
07:45 AM	0	**139**	139	435	335	**770**	0	0	0	**909**
08:00 AM	0	136	136	**442**	287	729	0	0	0	865
08:15 AM	0	121	121	437	254	691	0	0	0	812
Total Volume	0	523	523	1702	1239	2941	0	0	0	3464
% App. Total	0	100		57.9	42.1		0	0		
PHF	.000	.941	.941	.963	.853	.955	.000	.000	.000	.953
Cars	0	510	510	1691	1220	2911	0	0	0	3421
% Cars	0	97.5	97.5	99.4	98.5	99.0	0	0	0	98.8
Trucks	0	13	13	11	19	30	0	0	0	43
% Trucks	0	2.5	2.5	0.6	1.5	1.0	0	0	0	1.2



Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012A
Site Code : 7990012A
Start Date : 9/26/2018

Groups Printed- Bikes Peds

	Hammond St From North			Rotary From East			Rotary From West					
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	2	2
07:15 AM	0	1	0	0	1	0	0	0	0	0	2	2
07:30 AM	0	0	0	0	1	0	0	0	0	0	1	1
07:45 AM	0	0	0	2	2	0	0	0	0	0	4	4
Total	0	2	0	3	4	0	0	0	0	0	9	9
08:00 AM	0	1	0	0	1	0	0	0	0	0	2	2
08:15 AM	0	0	0	1	1	0	0	0	0	0	2	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	2	0	0	0	0	0	4	4
Grand Total	0	3	0	4	6	0	0	0	0	0	13	13
Apprch %	0	100		40	60		0	0				
Total %	0	23.1		30.8	46.2		0	0		0	100	

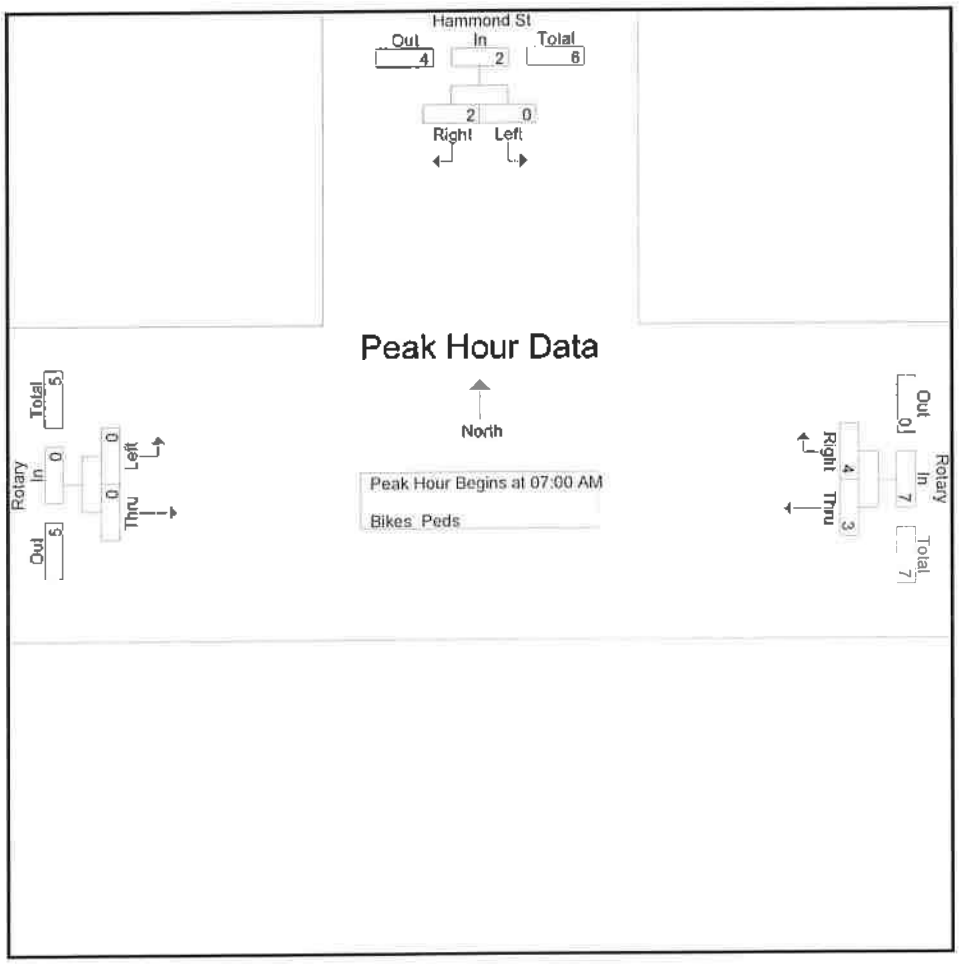
Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012A
Site Code : 7990012A
Start Date : 9/26/2018
Page No : 11

	Hammond St From North			Rotary From East			Rotary From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	1	1	1	0	1	0	0	0	2
07:15 AM	0	1	1	0	1	1	0	0	0	2
07:30 AM	0	0	0	0	1	1	0	0	0	1
07:45 AM	0	0	0	2	2	4	0	0	0	4
Total Volume	0	2	2	3	4	7	0	0	0	9
% App. Total	0	100		42.9	57.1		0	0		
PHF	.000	.500	.500	.375	.500	.438	.000	.000	.000	.563



Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012A
Site Code : 7990012A
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Hammond St From North		Rotary From East		Rotary From West		
Start Time	Left	Right	Thru	Right	Left	Thru	Int. Total
01:00 PM	0	97	204	90	0	0	391
01:15 PM	0	90	271	105	0	0	466
01:30 PM	0	91	223	91	0	0	405
01:45 PM	0	115	266	104	0	0	485
Total	0	393	964	390	0	0	1747
02:00 PM	0	111	241	104	0	0	456
02:15 PM	0	101	287	122	0	0	510
02:30 PM	0	117	318	152	0	0	587
02:45 PM	0	142	355	121	0	0	618
Total	0	471	1201	499	0	0	2171
03:00 PM	0	185	328	120	0	0	633
03:15 PM	0	207	329	150	0	0	686
03:30 PM	0	177	356	109	0	0	642
03:45 PM	0	186	369	102	0	0	657
Total	0	755	1382	481	0	0	2618
Grand Total	0	1619	3547	1370	0	0	6536
Apprch %	0	100	72.1	27.9	0	0	
Total %	0	24.8	54.3	21	0	0	
Cars	0	1589	3510	1345	0	0	6444
% Cars	0	98.1	99	98.2	0	0	98.6
Trucks	0	30	37	25	0	0	92
% Trucks	0	1.9	1	1.8	0	0	1.4

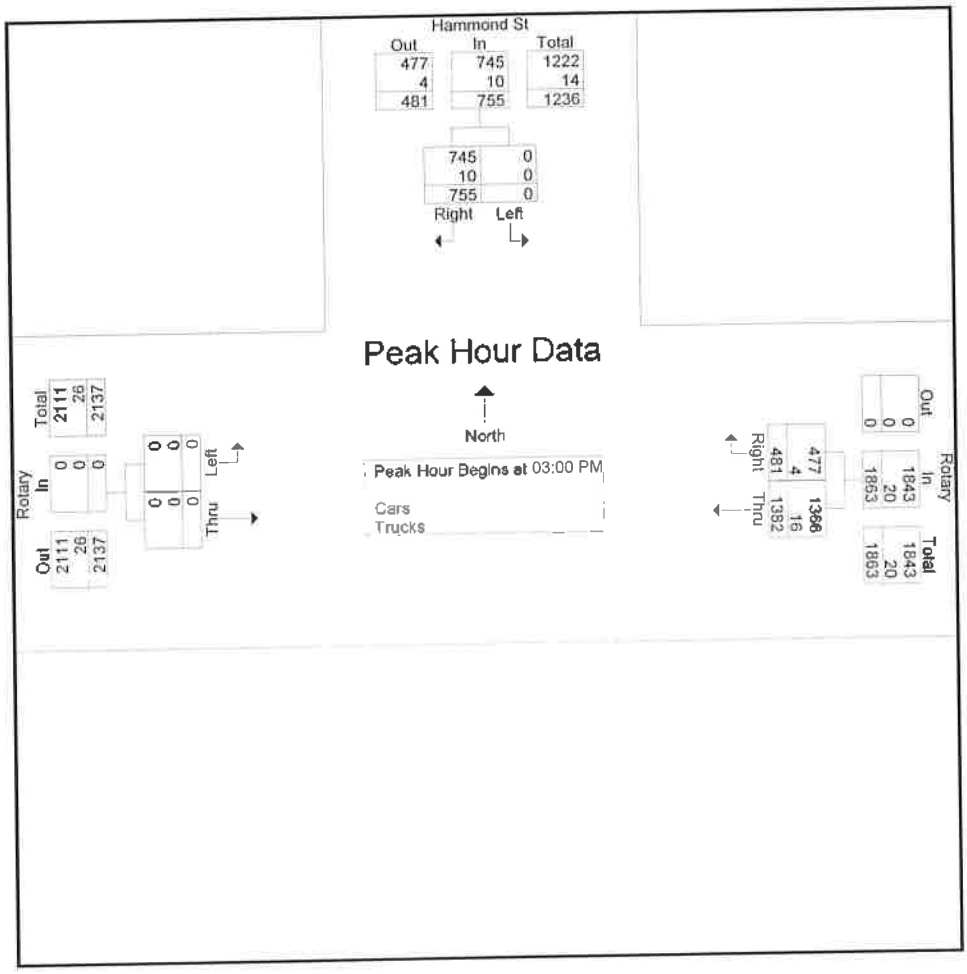
Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012A
Site Code : 7990012A
Start Date : 9/26/2018
Page No : 2

	Hammond St From North			Rotary From East			Rotary From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	0	185	185	328	120	448	0	0	0	633
03:15 PM	0	**207**	**207**	329	**150**	**479**	0	0	0	**686**
03:30 PM	0	177	177	356	109	465	0	0	0	642
03:45 PM	0	186	186	**369**	102	471	0	0	0	657
Total Volume	0	755	755	1382	481	1863	0	0	0	2618
% App. Total	0	100		74.2	25.8		0	0		
PHF	.000	.912	.912	.936	.802	.972	.000	.000	.000	.954
Cars	0	745	745	1366	477	1843	0	0	0	2588
% Cars	0	98.7	98.7	98.8	99.2	98.9	0	0	0	98.9
Trucks	0	10	10	16	4	20	0	0	0	30
% Trucks	0	1.3	1.3	1.2	0.8	1.1	0	0	0	1.1



Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012A
Site Code : 7990012A
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Hammond St From North			Rotary From East			Rotary From West					
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	1	0	0	0	0	0	1	1
01:30 PM	0	1	0	0	1	0	0	0	0	0	2	2
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	2	0	0	0	0	0	3	3
02:00 PM	0	1	0	0	0	0	0	0	0	0	1	1
02:15 PM	0	0	0	0	1	0	0	0	0	0	1	1
02:30 PM	0	0	0	1	0	0	0	0	0	0	1	1
02:45 PM	0	1	0	1	1	0	0	0	0	0	3	3
Total	0	2	0	2	2	0	0	0	0	0	6	6
03:00 PM	0	1	0	1	2	0	0	0	0	0	4	4
03:15 PM	0	1	0	2	0	0	0	0	0	0	3	3
03:30 PM	0	3	0	1	0	0	0	0	0	0	4	4
03:45 PM	0	0	0	0	1	0	0	0	0	0	1	1
Total	0	5	0	4	3	0	0	0	0	0	12	12
Grand Total	0	8	0	6	7	0	0	0	0	0	21	21
Apprch %	0	100		46.2	53.8		0	0				
Total %	0	38.1		28.6	33.3		0	0		0	100	

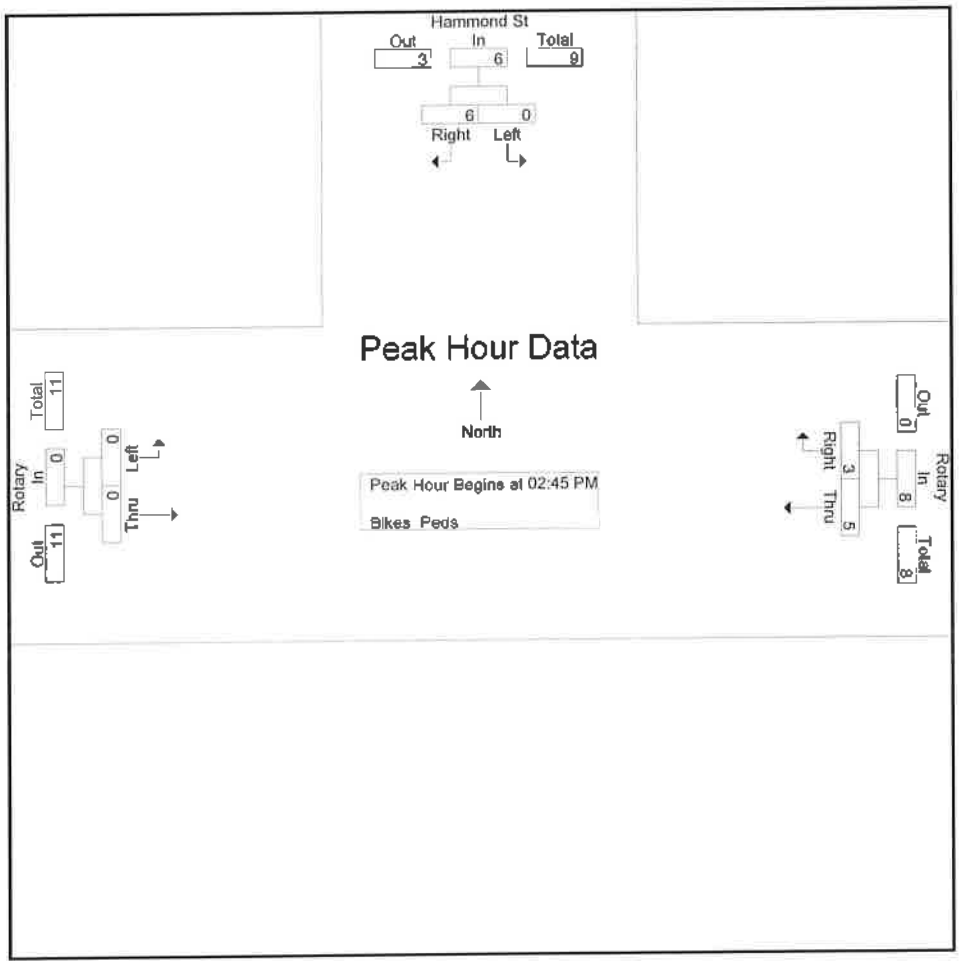
Accurate Counts

978-664-2565

N/S Street : Hammond Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012A
Site Code : 7990012A
Start Date : 9/26/2018
Page No : 11

	Hammond St From North			Rotary From East			Rotary From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	0	1	1	1	1	2	0	0	0	3
03:00 PM	0	1	1	1	2	3	0	0	0	4
03:15 PM	0	1	1	2	0	2	0	0	0	3
03:30 PM	0	3	3	1	0	1	0	0	0	4
Total Volume	0	6	6	5	3	8	0	0	0	14
% App. Total	0	100		62.5	37.5		0	0		
PHF	.000	.500	.500	.625	.375	.667	.000	.000	.000	.875



School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VA\7990\7990012B.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM

Site Code: 7990012B
Comment 1: N/S Street : Rotary
Comment 2: E/W Street : Hammond Pond Parkway
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Rotary From North			Rotary From South			Hammond Pond Pkwy From West			Rotary From North	Rotary From South	Pond Pkwy From West
Start Time	Thru	Right	Peds	Left	Thru	Peds	Left	Right	Peds	Phf by approach		
07:00 AM	66	372	0	0	0	0	0	173	0	438	0	173
07:15 AM	126	397	0	0	0	0	0	207	0	523	0	207
07:30 AM	166	349	0	0	0	0	0	236	0	515	0	236
07:45 AM	172	402	0	0	0	0	0	256	0	574	0	256
	530	1520	0	0	0	0	0	872	0	2050	0	872
No Build	568	1630		0	0		0	935				
PHF	0.77	0.95		0.00	0.00		0.00	0.85		0.89	0.00	0.85
Truck	23	16		0	0		0	9				
% Truck	4.3%	1.1%		0.0%	0.0%		0.0%	1.0%				
PED	0	0	0	0	0	0	0	0	2			
01:30 PM	162	152	0	0	0	0	0	222	0	314	0	222
01:45 PM	195	186	0	0	0	0	0	224	0	381	0	224
02:00 PM	200	152	0	0	0	0	0	226	0	352	0	226
02:15 PM	191	197	0	0	0	0	0	269	0	388	0	269
	748	687	0	0	0	0	0	941	0	1435	0	941
No Build	802	737 736		0	0		0	1009				
PHF	0.94	0.87		0.00	0.00		0.00	0.87		0.92	0.00	0.87
Truck	16	6		0	0		0	4				
% Truck	2.1%	0.9%		0.0%	0.0%		0.0%	0.4%				
PED	0	2	0	0	0	0	0	2	1			

Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Hammond Pond Parkway
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012B
Site Code : 7990012B
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

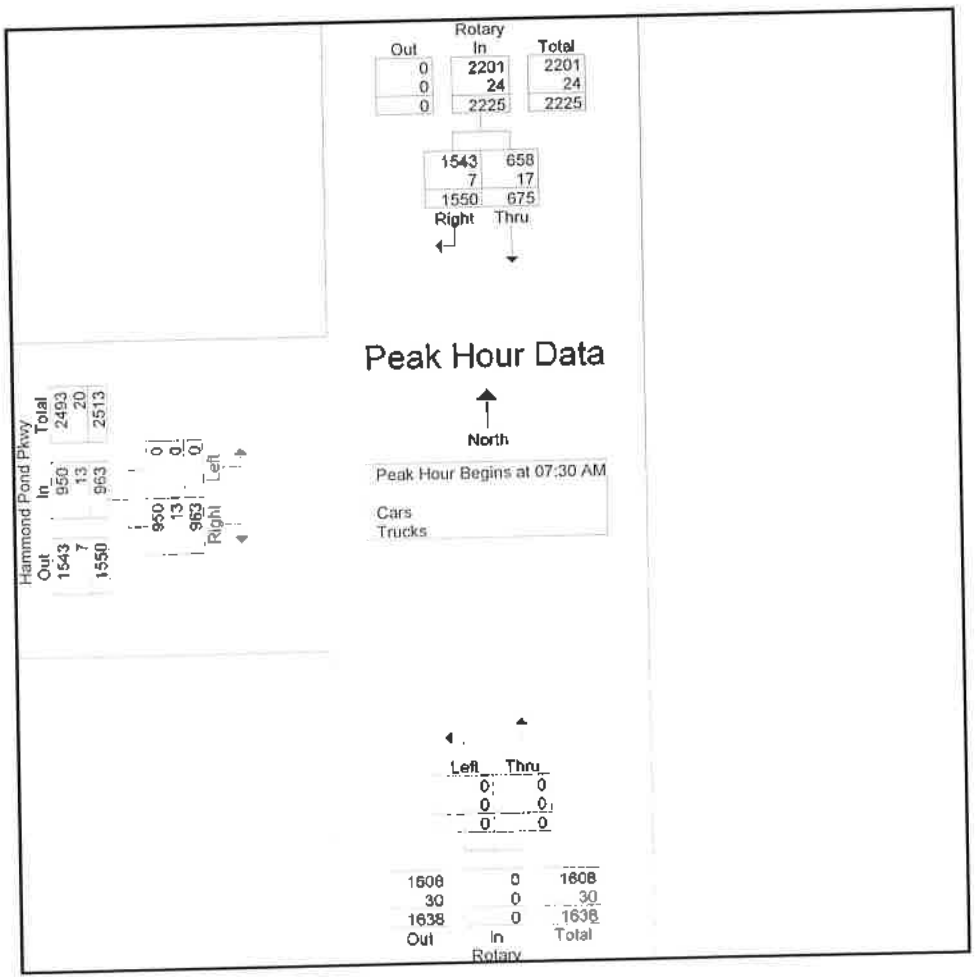
	Rotary From North		Rotary From South		Hammond Pond Pkwy From West		
Start Time	Thru	Right	Left	Thru	Left	Right	Int. Total
07:00 AM	66	372	0	0	0	173	611
07:15 AM	126	397	0	0	0	207	730
07:30 AM	166	349	0	0	0	236	751
07:45 AM	172	402	0	0	0	256	830
Total	530	1520	0	0	0	872	2922
08:00 AM	173	405	0	0	0	243	821
08:15 AM	164	394	0	0	0	228	786
08:30 AM	130	378	0	0	0	211	719
08:45 AM	162	365	0	0	0	193	720
Total	629	1542	0	0	0	875	3046
Grand Total	1159	3062	0	0	0	1747	5968
Apprch %	27.5	72.5	0	0	0	100	
Total %	19.4	51.3	0	0	0	29.3	
Cars	1125	3041	0	0	0	1726	5892
% Cars	97.1	99.3	0	0	0	98.8	98.7
Trucks	34	21	0	0	0	21	76
% Trucks	2.9	0.7	0	0	0	1.2	1.3

Accurate Counts
978-664-2565

N/S Street : Rotary
E/W Street : Hammond Pond Parkway
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012B
Site Code : 7990012B
Start Date : 9/26/2018
Page No : 2

	Rotary From North			Rotary From South			Hammond Pond Pkwy From West			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	166	349	515	0	0	0	0	236	236	751
07:45 AM	172	402	574	0	0	0	0	**256**	**256**	830
08:00 AM	**173**	**405**	**578**	0	0	0	0	243	243	821
08:15 AM	164	394	558	0	0	0	0	228	228	786
Total Volume	675	1550	2225	0	0	0	0	963	963	3188
% App. Total	30.3	69.7		0	0		0	100		
PHF	.975	.957	.962	.000	.000	.000	.000	.940	.940	.960
Cars	658	1543	2201	0	0	0	0	950	950	3151
% Cars	97.5	99.5	98.9	0	0	0	0	98.7	98.7	98.8
Trucks	17	7	24	0	0	0	0	13	13	37
% Trucks	2.5	0.5	1.1	0	0	0	0	1.3	1.3	1.2



Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Hammond Pond Parkway
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012B
Site Code : 7990012B
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

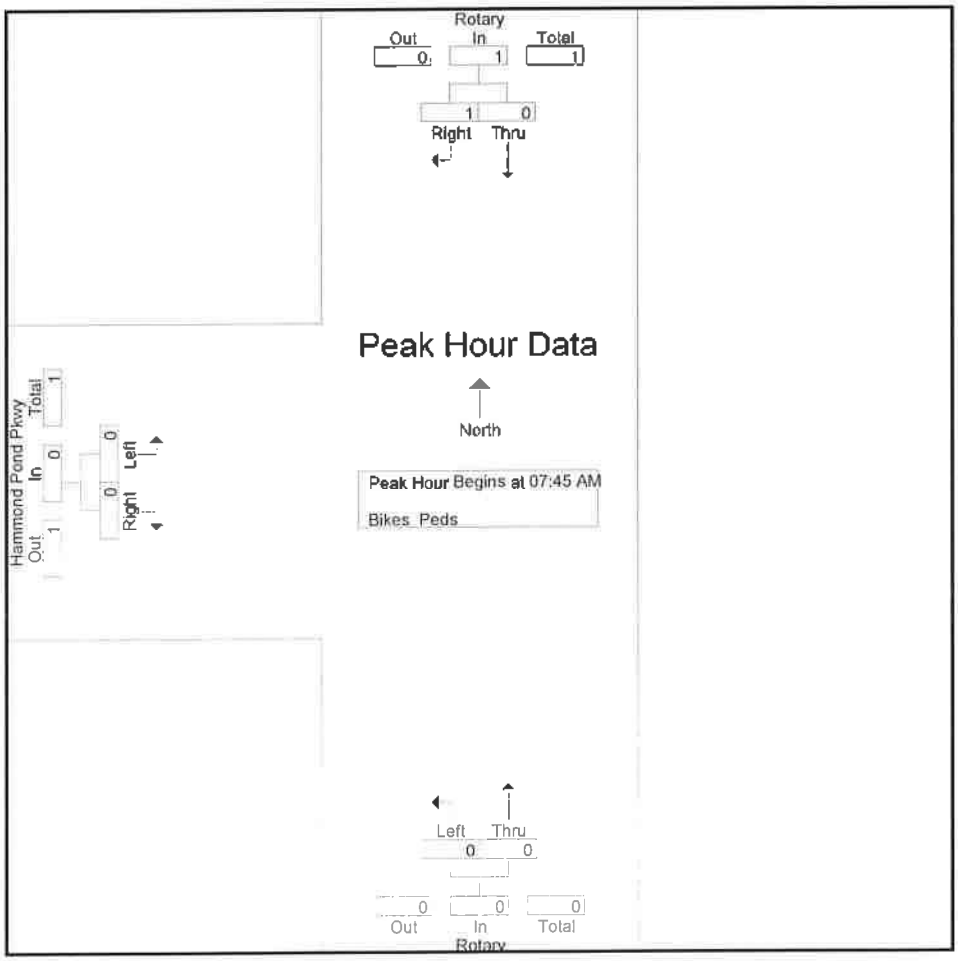
	Rotary From North			Rotary From South			Hammond Pond Pkwy From West					
Start Time	Thru	Right	Peds	Left	Thru	Peds	Left	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	2	2	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	2	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	0	0	0	0	0	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	1	1	0	1
Total	0	1	0	0	0	0	0	0	1	1	1	2
Grand Total	0	1	0	0	0	0	0	0	3	3	1	4
Apprch %	0	100		0	0		0	0				
Total %	0	100		0	0		0	0		75	25	

Accurate Counts
978-664-2565

N/S Street : Rotary
E/W Street : Hammond Pond Parkway
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012B
Site Code : 7990012B
Start Date : 9/26/2018
Page No : 11

	Rotary From North			Rotary From South			Hammond Pond Pkwy From West			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	1	1	0	0	0	0	0	0	1
% App. Total	0	100		0	0		0	0		
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000	.250



Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Hammond Pond Parkway
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012B
Site Code : 7990012B
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Rotary From North		Rotary From South		Hammond Pond Pkwy From West		
Start Time	Thru	Right	Left	Thru	Left	Right	Int. Total
01:00 PM	122	179	0	0	0	208	509
01:15 PM	150	211	0	0	0	215	576
01:30 PM	162	152	0	0	0	222	536
01:45 PM	195	186	0	0	0	224	605
Total	629	728	0	0	0	869	2226
02:00 PM	200	152	0	0	0	226	578
02:15 PM	191	197	0	0	0	269	657
02:30 PM	209	226	0	0	0	246	681
02:45 PM	279	218	0	0	0	280	777
Total	879	793	0	0	0	1021	2693
03:00 PM	299	214	0	0	0	319	832
03:15 PM	340	196	0	0	0	316	852
03:30 PM	332	201	0	0	0	272	805
03:45 PM	326	229	0	0	0	322	877
Total	1297	840	0	0	0	1229	3366
Grand Total	2805	2361	0	0	0	3119	8285
Apprch %	54.3	45.7	0	0	0	100	
Total %	33.9	28.5	0	0	0	37.6	
Cars	2758	2341	0	0	0	3101	8200
% Cars	98.3	99.2	0	0	0	99.4	99
Trucks	47	20	0	0	0	18	85
% Trucks	1.7	0.8	0	0	0	0.6	1

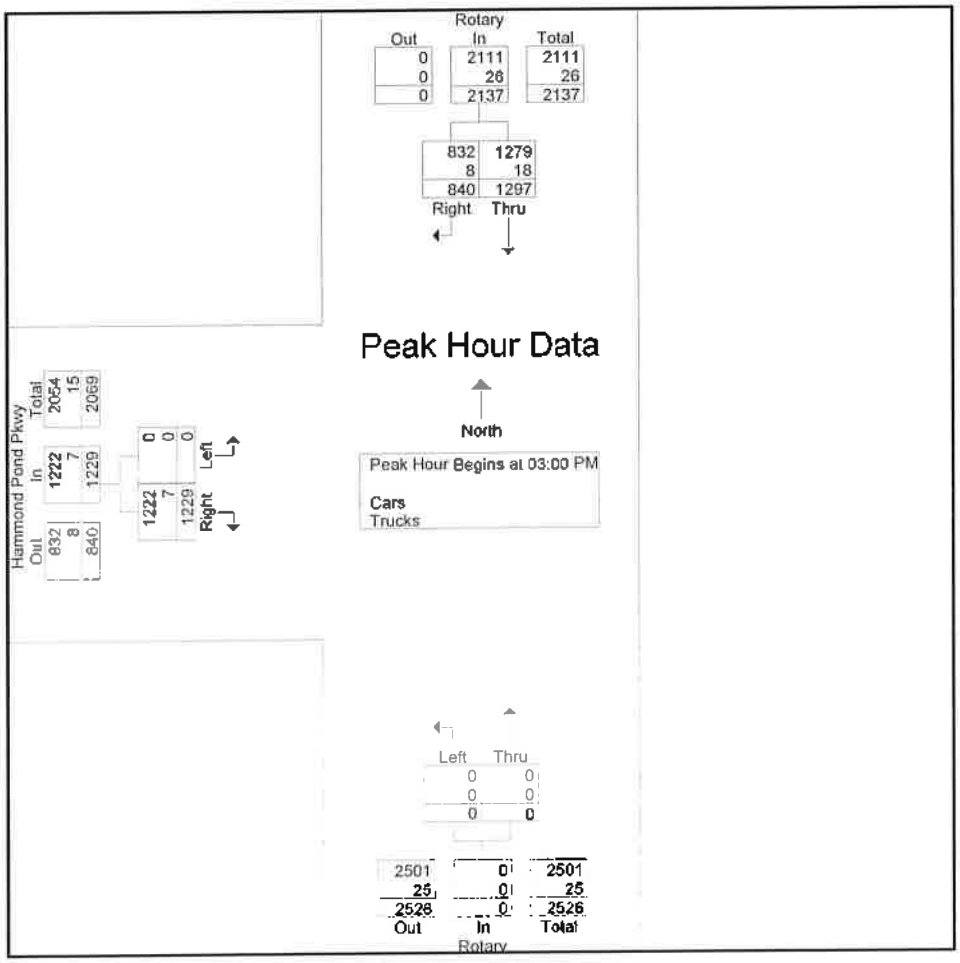
Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Hammond Pond Parkway
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012B
Site Code : 7990012B
Start Date : 9/26/2018
Page No : 2

	Rotary From North			Rotary From South			Hammond Pond Pkwy From West			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	299	214	513	0	0	0	0	319	319	832
03:15 PM	**340**	196	536	0	0	0	0	316	316	852
03:30 PM	332	201	533	0	0	0	0	272	272	805
03:45 PM	326	229	**555**	0	0	0	0	322	**322**	**877**
Total Volume	1297	840	2137	0	0	0	0	1229	1229	3366
% App. Total	60.7	39.3		0	0		0	100		
PHF	.954	.917	.963	.000	.000	.000	.000	.954	.954	.960
Cars	1279	832	2111	0	0	0	0	1222	1222	3333
% Cars	98.6	99.0	98.8	0	0	0	0	99.4	99.4	99.0
Trucks	18	8	26	0	0	0	0	7	7	33
% Trucks	1.4	1.0	1.2	0	0	0	0	0.6	0.6	1.0



Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Hammond Pond Parkway
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012B
Site Code : 7990012B
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Rotary From North			Rotary From South			Hammond Pond Pkwy From West					
Start Time	Thru	Right	Peds	Left	Thru	Peds	Left	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	0	0	0	0	0	3	3	0	3
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	3	3	0	3
02:00 PM	0	2	0	0	0	0	0	2	1	1	4	5
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	1	1	0	1
Total	0	2	0	0	0	0	0	2	2	2	4	6
03:00 PM	0	0	0	0	0	0	0	0	1	1	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	1	0	0	0	0	0	0	2	2	1	3
03:45 PM	0	2	0	0	0	0	0	0	1	1	2	3
Total	0	3	0	0	0	0	0	0	4	4	3	7
Grand Total	0	5	0	0	0	0	0	2	9	9	7	16
Apprch %	0	100		0	0		0	100				
Total %	0	71.4		0	0		0	28.6		56.2	43.8	

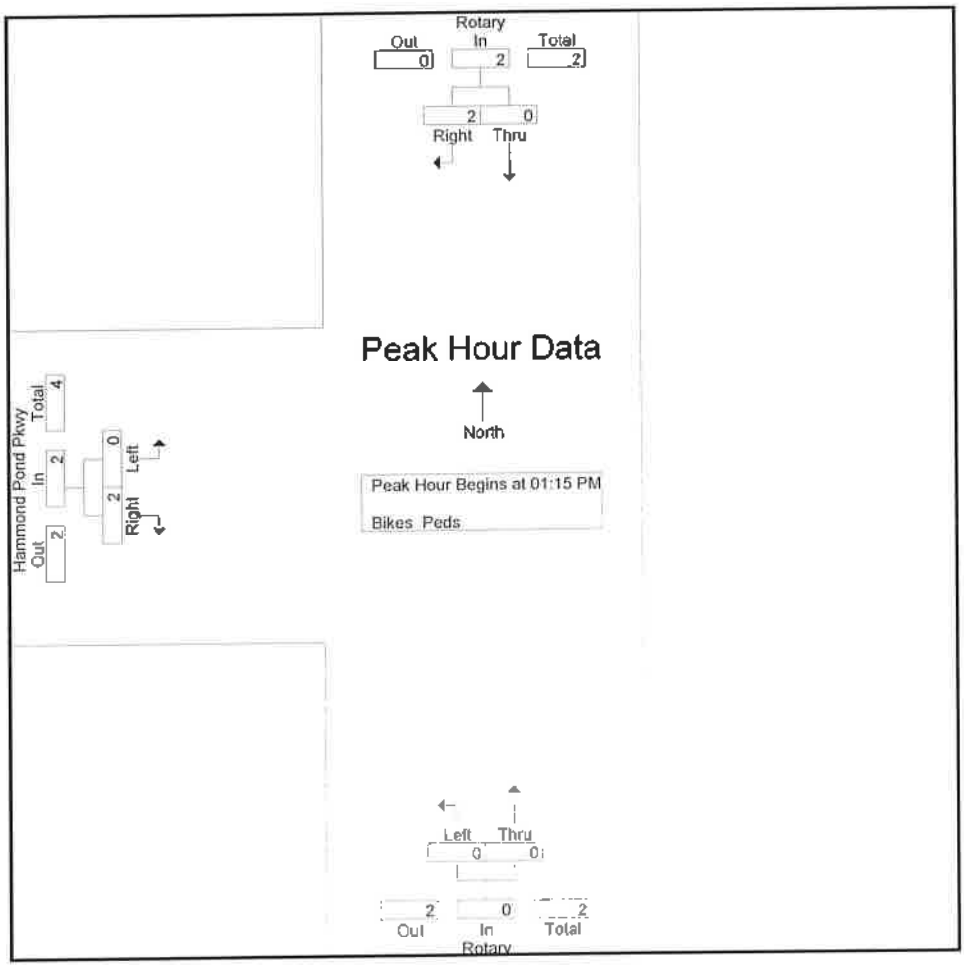
Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Hammond Pond Parkway
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012B
Site Code : 7990012B
Start Date : 9/26/2018
Page No : 11

	Rotary From North			Rotary From South			Hammond Pond Pkwy From West			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 01:15 PM										
01:15 PM	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	2	2	0	0	0	0	2	2	4
Total Volume	0	2	2	0	0	0	0	2	2	4
% App. Total	0	100		0	0		0	100		
PHF	.000	.250	.250	.000	.000	.000	.000	.250	.250	.250



School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VAI\7990\7990012C.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 7990012C
Comment 1: N/S Street : Newton Street
Comment 2: E/W Street : Rotary
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Rotary From East			Newton St From South			Rotary From West			Rotary From East	Newton St From South	Rotary From West
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Phf by approach		
07:00 AM	0	0	0	0	281	0	189	50	0	0	281	239
07:15 AM	0	0	0	0	276	0	248	85	0	0	276	333
07:30 AM	0	0	0	0	283	0	295	107	0	0	283	402
07:45 AM	0	0	0	0	219	0	333	95	0	0	219	428
	0	0	0	0	1059	0	1065	337	0	0	1059	1402
No Build	0	0		0	1135		1142	361				
PHF	0.00	0.00		0.00	0.94		0.80	0.79		0.00	0.94	0.82
Truck	0	0		0	13		21	11				
% Truck	0.0%	0.0%		0.0%	1.2%		2.0%	3.3%				
PED	0	0	0	0	1	1	0	4	0			
01:30 PM	0	0	0	0	66	0	276	108	0	0	66	384
01:45 PM	0	0	0	0	79	0	285	134	0	0	79	419
02:00 PM	0	0	0	0	69	0	283	143	0	0	69	426
02:15 PM	0	0	0	0	102	0	316	144	0	0	102	460
	0	0	0	0	316	0	1160	529	0	0	316	1689
No Build	0	0		0	339		1244	567				
PHF	0.00	0.00		0.00	0.77		0.92	0.92		0.00	0.77	0.92
Truck	0	0		0	7		13	7				
% Truck	0.0%	0.0%		0.0%	2.2%		1.1%	1.3%				
PED	0	0	0	0	2	1	0	3	0			

Accurate Counts

978-664-2565

N/S Street : Newton Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012C
Site Code : 7990012C
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

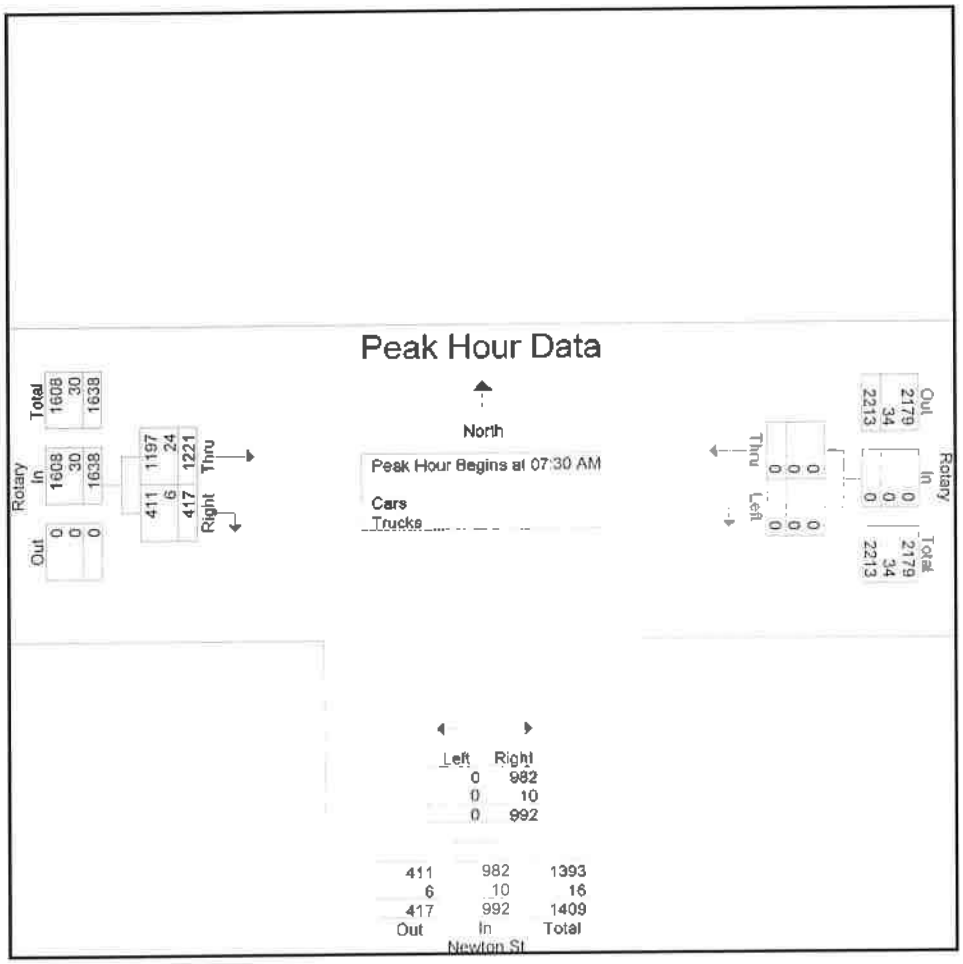
	Rotary From East		Newton St From South		Rotary From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	0	0	0	281	189	50	520
07:15 AM	0	0	0	276	248	85	609
07:30 AM	0	0	0	283	295	107	685
07:45 AM	0	0	0	219	333	95	647
Total	0	0	0	1059	1065	337	2461
08:00 AM	0	0	0	237	310	106	653
08:15 AM	0	0	0	253	283	109	645
08:30 AM	0	0	0	256	265	76	597
08:45 AM	0	0	0	232	240	115	587
Total	0	0	0	978	1098	406	2482
Grand Total	0	0	0	2037	2163	743	4943
Apprch %	0	0	0	100	74.4	25.6	
Total %	0	0	0	41.2	43.8	15	
Cars	0	0	0	2012	2124	727	4863
% Cars	0	0	0	98.8	98.2	97.8	98.4
Trucks	0	0	0	25	39	16	80
% Trucks	0	0	0	1.2	1.8	2.2	1.6

Accurate Counts
978-664-2565

N/S Street : Newton Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012C
Site Code : 7990012C
Start Date : 9/26/2018
Page No : 2

	Rotary From East			Newton St From South			Rotary From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	**283**	**283**	295	107	402	**685**
07:45 AM	0	0	0	0	219	219	**333**	95	**428**	647
08:00 AM	0	0	0	0	237	237	310	106	416	653
08:15 AM	0	0	0	0	253	253	283	**109**	392	645
Total Volume	0	0	0	0	992	992	1221	417	1638	2630
% App. Total	0	0		0	100		74.5	25.5		
PHF	.000	.000	.000	.000	.876	.876	.917	.956	.957	.960
Cars	0	0	0	0	982	982	1197	411	1608	2590
% Cars	0	0	0	0	99.0	99.0	98.0	98.6	98.2	98.5
Trucks	0	0	0	0	10	10	24	6	30	40
% Trucks	0	0	0	0	1.0	1.0	2.0	1.4	1.8	1.5



Accurate Counts

978-664-2565

N/S Street : Newton Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012C
Site Code : 7990012C
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Rotary From East			Newton St From South			Rotary From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	1	1	2
07:15 AM	0	0	0	0	0	0	0	1	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	0	0	2	0	0	3	3
Total	0	0	0	0	1	1	0	4	0	1	5	6
08:00 AM	0	0	0	0	1	0	0	1	0	0	2	2
08:15 AM	0	0	0	0	0	0	0	1	0	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	2	0	0	3	3
Grand Total	0	0	0	0	2	1	0	6	0	1	8	9
Apprch %	0	0		0	100		0	100				
Total %	0	0		0	25		0	75		11.1	88.9	

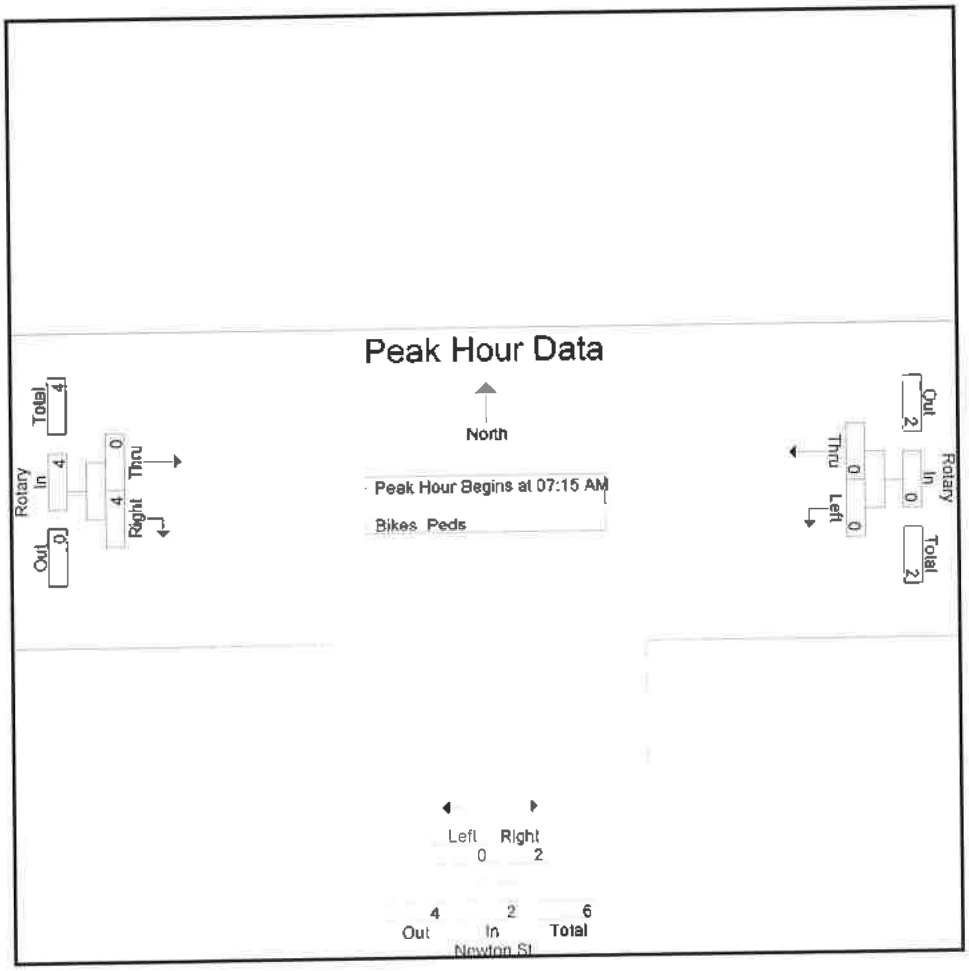
Accurate Counts

978-664-2565

N/S Street : Newton Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012C
Site Code : 7990012C
Start Date : 9/26/2018
Page No : 11

	Rotary From East			Newton St From South			Rotary From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	1	0	2	2	3
08:00 AM	0	0	0	0	1	1	0	1	1	2
Total Volume	0	0	0	0	2	2	0	4	4	6
% App. Total	0	0		0	100		0	100		
PHF	.000	.000	.000	.000	.500	.500	.000	.500	.500	.500



Accurate Counts

978-664-2565

N/S Street : Newton Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012C
Site Code : 7990012C
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

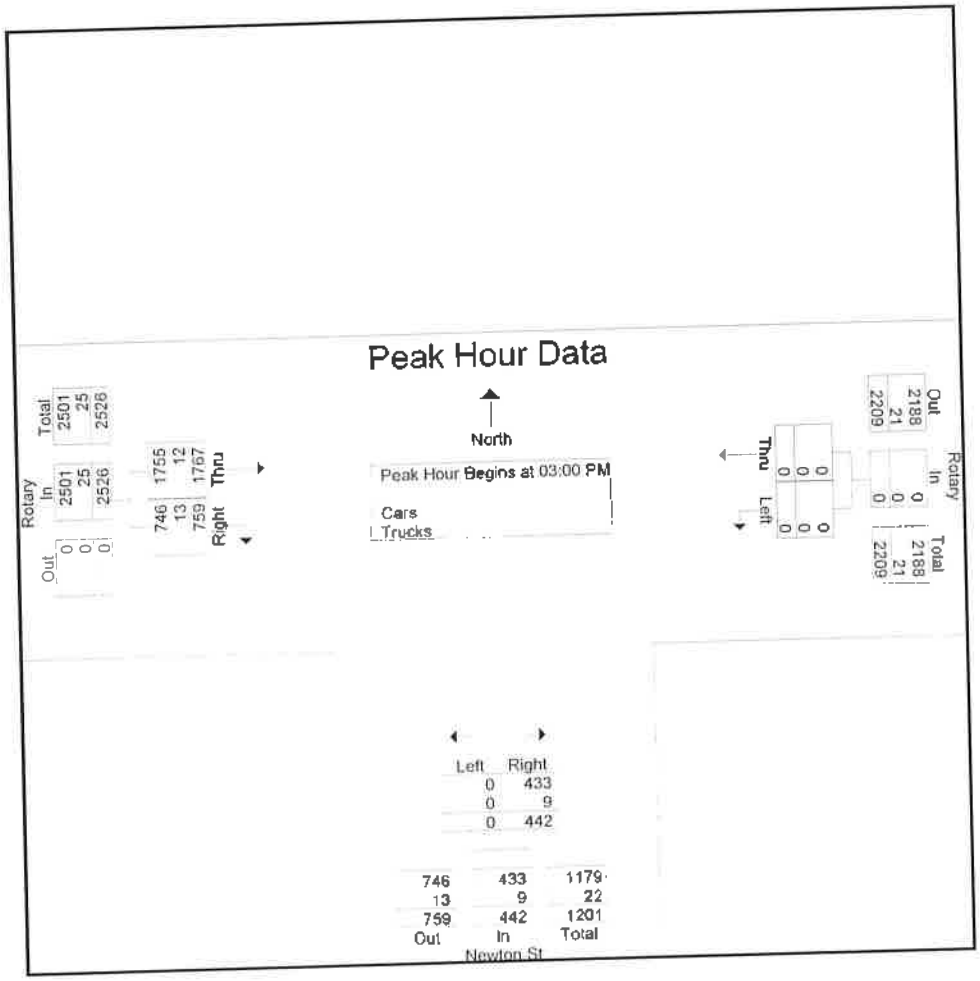
Start Time	Rotary From East		Newton St From South		Rotary From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
01:00 PM	0	0	0	88	258	72	418
01:15 PM	0	0	0	85	267	98	450
01:30 PM	0	0	0	66	276	108	450
01:45 PM	0	0	0	79	285	134	498
Total	0	0	0	318	1086	412	1816
02:00 PM	0	0	0	69	283	143	495
02:15 PM	0	0	0	102	316	144	562
02:30 PM	0	0	0	96	308	147	551
02:45 PM	0	0	0	92	349	210	651
Total	0	0	0	359	1256	644	2259
03:00 PM	0	0	0	107	431	187	725
03:15 PM	0	0	0	110	481	175	766
03:30 PM	0	0	0	109	402	202	713
03:45 PM	0	0	0	116	453	195	764
Total	0	0	0	442	1767	759	2968
Grand Total	0	0	0	1119	4109	1815	7043
Apprch %	0	0	0	100	69.4	30.6	
Total %	0	0	0	15.9	58.3	25.8	
Cars	0	0	0	1098	4069	1790	6957
% Cars	0	0	0	98.1	99	98.6	98.8
Trucks	0	0	0	21	40	25	86
% Trucks	0	0	0	1.9	1	1.4	1.2

Accurate Counts
978-664-2565

N/S Street : Newton Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012C
Site Code : 7990012C
Start Date : 9/26/2018
Page No : 2

	Rotary From East			Newton St From South			Rotary From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	0	0	0	0	107	107	431	187	618	725
03:15 PM	0	0	0	0	110	110	481	175	656	766
03:30 PM	0	0	0	0	109	109	402	202	604	713
03:45 PM	0	0	0	0	116	116	453	195	648	764
Total Volume	0	0	0	0	442	442	1767	759	2526	2968
% App. Total	0	0		0	100		70	30		
PHF	.000	.000	.000	.000	.953	.953	.918	.939	.963	.969
Cars	0	0	0	0	433	433	1755	746	2501	2934
% Cars	0	0	0	0	98.0	98.0	99.3	98.3	99.0	98.9
Trucks	0	0	0	0	9	9	12	13	25	34
% Trucks	0	0	0	0	2.0	2.0	0.7	1.7	1.0	1.1



Accurate Counts

978-664-2565

N/S Street : Newton Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012C
Site Code : 7990012C
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

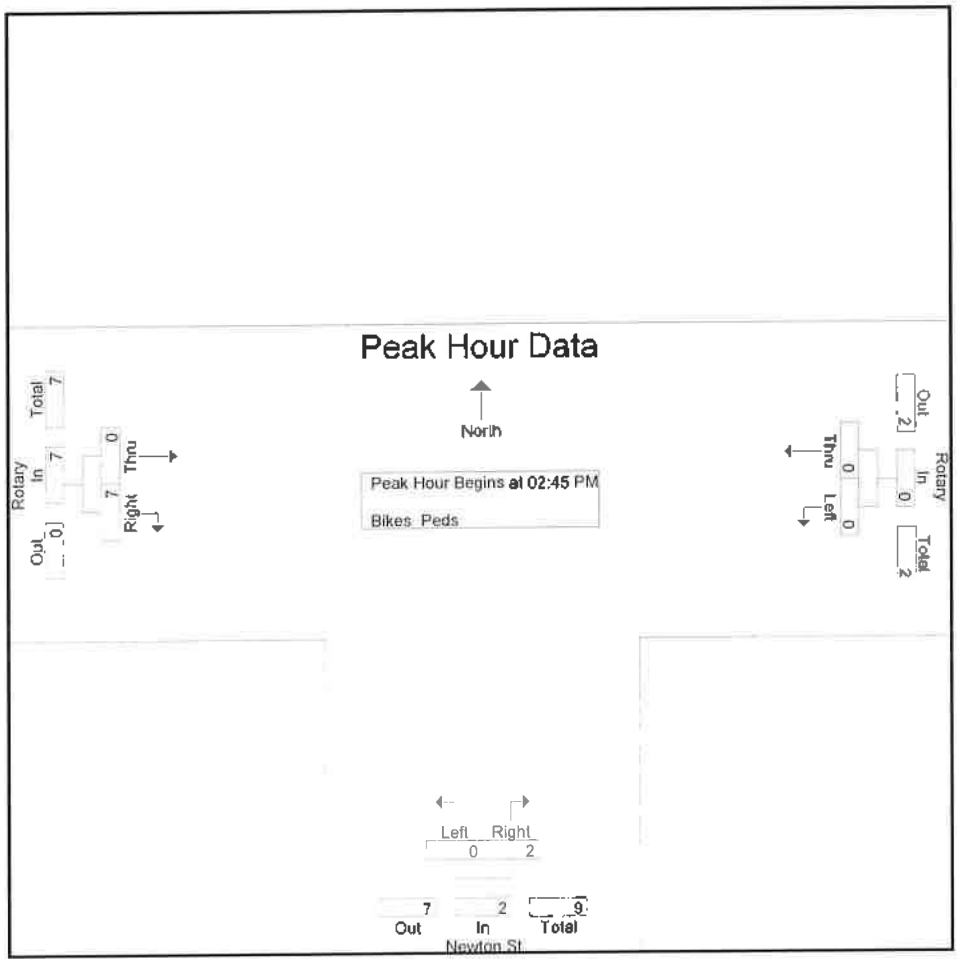
	Rotary From East			Newton St From South			Rotary From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	1	0	0	0	0	0	0	1	1
01:15 PM	0	0	0	0	0	0	0	1	0	0	1	1
01:30 PM	0	0	0	0	1	0	0	1	0	0	2	2
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	2	0	0	4	4
02:00 PM	0	0	0	0	0	1	0	1	0	1	1	2
02:15 PM	0	0	0	0	1	0	0	1	0	0	2	2
02:30 PM	0	0	0	0	1	0	0	1	0	0	2	2
02:45 PM	0	0	0	0	1	1	0	1	0	1	2	3
Total	0	0	0	0	3	2	0	4	0	2	7	9
03:00 PM	0	0	0	0	0	1	0	1	0	1	1	2
03:15 PM	0	0	0	0	0	0	0	3	0	0	3	3
03:30 PM	0	0	0	0	1	1	0	2	0	1	3	4
03:45 PM	0	0	0	0	2	1	0	0	0	1	2	3
Total	0	0	0	0	3	3	0	6	0	3	9	12
Grand Total	0	0	0	1	7	5	0	12	0	5	20	25
Apprch %	0	0		12.5	87.5		0	100				
Total %	0	0		5	35		0	60		20	80	

Accurate Counts
978-664-2565

N/S Street : Newton Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012C
Site Code : 7990012C
Start Date : 9/26/2018
Page No : 11

	Rotary From East			Newton St From South			Rotary From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	0	0	0	0	1	1	0	1	1	2
03:00 PM	0	0	0	0	0	0	0	1	1	1
03:15 PM	0	0	0	0	0	0	0	3	3	3
03:30 PM	0	0	0	0	1	1	0	2	2	3
Total Volume	0	0	0	0	2	2	0	7	7	9
% App. Total	0	0		0	100		0	100		
PHF	.000	.000	.000	.000	.500	.500	.000	.583	.583	.750



Traffic Count

School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VAI\7990\7990012D.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 7990012D
Comment 1: N/S Street : Lagrange Street
Comment 2: E/W Street : Rotary
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Rotary From East			Lagrange St From South			Rotary From West			Rotary From East	Lagrange St From South	Rotary From West
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Phf by approach		
07:00 AM	0	0	0	0	113	0	420	50	0	0	113	470
07:15 AM	0	0	0	0	103	0	445	79	0	0	103	524
07:30 AM	0	0	0	0	120	0	462	116	0	0	120	578
07:45 AM	0	0	0	0	104	0	447	105	0	0	104	552
	0	0	0	0	440	0	1774	350	0	0	440	2124
No Build	0	0		0	472		1902	375				
PHF	0.00	0.00		0.00	0.92		0.96	0.75		0.00	0.92	0.92
Truck	0	0		0	7		26	8				
% Truck	0.0%	0.0%		0.0%	1.6%		1.5%	2.3%				
PED	0	0	0	0	0	0	0	0	0			
01:30 PM	0	0	0	0	67	0	234	108	0	0	67	342
01:45 PM	0	0	0	0	73	0	258	106	0	0	73	364
02:00 PM	0	0	0	0	84	0	252	100	0	0	84	352
02:15 PM	0	0	0	0	92	0	300	118	0	0	92	418
	0	0	0	0	316	0	1044	432	0	0	316	1476
No Build	0	0		0	339		1119	463				
PHF	0.00	0.00		0.00	0.86		0.87	0.92		0.00	0.86	0.88
Truck	0	0		0	6		16	4				
% Truck	0.0%	0.0%		0.0%	1.9%		1.5%	0.9%				
PED	0	0	0	0	0	1	0	0	0			

Accurate Counts
978-664-2565

N/S Street : Lagrange Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012D
Site Code : 7990012D
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Rotary From East		Lagrange St From South		Rotary From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	0	0	0	113	420	50	583
07:15 AM	0	0	0	103	445	79	627
07:30 AM	0	0	0	120	462	116	698
07:45 AM	0	0	0	104	447	105	656
Total	0	0	0	440	1774	350	2564
08:00 AM	0	0	0	105	470	77	652
08:15 AM	0	0	0	90	455	81	626
08:30 AM	0	0	0	109	448	73	630
08:45 AM	0	0	0	103	401	71	575
Total	0	0	0	407	1774	302	2483
Grand Total	0	0	0	847	3548	652	5047
Apprch %	0	0	0	100	84.5	15.5	
Total %	0	0	0	16.8	70.3	12.9	
Cars	0	0	0	834	3496	640	4970
% Cars	0	0	0	98.5	98.5	98.2	98.5
Trucks	0	0	0	13	52	12	77
% Trucks	0	0	0	1.5	1.5	1.8	1.5

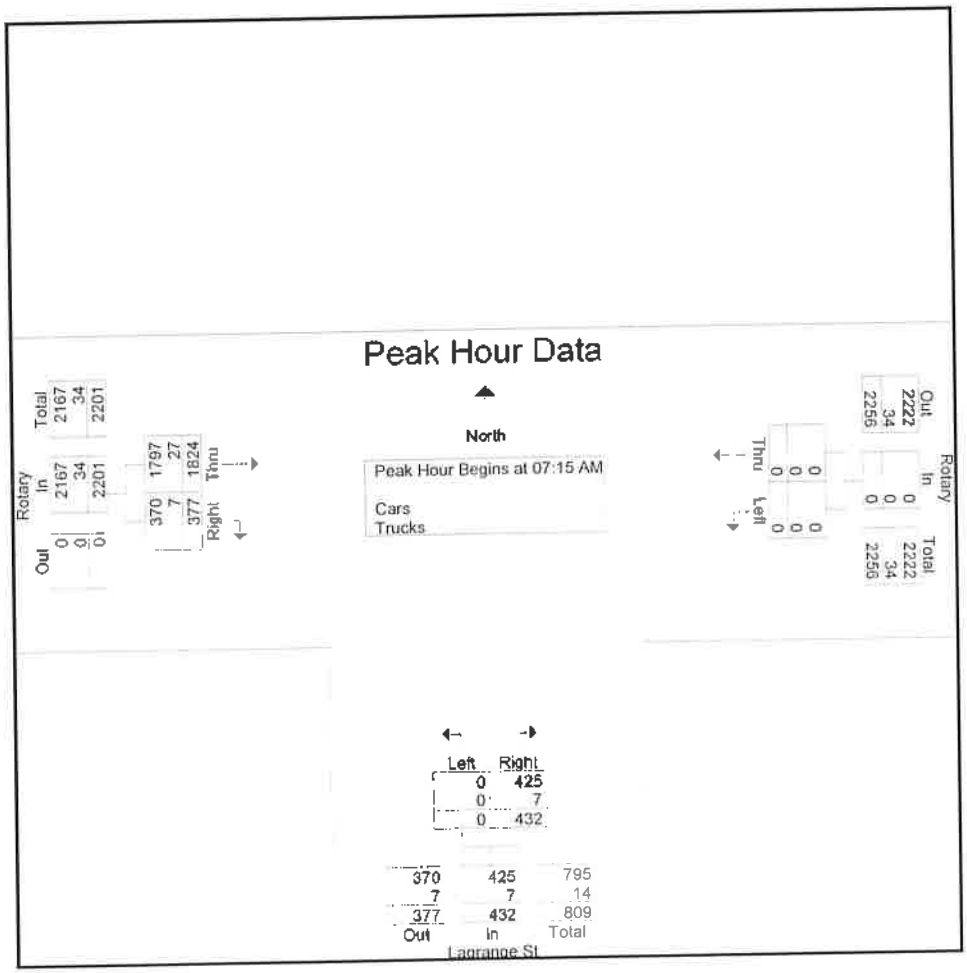
Accurate Counts

978-664-2565

N/S Street : Lagrange Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012D
Site Code : 7990012D
Start Date : 9/26/2018
Page No : 2

	Rotary From East			Lagrange St From South			Rotary From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	103	103	445	79	524	627
07:30 AM	0	0	0	0	**120**	**120**	462	**116**	578	**698**
07:45 AM	0	0	0	0	104	104	447	105	552	656
08:00 AM	0	0	0	0	105	105	**470**	77	547	652
Total Volume	0	0	0	0	432	432	1824	377	2201	2633
% App. Total	0	0		0	100		82.9	17.1		
PHF	.000	.000	.000	.000	.900	.900	.970	.813	.952	.943
Cars	0	0	0	0	425	425	1797	370	2167	2592
% Cars	0	0	0	0	98.4	98.4	98.5	98.1	98.5	98.4
Trucks	0	0	0	0	7	7	27	7	34	41
% Trucks	0	0	0	0	1.6	1.6	1.5	1.9	1.5	1.6



Accurate Counts

978-664-2565

N/S Street : Lagrange Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012D
Site Code : 7990012D
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Rotary From East			Lagrange St From South			Rotary From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0				
Total %										0	0	

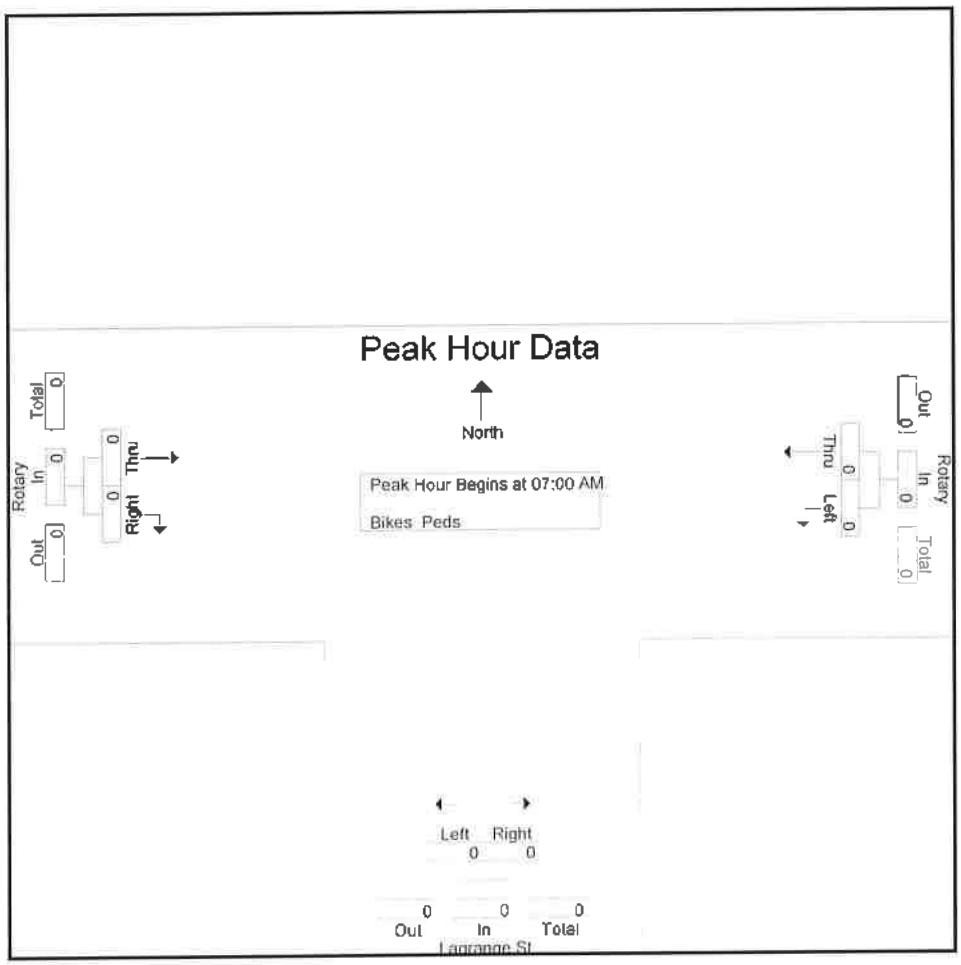
Accurate Counts

978-664-2565

N/S Street : Lagrange Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012D
Site Code : 7990012D
Start Date : 9/26/2018
Page No : 11

	Rotary From East			Lagrange St From South			Rotary From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



Accurate Counts

978-664-2565

N/S Street : Lagrange Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012D
Site Code : 7990012D
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Rotary From East		Lagrange St From South		Rotary From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
01:00 PM	0	0	0	75	261	85	421
01:15 PM	0	0	0	75	276	76	427
01:30 PM	0	0	0	67	234	108	409
01:45 PM	0	0	0	73	258	106	437
Total	0	0	0	290	1029	375	1694
02:00 PM	0	0	0	84	252	100	436
02:15 PM	0	0	0	92	300	118	510
02:30 PM	0	0	0	95	286	118	499
02:45 PM	0	0	0	93	319	122	534
Total	0	0	0	364	1157	458	1979
03:00 PM	0	0	0	88	361	177	626
03:15 PM	0	0	0	90	391	200	681
03:30 PM	0	0	0	64	342	169	575
03:45 PM	0	0	0	89	373	196	658
Total	0	0	0	331	1467	742	2540
Grand Total	0	0	0	985	3653	1575	6213
Apprch %	0	0	0	100	69.9	30.1	
Total %	0	0	0	15.9	58.8	25.4	
Cars	0	0	0	971	3605	1562	6138
% Cars	0	0	0	98.6	98.7	99.2	98.8
Trucks	0	0	0	14	48	13	75
% Trucks	0	0	0	1.4	1.3	0.8	1.2

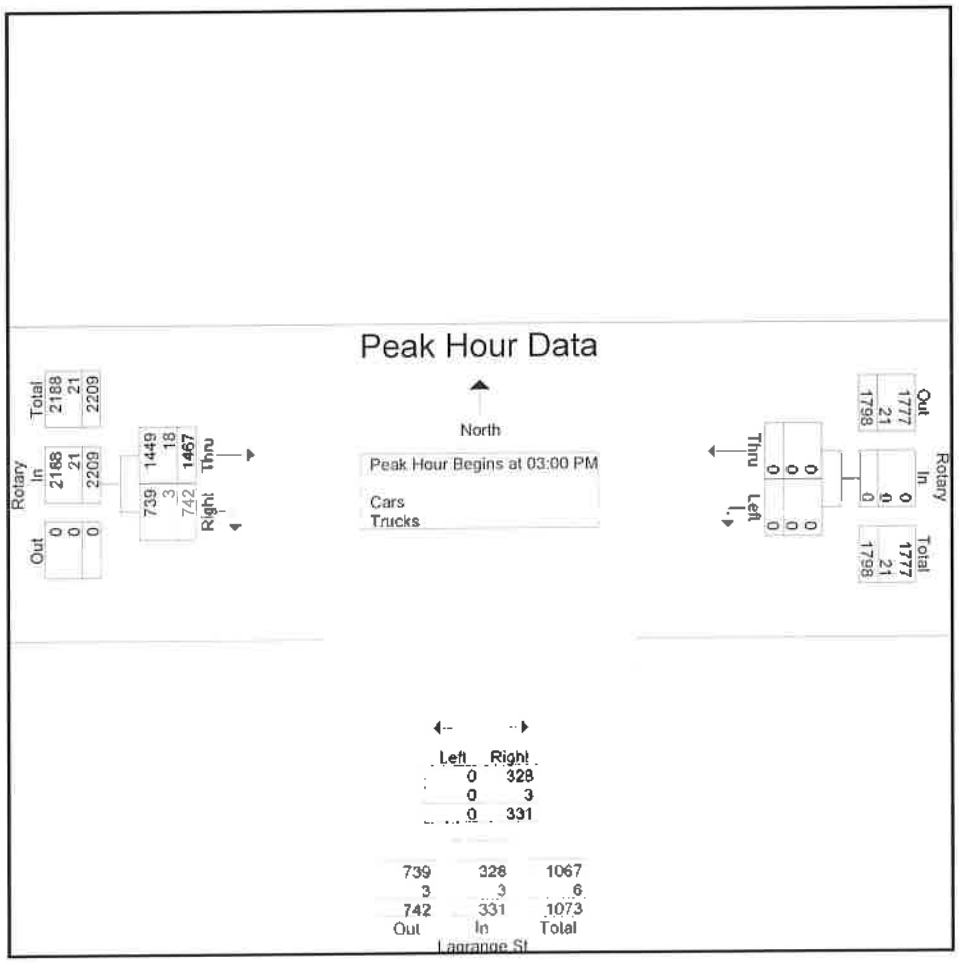
Accurate Counts

978-664-2565

N/S Street : Lagrange Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012D
Site Code : 7990012D
Start Date : 9/26/2018
Page No : 2

	Rotary From East			Lagrange St From South			Rotary From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	0	0	0	0	88	88	361	177	538	626
03:15 PM	0	0	0	0	**90**	**90**	**391**	**200**	**591**	**681**
03:30 PM	0	0	0	0	64	64	342	169	511	575
03:45 PM	0	0	0	0	89	89	373	196	569	658
Total Volume	0	0	0	0	331	331	1467	742	2209	2540
% App. Total	0	0		0	100		66.4	33.6		
PHF	.000	.000	.000	.000	.919	.919	.938	.928	.934	.932
Cars	0	0	0	0	328	328	1449	739	2188	2516
% Cars	0	0	0	0	99.1	99.1	98.8	99.6	99.0	99.1
Trucks	0	0	0	0	3	3	18	3	21	24
% Trucks	0	0	0	0	0.9	0.9	1.2	0.4	1.0	0.9



Accurate Counts

978-664-2565

N/S Street : Lagrange Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012D
Site Code : 7990012D
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

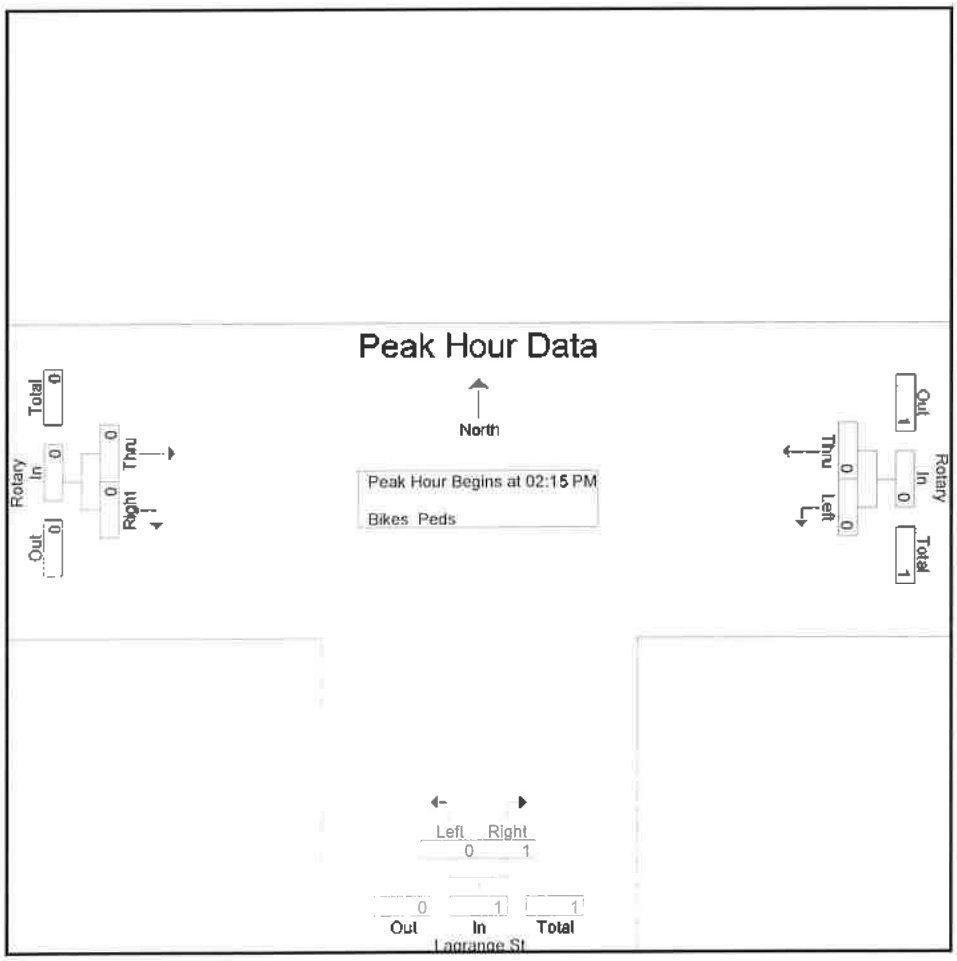
	Rotary From East			Lagrange St From South			Rotary From West					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	0	0	1	0	0	0	1	0	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	1	0	1
02:00 PM	0	0	0	0	0	1	0	0	0	1	0	1
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	1	0	1
03:00 PM	0	0	0	0	1	0	0	0	0	0	1	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	1	1
Grand Total	0	0	0	0	1	2	0	0	0	2	1	3
Apprch %	0	0		0	100		0	0				
Total %	0	0		0	100		0	0		66.7	33.3	

Accurate Counts
978-664-2565

N/S Street : Lagrange Street
E/W Street : Rotary
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012D
Site Code : 7990012D
Start Date : 9/26/2018
Page No : 11

	Rotary From East			Lagrange St From South			Rotary From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:15 PM										
02:15 PM	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	1	1	0	0	0	1
Total Volume	0	0	0	0	1	1	0	0	0	1
% App. Total	0	0		0	100		0	0		
PHF	.000	.000	.000	.000	.250	.250	.000	.000	.000	.250



School Peak Hour Traffic Volumes

File Name: C:\Users\stevi\Documents\2018\Petra\Brookline, MA\VAI\7990\7990012E.ppd
Start Date: 9/26/2018
Start Time: 7:00:00 AM
Site Code: 7990012E
Comment 1: N/S Street : Rotary
Comment 2: E/W Street : Newton Street
Comment 3: City/State : Brookline, MA
Comment 4: Weather : Cloudy

	Rotary From North			Newton St From East			Rotary From South			Rotary From North	Newton St From East	Rotary From South
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Phf by approach		
07:00 AM	0	0	0	0	326	0	297	236	0	0	326	533
07:15 AM	0	0	0	0	365	0	343	205	0	0	365	548
07:30 AM	0	0	0	0	380	0	371	211	0	0	380	582
07:45 AM	0	0	0	0	492	0	278	273	0	0	492	551
	0	0	0	0	1563	0	1289	925	0	0	1563	2214
No Build	0	0		0	1676		1382	992				
PHF	0.00	0.00		0.00	0.79		0.87	0.85		0.00	0.79	0.95
Truck	0	0		0	26		16	17				
% Truck	0.0%	0.0%		0.0%	1.7%		1.2%	1.8%				
PED	0	0	0	0	0	0	0	0	0			
01:30 PM	0	0	0	0	202	0	112	189	0	0	202	301
01:45 PM	0	0	0	0	264	0	106	225	0	0	264	331
02:00 PM	0	0	0	0	226	0	119	217	0	0	226	336
02:15 PM	0	0	0	0	257	0	152	240	0	0	257	392
	0	0	0	0	949	0	489	871	0	0	949	1360
No Build	0	0		0	1017		524	934				
PHF	0.00	0.00		0.00	0.90		0.80	0.91		0.00	0.90	0.87
Truck	0	0		0	4		20	2				
% Truck	0.0%	0.0%		0.0%	0.4%		4.1%	0.2%				
PED	0	0	0	0	0	0	0	0	0			

Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Newton Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012E
Site Code : 7990012E
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

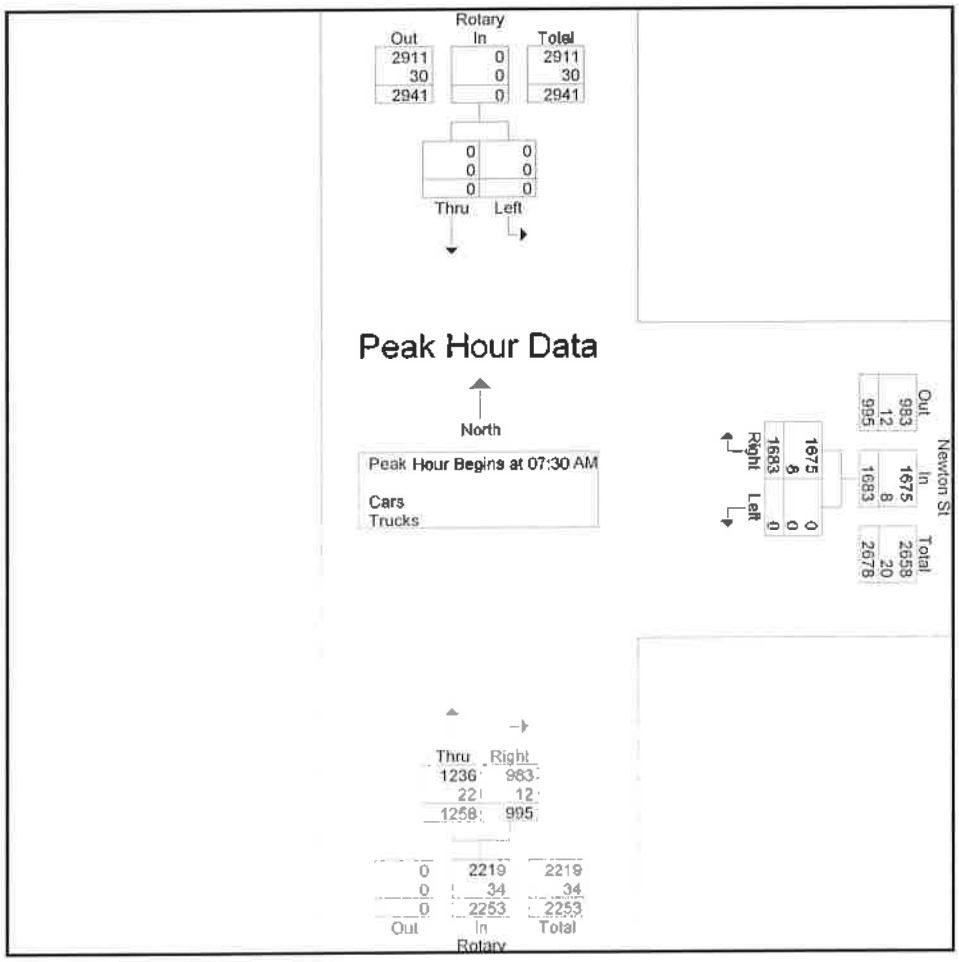
	Rotary From North		Newton St From East		Rotary From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	0	0	0	326	297	236	859
07:15 AM	0	0	0	365	343	205	913
07:30 AM	0	0	0	380	371	211	962
07:45 AM	0	0	0	492	278	273	1043
Total	0	0	0	1563	1289	925	3777
08:00 AM	0	0	0	422	307	268	997
08:15 AM	0	0	0	389	302	243	934
08:30 AM	0	0	0	366	314	243	923
08:45 AM	0	0	0	349	297	207	853
Total	0	0	0	1526	1220	961	3707
Grand Total	0	0	0	3089	2509	1886	7484
Apprch %	0	0	0	100	57.1	42.9	
Total %	0	0	0	41.3	33.5	25.2	
Cars	0	0	0	3063	2467	1863	7393
% Cars	0	0	0	99.2	98.3	98.8	98.8
Trucks	0	0	0	26	42	23	91
% Trucks	0	0	0	0.8	1.7	1.2	1.2

Accurate Counts
978-664-2565

N/S Street : Rotary
E/W Street : Newton Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012E
Site Code : 7990012E
Start Date : 9/26/2018
Page No : 2

	Rotary From North			Newton St From East			Rotary From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	380	380	**371**	211	**582**	962
07:45 AM	0	0	0	0	**492**	**492**	278	**273**	551	**1043**
08:00 AM	0	0	0	0	422	422	307	268	575	997
08:15 AM	0	0	0	0	389	389	302	243	545	934
Total Volume	0	0	0	0	1683	1683	1258	995	2253	3936
% App. Total	0	0		0	100		55.8	44.2		
PHF	.000	.000	.000	.000	.855	.855	.848	.911	.968	.943
Cars	0	0	0	0	1675	1675	1236	983	2219	3894
% Cars	0	0	0	0	99.5	99.5	98.3	98.8	98.5	98.9
Trucks	0	0	0	0	8	8	22	12	34	42
% Trucks	0	0	0	0	0.5	0.5	1.7	1.2	1.5	1.1



Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Newton Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012E
Site Code : 7990012E
Start Date : 9/26/2018

Groups Printed- Bikes Peds

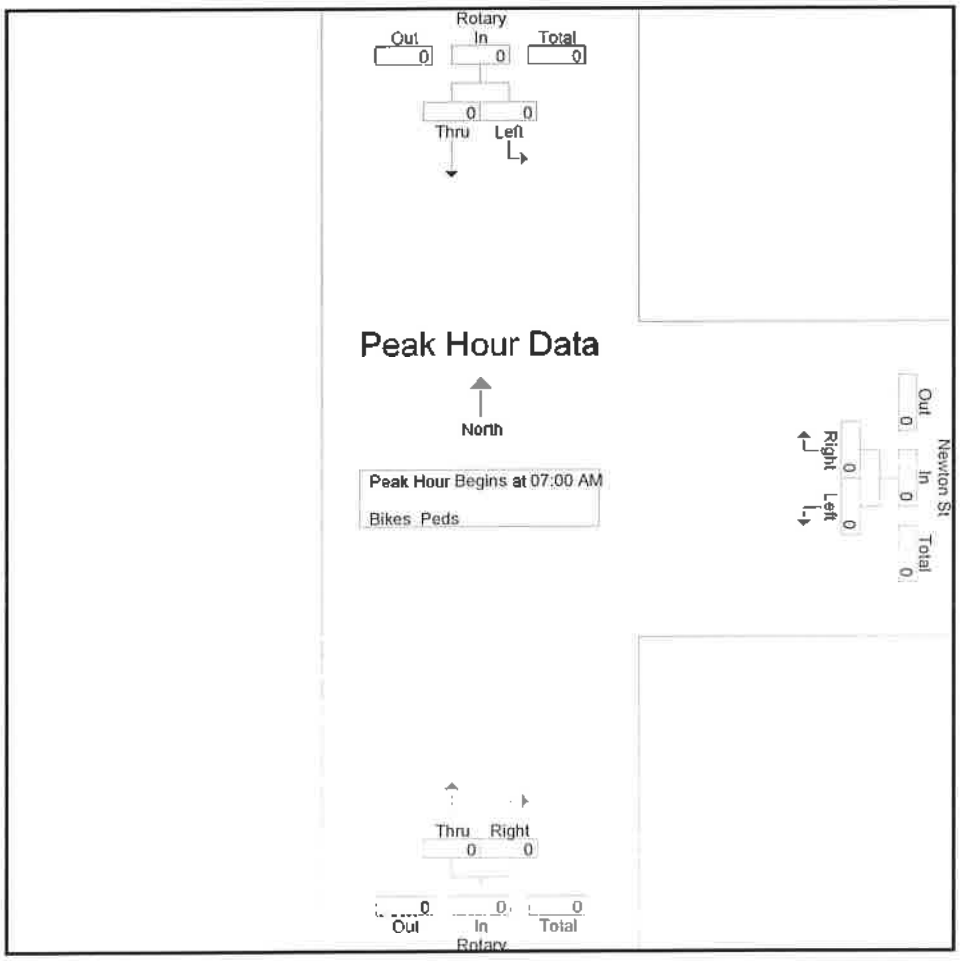
	Rotary From North			Newton St From East			Rotary From South					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0				
Total %										0	0	

Accurate Counts
978-664-2565

N/S Street : Rotary
E/W Street : Newton Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012E
Site Code : 7990012E
Start Date : 9/26/2018
Page No : 11

	Rotary From North			Newton St From East			Rotary From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Newton Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012E
Site Code : 7990012E
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars - Trucks

	Rotary From North		Newton St From East		Rotary From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
01:00 PM	0	0	0	157	137	199	493
01:15 PM	0	0	0	232	144	207	583
01:30 PM	0	0	0	202	112	189	503
01:45 PM	0	0	0	264	106	225	595
Total	0	0	0	855	499	820	2174
02:00 PM	0	0	0	226	119	217	562
02:15 PM	0	0	0	257	152	240	649
02:30 PM	0	0	0	316	154	227	697
02:45 PM	0	0	0	334	142	270	746
Total	0	0	0	1133	567	954	2654
03:00 PM	0	0	0	311	137	312	760
03:15 PM	0	0	0	307	172	309	788
03:30 PM	0	0	0	373	92	314	779
03:45 PM	0	0	0	331	140	323	794
Total	0	0	0	1322	541	1258	3121
Grand Total	0	0	0	3310	1607	3032	7949
Apprch %	0	0	0	100	34.6	65.4	
Total %	0	0	0	41.6	20.2	38.1	
Cars	0	0	0	3287	1568	3008	7863
% Cars	0	0	0	99.3	97.6	99.2	98.9
Trucks	0	0	0	23	39	24	86
% Trucks	0	0	0	0.7	2.4	0.8	1.1

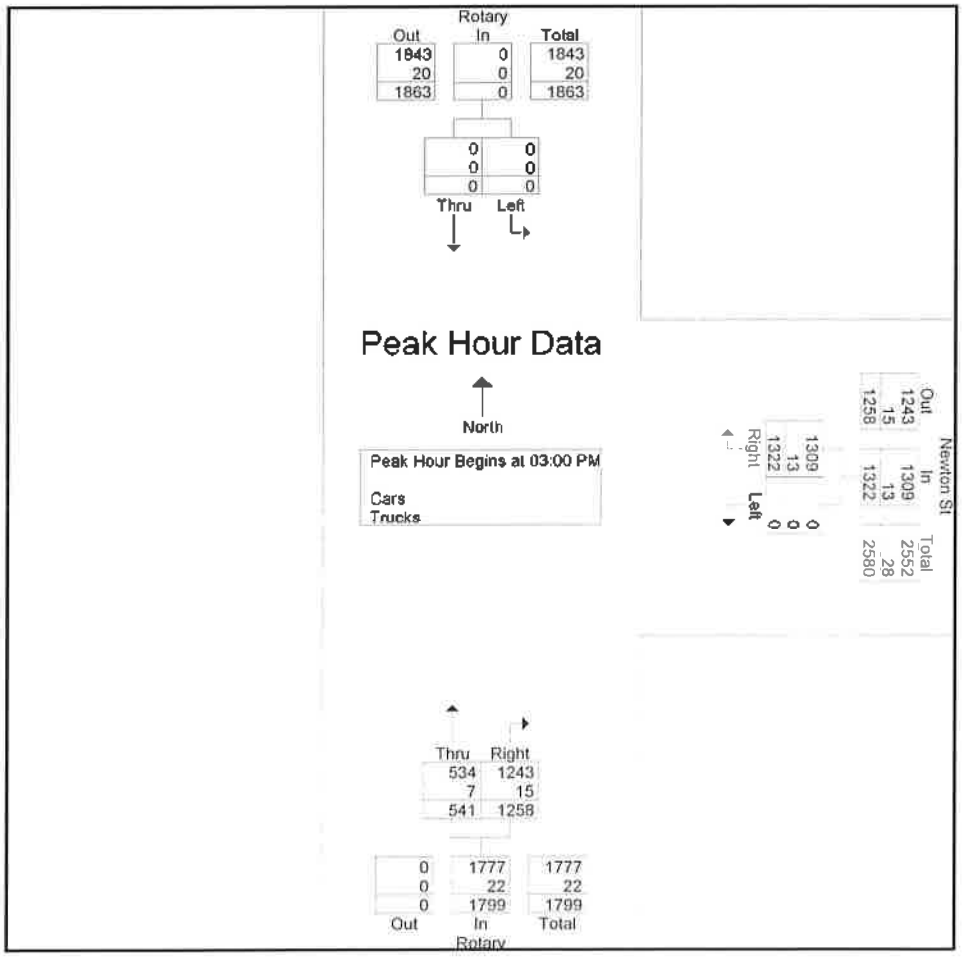
Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Newton Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012E
Site Code : 7990012E
Start Date : 9/26/2018
Page No : 2

	Rotary From North			Newton St From East			Rotary From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	0	0	0	0	311	311	137	312	449	760
03:15 PM	0	0	0	0	307	307	**172**	309	**481**	788
03:30 PM	0	0	0	0	**373**	**373**	92	314	406	779
03:45 PM	0	0	0	0	331	331	140	**323**	463	**794**
Total Volume	0	0	0	0	1322	1322	541	1258	1799	3121
% App. Total	0	0		0	100		30.1	69.9		
PHF	.000	.000	.000	.000	.886	.886	.786	.974	.935	.983
Cars	0	0	0	0	1309	1309	534	1243	1777	3086
% Cars	0	0	0	0	99.0	99.0	98.7	98.8	98.8	98.9
Trucks	0	0	0	0	13	13	7	15	22	35
% Trucks	0	0	0	0	1.0	1.0	1.3	1.2	1.2	1.1



Accurate Counts

978-664-2565

N/S Street : Rotary
E/W Street : Newton Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012E
Site Code : 7990012E
Start Date : 9/26/2018
Page No : 10

Groups Printed- Bikes Peds

	Rotary From North			Newton St From East			Rotary From South					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0				
Total %										0	0	

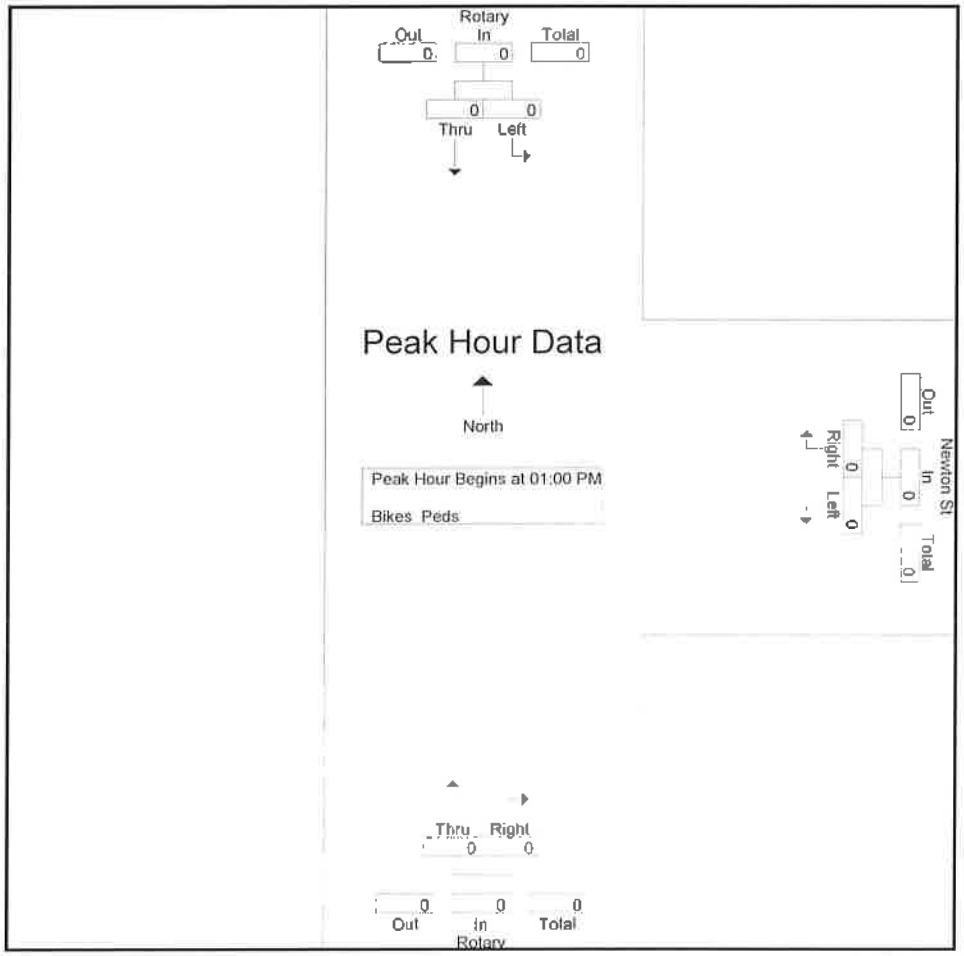
Accurate Counts

978-664-2565

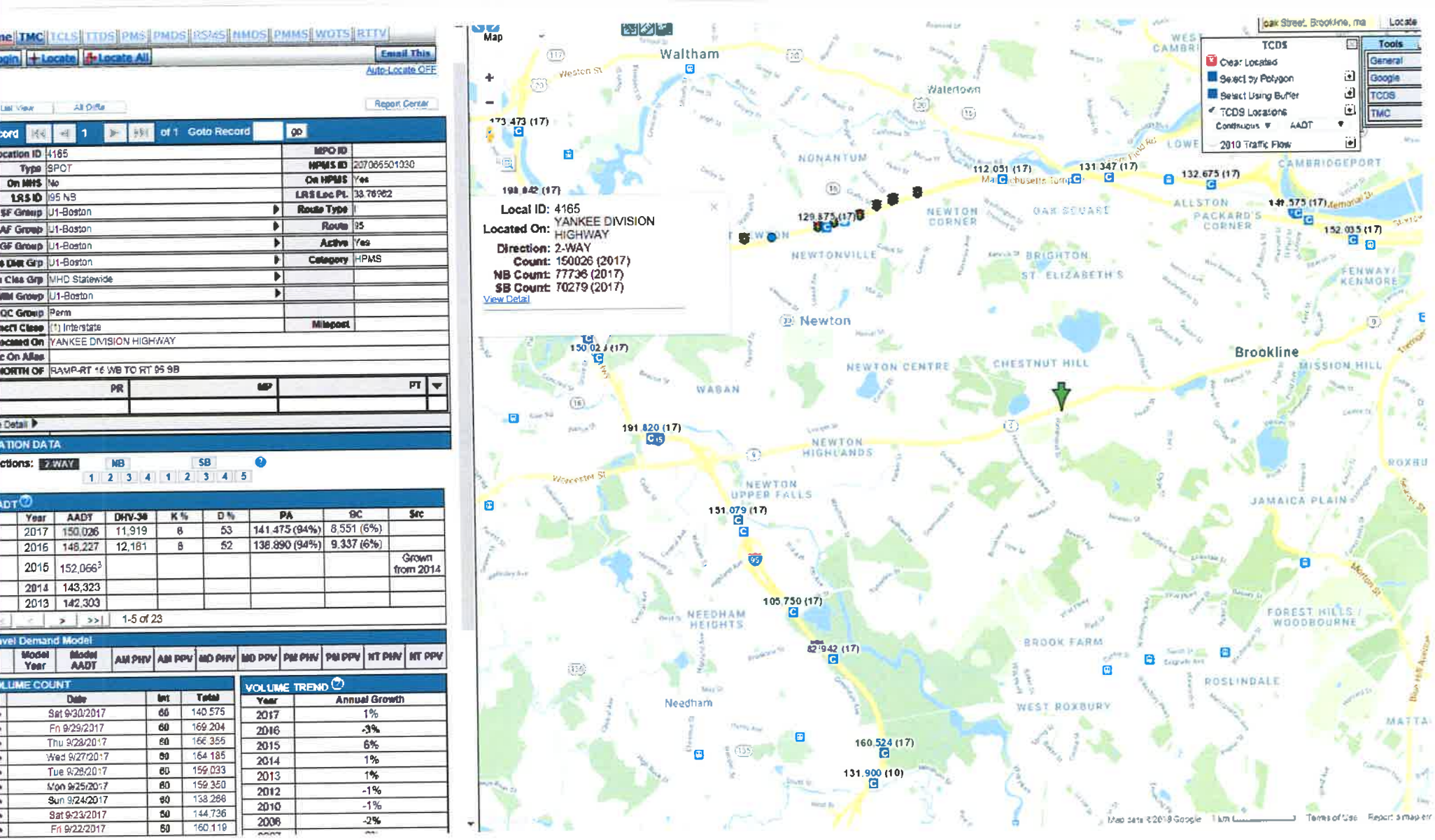
N/S Street : Rotary
E/W Street : Newton Street
City/State : Brookline, MA
Weather : Cloudy

File Name : 7990012E
Site Code : 7990012E
Start Date : 9/26/2018
Page No : 11

	Rotary From North			Newton St From East			Rotary From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 01:00 PM										
01:00 PM	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



SEASONAL ADJUSTMENTS


TMC
TCLS
TTDS
PMS
PMDS
RSMS
NMDS
PMMS
WOTS
RTTV
Locate
Locate All
Email This
Auto-Locate OFF
Report Center
of 1
Goto Record
go
Location ID 4165
Type SPOT
On NHS No
LRS ID 95 NB
SF Group U1-Boston
AF Group U1-Boston
GF Group U1-Boston
DIR Grp U1-Boston
Class Grp MHD Statewide
HM Group U1-Boston
QC Group Perm
Functl Class (1) Interstate
Located On YANKEE DIVISION HIGHWAY
And/Or On Alias
NORTH OF RAMP-RT 16 WB TO RT 95 SB
MPO ID
HPMS ID 207065501030
On HPMS Yes
LRS Loc Pt. 33.76962
Route Type I
Route 95
Active Yes
Category HPMS
Milepost
PR
MP
PT
ATION DATA
Directions: 2-WAY NB SB
1 2 3 4 1 2 3 4 5
Year AADT DHV-30 K % D % PA %C Src
2017 150,026 11,919 8 53 141,475 (94%) 8,551 (6%)
2016 148,227 12,181 8 52 138,890 (94%) 9,337 (6%)
2015 152,066[3] Grown from 2014
2014 143,323
2013 142,303
1-5 of 23
Travel Demand Model
Model Year Model AADT AM PHV AM PPV MD PHV MD PPV PM PHV PM PPV NT PHV NT PPV
VOLUME COUNT
Date Int Total
Sat 9/30/2017 60 140,575
Fri 9/29/2017 60 169,204
Thu 9/28/2017 60 166,355
Wed 9/27/2017 60 164,185
Tue 9/26/2017 60 159,033
Mon 9/25/2017 60 159,350
Sun 9/24/2017 60 138,288
Sat 9/23/2017 60 144,736
Fri 9/22/2017 60 160,119
VOLUME TREND
Year Annual Growth
2017 1%
2016 -3%
2015 6%
2014 1%
2013 1%
2012 -1%
2010 -1%
2006 -2%
Local ID: 4165
Located On: YANKEE DIVISION HIGHWAY
Direction: 2-WAY
Count: 150026 (2017)
NB Count: 77736 (2017)
SB Count: 70279 (2017)
View Detail
Oak Street, Brookline, ma
Locate
Tools
General
Google
TCDS
TMC
TCDS
Clear Located
Select by Polygon
Select Using Buffer
TCDS Locations
Continuous AADT
2010 Traffic Flow
Waltham
Weston St
Watertown
NONANTUM
NEWTON CORNER
OAK SQUARE
NEWTONVILLE
BRIGHTON
ST ELIZABETH'S
ALLSTON
PACKARD'S CORNER
CAMBRIDGEPORT
Memorial Dr
Newton
NEWTON CENTRE
CHESTNUT HILL
WABAN
Brookline
MISSION HILL
NEWTON HIGHLANDS
NEWTON UPPER FALLS
Worcester St
JAMAICA PLAIN
ROXBU
NEEDHAM HEIGHTS
BROOK FARM
FOREST HILLS / WOODBOURNE
ROSLINDALE
WEST ROXBURY
Needham
MATTA
Morton St
Blue Hill Avenue
173.473 (17)
198.842 (17)
112.051 (17)
131.347 (17)
132.675 (17)
129.875 (17)
141.575 (17)
152.035 (17)
150.024 (17)
191.820 (17)
151.079 (17)
105.750 (17)
82.942 (17)
160.524 (17)
131.900 (10)
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1 km
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Massachusetts Highway Department

Traffic Pattern by Month for 1/1/2017 - 12/31/2017

Factor Group	Station	Weight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
U1-Boston	4165	1			0.901	0.952	1.016	1.043	0.973	0.991	1.035	1.032	0.995	0.955
	Average of Weighted Factors		**0.000**	**0.000**	**0.901**	**0.952**	**1.016**	**1.043**	**0.973**	**0.991**	**1.035**	**1.032**	**0.995**	**0.955**

Massachusetts Highway Department

4165: Monthly Hourly Volume for September 2017

Location ID:	4165	**Seasonal Factor Group:**	U1-Boston
County:	Middlesex	**Daily Factor Group:**	
Funcational Class	1	**Axle Factor Group:**	U1-Boston
Location:	YANKEE DIVISION HIGHWAY	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL
1																									
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9	1514	821	553	410	646	1664	3492	5327	7092	8814	10335	11260	11041	11135	10508	10081	10360	9728	8866	6800	5184	4665	4456	2855	147607
10	1528	851	638	385	375	661	1723	3247	4791	6798	8568	10033	10812	10542	10577	10201	10235	10061	9955	8510	6889	4166	2387	1302	135235
11	716	400	313	397	1223	5158	10159	11856	10645	10404	9241	8360	8542	8777	10354	10312	10641	11397	9943	6815	4692	3403	2028	1289	157075
12	673	428	362	438	1221	5364	10681	11846	10320	10973	9733	9237	9289	9644	10803	10445	10673	11285	10482	7442	5195	3926	2617	1519	164596
13	792	466	392	479	1176	5264	10760	11625	10614	11178	10058	9858	9210	9925	10375	10479	11024	11547	10499	7770	5478	4265	2692	1651	167577
14	725	477	394	462	1240	5240	10621	11796	10991	8842	10131	9569	9564	9923	10237	10661	11004	11248	10392	7555	5775	4142	2614	1681	165284
15	933	571	462	537	1127	4998	10132	12066	11175	10324	9782	9965	10253	10540	10326	10470	10433	10245	10088	7526	5562	4319	3350	2205	167389
16	1327	782	542	472	605	1592	3232	5114	7269	8582	10140	10434	10223	10268	9995	10031	10055	9472	8610	7403	6598	5121	4163	2986	145016
17	1708	996	683	404	379	715	1751	3037	5147	7046	9002	10237	11255	10230	9883	10216	9939	9319	7954	7673	5544	3966	2377	1273	130734
18	649	468	349	439	1168	5053	10137	10855	10246	10874	9246	8788	8701	9255	10228	10378	10782	11478	9550	6810	4588	3298	2053	1295	156688
19	678	457	400	482	1255	5025	10177	11305	10372	10772	9204	8886	8820	9533	10184	10497	11024	11507	9888	6535	4724	3503	2203	1348	158779
20	692	419	344	416	1008	4702	9924	10363	9557	10273	9265	8580	8684	9237	10184	9921	10489	11007	10031	6945	4710	3954	2656	1581	154942
21	754	503	359	460	1158	4964	10393	11798	11131	10799	9880	9507	9628	9879	10821	10250	10641	11342	10261	7630	5527	4064	2668	1635	166052
22	820	573	422	495	1185	4532	9856	10493	10836	10766	9654	10020	9816	10039	9301	9811	9646	10147	9856	7542	4898	3946	3182	2283	160119
23	1221	828	607	490	592	1510	3284	5176	6978	8802	10484	10738	11137	10618	10327	10215	10068	9831	8926	6659	5261	4632	3631	2721	144736
24	1802	1016	663	484	396	751	1822	3719	6059	8796	10341	10144	10568	10421	9904	9818	9728	10363	9453	8176	6106	4004	2360	1374	138268
25	724	428	344	438	1243	5281	10229	11193	10414	10686	9379	8820	8884	9408	10260	10336	10405	11176	10458	7837	4709	3379	2316	1508	159350
26	717	411	371	462	1217	5152	10593	11905	10476	10825	9907	9067	8918	9651	10380	10589	10297	9687	8962	6801	4653	3956	2502	1534	159033
27	758	414	379	484	1230	5224	10504	11664	10151	10188	10009	9695	8893	10177	10414	10680	10567	10748	10344	7486	5417	4321	2839	1599	164185
28	814	510	359	476	1236	5285	10420	11477	10913	10533	10092	9410	9310	9888	10411	10362	10550	10986	9978	8162	5853	4333	2934	2063	166355
29	1030	598	442	487	1181	4981	10171	11561	11412	10384	9959	10057	10482	10422	10022	9841	10454	11111	10193	8266	5621	4203	3609	2717	169204
30	1352	908	622	453	601	1385	2850	4650	6763	8531	9843	10414	10223	10385	9805	9976	10002	9323	8451	6489	5636	4720	4164	3029	140575
																								average	155400
																								AADT	150.026
																									1.03582

AUTOMATIC TRAFFIC RECORDER COUNTS

Vanasse & Associates

35 New England Business Center Dr, Suite 140
Andover, MA 01810

Vanasse & Associates
Location: Heath Street
Location: East of Baldwin School
City: Brookline, MA

Site Code: 00799001

Start Time	01-Oct-18		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	Eastbound	Westbou	Eastboun	Westbou	Eastboun	Westbou	Eastboun	Westbou	Eastboun	Westbou	Eastboun	Westbou	Eastboun	Westbou	Eastboun	Westbou
12:00 AM	*	*	4	4	2	10	*	*	*	*	*	*	*	*	3	7
01:00	*	*	2	1	2	3	*	*	*	*	*	*	*	*	2	2
02:00	*	*	0	1	0	1	*	*	*	*	*	*	*	*	0	1
03:00	*	*	0	0	1	2	*	*	*	*	*	*	*	*	0	1
04:00	*	*	1	0	1	0	*	*	*	*	*	*	*	*	1	0
05:00	*	*	6	9	9	9	*	*	*	*	*	*	*	*	8	9
06:00	*	*	18	32	17	38	*	*	*	*	*	*	*	*	18	35
07:00	*	*	38	178	39	182	*	*	*	*	*	*	*	*	38	180
08:00	*	*	67	216	65	204	*	*	*	*	*	*	*	*	66	210
09:00	*	*	54	131	61	136	*	*	*	*	*	*	*	*	58	134
10:00	31	119	63	132	22	56	*	*	*	*	*	*	*	*	39	102
11:00	53	136	46	131	*	*	*	*	*	*	*	*	*	*	50	134
12:00 PM	67	172	74	166	*	*	*	*	*	*	*	*	*	*	70	169
01:00	46	117	50	130	*	*	*	*	*	*	*	*	*	*	48	124
02:00	57	183	40	156	*	*	*	*	*	*	*	*	*	*	48	170
03:00	52	257	32	254	*	*	*	*	*	*	*	*	*	*	42	256
04:00	56	281	58	358	*	*	*	*	*	*	*	*	*	*	57	320
05:00	43	359	48	338	*	*	*	*	*	*	*	*	*	*	46	348
06:00	39	233	38	291	*	*	*	*	*	*	*	*	*	*	38	262
07:00	19	86	16	110	*	*	*	*	*	*	*	*	*	*	18	98
08:00	21	69	16	75	*	*	*	*	*	*	*	*	*	*	18	72
09:00	18	44	17	51	*	*	*	*	*	*	*	*	*	*	18	48
10:00	8	25	13	31	*	*	*	*	*	*	*	*	*	*	10	28
11:00	8	18	7	16	*	*	*	*	*	*	*	*	*	*	8	17
Lane	518	2099	708	2811	219	641	0	0	0	0	0	0	0	0	704	2727
Day	2617		3519		860		0		0		0		0		3431	
AM Peak	11:00	11:00	08:00	08:00	08:00	08:00	-	-	-	-	-	-	-	-	08:00	08:00
Vol.	53	136	67	216	65	204	-	-	-	-	-	-	-	-	66	210
PM Peak	12:00	17:00	12:00	16:00	-	-	-	-	-	-	-	-	-	-	12:00	17:00
Vol.	67	359	74	358	-	-	-	-	-	-	-	-	-	-	70	348

Comb. Total	2617	3519	860	0	0	0	0	3431
ADT	ADT 3,427	AADT 3,427						

Accurate Counts

978-664-2565

Location : Hammond Street
Location : North of Glenoe Road
City/State: Brookline, MA

7990VOL1

Start Time	10/2/2018 Tue	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		11	77			7	80				
12:15		4	88			7	66				
12:30		2	90			3	87				
12:45		1	74	18	329	7	82	24	315	42	644
01:00		3	76			3	79				
01:15		2	84			4	87				
01:30		2	82			4	85				
01:45		3	86	10	328	2	110	13	361	23	689
02:00		1	74			2	91				
02:15		2	88			6	117				
02:30		1	84			3	106				
02:45		1	99	5	345	2	126	13	440	18	785
03:00		1	92			1	132				
03:15		2	81			3	169				
03:30		1	97			1	160				
03:45		5	97	9	367	0	167	5	628	14	995
04:00		3	81			2	174				
04:15		8	94			2	155				
04:30		4	86			1	194				
04:45		6	103	21	364	1	167	6	690	27	1054
05:00		14	97			5	176				
05:15		23	116			5	169				
05:30		31	126			11	189				
05:45		47	121	115	460	12	145	33	679	148	1139
06:00		54	83			15	154				
06:15		77	93			23	148				
06:30		104	102			31	125				
06:45		115	111	350	389	44	109	113	536	463	925
07:00		150	77			47	120				
07:15		129	67			83	88				
07:30		165	51			107	96				
07:45		100	41	544	236	136	68	373	372	917	608
08:00		107	52			100	65				
08:15		141	45			105	70				
08:30		119	45			98	47				
08:45		128	41	495	183	83	58	386	240	881	423
09:00		131	20			69	62				
09:15		130	30			85	55				
09:30		120	22			55	43				
09:45		133	17	514	89	74	39	283	199	797	288
10:00		109	23			60	39				
10:15		109	22			80	38				
10:30		109	16			76	20				
10:45		91	17	418	78	70	27	286	124	704	202
11:00		74	14			62	24				
11:15		85	8			65	27				
11:30		87	6			74	15				
11:45		79	8	325	36	76	13	277	79	602	115
Total		2824	3204			1812	4663			4636	7867
Percent		46.8%	53.2%			28.0%	72.0%			37.1%	62.9%
Grand Total		2824	3204			1812	4663			4636	7867
Percent		46.8%	53.2%			28.0%	72.0%			37.1%	62.9%
ADT		ADT 12,503		AADT 12,503							

SPEEDS

Vanasse & Associates

35 New England Business Center Dr, Suite 140
Andover, MA 01810

Vanasse & Associates
Location: Heath Street
Location: East of Baldwin School
City: Brookline, MA

Site Code: 00799001

Eastbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	85th Percent	95th Percent
10/03/18	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	29	29
01:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	28	29
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	29	29
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	19	19
05:00	0	1	2	4	1	1	0	0	0	0	0	0	0	0	9	33	37
06:00	0	0	6	6	4	1	0	0	0	0	0	0	0	0	17	33	35
07:00	3	1	10	19	6	0	0	0	0	0	0	0	0	0	39	30	33
08:00	1	2	12	39	11	0	0	0	0	0	0	0	0	0	65	30	33
09:00	3	4	6	35	10	2	1	0	0	0	0	0	0	0	61	31	34
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	7	9	37	107	32	4	1	0	0	0	0	0	0	0	197		
Percent	3.6%	4.6%	18.8%	54.3%	16.2%	2.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	09:00	08:00	08:00	08:00	09:00	09:00								08:00		
Vol.	3	4	12	39	11	2	1								65		
PM Peak Vol.																	
Grand Total	41	78	325	729	229	18	3	0	0	0	0	0	0	0	1423		
Percent	2.9%	5.5%	22.8%	51.2%	16.1%	1.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile :	21 MPH
50th Percentile :	26 MPH
85th Percentile :	30 MPH
95th Percentile :	33 MPH

Statistics

10 MPH Pace Speed :	21-30 MPH
Number in Pace :	1054
Percent in Pace :	74.1%
Number of Vehicles > 30 MPH :	250
Percent of Vehicles > 30 MPH :	17.6%
Mean Speed(Average) :	27 MPH

Vanasse & Associates

35 New England Business Center Dr, Suite 140
Andover, MA 01810

Vanasse & Associates
Location: Heath Street
Location: East of Baldwin School
City: Brookline, MA

Site Code: 00799001

Westbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	85th Percent	95th Percent
10/03/18	0	0	2	4	4	0	0	0	0	0	0	0	0	0	10	33	34
01:00	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	33	34
02:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	29	29
03:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	29	29
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	0	2	1	5	1	0	0	0	0	0	0	0	0	0	9	29	32
06:00	0	2	6	14	15	1	0	0	0	0	0	0	0	0	38	33	34
07:00	1	5	13	96	58	9	0	0	0	0	0	0	0	0	182	33	34
08:00	2	3	14	116	65	4	0	0	0	0	0	0	0	0	204	32	34
09:00	1	8	14	69	38	5	1	0	0	0	0	0	0	0	136	33	34
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	5	20	50	307	183	19	1	0	0	0	0	0	0	0	585		
Percent	0.9%	3.4%	8.5%	52.5%	31.3%	3.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	09:00	08:00	08:00	08:00	07:00	09:00								08:00		
Vol.	2	8	14	116	65	9	1								204		
PM Peak Vol.																	
Grand Total	30	115	849	2914	1442	139	6	0	0	0	0	0	0	0	5495		
Percent	0.5%	2.1%	15.5%	53.0%	26.2%	2.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

	15th Percentile :	24 MPH
	50th Percentile :	28 MPH
	85th Percentile :	32 MPH
	95th Percentile :	34 MPH
Statistics	10 MPH Pace Speed :	26-35 MPH
	Number in Pace :	4356
	Percent in Pace :	79.3%
	Number of Vehicles > 30 MPH :	1587
	Percent of Vehicles > 30 MPH :	28.9%
	Mean Speed(Average) :	28 MPH

Accurate Counts

978-664-2565

Location : Hammond Street
Location : North of Glenoe Road
City/State: Brookline, MA

7990SPD1

NB, SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
10/02/18	0	0	1	3	12	19	6	1	0	0	0	0	0	0	42
01:00	0	0	0	2	10	7	3	1	0	0	0	0	0	0	23
02:00	0	0	0	1	6	7	3	1	0	0	0	0	0	0	18
03:00	0	0	0	0	5	3	2	1	1	1	0	0	0	0	14
04:00	0	0	0	0	8	8	9	1	0	0	1	0	0	0	27
05:00	2	1	3	9	38	63	23	9	0	0	0	0	0	0	148
06:00	1	6	1	21	123	192	100	18	1	0	0	0	0	0	463
07:00	2	5	28	96	251	354	152	21	7	1	0	0	0	0	917
08:00	4	5	14	84	354	325	66	8	1	0	0	0	0	0	861
09:00	2	5	9	80	248	283	142	26	2	0	0	0	0	0	797
10:00	0	2	4	45	182	311	134	22	4	0	0	0	0	0	704
11:00	0	4	13	38	149	278	102	16	2	0	0	0	0	0	602
12 PM	0	1	10	41	195	267	110	16	3	0	1	0	0	0	644
13:00	1	4	12	40	192	297	130	13	0	0	0	0	0	0	689
14:00	0	4	3	42	250	317	146	22	0	1	0	0	0	0	785
15:00	3	5	6	71	332	415	142	16	2	1	0	0	0	0	995
16:00	1	1	4	62	313	459	176	37	1	0	0	0	0	0	1054
17:00	6	3	22	104	413	443	129	16	3	0	0	0	0	0	1139
18:00	3	4	4	78	372	360	91	12	1	0	0	0	0	0	925
19:00	2	2	7	86	251	195	55	9	1	0	0	0	0	0	608
20:00	1	1	1	33	148	182	51	6	0	0	0	0	0	0	423
21:00	0	2	0	33	117	112	21	3	0	0	0	0	0	0	288
22:00	0	2	0	23	66	81	22	5	2	1	0	0	0	0	202
23:00	1	3	0	14	29	41	21	5	1	0	0	0	0	0	115
Total	29	60	144	1006	4065	5019	1856	285	32	5	2	0	0	0	12503

Daily

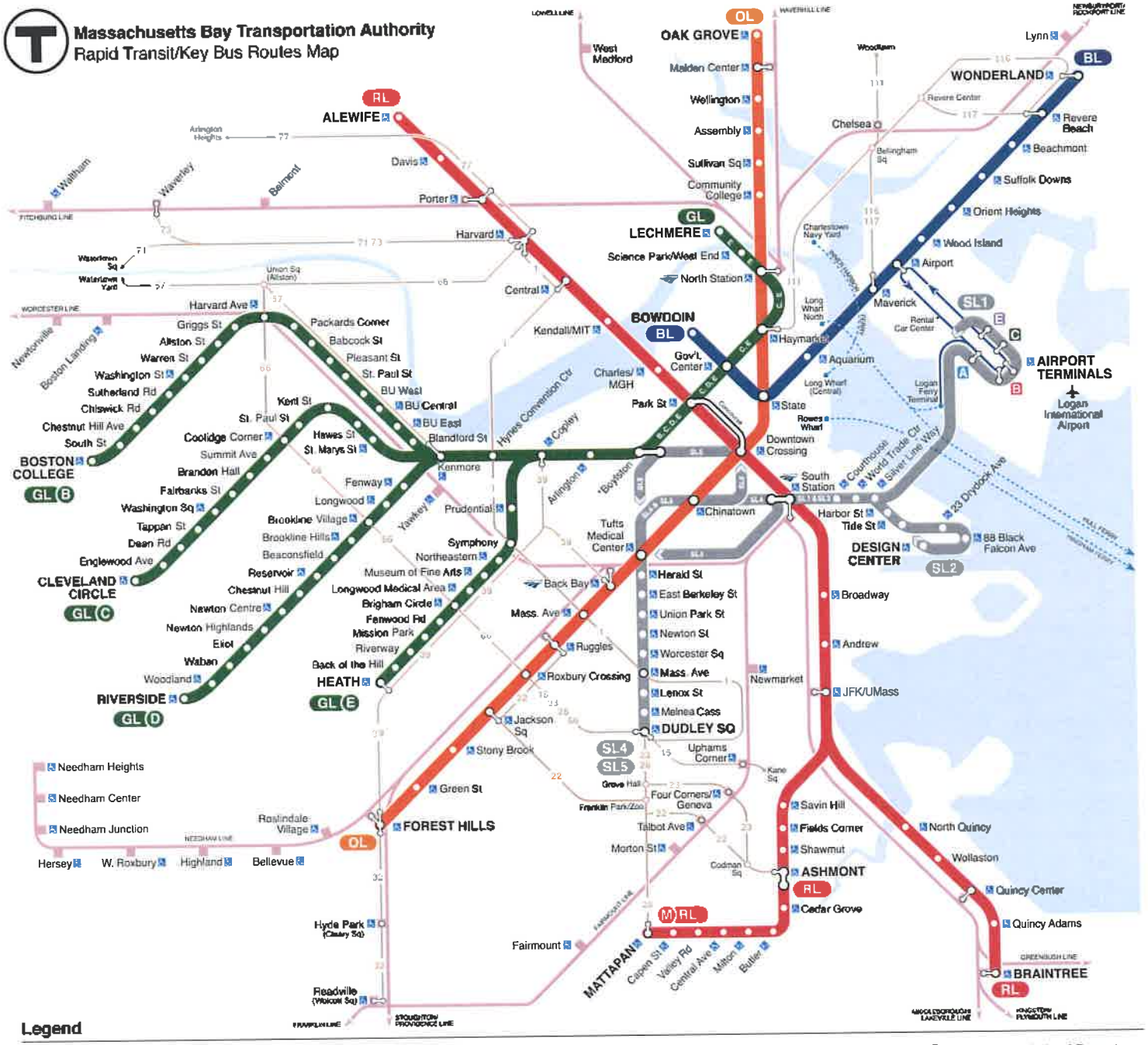
15th Percentile :	30 MPH
50th Percentile :	35 MPH
85th Percentile :	40 MPH
95th Percentile :	44 MPH
Mean Speed(Average) :	36 MPH
10 MPH Pace Speed :	31-40 MPH
Number in Pace :	9064
Percent in Pace :	72.7%
Number of Vehicles > 35 MPH :	7199
Percent of Vehicles > 35 MPH :	57.6%

Grand Total	29	60	144	1006	4065	5019	1856	285	32	5	2	0	0	0	12503

Overall

15th Percentile :	30 MPH
50th Percentile :	35 MPH
85th Percentile :	40 MPH
95th Percentile :	44 MPH
Mean Speed(Average) :	36 MPH
10 MPH Pace Speed :	31-40 MPH
Number in Pace :	9064
Percent in Pace :	72.7%
Number of Vehicles > 35 MPH :	7199
Percent of Vehicles > 35 MPH :	57.6%

TRANSIT INFORMATION


Massachusetts Bay Transportation Authority
Rapid Transit/Key Bus Routes Map
OAK GROVE
ALEWIFE
LECHMERE
BOWDOIN
WONDERLAND
AIRPORT TERMINALS
Logan International Airport
DESIGN CENTER
BOSTON COLLEGE
CLEVELAND CIRCLE
RIVERSIDE
HEATH
DUDLEY SQ
FOREST HILLS
ASHMONT
MATTAPAN
BRAINTREE
Legend
RED LINE
MATTAPAN LINE
ORANGE LINE
BLUE LINE
SILVER LINE and branches
GREEN LINE and branches
COMMUTER RAIL
KEY BUS ROUTE
FERRY
Accessible station
Rapid Transit transfer station
Commuter Rail transfer station
Free Logan Airport shuttle bus
Amtrak service
Customer Communications & Travel Info
MBTA Transit Police: 911
Elevator/escalator/lift updates: 800-392-6100
Not to scale
©April 2017 v.30

Fares

PRICE PER TRIP	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.70	$1.70	$2.25	$2.25
CharlieTicket	$2.00	$2.00	$2.75	$4.75***
Cash-on-Board	$2.00	$4.00	$2.75	$4.75***
Student/Youth*	$0.85	$0.85	$1.10	$1.10
Senior/TAP**	$0.85	$0.85	$1.10	$1.10
UNLIMITED TRIP PASSES				
1-Day	$12.00	$12.00	$12.00	$12.00
7-Day	$21.25	$21.25	$21.25	$21.25
Monthly	$55.00	$55.00	$84.50	$84.50
Senior/TAP Monthly	$30.00/month for unlimited travel on Local Bus and Rapid Transit			

VALID PASSES: LinkPass ($84.50/mo.); Student /Youth LinkPass* ($30/mo.) ; Senior/TAP LinkPass* ($30/mo.); and express bus, commuter rail, and boat passes.

FREE FARES: Children 11 and under ride free when accompanied by an adult;

Blind Access CharlieCard holders ride free: if using a guide, the guide rides free

* Requires Student CharlieCard or Youth CharlieCard. Student CharlieCards are available to students through participating middle schools and high schools. Youth CharlieCards are available through community partners in the Boston metro area. Visit www.mbta.com/youthpass for details.

** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

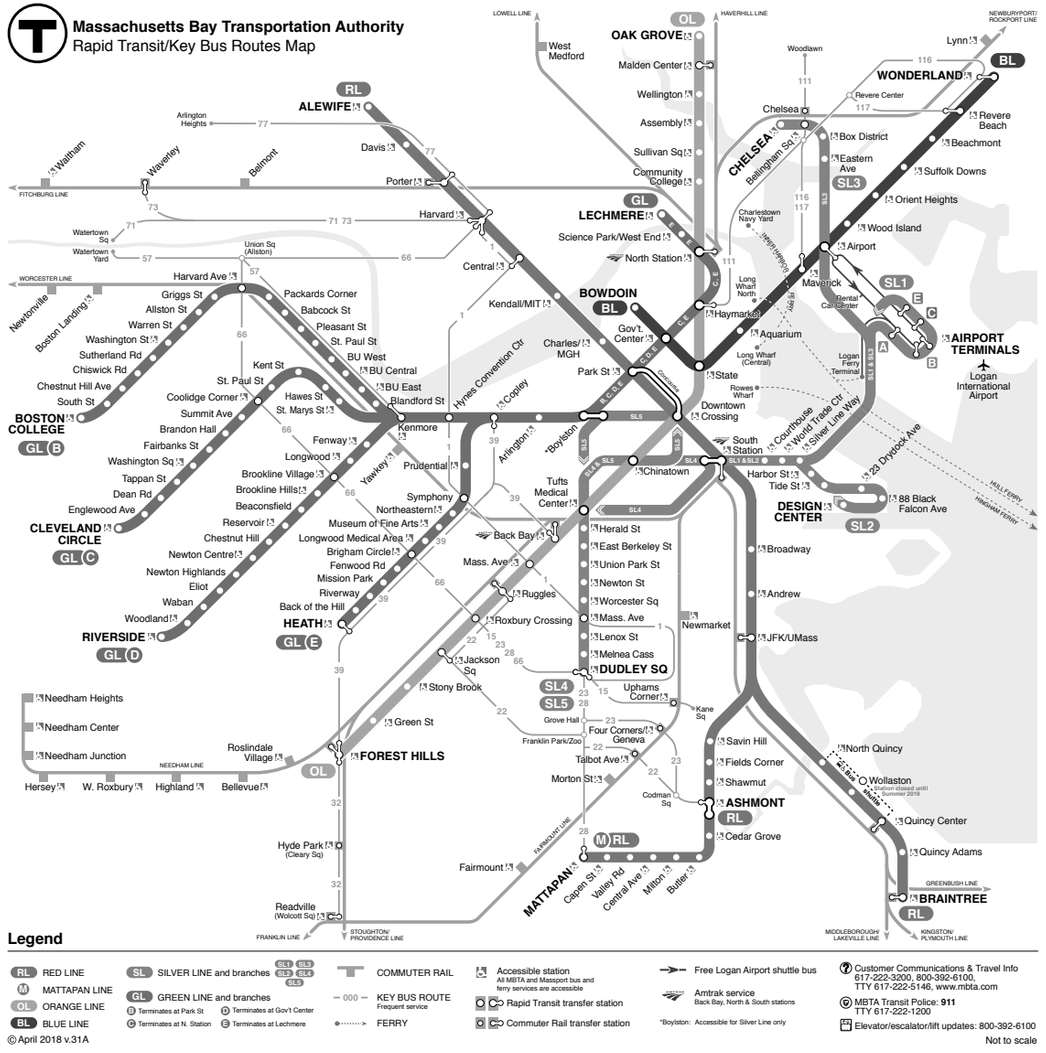
*** For Silver Line SL4 or SL5 pay $2.75. Also see "transfers."

TRANSFERS

If paying with a CharlieTicket or CharlieCard, discounted transfers that are available are automatic — just use the same ticket or card throughout your trip. If paying with cash onboard a vehicle, free transfers are only allowed between rapid transit lines and inside paid platform areas at gated stations.

SCHEDULES

Schedules are available at the following stations: Park Street, Airport, Malden, Harvard, Haymarket (Green Line Level), Back Bay, Downtown Crossing (Orange Line Level), and Quincy Center, or ask a Customer Service Agent. Schedules are also available at the State Transportation Building (10 Park Plaza), 45 High St, and online at mbta.com.



Rapid Transit

Effective September 2, 2018

Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

Rapid Transit Line	Weekday							Saturday						Sunday					
	First Trip	AM Peak	Midday	PM Peak	Evening	Late Night	Last Trip	First Trip	AM Peak	PM Peak	Evening	Late Night	Last Trip	First Trip	AM Peak	PM Peak	Evening	Late Night	Last Trip
Red Line																			
Alewife	5:24AM	9 min	14 min	9 min	12 min	12 min	12:15AM	5:24AM	14 min	14 min	14 min	14 min	12:15AM	6:08AM	15 min	15 min	15 min	16 min	12:15AM
Braintree*	5:13AM	9 min	14 min	9 min	12 min	12 min	12:17AM	5:15AM	14 min	14 min	14 min	14 min	12:17AM	6:00AM	15 min	15 min	15 min	16 min	12:17AM
Alewife	5:16AM	9 min	14 min	9 min	12 min	12 min	w 12:22AM	5:16AM	14 min	14 min	14 min	14 min	w 12:22AM	6:00AM	15 min	15 min	15 min	16 min	w 12:22AM
Ashmont	5:16AM	9 min	14 min	9 min	12 min	12 min	w 12:30AM	5:16AM	14 min	14 min	14 min	14 min	w 12:30AM	6:00AM	15 min	15 min	15 min	16 min	w 12:30AM
"M" Ashmont	5:17AM	5 min	8 min	5 min	12 min	12 min	w 1:05AM	5:15AM	26 min	12 min	12 min	26 min	w 1:05AM	6:03AM	26 min	12 min	12 min	26 min	w 1:05AM
Mattapan	5:05AM	5 min	8 min	5 min	12 min	12 min	12:53AM	5:05AM	26 min	12 min	12 min	26 min	12:53AM	5:51AM	26 min	12 min	12 min	26 min	12:53AM
Blue Line																			
Wonderland	5:13AM	5 min	9 min	5 min	9 min	9 min	12:28AM	5:25AM	9 min	9 min	9 min	13 min	12:28AM	5:58AM	13 min	9 min	9 min	13 min	12:28AM
Orient Heights	5:13AM	5 min	9 min	5 min	9 min	9 min	12:33AM	5:13AM	9 min	9 min	9 min	13 min	12:33AM	6:03AM	13 min	9 min	9 min	13 min	12:33AM
Bowdoin	5:29AM	5 min	9 min	5 min	9 min	9 min	w 1:00AM	5:29AM	9 min	9 min	9 min	13 min	w 1:00AM	6:21AM	13 min	9 min	9 min	13 min	w 1:00AM
Orange Line																			
Oak Grove	5:16AM	6 min	9 min	6 min	10 min	10 min	w 12:30AM	5:16AM	10 min	9 min	11 min	11 min	w 12:30AM	6:00AM	13 min	11 min	11 min	11 min	w 12:30AM
Forest Hills	5:16AM	6 min	9 min	6 min	10 min	10 min	w 12:28AM	5:16AM	10 min	9 min	11 min	11 min	w 12:28AM	6:00AM	13 min	11 min	11 min	11 min	w 12:28AM
Green Line																			
B Boston College	5:01AM	6 min	8 min	6 min	8 min	9 min	12:10AM	4:45AM[2]	11 min	7 min	7 min	11 min	12:09AM	5:20AM[2]	12 min	9 min	7 min	10 min	12:10AM
Park Street	5:42AM	6 min	8 min	6 min	8 min	9 min	w 12:52AM	5:40AM	11 min	7 min	7 min	11 min	w 12:52AM	6:12AM	12 min	9 min	7 min	10 min	w 12:52AM
C Cleveland Circle	5:01AM[1]	6 min	9 min	7 min	7 min	10 min	12:10AM	4:50AM[2]	10 min	9 min	8 min	10 min	12:10AM	5:30AM[2]	12 min	11 min	9 min	12 min	12:10AM
North Station	5:55AM	6 min	9 min	7 min	7 min	10 min	w 12:46AM	5:30AM	10 min	9 min	8 min	10 min	w 12:46AM	6:06AM	12 min	11 min	9 min	12 min	w 12:46AM
D Riverside	4:56AM	6 min	8 min	6 min	8 min	11 min	12:05AM	4:55AM	13 min	9 min	8 min	10 min	12:02AM	5:25AM	13 min	11 min	11 min	11 min	12:05AM
Government Ctr.	5:41AM	6 min	8 min	6 min	8 min	11 min	w 12:49AM	5:38AM	13 min	9 min	8 min	10 min	w 12:49AM	6:10AM	13 min	11 min	11 min	11 min	w 12:49AM
E Lechmere	5:01AM	6 min	8 min	6 min	9 min	9 min	12:30AM	5:01AM	11 min	9 min	11 min	11 min	12:30AM	5:35AM	12 min	12 min	12 min	12 min	12:30AM
Heath Street	5:38AM	6 min	8 min	6 min	9 min	9 min	12:47AM[3]	5:39AM	11 min	9 min	11 min	11 min	12:47AM[3]	6:15AM	12 min	12 min	12 min	12 min	12:47AM[3]
Silver Line																			
SL1 Logan Airport	5:38AM	8 min	9 min	10 min	9 min	12 min	f 2:30AM	5:33AM	12 min	12 min	12 min	12 min	f 2:30AM	5:50AM	12 min	8 min	8 min	8 min	f 2:30AM
South Station	5:40AM	8 min	9 min	10 min	9 min	12 min	1:00AM	5:35AM	12 min	12 min	12 min	12 min	1:00AM	6:12AM	12 min	8 min	8 min	8 min	1:00AM
SL2 Design Center	6:03AM	5 min	10 min	5 min	9 min	15 min	12:30AM	6:10AM	15 min	15 min	15 min	15 min	12:35AM	6:50AM	15 min	15 min	15 min	15 min	12:34AM
South Station	5:45AM	5 min	10 min	5 min	9 min	15 min	12:50AM	5:50AM	15 min	15 min	15 min	15 min	12:49AM	6:35AM	15 min	15 min	15 min	15 min	12:48AM
SL3 Chelsea Station	5:00AM	12 min	15 min	12 min	12 min	15 min	f 1:22AM	5:30AM	12 min	12 min	15 min	15 min	f 1:25AM	6:30AM	15 min	15 min	15 min	15 min	f 1:25AM
South Station	4:31AM	12 min	15 min	12 min	12 min	15 min	w 12:55AM	4:53AM	12 min	12 min	15 min	15 min	w 12:55AM	5:53AM	15 min	15 min	15 min	15 min	w 12:55AM
SL4 Dudley Station	5:20AM	12 min	16 min	14 min	12 min	19 min	12:20AM	5:23AM	15 min	15 min	15 min	20 min	12:20AM	6:02AM	15 min	15 min	15 min	20 min	12:20AM
South Station	5:35AM	12 min	16 min	14 min	12 min	19 min	x 2:54AM	5:40AM	15 min	15 min	15 min	20 min	x 2:54AM	6:20AM	15 min	15 min	15 min	20 min	x 2:54AM
SL5 Dudley Station	5:15AM	8 min	10 min	8 min	7 min	17 min	12:53AM	5:19AM	10 min	10 min	11 min	11 min	12:46AM	6:00AM	10 min	8 min	9 min	9 min	12:25AM
Downtown Xing	5:32AM	8 min	10 min	8 min	7 min	17 min	w 1:07AM	5:34AM	10 min	10 min	11 min	11 min	w 1:00AM	6:15AM	10 min	8 min	9 min	9 min	w 12:47AM

Schedule Periods (approximate):

AM Rush Hour:	6:30 AM - 9:00 AM
Midday:	9:00 AM - 3:30 PM
PM Rush Hour:	3:30 PM - 6:30 PM
Evening:	6:30 PM - 8:00 PM
Late Night:	8:00 PM - CLOSE

Red Line Note:

*Braintree Line:
Due to construction on Wollaston Station the station will be closed. During construction shuttle buses will operate between Wollaston, North Quincy, and Quincy Center Stations. Please visit mbta.com/alerts for updated service information.

Mattapan Note:

Saturday and Sunday before 10:00 AM and after 8:00 PM trips depart every 26 minutes and the rest of the day every 12 minutes. Also, see Mattapan Line Schedule Card.

Green Line Notes:

1 - The first two C Line AM inbound trips run through to Lechmere Station on weekdays.

2 - The first B Line and second C Line AM inbound trips run through to Lechmere Station on weekends.

3 - The 12:32AM trip from Heath St is the last connecting train to other lines downtown. The 12:47AM trip from Heath St. runs in service to Lechmere with no guaranteed connections.

f - After exiting Ted Williams Tunnel bus will only service World Trade Center and South Station stops.

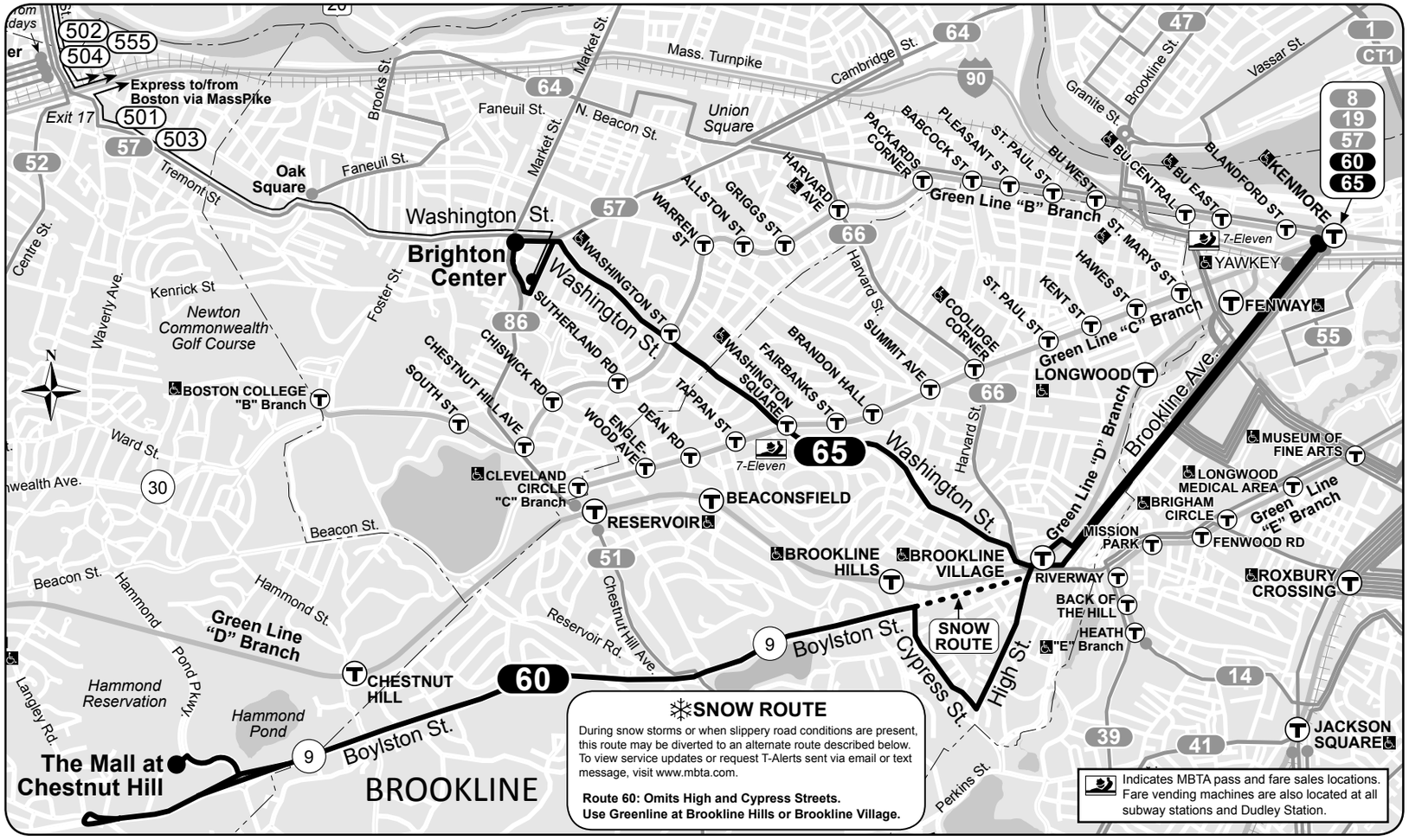
w - Last trips wait at some stations, primarily in the Downtown area, for connecting service. Departure times are approximate.

x - Trip departs from Summer St. @ Dorchester Ave. and omits Essex Street stop.

Fall 2018 & Winter 2019 Holidays

9/3/18: see Sunday 10/8/18: see Weekday
11/22/18, 12/25/18, 1/1/19: see Sunday
1/21/19 & 2/18/19: see Saturday
Silver Line see Weekday

Route 60 Chestnut Hill - Kenmore Station
Route 65 Brighton Center - Kenmore Station



60•65

Effective September 2, 2018

60 Chestnut Hill-Kenmore Station

65 Brighton Center-Kenmore Station

Serving

- The Mall at Chestnut Hill
- St. Elizabeth's Medical Center
- Brookline Village
- Longwood Medical Area
- Beth Israel Deaconess Medical Center
- Fenway Park
- Green Line

Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

60 Weekday

Inbound				Outbound			
Leave Mall at Chestnut Hill	Lv/Arrive Boylston at Tully	Arrive Brookline Village	Arrive Kenmore Station	Leave Kenmore Station	Arrive Brookline Village	Arrive Mall at Chestnut Hill	Arrive Boylston at Tully
.....	5:12A	5:20A	5:28A	.....	4:55A	5:03A	5:07A
.....	6:00	6:09	6:19	5:30A	5:37	5:48	5:52
.....	6:30	6:39	6:49	6:00	6:07	6:18	6:22
.....	6:58	7:15	7:30	6:27	6:34	6:49	6:54
.....	7:22	7:39	7:54	6:43	6:51	7:06	7:11
.....	7:49	8:06	8:21	7:06	7:14	7:29	7:36
.....	8:17	8:34	8:49	7:34	7:44	8:04	8:11
.....	8:41	8:58	9:13	7:58	8:08	8:28	8:35
.....	9:06	9:18	9:33	8:25	8:34	8:50	8:57
.....	9:40	9:52	10:07	8:53	9:03	9:19	9:26
.....	10:15	10:27	10:42	9:16	9:26	9:42	9:49
.....	10:50	11:02	11:16	9:38	9:48	10:04	10:11
.....	11:25	11:36	11:50	10:12	10:22	10:39	10:44
.....	**12:00N**	**12:11P**	**12:25P**	10:48	10:58	11:14	11:19
.....	**12:39P**	**12:50**	**1:04**	11:22	11:31	11:49	11:56
				11:58	**12:08P**	**12:26P**	**12:33P**
1:10P	**1:14P**	**1:26P**	**1:42P**				
1:43	**1:47**	**1:59**	**2:15**	**12:35P**	**12:46P**	**1:03P**	.....
2:10	**2:14**	**2:26**	**2:44**	**1:10**	**1:21**	**1:38**	.....
2:40	**2:45**	**2:59**	**3:18**	**1:35**	**1:46**	**2:03**	.....
3:10	**3:15**	**3:29**	**3:48**	**2:05**	**2:16**	**2:33**	.....
3:45	**3:50**	**4:03**	**4:20**	**2:35**	**2:47**	**3:08**	.....
4:20	**4:25**	**4:38**	**4:55**	**3:05**	**3:17**	**3:38**	.....
4:45	**4:50**	**5:03**	**5:20**	**3:35**	**3:47**	**4:08**	.....
5:14	**5:19**	**5:32**	**5:46**	**4:00**	**4:12**	**4:33**	.....
5:41	**5:46**	**6:00**	**6:14**	**4:30**	**4:42**	**5:02**	.....
6:08	**6:13**	**6:27**	**6:41**	**5:00**	**5:14**	**5:35**	.....
6:35	**6:40**	**6:54**	**7:05**	**5:25**	**5:39**	**6:00**	.....
6:59	**7:02**	**7:12**	**7:22**	**5:55**	**6:08**	**6:26**	.....
7:19	**7:22**	**7:32**	**7:42**	**6:22**	**6:34**	**6:52**	.....
7:45	**7:48**	**7:58**	**8:08**	**6:50**	**7:01**	**7:18**	.....
8:15	**8:18**	**8:28**	**8:38**	**7:15**	**7:23**	**7:40**	.....
8:45	**8:48**	**8:58**	**9:08**	**7:45**	**7:53**	**8:10**	.....
9:15	**9:18**	**9:28**	**9:40**	**8:15**	**8:23**	**8:40**	.....
10:15	**10:19**	**10:28**	**10:37**	**8:45**	**8:53**	**9:10**	.....
11:15	**11:18**	**11:27**	**11:36**	**9:45**	**9:53**	**10:10**	.....
12:06A	.....	12:18A	.....	**10:45**	**10:52**	**11:07**	.....
				11:40	**11:47**	12:02A	.....

60 Saturday

Inbound			Outbound		
Leave Mall at Chestnut Hill	Arrive Brookline Village	Arrive Kenmore Station	Leave Kenmore Station	Lv/Arrive Brookline Village	Arrive Mall at Chestnut Hill
5:05A	5:15A	5:23A	.....	4:55A	5:02A
6:00	6:10	6:18	5:30A	5:36	5:48
7:00	7:11	7:20	6:30	6:37	6:49
7:30	7:41	7:50	7:00	7:07	7:19
8:00	8:11	8:20	7:30	7:37	7:49
8:30	8:44	8:53	8:00	8:07	8:20
9:00	9:14	9:23	8:30	8:37	8:50
9:35	9:49	9:59	9:00	9:07	9:20
10:10	10:24	10:34	9:35	9:43	9:59
10:45	10:59	11:09	10:10	10:18	10:34
11:20	11:34	11:44	10:45	10:53	11:08
11:55	**12:09P**	**12:19P**	11:20	11:28	11:44
			11:55	**12:03P**	**12:19P**
12:30P	**12:44P**	**12:54P**			
1:05	**1:19**	**1:29**	**12:30P**	**12:38P**	**12:54P**
1:45	**1:59**	**2:09**	**1:05**	**1:13**	**1:29**
2:25	**2:40**	**2:52**	**1:45**	**1:53**	**2:09**
3:05	**3:20**	**3:32**	**2:25**	**2:33**	**2:49**
3:45	**4:00**	**4:10**	**3:05**	**3:14**	**3:30**
4:25	**4:42**	**4:52**	**3:45**	**3:54**	**4:10**
5:05	**5:19**	**5:28**	**4:25**	**4:34**	**4:50**
5:45	**5:59**	**6:08**	**5:05**	**5:13**	**5:29**
6:25	**6:39**	**6:48**	**5:45**	**5:53**	**6:09**
7:00	**7:14**	**7:23**	**6:25**	**6:33**	**6:49**
7:30	**7:44**	**7:53**	**7:00**	**7:08**	**7:24**
8:00	**8:11**	**8:21**	**7:30**	**7:38**	**7:54**
8:30	**8:41**	**8:51**	**8:00**	**8:07**	**8:22**
9:00	**9:11**	**9:21**	**8:30**	**8:37**	**8:52**
10:00	**10:11**	**10:21**	**9:30**	**9:37**	**9:52**
11:00	**11:11**	**11:21**	**10:30**	**10:37**	**10:52**
12:00M	12:11A	12:18A	**11:30**	**11:36**	**11:50**
12:50A	1:01	.....	12:25A	12:31A	12:45A

60 Sunday

Inbound			Outbound		
Leave Mall at Chestnut Hill	Arrive Brookline Village	Arrive Kenmore Station	Leave Kenmore Station	Arrive Brookline Village	Arrive Mall at Chestnut Hill
6:30A	6:43A	6:51A	6:00A	6:06A	6:19A
Every	*Hour*	*Until*	*Every*	*Hour*	*Until*
11:30	11:43	11:53	11:00	11:08	11:23
12:40P	**12:53P**	**1:03P**	**12:00N**	**12:08P**	**12:23P**
1:50	**2:03**	**2:13**	**1:10P**	**1:18**	**1:33**
3:00	**3:15**	**3:25**	**2:20**	**2:28**	**2:44**
4:10	**4:24**	**4:35**	**3:30**	**3:38**	**3:54**
5:20	**5:34**	**5:45**	**4:40**	**4:48**	**5:04**
6:30	**6:44**	**6:55**	**5:50**	**5:58**	**6:14**
7:30	**7:42**	**7:51**	**7:00**	**7:08**	**7:24**
8:30	**8:42**	**8:51**	**8:00**	**8:08**	**8:22**
9:30	**9:42**	**9:51**	**9:00**	**9:08**	**9:22**

Route 60
Chestnut Hill-Kenmore Station

Route 65
Brighton Center-Kenmore Station

No Route 65 service on Sunday

All buses are accessible to persons with disabilities

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.70	$1.70	$2.25	$2.25
CharlieTicket	$2.00	$2.00	$2.75	$4.75
Cash-on-Board	$2.00	$4.00	$2.75	$4.75
Student/Youth*	$0.85	$0.85	$1.10	$1.10
Senior/TAP**	$0.85	$0.85	$1.10	$1.10

VALID PASSES: LinkPass ($84.50/mo.); Local Bus ($55/mo.); *Student/Youth LinkPass ($30.00/mo.); **Senior/TAP LinkPass ($30/mo.); and express bus, commuter rail, and boat passes.

FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.

* Requires Student CharlieCard or Youth CharlieCard. Student CharlieCards are available to students through participating middle schools and high schools. Youth CharlieCards are available through community partners in the Boston metro area. Visit www.mbta.com/youthpass for details.

** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

Fall 2018 & Winter 2019 Holidays
9/3/18: see Sunday 10/8/18: see Weekday
11/22/18, 12/25/18, 1/1/19: see Sunday 1/21/19 & 2/18/19: see Saturday

65 Weekday

Inbound			Outbound		
Leave Brighton Center	Arrive Brookline Village	Arrive Kenmore Station	Leave Kenmore Station	Arrive Brookline Village	Arrive Brighton Center
5:58A	6:10A	6:23A	6:14A	6:23A	6:37A
6:20	6:32	6:45	6:50	6:59	7:17
6:40	6:54	7:10	7:12	7:22	7:41
6:56	7:11	7:28	7:31	7:43	8:02
7:07	7:23	7:40	7:47	7:59	8:17
7:17	7:33	7:50	8:07	8:17	8:35
7:27	7:43	8:02	8:27	8:37	8:55
7:37	7:55	8:14	8:42	8:52	9:10
7:47	8:06	8:25	9:00	9:10	9:27
7:57	8:16	8:35	9:30	9:39	9:56
8:08	8:27	8:45	10:10	10:19	10:36
8:15	8:33	8:51	10:40	10:49	11:06
8:24	8:40	8:58	11:15	11:24	11:43
8:35	8:50	9:08	11:50	**12:01P**	**12:20P**
8:46	9:01	9:19			
9:00	9:15	9:33	**12:25P**	**12:36**	**12:55P**
9:30	9:45	10:03	**1:00**	**1:11**	**1:30**
10:05	10:17	10:34	**1:35**	**1:46**	**2:05**
10:40	10:52	11:09	**2:00**	**2:11**	**2:30**
11:10	11:22	11:39	**2:25**	**2:36**	**2:55**
11:45	11:57	**12:14P**	**2:45**	**2:56**	**3:15**
			3:20	**3:31**	**3:50**
12:20P	**12:32P**	**12:49P**	**3:40**	**3:51**	**4:10**
12:55	**1:07**	**1:24**	**4:00**	**4:11**	**4:32**
1:30	**1:42**	**1:59**	**4:17**	**4:32**	**4:54**
2:05	**2:18**	**2:36**	**4:35**	**4:50**	**5:12**
2:40	**2:54**	**3:12**	**4:45**	**5:00**	**5:22**
3:00	**3:14**	**3:32**	**4:55**	**5:10**	**5:32**
3:16	**3:30**	**3:48**	**5:05**	**5:20**	**5:42**
3:35	**3:49**	**4:07**	**5:20**	**5:35**	**5:57**
3:55	**4:09**	**4:27**	**5:40**	**5:55**	**6:15**
4:15	**4:29**	**4:47**	**6:00**	**6:11**	**6:30**
4:40	**4:54**	**5:12**	**6:25**	**6:36**	**6:55**
5:00	**5:14**	**5:32**	**6:50**	**7:01**	**7:20**
5:20	**5:34**	**5:52**	**7:35**	**7:46**	**8:05**
5:45	**5:59**	**6:17**	**8:35**	**8:44**	**8:58**
6:15	**6:29**	**6:47**			
7:07	**7:18**	**7:30**			
8:06	**8:16**	**8:28**			

65 Saturday

Inbound			Outbound		
Leave Brighton Center	Arrive Brookline Village	Arrive Kenmore Station	Leave Kenmore Station	Arrive Brookline Village	Arrive Brighton Center
6:45A	6:54A	7:03A	7:15A	7:23A	7:37A
7:45	7:54	8:03	8:15	8:23	8:36
8:45	8:55	9:04	9:15	9:23	9:36
9:45	9:57	10:05	10:15	10:23	10:36
10:45	10:56	11:05	11:15	11:23	11:37
11:45	11:57	**12:06P**			
			12:15P	**12:26P**	**12:39P**
12:45P	**12:57P**	**1:06P**	**1:15**	**1:26**	**1:44**
1:45	**1:57**	**2:08**	**2:15**	**2:26**	**2:44**
2:45	**2:57**	**3:08**	**3:15**	**3:24**	**3:42**
3:45	**3:58**	**4:07**	**4:15**	**4:24**	**4:42**
4:45	**4:58**	**5:09**	**5:15**	**5:24**	**5:39**
5:45	**5:58**	**6:08**	**6:15**	**6:26**	**6:39**

CRASH DATA

MassDOT

CRASH RATE WORKSHEET

CITY/TOWN : Brookline COUNT DATE : 2016

DISTRICT : 6 UNSIGNALIZED : [ ] SIGNALIZED : Yes

MHD USE ONLY

Source # [ ]

~ INTERSECTION DATA ~

MAJOR STREET : Boylston Street ST # [ ]

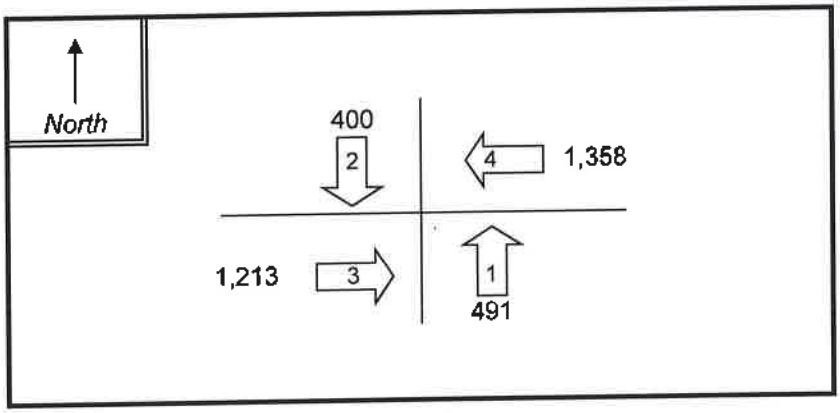
MINOR STREET(S) : Hammond Street ST # [ ]

ST # [ ]

ST # [ ]

ST # [ ]

INTERSECTION DIAGRAM (Label Approaches)



INTERSECTION REF # [ ]

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	491	400	1,213	1,358		3,462

" K " FACTOR : 0.080 APPROACH ADT : 43,167 ADT = TOTAL VOL/"K" FACT.

Crash rate is significant if > 0.52 crashes per mev for an unsignalized intersection and >0.71

TOTAL # OF ACCIDENTS :	29	# OF YEARS :	5	AVERAGE # OF ACCIDENTS (A) :	5.80

CRASH RATE CALCULATION : 0.37 RATE = (A * 1,000,000) / (ADT * 365)

Comments : Crash rate is significant if > 0.52 crashes per mev for an unsignalized intersection and >0.71 crashes per mev for a signalized intersection for MassDOT District 6.

MassDOT

CRASH RATE WORKSHEET

CITY/TOWN : Brookline COUNT DATE : 2016

DISTRICT : 6 UNSIGNALIZED : SIGNALIZED : Yes

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : Hammond Street ST #

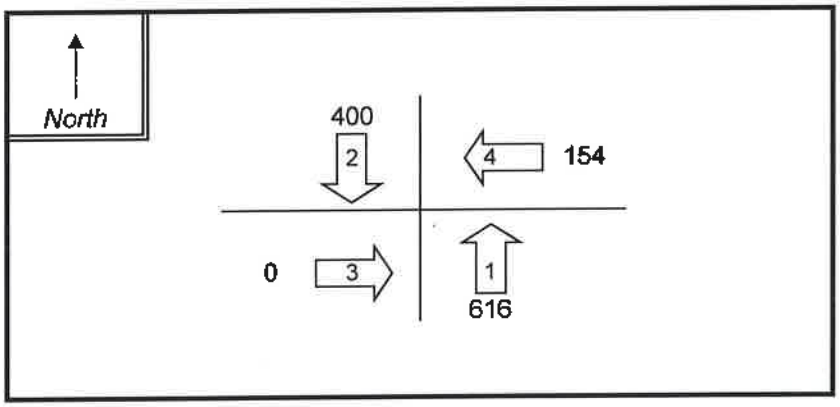
MINOR STREET(S) : Heath Street ST #

ST #

ST #

ST #

INTERSECTION DIAGRAM (Label Approaches)



INTERSECTION REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	616	400	0	154		1,170

" K " FACTOR : 0.080 APPROACH ADT : 14,589 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 3 # OF YEARS : 5 AVERAGE # OF ACCIDENTS (A) : 0.60

CRASH RATE CALCULATION : 0.11 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Comments : Crash rate is significant if > 0.52 crashes per mev for an unsignalized intersection and >0.71 crashes per mev for a signalized intersection for MassDOT District 6.

MassDOT

CRASH RATE WORKSHEET

CITY/TOWN : Brookline COUNT DATE : 2016

DISTRICT : 6 UNSIGNALIZED : Yes SIGNALIZED :

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : Hammond Street ST #

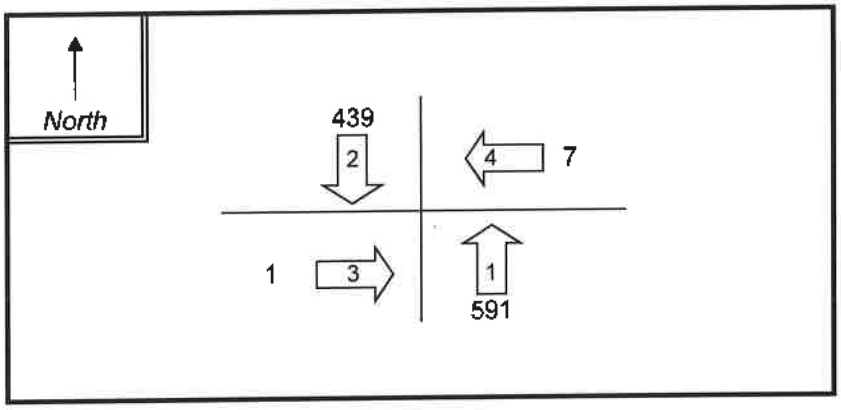
MINOR STREET(S) : Soule Rec Driveway ST #

ST #

ST #

ST #

INTERSECTION DIAGRAM (Label Approaches)



INTERSECTION REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	591	439	1	7		1,038

" K " FACTOR : 0.080 APPROACH ADT : 12,943 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 2 # OF YEARS : 5 AVERAGE # OF ACCIDENTS (A) : 0.40

CRASH RATE CALCULATION : 0.08 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Comments : Crash rate is significant if > 0.52 crashes per mev for an unsignalized intersection and >0.71 crashes per mev for a signalized intersection for MassDOT District 6.

MassDOT

CRASH RATE WORKSHEET

CITY/TOWN : Brookline COUNT DATE : 2016

DISTRICT : 6 UNSIGNALIZED : Yes SIGNALIZED :

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : Hammond Street

MINOR STREET(S) : Woodland Road

ST #

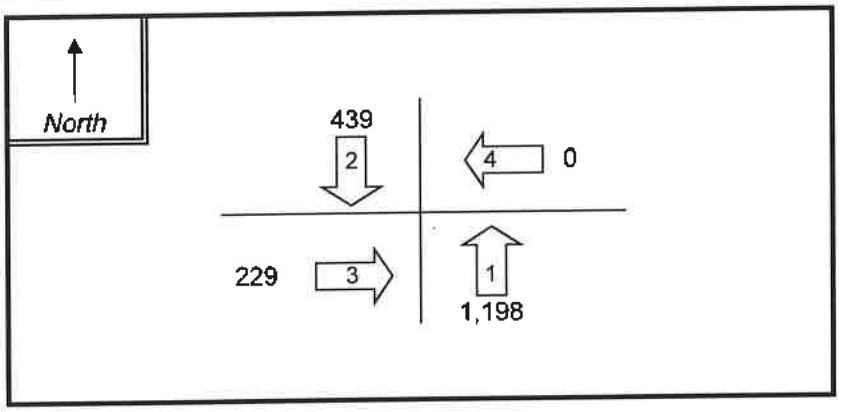
ST #

ST #

ST #

ST #

INTERSECTION DIAGRAM (Label Approaches)



INTERSECTION REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	1,198	439	229	0		1,866

" K " FACTOR : 0.080 APPROACH ADT : 23,267 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 13 # OF YEARS : 5 AVERAGE # OF ACCIDENTS (A) : 2.60

CRASH RATE CALCULATION : 0.31 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Comments : Crash rate is significant if > 0.52 crashes per mev for an unsignalized intersection and >0.71 crashes per mev for a signalized intersection for MassDOT District 6.

MassDOT

CRASH RATE WORKSHEET

CITY/TOWN : Brookline COUNT DATE : 2016

DISTRICT : 6 UNSIGNALIZED : Yes SIGNALIZED :

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : Heath Street ST #

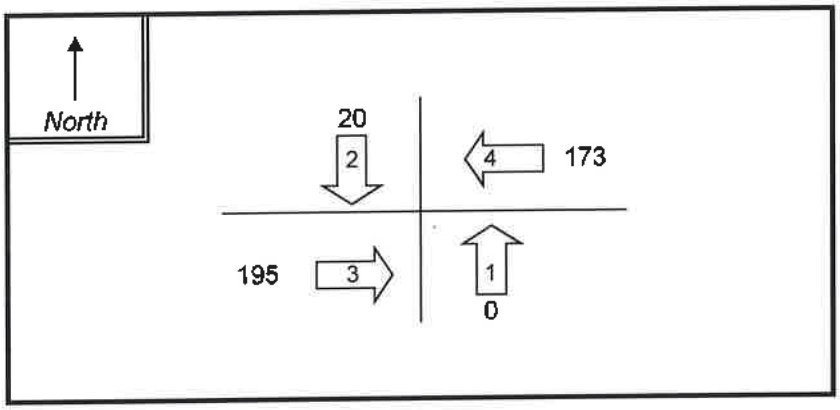
MINOR STREET(S) : Dunster Street ST #

ST #

ST #

ST #

INTERSECTION DIAGRAM (Label Approaches)



INTERSECTION REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	0	20	195	173		388

" K " FACTOR : 0.080 APPROACH ADT : 4,838 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 1 # OF YEARS : 5 AVERAGE # OF ACCIDENTS (A) : 0.20

CRASH RATE CALCULATION : 0.11 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Comments : Crash rate is significant if > 0.52 crashes per mev for an unsignalized intersection and >0.71 crashes per mev for a signalized intersection for MassDOT District 6.

MassDOT

CRASH RATE WORKSHEET

CITY/TOWN : Brookline COUNT DATE : 2016

DISTRICT : 6 UNSIGNALIZED : Yes SIGNALIZED :

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : Hammond Pond Parkway ST #

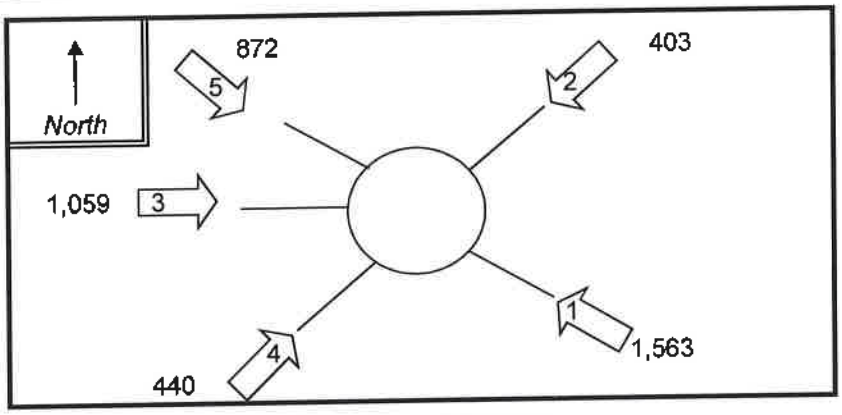
MINOR STREET(S) : Hammond Street ST #

Newton Street (West) ST #

LeGrange Street ST #

Newton Street (South) ST #

INTERSECTION DIAGRAM (Label Approaches)



INTERSECTION REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	NEB	SEB	
VOLUMES (AM/PM) :	1,563	403	1,059	440	872	4,337

" K " FACTOR : 0.080 APPROACH ADT : 54,077 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 75 # OF YEARS : 5 AVERAGE # OF ACCIDENTS (A) : 15.00

CRASH RATE CALCULATION : 0.76 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Comments : Crash rate is significant if > 0.52 crashes per mev for an unsignalized intersection and >0.71 crashes per mev for a signalized intersection for MassDOT District 6.

Crash Number	Crash Date	Crash Time	City/Town	Dist	Crash Severity	Maximum Injury Severity Reported	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	First Harmful Event	First Harmful Event Location	Vehicle Sequence of Events	Driver Contributing Codes	Road Surface	Ambient Light	Weather Condition	Street Number	Roadway	Near Intersection Roadway/ Landmarker	Traffic Way	Speed Limit	Roadway Intersection Type	Traffic Control Device Type	Traffic Device Functioning	Schoolbus Related	Geocoding Method
Boylston Street at Hammond Street																										
4284312	10/14/2016	8:45 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Single vehicle crash	V1: Travelling straight ahead	V1:8	Collision with pedestrian	Roadway	V1:(Collision with pedestrian)	D1:(No improper driving)	Dry	Dark - lighted roadway	Clear		BOYLSTON ST Rte 9 E / HAMMOND ST		Two-way, divided, positive median barrier	40	Four-way intersection	Traffic control signal	Yes, device functioning	No, school bus not involved	At Intersection
4284932	11/4/2016	10:05 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Sideswipe, same direction	V1: Changing lanes / V2:Travelling straight ahead	V1:W / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:(No improper driving)	Dry	Daylight	Clear		BOYLSTON STREET Rte 9 W / HAMMOND STREET		Two-way, divided, positive median barrier	40	Four-way intersection	Traffic control signal	Yes, device functioning	No, school bus not involved	At Intersection
4298730	12/15/2016	12:10 PM	BROOKLINE	6	Not Reported	Not reported	Not reported	V1: Turning right	V1:8	Not reported	Not reported	V1:(Collision with motor vehicle in traffic)	D1:()	Dry	Daylight	Clear		HAMMOND STREET / BOYLSTON STREET Rte SR9 W		Two-way, divided, positive median barrier	40	Four-way intersection	Traffic control signal	Yes, device functioning	Not reported	Operator Designated
4302132	12/23/2016	4:15 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:W / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Fatigued/asleep) D2:(No improper driving)	Dry	Dusk	Clear		BOYLSTON STREET Rte 9 W / HAMMOND STREET Rte 9		Two-way, divided, positive median barrier	30	Not at junction	Traffic control signal	Yes, device functioning	No, school bus not involved	At Intersection
4303148	12/5/2016	7:30 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	V1:E / V2:E / V3:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(No improper driving) D3:(Followed too closely)	Dry	Dark - lighted roadway	Clear	1220	BOYLSTON STREET Rte 9 E		Two-way, divided, positive median barrier	30	Not at junction	Traffic control signal	Yes, device functioning	No, school bus not involved	At Address
Hammond Street at Heath Street																										
3550861	7/29/2013	6:00 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, opposite direction	V1: Travelling straight ahead / V2:Travelling straight ahead / V3:Travelling straight ahead	V1:S / V2:W / V3:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Visibility obstructed) D3:(No improper driving)	Dry	Daylight	Clear		HEATH STREET	HAMMOND STREET	Two-way, not divided	30	Four-way intersection	Traffic control signal	Yes, device functioning	No, school bus not involved	Off Intersection
4095362	10/6/2015	8:58 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Turning left / V2:Travelling straight ahead	V1:8 / V2:8	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic),(Separation of units) V2:(Collision with motor vehicle in traffic),(Separation of units)	D1:(No improper driving) D2:(Disregarded traffic signs, signals, road markings)	Dry	Dark - lighted roadway	Clear		HAMMOND STREET / HEATH STREET		Two-way, not divided	30	Four-way intersection	Traffic control signal	Yes, device functioning	No, school bus not involved	At Intersection
4182571	4/29/2016	3:03 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Angle	V1: Travelling straight ahead / V2:Turning left	V1:8 / V2:8	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HAMMOND STREET / HEATH STREET	CENTRAL CLEANERS	Two-way, not divided	30	Four-way intersection	Traffic control signal	Yes, device functioning	No, school bus not involved	At Intersection
Heath Street at Dunster Road																										
4074823	2/26/2014	8:17 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:N / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic),(Collision with impact attenuator/crash cushion) V2:(Collision with motor vehicle in traffic),(Collision with impact attenuator/crash cushion)	D1:(No improper driving) D2:(Failed to yield right of way),(Inattention)	Dry	Daylight	Clear	652	HAMMOND ST		Two-way, divided, unprotected median	35	Not at junction	No controls	Not reported	No, school bus not involved	At Address
4091613	9/30/2015	9:54 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Backing / V2:Parked	V1:8 / V2:8	Collision with parked motor vehicle	Outside roadway	V1:(Collision with impact attenuator/crash cushion),(Collision with parked motor vehicle) V2:	D1:(Inattention),(Visibility obstructed) D2:()	Wet	Daylight	Rain	652	HAMMOND ST		Two-way, not divided	15	Drive way	No controls	Not reported	No, school bus not involved	At Address
Hammond Street at Woodland Road																										
3023330	1/13/2012	5:10 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:8 / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(No improper driving)	Dry	Dark - lighted roadway	Clear		WOODLAND ROAD / HAMMOND STREET		Two-way, not divided	35	Four-way intersection	No controls	Not reported	No, school bus not involved	At Intersection

Crash Number	Crash Date	Crash Time	City/Town	Dist	Crash Severity	Maximum Injury Severity Reported	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	First Harmful Event	First Harmful Event Location	Vehicle Sequence of Events	Driver Contributing Codes	Road Surface	Ambient Light	Weather Condition	Street Number	Roadway	Near Intersection Roadway/ Landmarker	Traffic Way	Speed Limit	Roadway Intersection Type	Traffic Control Device Type	Traffic Device Functioning	Schoolbus Related	Geocoding Method
3011452	1/12/2012	4:56 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Single vehicle crash	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:E / V2:N	Collision with other	Shoulder - unpaved	V2:(Collision with fence)	D1:(No improper driving) D2:(No improper driving)	Dry	Dark - lighted roadway	Clear		HAMMOND STREET / WOODLAND ROAD		Two-way, not divided	35	Four-way intersection	No controls	Not reported	No, school bus not involved	At Intersection
3348834	12/8/2012	11:23 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Not reported	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:N / V2:E	Not reported	Not reported	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Wet	Daylight	Rain		HAMMOND STREET / WOODLAND ROAD		Not reported	35	Four-way intersection	Stop signs	Not reported	Not reported	At Intersection
3611807	9/16/2013	5:30 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Head-on	V1: Entering traffic lane	V1:E	Collision with pedalcycle (bicycle, tricycle, unicycle, pedal car)	Roadway	V1:(Collision with cyclist)	D1:(Inattention)	Dry	Daylight	Clear		WOODLAND ROAD / HAMMOND STREET		Two-way, not divided	25	T-intersection	No controls	Not reported	No, school bus not involved	At Intersection
3805488	1/14/2014	9:30 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:N / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)		Wet	Daylight	Cloudy/Rain		HAMMOND STREET / WOODLAND RD		Two-way, not divided	35	Four-way intersection	Stop signs	Yes, device functioning	No, school bus not involved	At Intersection
3831445	4/10/2014	5:00 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Making U-turn / V2:Travelling straight ahead / V3:Travelling straight ahead	V1:N / V2:N / V3:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(No improper driving)	Dry	Daylight	Clear	794	HAMMOND ST		Two-way, not divided	35	Not at junction	No controls	Not reported	No, school bus not involved	At Address
4074888	7/23/2014	3:25 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Single vehicle crash	V1: Turning right	V1:N	Collision with tree	Outside roadway	V1:(Collision with tree)	D1:(Made an improper turn)	Dry	Daylight	Clear		HAMMOND ST / WOODLAND RD		Two-way, not divided	35	Four-way intersection	No controls	Not reported	No, school bus not involved	At Intersection
4074981	11/10/2014	12:00 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HAMMOND STREET / WOODLAND ROAD		Two-way, not divided	0	T-intersection	No controls	Not reported	No, school bus not involved	At Intersection
4075019	12/11/2014	6:28 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Angle	V1: Travelling straight ahead / V2:Turning left	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Wet	Dark - lighted roadway	Clear		HAMMOND ST / WOODLAND RD		Two-way, not divided	30	Four-way intersection	No controls	Not reported	No, school bus not involved	At Intersection
4095361	10/7/2015	11:00 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:N / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HAMMOND STREET / WOODLAND ROAD		Two-way, not divided	35	Four-way intersection	Stop signs	Yes, device functioning	No, school bus not involved	At Intersection
4126464	12/27/2015	3:45 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:N / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic),(Separation of units) V2:(Collision with motor vehicle in traffic),(Separation of units)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Dusk	Cloudy		HAMMOND ST / WOODLAND RD		Two-way, not divided	35	Four-way intersection	No controls	Not reported	No, school bus not involved	At Intersection
4182568	4/27/2016	8:55 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:N / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic),(Collision with highway traffic sign post)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HAMMOND ST / WOODLAND RD		Two-way, not divided	35	Four-way intersection	No controls	Not reported	No, school bus not involved	At Intersection
4233521	8/18/2016	8:00 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead		Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)		Dry	Daylight	Cloudy		HAMMOND ST / WOODLAND RD		Two-way, not divided	35	Not at junction	No controls	Not reported	No, school bus not involved	At Intersection
Heath Street at Dunster Road																										
4074815	1/3/2014	1:27 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Single vehicle crash	V1: Travelling straight ahead	V1:E	Collision with utility pole	Shoulder - paved	V1:(Collision with motor vehicle in traffic),(Collision with utility pole),(Collision with impact attenuator/crash cushion)	D1:(Visibility obstructed)	Ice	Daylight	Snow /Blowing sand, snow		HEATH ST / DUNSTER RD		Two-way, divided, unprotected median	30	Not at junction	No controls	Not reported	No, school bus not involved	At Intersection

Crash Number	Crash Date	Crash Time	City/Town	Dist	Crash Severity	Maximum Injury Severity Reported	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	First Harmful Event	First Harmful Event Location	Vehicle Sequence of Events	Driver Contributing Codes	Road Surface	Ambient Light	Weather Condition	Street Number	Roadway	Near Intersection Roadway/ Landmarker	Traffic Way	Speed Limit	Roadway Intersection Type	Traffic Control Device Type	Traffic Device Functioning	SchoolBus Related	Geocoding Method
Horace James Circle																										
2869678	1/20/2012	3:45 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Single vehicle crash	V1: Travelling straight ahead	V1:S	Collision with curb	Outside roadway	V1:(Collision with curb),(Collision with tree)	D1:(Physical impairment)	Wet	Dark - lighted roadway	Snow		HAMMOND POND PARKWAY / HORACE JAMES CIRCLE /		Not reported	25	Traffic circle	Traffic control signal	Yes, device functioning	No, school bus not involved	At Intersection
3022776	4/1/2012	10:35 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Single vehicle crash	V1: Travelling straight ahead	V1:N	Collision with other light pole or other post/support	Roadside	V1:(Ran off road left),(Collision with light pole or other post/support)	D1:(Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc)	Dry	Dark - lighted roadway	Cloudy		HORACE JAMES CIRCLE		One-way, not divided	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Rotary
3049850	4/25/2012	8:11 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failure to keep in proper lane or running off road) D2:(No improper driving)	Dry	Daylight	Cloudy		HAMMOND POND PARKWAY	HORACE JAMES CIRCLE	One-way, not divided	25	Traffic circle	No controls	Not reported	No, school bus not involved	Off Intersection
3059357	3/28/2012	5:40 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Other improper action) D2:(No improper driving)	Dry	Daylight	Clear	24	LAGRANGE STREET		Two-way, not divided	30	Not reported	Stop signs	Not reported	No, school bus not involved	At Address
3266570	7/11/2012	4:05 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(No improper driving)	Dry	Daylight	Clear		LAGRANGE STREET / HORACE JAMES CIRCLE		Two-way, not divided	30	Traffic circle	No controls	No, device not functioning	No, school bus not involved	At Intersection
3303732	10/12/2012	5:24 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Changing lanes / V2:Travelling straight ahead	V1:W / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:(No improper driving)	Dry	Daylight	Clear		HORACE JAMES CIRCLE	HAMMOND STREET	One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	Off Intersection
3327943	12/12/2012	3:35 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	V1:S / V2:S / V3:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(No improper driving) D3:(Followed too closely)	Dry	Daylight	Clear	68	HAMMOND POND PARKWAY		Two-way, not divided	40	Traffic circle	No controls	Not reported	No, school bus not involved	At Address
3391389	4/13/2013	6:15 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Single vehicle crash	V1: Travelling straight ahead	V1:N	Collision with utility pole	Roadway	V1:(Collision with light pole or other post/support)	D1:(Exceeded authorized speed limit)	Wet	Dawn	Rain		HORACE JAMES CIRCLE / WEST ROXBURY PARKWAY		One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	Operator Designated
3402977	4/26/2013	12:00 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Turning left / V2:Travelling straight ahead	V1:W / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:() D2:(Other improper action)	Dry	Daylight	Clear	32	HAMMOND POND PARKWAY	HORACE JAMES CIRCLE	Two-way, not divided	35	Not at Junction	No controls	No, device not functioning	No, school bus not involved	Off Intersection
3403896	5/3/2013	4:51 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HORACE JAMES CIRCLE / NEWTON STREET /		One-way, not divided	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
3427537	5/13/2013	7:05 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Sideswipe, same direction	V1: Turning left	V1:E	Collision with pedalcycle (bicycle, trkcycle, unicycle, pedal car)	Roadway	V1:(Collision with cyclist)	D1:(Visibility obstructed)	Dry	Daylight	Clear		HORACE JAMES CIRCLE / /		One-way, not divided	25	Traffic circle	No controls	Not reported	No, school bus not involved	Rotary
3440932	4/11/2013	2:40 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:W / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Followed too closely),(Inattention)	Dry	Daylight	Clear		HORACE JAMES CIRCLE / HAMMOND STREET / WEST ROXBURY PARKWAY		One-way, not divided	25	Traffic circle	Yield signs	Not reported	No, school bus not involved	Operator Designated
3600422	9/19/2013	5:45 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Changing lanes / V2:Travelling straight ahead	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:(No improper driving)	Not reported	Daylight	Clear		HORACE JAMES CIRCLE Rte UNKNOW		One-way, not divided	25	Traffic circle	No controls	Not reported	No, school bus not involved	Rotary

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3608053	9/12/2013	2:00 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Turning right / V2:Entering traffic lane	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Cloudy		HORACE JAMES CIRCLE / NEWTON STREET / LAGRANGE STREET		Unknown	20	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
3633735	8/1/2013	10:00 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Followed too closely),(Inattention)	Dry	Daylight	Clear		HORACE JAMES CIRCLE		Two-way, divided, unprotected median	20	Traffic circle	Yield signs	No, device not functioning	No, school bus not involved	Rotary
3857994	11/4/2013	4:47 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HORACE JAMES CIRCLE / NEWTON STREET /		One-way, not divided	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
3868550	11/21/2013	7:20 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Turning right / V2:Turning right	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc)	Dry	Daylight	Clear		HAMMOND POND PARKWAY	HORACE JAMES CIRCLE	One-way, not divided	25	Traffic circle	No controls	Not reported	No, school bus not involved	Off Intersection
3738722	2/18/2014	2:00 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Followed too closely)	Snow	Daylight	Snow		HORACE JAMES CIRCLE / /		Two-way, not divided	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Rotary
3736844	12/16/2013	8:29 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Entering traffic lane / V2:Travelling straight ahead	V1:W / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:(No improper driving)	Dry	Daylight	Clear		HAMMOND POND PARKWAY Rte UNKNOW	HORACE JAMES CIRCLE	Two-way, divided, unprotected median	35	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Off Intersection
3748369	1/15/2014	9:27 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Turning left / V2:Travelling straight ahead	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic),(Collision with highway traffic sign post) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:(No improper driving)	Dry	Daylight	Clear		HAMMOND POND PARKWAY Rte UNKNOW	HORACE JAMES CIRCLE	Two-way, divided, positive median barrier	30	Traffic circle	Warning signs	Yes, device functioning	No, school bus not involved	Off Intersection
3803968	2/7/2014	5:58 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Inattention)	Dry	Dark - lighted roadway	Clear		HORACE JAMES CIRCLE		One-way, not divided	0	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Rotary
3804001	2/17/2014	11:25 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		NEWTON STREET / / LAGRANGE STREET /		One-way, not divided	20	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
3847753	6/6/2014	5:46 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HAMMOND POND PARKWAY Rte UNKNOW	HORACE JAMES CIRCLE	One-way, not divided	15	Traffic circle	No controls	Not reported	No, school bus not involved	Off Intersection
3865130	5/29/2014	3:15 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Changing lanes / V2:Travelling straight ahead	V1:W / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:(No improper driving)	Dry	Daylight	Clear		HORACE JAMES CIRCLE / HAMMOND STREET / HAMMOND POND PARKWAY	HORACE JAMES ROTARY	One-way, not divided	30	Not at junction	No controls	Not reported	No, school bus not involved	Operator Designated
3922793	8/7/2014	2:11 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Sideswipe, same direction	V1: Travelling straight ahead / V2:Changing lanes	V1:W / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HAMMOND POND PARKWAY Rte UNKNOW	HORACE JAMES CIRCLE	One-way, not divided	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Off Intersection
3966095	9/18/2014	6:30 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Travelling straight ahead / V2:Changing lanes	V1:N / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failure to keep in proper lane or running off road)	Dry	Daylight	Clear		HORACE JAMES CIRCLE		One-way, not divided	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Rotary

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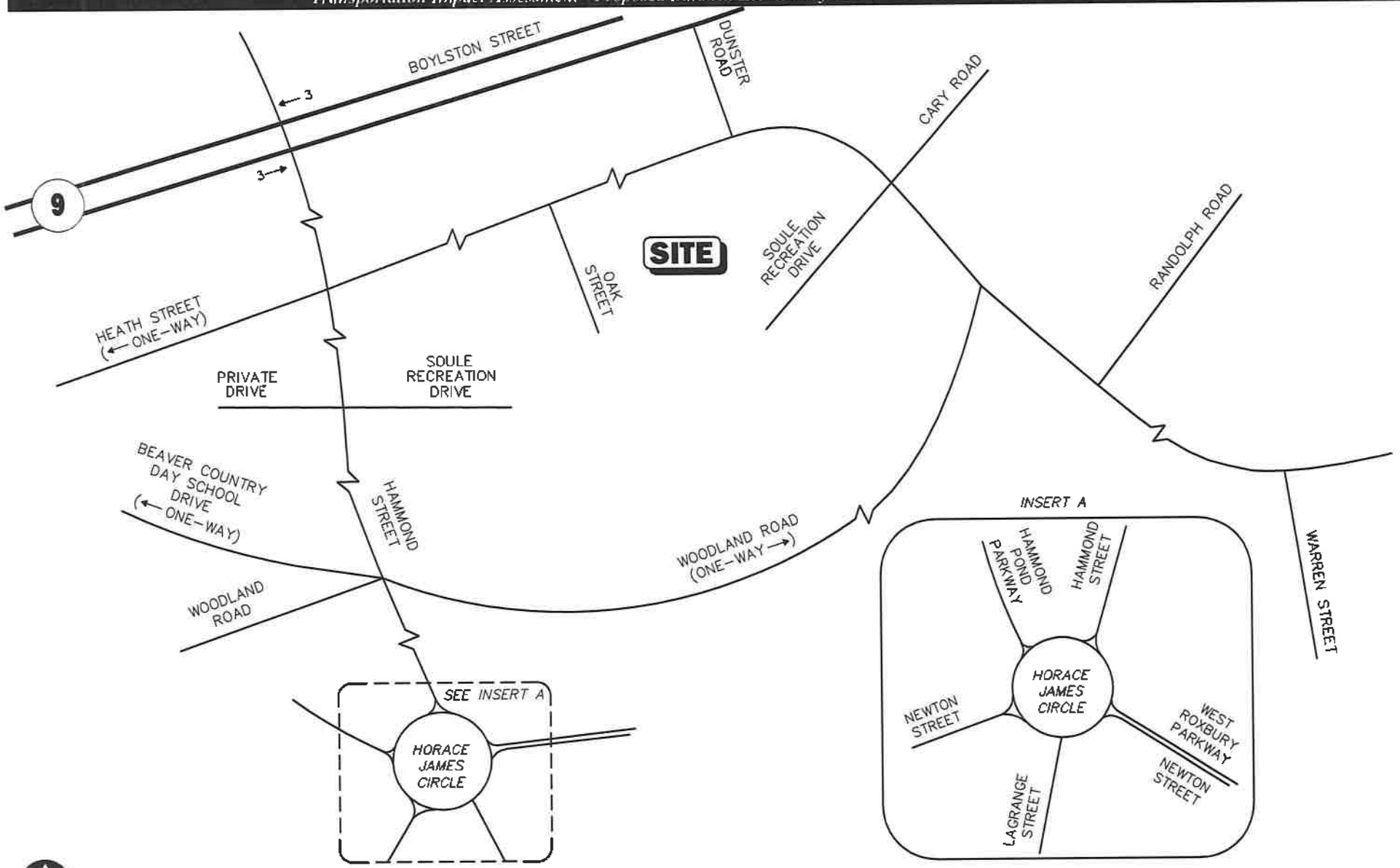
3972016	10/23/2014	3:23 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	O1:(No improper driving) D2:(Other improper action)	Dry	Daylight	Cloudy		HAMMOND POND PARKWAY Rte UNKNOW	HORACE JAMES CIRCLE	Two-way, divided, unprotected median	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Off Intersection
3991772	12/18/2014	7:48 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Inattention)	Wet	Daylight	Cloudy/Rain		HAMMOND POND PARKWAY Rte UNKNOW	HORACE JAMES CIRCLE	Two-way, not divided	35	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Off Intersection
3997336	1/13/2015	4:56 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Entering traffic lane / V2:Travelling straight ahead	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Followed too closely)	Dry	Daylight	Clear		HAMMOND POND PARKWAY / HORACE JAMES CIRCLE /		Two-way, divided, positive median barrier	30	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4039579	4/27/2015	6:00 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Entering traffic lane / V2:Travelling straight ahead	V1:E / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:(No improper driving)	Dry	Daylight	Cloudy		NEWTON STREET / HORACE JAMES CIRCLE		One-way, not divided	30	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Operator Designated
4060305	6/27/2015	3:08 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Single vehicle crash	V1: Turning left	V1:E	Collision with curb	Median	V1:(Collision with motor vehicle in traffic),(Collision with curb),(Collision with highway traffic sign post),(Collision with tree)	D1:(Operating vehicle in erratic, reckless, careless, negligent or aggressive manner)	Dry	Dark - lighted roadway	Not Reported		HAMMOND POND PARKWAY Rte UNKNOW	HORACE JAMES CIRCLE	One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	Off Intersection
4074943	9/28/2014	12:50 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		NEWTON ST / LAGRANGE ST / HORACE JAMES ROTARY		Two-way, divided, positive median barrier	20	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
4074958	10/14/2014	5:54 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Entering traffic lane / V2:Travelling straight ahead	V1:N / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:(No improper driving)	Dry	Daylight	Clear		HORACE JAMES CIRCLE / NEWTON STREET		One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4074969	11/1/2014	5:30 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Turning right / V2:Travelling straight ahead	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Wet	Dark - lighted roadway	Rain		NEWTON ST / HORACE JAMES CIRCLE		Reported but invalid	30	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
4075022	12/13/2014	1:38 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Leaving traffic lane / V2:Turning left	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failure to keep in proper lane or running off road),(Other improper action)	Dry	Daylight	Clear		HORACE JAMES CIRCLE	HAMMOND STREET	One-way, not divided	30	Traffic circle	Yield signs	No, device not functioning	No, school bus not involved	Off Intersection
4075057	1/26/2015	10:55 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way),(Followed too closely)	Dry	Daylight	Cloudy		HAMMOND POND PARKWAY / HORACE JAMES CIRCLE	HORACE JAMES ROTARY	Two-way, not divided	20	Traffic circle	No controls	Not reported	No, school bus not involved	Operator Designated
4075115	3/27/2015	6:20 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Changing lanes / V2:Changing lanes	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Cloudy		HORACE JAMES CIRCLE / HAMMOND POND PARKWAY		One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	Operator Designated
4075203	7/10/2015	2:50 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:S / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		NEWTON ST / HORACE JAMES CIRCLE		One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4093168	10/3/2015	9:51 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Single vehicle crash	V1: Overtaking/passing	V1:N	Collision with pedalcycle (bicycle, tricycle, unicycle, pedal car)	Roadway	V1:(Collision with cyclist)	D1:(Failed to yield right of way)	Wet	Daylight	Cloudy/Rain		HORACE JAMES CIRCLE Rte UNKNOW		One-way, not divided	25	Traffic circle	No controls	Not reported	No, school bus not involved	Rotary

Crash Number	Crash Date	Crash Time	City/Town	Dist	Crash Severity	Maximum Injury Severity Reported	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	First Harmful Event	First Harmful Event Location	Vehicle Sequence of Events	Driver Contributing Codes	Road Surface	Ambient Light	Weather Condition	Street Number	Roadway	Near Intersection Roadway/ Landmarker	Traffic Way	Speed Limit	Roadway Intersection Type	Traffic Control Device Type	Traffic Device Functioning	Schoolbus Related	Geocoding Method
4097974	10/15/2015	4:45 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Turning right / V2:Turning right	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failure to keep in proper lane or running off road),(Made an improper turn)	Dry	Daylight	Clear		HAMMOND POND PARKWAY / HORACE JAMES CIRCLE / NEWTON STREET		One-way, not divided	0	Not at junction	Yield signs	Yes, device functioning	No, school bus not involved	Operator Designated
4101377	10/21/2015	11:55 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Sideswipe, opposite direction	V1: Turning right / V2:Slowing or stopped in traffic	V1:S / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failure to keep in proper lane or running off road),(Inattention) D2:(No improper driving)	Wet	Daylight	Cloudy/Rain		LAGRANGE STREET / NEWTON STREET		Two-way, not divided	0	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
4102333	9/30/2015	8:55 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Followed too closely) D2:(No improper driving)	Wet	Daylight	Rain		HORACE JAMES CIRCLE Rte UNKNOW		Two-way, divided, positive median barrier	30	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Rotary
4110820	11/8/2015	2:01 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:E / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic),(Collision with impact attenuator/crash cushion) V2:(Collision with motor vehicle in traffic),(Collision with impact attenuator/crash cushion)	D1:(Failed to yield right of way),(Disregarded traffic signs, signals, road markings) D2:(No improper driving)	Dry	Daylight	Clear		NEWTON ST / HORACE JAMES CIRCLE		One-way, not divided	30	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
4110827	11/3/2015	7:20 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Turning right / V2:Entering traffic lane	V1:E / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with parked motor vehicle) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:()	Dry	Dark - lighted roadway	Clear		HORACE JAMES CIR / NEWTON ST		One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4115057	11/6/2015	3:40 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Other improper action)	Dry	Daylight	Clear		HORACE JAMES CIRCLE		Two-way, divided, positive median barrier	30	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Rotary
4126215	12/20/2015	10:18 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Turning right	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HAMMOND POND PARKWAY	HORACE JAMES CIRCLE	Two-way, divided, positive median barrier	30	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Off Intersection
4126221	12/23/2015	6:28 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:E / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:(No improper driving)	Wet	Dark - lighted roadway	Rain		HORACE JAMES CIRCLE / NEWTON STREET		One-way, not divided	20	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4133589	1/9/2016	3:21 PM	BROOKLINE	6	Fatal injury	Fatal injury	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead / V3:Travelling straight ahead	V1:E / V2:E / V3:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic)		Dry	Daylight	Cloudy	15	LAGRANGE STREET		Two-way, not divided	25	Not at junction	No controls	Not reported	No, school bus not involved	At Address
4147431	1/25/2016	8:52 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HORACE JAMES CIRCLE	WEST ROXBURY PARKWAY	One-way, not divided	30	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Off Intersection
4149991	2/13/2016	3:30 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Travelling straight ahead	V1:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic)	D1:(No improper driving)	Dry	Daylight	Clear		HORACE JAMES ROTARY / LAGRANGE ST. / NEWTON ST.		Unknown	30	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4152020	2/18/2016	10:31 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Single vehicle crash	V1: Turning right	V1:E	Collision with pedestrian	Roadway	V1:(Collision with pedestrian)	D1:(Failed to yield right of way)	Dry	Daylight	Clear		LAGRANGE STREET / HORACE JAMES CIRCLE		Two-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4157090	2/19/2016	7:00 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Turning right / V2:Entering traffic lane	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Cloudy		HORACE JAMES CIRCLE	LAGRANGE STREET	One-way, not divided	30	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Off Intersection

Crash Number	Crash Date	Crash Time	City/Town	Dist	Crash Severity	Maximum Injury Severity Reported	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	First Harmful Event	First Harmful Event Location	Vehicle Sequence of Events	Driver Contributing Codes	Road Surface	Ambient Light	Weather Condition	Street Number	Roadway	Near Intersection Roadway/ Landmarker	Traffic Way	Speed Limit	Roadway Intersection Type	Traffic Control Device Type	Traffic Device Functioning	Schoolbus Related	Geocoding Method
4165136	3/13/2016	3:30 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead / V4:Turning right	V1:S / V2:S / V3:S / V4:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic) V4:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(No improper driving) D3:(Followed too closely) D4:()	Dry	Daylight	Clear		HORACE JAMES CIRCLE Rte UNKNOW		Not reported	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Rotary
4167091	2/25/2016	4:11 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Followed too closely)	Dry	Daylight	Not Reported		HAMMOND POND PARKWAY Rte UNKNOW	HORACE JAMES CIRCLE	One-way, not divided	25	Traffic circle	Yield signs	Not reported	No, school bus not involved	Off Intersection
4173858	4/6/2016	11:45 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:N / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:()	Dry	Daylight	Cloudy		HORACE JAMES CIRCLE / HAMMOND STREET /		Two-way, not divided	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
4179439	4/12/2016	5:50 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Followed too closely)	Dry	Daylight	Clear		HAMMOND POND PARKWAY / HORACE JAMES CIRCLE		One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4182565	3/19/2016	5:40 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:E / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Followed too closely) D2:(No improper driving)	Dry	Daylight	Clear		NEWTON STREET / LAGRANGE STREET		Two-way, divided, positive median barrier	20	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4190630	5/8/2016	4:45 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Rear-end	V1: Entering traffic lane / V2:Travelling straight ahead	V1:S / V2:S	Not reported	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Followed too closely) D2:(No improper driving)	Dry	Daylight	Clear		HAMMOND POND PARKWAY / HORACE JAMES CIRCLE		Two-way, divided, positive median barrier	25	Traffic circle	No controls	Yes, device functioning	No, school bus not involved	Operator Designated
4202740	5/27/2016	3:55 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Not reported / V2:Travelling straight ahead	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failed to yield right of way) D2:(No improper driving)	Dry	Daylight	Not Reported		HORACE JAMES CIRCLE Rte UNKNOW		Two-way, divided, positive median barrier	20	Traffic circle	Yield signs	Not reported	No, school bus not involved	Rotary
4202948	6/2/2016	7:30 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:E / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		NEWTON ST / LAGRANGE ST		One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4210765	6/29/2016	5:40 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HORACE JAMES CIRCLE / NEWTON ST / LAGRANGE ST		One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4220970	7/15/2016	1:27 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Rear-end	V1: Travelling straight ahead	V1:W	Collision with pedalcycle (bicycle, tricycle, unicycle, pedal car)	Roadway	V1:(Collision with cyclist)	D1:()	Dry	Daylight	Clear		HORACE JAMES CIRCLE / HAMMOND POND PARKWAY /		One-way, not divided	25	Traffic circle	No controls	Not reported	No, school bus not involved	At Intersection
4225078	7/20/2016	8:53 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Sideswipe, same direction	V1: Entering traffic lane / V2:Entering traffic lane	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:() D2:()	Dry	Daylight	Clear		HORACE JAMES CIRCLE Rte UNKNOW		One-way, not divided	25	Traffic circle	No controls	Not reported	No, school bus not involved	Rotary
4245879	8/28/2016	4:30 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Sideswipe, same direction	V1: Turning left / V2:Turning right	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HORACE JAMES CIRCLE		Two-way, not divided	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Rotary
4249123	9/9/2016	12:26 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Rear-end	V1: Travelling straight ahead / V2:Entering traffic lane	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Followed too closely) D2:(No improper driving)	Dry	Daylight	Clear		WEST ROXBURY PARKWAY / HORACE JAMES CIRCLE		One-way, not divided	30	Traffic circle	Yield signs	Not reported	No, school bus not involved	At Intersection

Crash Number	Crash Date	Crash Time	City/Town	Dist	Crash Severity	Maximum Injury Severity Reported	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	First Harmful Event	First Harmful Event Location	Vehicle Sequence of Events	Driver Contributing Codes	Road Surface	Ambient Light	Weather Condition	Street Number	Roadway	Near Intersection Roadway/ Landmarker	Traffic Way	Speed Limit	Roadway Intersection Type	Traffic Control Device Type	Traffic Device Functioning	Schoolbus Related	Geocoding Method
4252129	9/24/2016	12:45 AM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Single vehicle crash	V1: Travelling straight ahead	V1:8	Collision with other light pole or other post/support	Median	V1:(Collision with light pole or other post/support)	D1:(Failure to keep in proper lane or running off road)	Wet	Dark - lighted roadway	Rain		HORACE JAMES CIRCLE	NEWTON STREET	One-way, not divided	40	Four-way intersection	Yield signs	No, device not functioning	No, school bus not involved	Off Intersection
4271285	10/29/2016	5:50 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Angle	V1: Turning right / V2:Entering traffic lane	V1:N / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic),(Separation of units) V2:(Collision with motor vehicle in traffic),(Separation of units)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Cloudy		HORACE JAMES ROTARY / NEWTON ST / LAGRANGE ST		One-way, not divided	20	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
4276278	10/27/2016	3:05 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Angle	V1: Travelling straight ahead / V2:Turning right	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HORACE JAMES CIRCLE / HAMMOND POND PARKWAY / HAMMOND STREET		One-way, not divided	30	Traffic circle	No controls	Not reported	No, school bus not involved	Operator Designated
4283182	11/12/2016	7:54 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Non incapacitating	Sideswipe, same direction	V1: Travelling straight ahead / V2:Leaving traffic lane	V1:W / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Inattention)	Dry	Dark - lighted roadway	Clear		HAMMOND POND PARKWAY Rte UNKNOW	HORACE JAMES CIRCLE	One-way, not divided	20	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	Off Intersection
4284317	11/13/2016	5:05 PM	BROOKLINE	6	Non-fatal injury	Non-fatal injury - Possible	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Followed too closely)	Dry	Dark - lighted roadway	Clear	20	LAGRANGE ST		Two-way, not divided	30	Unknown	No controls	Not reported	No, school bus not involved	At Address
4284774	11/8/2016	7:05 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Other / V2:Entering traffic lane	V1:S / V2:S	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HORACE JAMES CIRCLE / HAMMOND POND PARKWAY		Two-way, divided, positive median barrier	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
4286177	11/12/2016	9:43 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Turning right / V2:Travelling straight ahead	V1:W / V2:W	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failure to keep in proper lane or running off road)	Dry	Daylight	Clear		HORACE JAMES CIRCLE Rte UNKNOW	HAMMOND POND PARKWAY	One-way, not divided	25	Traffic circle	No controls	Not reported	No, school bus not involved	Off Intersection
4293737	11/17/2016	3:56 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Turning left / V2:Turning left	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:() D2:()	Dry	Daylight	Clear		HORACE JAMES CIRCLE		One-way, not divided	25	Traffic circle	No controls	Not reported	Yes, school bus involved	Rotary
4302135	12/20/2016	10:10 AM	BROOKLINE	6	Property damage only (none injured)	No injury	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:S / V2:E	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(No improper driving) D2:(Failed to yield right of way)	Dry	Daylight	Clear		HORACE JAMES ROTARY / NEWTON ST / LAGRANGE ST		Two-way, divided, positive median barrier	20	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection
4317770	12/4/2016	2:40 PM	BROOKLINE	6	Property damage only (none injured)	No injury	Sideswipe, same direction	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:N / V2:N	Collision with motor vehicle in traffic	Roadway	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	D1:(Failure to keep in proper lane or running off road) D2:(Other improper action)	Dry	Daylight	Clear		HAMMOND POND PARKWAY / HORACE JAMES CIRCLE		Two-way, divided, positive median barrier	25	Traffic circle	Yield signs	Yes, device functioning	No, school bus not involved	At Intersection

BACKGROUND DEVELOPMENT



Not To Scale

Figure A-1

Mixed-Use Development
Weekday Morning
1180 Boylston Street
School Peak Hour Traffic Volume

Vanasse & Associates, Inc.
Transportation Engineers & Planners

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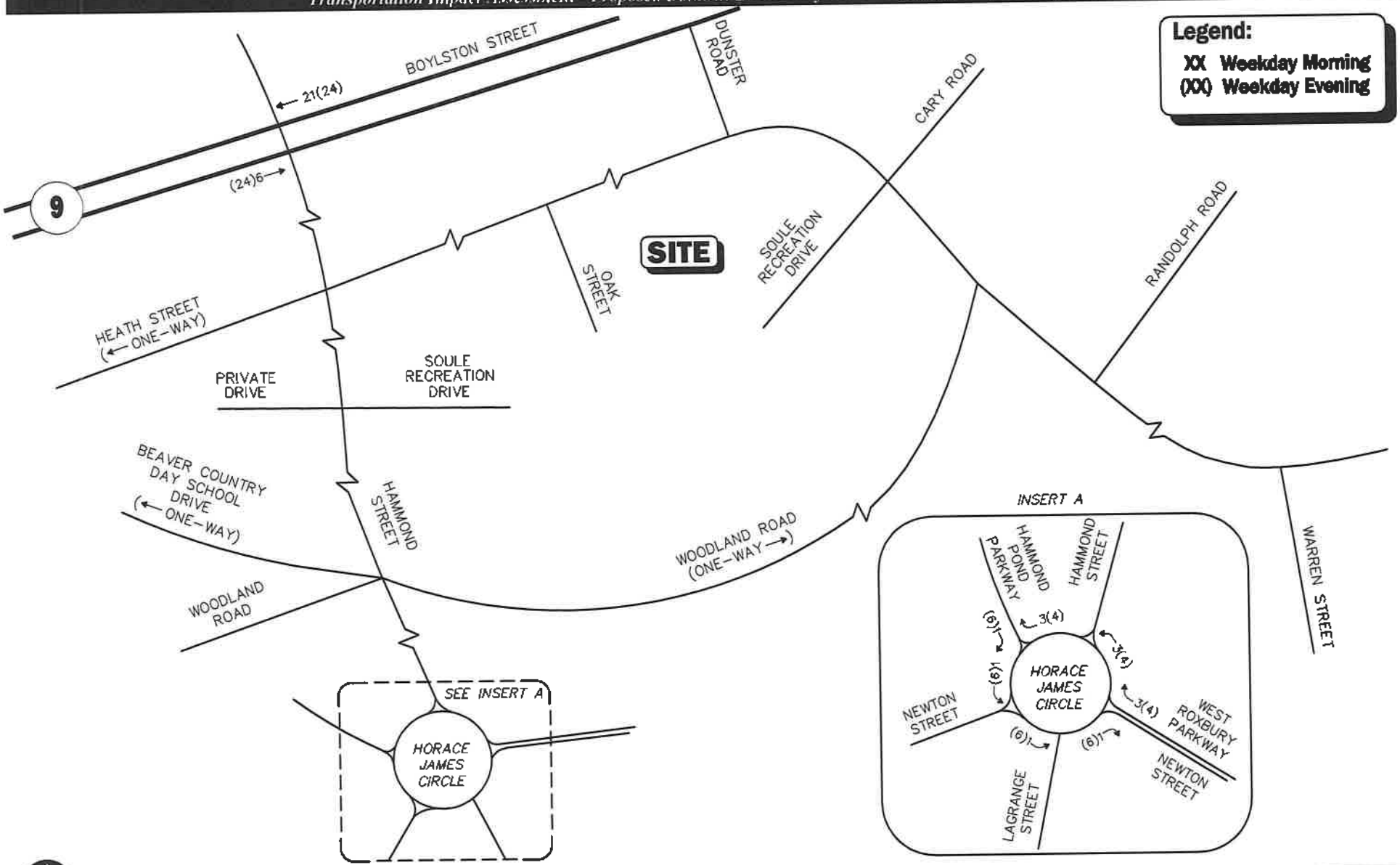

Not To Scale

Figure A-2

Atrium Mall
Medical-Dental Office
School Peak Hour Traffic Volume

Vanasse & Associates, Inc.
Transportation Engineers & Planners

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VEHICLE OCCUPANY RATIO

Vanasse & Associates, Inc.
Transportation Engineers & Planners
35 New England Business Center Drive
Suite 140
Andover, MA 01810-1066

Job: Brooline, MA
Location : Baker School
Title: AM/PM Drop off's Observations

Job number: 7382
Date: 1/12/17

Vehicles	7:35	7:48	8:00		2:15	2:30	2:45
1	1	2	2		1	1	1
2	1	1	2			1	1
3	3	1	1			2	2
4	1	1	1			1	2
5	2	1	1			1	1
6	1	1	2			1	2
7	1	2	1			1	1
8	2	2	2			2	2
9	1	1	1			1	
10	2	1	1			2	
11	2	1	1			1	
12	1	2	1			2	
13	1	2				1	
14	2	1				1	
15	1	2				1	
16	1	2				4	
17	1	1				2	
18	1	2				2	
19	1	2				1	
20		1					
21		3					
22		1					
23		2					
24		1					
25		1					
26		2					
27		1					
28		1					
29		3					
30		1					
TOTAL	26	45	16		1	28	12

		AM *		PM**	
Total Children	71	1.45		40	1.48
Total Vehicle	49			27	

* 7:35 to 8:00 AM
**2:30 to 3:00 PM

Average: 1.47

TRIP GENERATION

Institute of Transportation Engineers (ITE)
***Trip Generation, 9*th Edition**
Land Use Code (LUC) 520 - Elementary School

Average Vehicle Trips Ends vs: Students
Independent Variable (X): 453

R2 **Equation**

0.7 AVERAGE WEEKDAY DAILY
T = 2.13(x)-184.07
T = 2.13(x)-184.07
T = 780.82
T = 780 vehicle trips
with 50% (390 vph) entering and 50% (390 vph) exiting.

Rate

AVERAGE WEEKDAY DAILY
T = 1.89 * (X)
T = 1.89 * 453
T = 856.17
T = 856 vehicle trips
with 50% (428 vph) entering and 50% (428 vph) exiting.

--

WEEKDAY MORNING PEAK HOUR **7:00 - 9:00 AM**
T = 0.67 * (X)
T = 0.67 * 453
T = 303.51
T = 304 vehicle trips
with 55% (167 vph) entering and 45% (137 vph) exiting.

--

WEEKDAY EVENING PEAK HOUR OF GENERATOR
T = 0.34 * (X)
T = 0.34* 453
T = 154.02
T = 154 vehicle trips
with 45% (69 vph) entering and 55% (85 vph) exiting.

CAPACITY ANALYSIS

Boylston Street (Route 9) at Hammond Street
Hammond Street at Heath Street
Hammond Street at Soule Recreation Drive and Private Drive
Hammond Street at Woodland Road
Heath Street at Oak Street
Heath Street at Site Driveway (Entrance only)
Heath Street at Dunster Road
Boylston Street (Route 9) at Dunster
Heath Street at Cary Road and Soule Recreation Drive
Heath Street at Woodland Road
Heath Street at Randolph Road
Heath Street at Warren Street
James Horace Circle

Boylston Street (Route 9) at Hammond Street

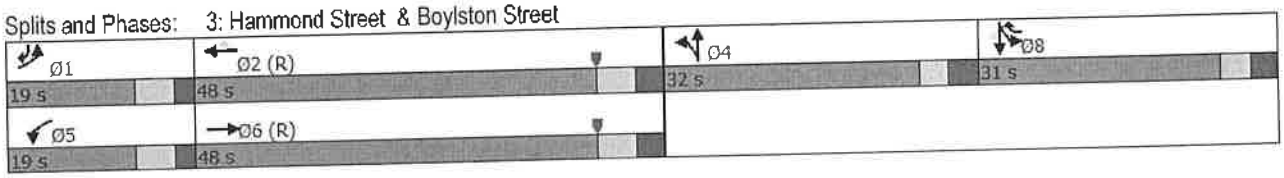
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	1074	25	176	1149	33	64	373	54	119	203	78
Future Volume (vph)	144	1074	25	176	1149	33	64	373	54	119	203	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	12	12	12	13	12	12	10	11
Storage Length (ft)	220		0	330		150	0		0	0		100
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	1.00
Frt		0.997				0.850		0.983				0.850
Flt Protected	0.950			0.950				0.994			0.982	
Satd. Flow (prot)	1728	3514	0	1678	3539	1615	0	3572	0	0	3309	1561
Flt Permitted	0.950			0.950				0.994			0.982	
Satd. Flow (perm)	1728	3514	0	1678	3539	1615	0	3572	0	0	3309	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				76		9				99
Link Speed (mph)		40			45			25			25	
Link Distance (ft)		710			770			351			593	
Travel Time (s)		12.1			11.7			9.6			16.2	
Peak Hour Factor	0.87	0.87	0.87	0.84	0.84	0.84	0.90	0.90	0.90	0.75	0.75	0.75
Heavy Vehicles (%)	1%	2%	20%	4%	2%	0%	3%	0%	15%	0%	0%	0%
Adj. Flow (vph)	166	1234	29	210	1368	39	71	414	60	159	271	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	166	1263	0	210	1368	39	0	545	0	0	430	104
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.04	1.00	1.00	1.00	0.96	1.00	1.00	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA		Split	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2	8	4	4		8	8	1
Permitted Phases						2						8
Detector Phase	1	6		5	2	8	4	4		8	8	1
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	10.0	60.0		10.0	60.0	30.0	30.0	30.0		30.0	30.0	10.0
Total Split (s)	19.0	48.0		19.0	48.0	31.0	32.0	32.0		31.0	31.0	19.0
Total Split (%)	14.6%	36.9%		14.6%	36.9%	23.8%	24.6%	24.6%		23.8%	23.8%	14.6%
Maximum Green (s)	13.0	41.0		13.0	41.0	25.0	26.0	26.0		25.0	25.0	13.0
Yellow Time (s)	4.0	4.0		4.0	4.0	3.0	3.0	3.0		3.0	3.0	4.0
All-Red Time (s)	2.0	3.0		2.0	3.0	3.0	3.0	3.0		3.0	3.0	2.0
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0	-2.0		-2.0			-2.0	-2.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	Ped	Ped	Ped		Ped	Ped	None
Walk Time (s)		20.0			20.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		20.0			20.0	18.0	19.0	19.0		18.0	18.0	
Pedestrian Calls (#/hr)		10			10	3	8	8		3	3	
Act Effct Green (s)	16.1	44.0		17.1	45.0	70.8		27.1			25.8	45.9
Actuated g/C Ratio	0.12	0.34		0.13	0.35	0.54		0.21			0.20	0.35
v/c Ratio	0.78	1.06		0.95	1.12	0.04		0.73			0.66	0.17
Control Delay	79.2	85.3		105.3	104.1	0.3		20.0			53.2	6.7
Queue Delay	0.0	0.0		0.0	0.0	0.0		1.0			0.0	0.0
Total Delay	79.2	85.3		105.3	104.1	0.3		21.0			53.2	6.7
LOS	E	F		F	F	A		C			D	A
Approach Delay		84.6			101.8			21.0			44.2	
Approach LOS		F			F			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow, Master Intersection
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 77.7 — Intersection LOS: E
Intersection Capacity Utilization 76.5% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Hammond Street & Boylston Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	166	1263	210	1368	39	545	430	104
v/c Ratio	0.78	1.06	0.95	1.12	0.04	0.73	0.66	0.17
Control Delay	79.2	85.3	105.3	104.1	0.3	20.0	53.2	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Total Delay	79.2	85.3	105.3	104.1	0.3	21.0	53.2	6.7
Queue Length 50th (ft)	136	~615	177	~708	0	99	178	3
Queue Length 95th (ft)	#249	#713	#322	#754	0	103	188	25
Internal Link Dist (ft)		630		690		271	513	
Turn Bay Length (ft)	220		330		150			100
Base Capacity (vph)	215	1190	221	1224	928	776	687	616
Starvation Cap Reductn	0	0	0	0	0	74	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.06	0.95	1.12	0.04	0.78	0.63	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

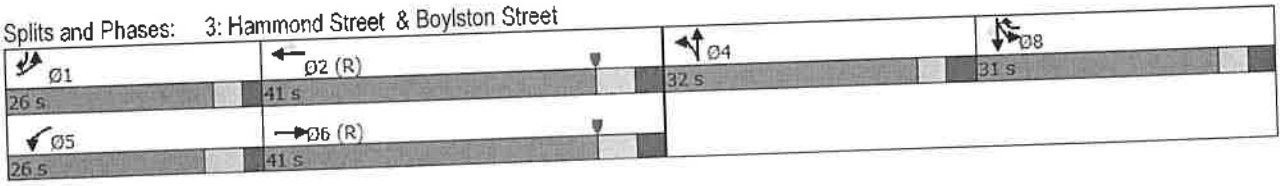
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	1011	51	152	1144	48	130	134	64	113	194	110
Future Volume (vph)	147	1011	51	152	1144	48	130	134	64	113	194	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	12	12	12	13	12	12	10	11
Storage Length (ft)	220		0	330		150	0		0	0		100
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	1.00
Frt		0.993				0.850		0.971				0.850
Flt Protected	0.950			0.950				0.981			0.982	
Satd. Flow (prot)	1728	3548	0	1694	3539	1615	0	3433	0	0	3267	1561
Flt Permitted	0.950			0.950				0.981			0.982	
Satd. Flow (perm)	1728	3548	0	1694	3539	1615	0	3433	0	0	3267	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				76		21				116
Link Speed (mph)		40			45			25			25	
Link Distance (ft)		710			770			351			593	
Travel Time (s)		12.1			11.7			9.6			16.2	
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.80	0.80	0.80	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	2%	3%	2%	0%	2%	0%	14%	0%	2%	0%
Adj. Flow (vph)	158	1087	55	162	1217	51	163	168	80	119	204	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	1142	0	162	1217	51	0	411	0	0	323	116
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.04	1.00	1.00	1.00	0.96	1.00	1.00	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA		Split	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2	8	4	4		8	8	1
Permitted Phases						2						8
Detector Phase	1	6		5	2	8	4	4		8	8	1
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	10.0	60.0		10.0	60.0	29.0	30.0	30.0		29.0	29.0	10.0
Total Split (s)	26.0	41.0		26.0	41.0	31.0	32.0	32.0		31.0	31.0	26.0
Total Split (%)	20.0%	31.5%		20.0%	31.5%	23.8%	24.6%	24.6%		23.8%	23.8%	20.0%
Maximum Green (s)	21.0	34.0		20.0	34.0	25.0	26.0	26.0		25.0	25.0	21.0
Yellow Time (s)	3.0	4.0		4.0	4.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	3.0		2.0	3.0	3.0	3.0	3.0		3.0	3.0	2.0
Lost Time Adjust (s)	-1.0	-3.0		-2.0	-3.0	-2.0		-2.0			-2.0	-1.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	None	None	None		None	None	None
Walk Time (s)		10.0			10.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		20.0			20.0	18.0	19.0	19.0		18.0	18.0	
Pedestrian Calls (#/hr)		11			11	5	7	7		5	5	
Act Effct Green (s)	17.9	52.1		19.1	53.3	73.7		22.4			20.4	42.3
Actuated g/C Ratio	0.14	0.40		0.15	0.41	0.57		0.17			0.16	0.33
v/c Ratio	0.66	0.80		0.65	0.84	0.05		0.68			0.63	0.20
Control Delay	66.2	41.2		64.3	42.4	0.9		76.2			56.5	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.4			0.0	0.0
Total Delay	66.2	41.2		64.3	42.4	0.9		76.5			56.5	5.1
LOS	E	D		E	D	A		E			E	A
Approach Delay		44.2			43.4			76.5			43.0	
Approach LOS		D			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow, Master Intersection			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 47.4		Intersection LOS: D	
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Hammond Street & Boylston Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	158	1142	162	1217	51	411	323	116
v/c Ratio	0.66	0.80	0.65	0.84	0.05	0.68	0.63	0.20
Control Delay	66.2	41.2	64.3	42.4	0.9	76.2	56.5	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	66.2	41.2	64.3	42.4	0.9	76.5	56.5	5.1
Queue Length 50th (ft)	128	440	130	476	0	183	136	0
Queue Length 95th (ft)	194	#726	200	#795	6	210	178	37
Internal Link Dist (ft)		630		690		271	513	
Turn Bay Length (ft)	220		330		150			100
Base Capacity (vph)	296	1424	291	1450	1026	755	678	635
Starvation Cap Reductn	0	0	0	0	0	77	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.80	0.56	0.84	0.05	0.61	0.48	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

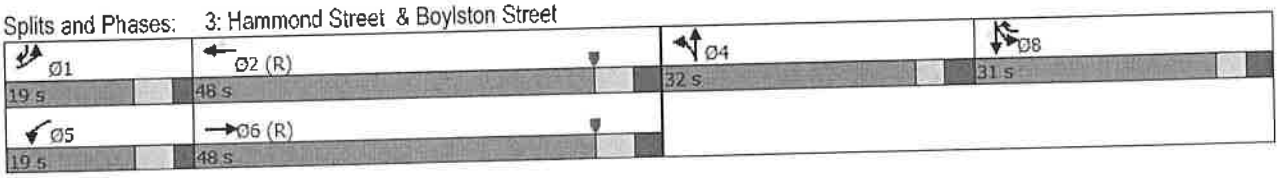
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1060	27	189	1256	35	69	400	58	128	218	84
Future Volume (vph)	154	1060	27	189	1256	35	69	400	58	128	218	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	12	12	12	13	12	12	10	11
Storage Length (ft)	220		0	330		150	0		0	0		100
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	1.00
Frt		0.996				0.850		0.984				0.850
Flt Protected	0.950			0.950				0.993			0.982	
Satd. Flow (prot)	1728	3510	0	1678	3539	1615	0	3572	0	0	3309	1561
Flt Permitted	0.950			0.950				0.993			0.982	
Satd. Flow (perm)	1728	3510	0	1678	3539	1615	0	3572	0	0	3309	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				76		9				99
Link Speed (mph)		40			45			25			25	
Link Distance (ft)		710			770			351			593	
Travel Time (s)		12.1			11.7			9.6			16.2	
Peak Hour Factor	0.87	0.87	0.87	0.84	0.84	0.84	0.90	0.90	0.90	0.75	0.75	0.75
Heavy Vehicles (%)	1%	2%	20%	4%	2%	0%	3%	0%	15%	0%	0%	0%
Adj. Flow (vph)	177	1218	31	225	1495	42	77	444	64	171	291	112
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	1249	0	225	1495	42	0	585	0	0	462	112
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.04	1.00	1.00	1.00	0.96	1.00	1.00	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA		Split	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2	8	4	4		8	8	1
Permitted Phases						2						8
Detector Phase	1	6		5	2	8	4	4		8	8	1
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	10.0	60.0		10.0	60.0	30.0	30.0	30.0		30.0	30.0	10.0
Total Split (s)	19.0	48.0		19.0	48.0	31.0	32.0	32.0		31.0	31.0	19.0
Total Split (%)	14.6%	36.9%		14.6%	36.9%	23.8%	24.6%	24.6%		23.8%	23.8%	14.6%
Maximum Green (s)	13.0	41.0		13.0	41.0	25.0	26.0	26.0		25.0	25.0	13.0
Yellow Time (s)	4.0	4.0		4.0	4.0	3.0	3.0	3.0		3.0	3.0	4.0
All-Red Time (s)	2.0	3.0		2.0	3.0	3.0	3.0	3.0		3.0	3.0	2.0
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0	-2.0		-2.0			-2.0	-2.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	Ped	Ped	Ped		Ped	Ped	None
Walk Time (s)		20.0			20.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		20.0			20.0	18.0	19.0	19.0		18.0	18.0	
Pedestrian Calls (#/hr)		10			10	3	8	8		3	3	
Act Effct Green (s)	16.1	44.0		16.7	44.6	70.6		27.3			26.0	46.1
Actuated g/C Ratio	0.12	0.34		0.13	0.34	0.54		0.21			0.20	0.35
v/c Ratio	0.83	1.05		1.05	1.23	0.05		0.77			0.70	0.18
Control Delay	85.5	82.0		128.4	149.3	0.4		21.1			54.6	7.7
Queue Delay	0.0	0.0		0.0	0.0	0.0		1.8			0.0	0.0
Total Delay	85.5	82.0		128.4	149.3	0.4		22.8			54.6	7.7
LOS	F	F		F	F	A		C			D	A
Approach Delay		82.4			143.1			22.8			45.4	
Approach LOS		F			F			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow, Master Intersection
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.23
Intersection Signal Delay: 94.1 Intersection LOS: F
Intersection Capacity Utilization 81.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Hammond Street & Boylston Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	177	1249	225	1495	42	585	462	112
v/c Ratio	0.83	1.05	1.05	1.23	0.05	0.77	0.70	0.18
Control Delay	85.5	82.0	128.4	149.3	0.4	21.1	54.6	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
Total Delay	85.5	82.0	128.4	149.3	0.4	22.8	54.6	7.7
Queue Length 50th (ft)	148	~603	~214	~825	0	83	192	7
Queue Length 95th (ft)	#270	#700	#352	#864	1	110	202	30
Internal Link Dist (ft)		630		690		271	513	
Turn Bay Length (ft)	220		330		150			100
Base Capacity (vph)	214	1189	215	1213	923	776	687	617
Starvation Cap Reductn	0	0	0	0	0	79	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	1.05	1.05	1.23	0.05	0.84	0.67	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

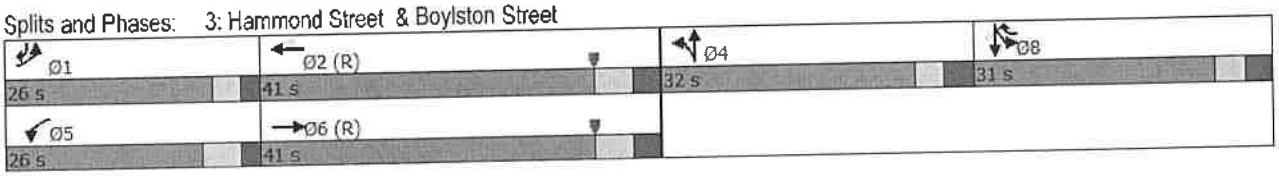
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	1108	55	163	1251	51	139	144	69	121	208	118
Future Volume (vph)	158	1108	55	163	1251	51	139	144	69	121	208	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	12	12	12	13	12	12	10	11
Storage Length (ft)	220		0	330		150	0		0	0		100
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	1.00
Frt		0.993				0.850		0.971				0.850
Flt Protected	0.950			0.950				0.981			0.982	
Satd. Flow (prot)	1728	3548	0	1694	3539	1615	0	3432	0	0	3267	1561
Flt Permitted	0.950			0.950				0.981			0.982	
Satd. Flow (perm)	1728	3548	0	1694	3539	1615	0	3432	0	0	3267	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				76		21				124
Link Speed (mph)		40			45			25			25	
Link Distance (ft)		710			770			351			593	
Travel Time (s)		12.1			11.7			9.6			16.2	
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.80	0.80	0.80	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	2%	3%	2%	0%	2%	0%	14%	0%	2%	0%
Adj. Flow (vph)	170	1191	59	173	1331	54	174	180	86	127	219	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	170	1250	0	173	1331	54	0	440	0	0	346	124
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.04	1.00	1.00	1.00	0.96	1.00	1.00	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA		Split	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2	8	4	4		8	8	1
Permitted Phases						2						8
Detector Phase	1	6		5	2	8	4	4		8	8	1
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	10.0	60.0		10.0	60.0	29.0	30.0	30.0		29.0	29.0	10.0
Total Split (s)	26.0	41.0		26.0	41.0	31.0	32.0	32.0		31.0	31.0	26.0
Total Split (%)	20.0%	31.5%		20.0%	31.5%	23.8%	24.6%	24.6%		23.8%	23.8%	20.0%
Maximum Green (s)	21.0	34.0		20.0	34.0	25.0	26.0	26.0		25.0	25.0	21.0
Yellow Time (s)	3.0	4.0		4.0	4.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	3.0		2.0	3.0	3.0	3.0	3.0		3.0	3.0	2.0
Lost Time Adjust (s)	-1.0	-3.0		-2.0	-3.0	-2.0		-2.0			-2.0	-1.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	None	None	None		None	None	None
Walk Time (s)		10.0			10.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		20.0			20.0	18.0	19.0	19.0		18.0	18.0	
Pedestrian Calls (#/hr)		11			11	5	7	7		5	5	
Act Effct Green (s)	18.4	49.8		19.5	51.0	72.3		23.4			21.3	43.7
Actuated g/C Ratio	0.14	0.38		0.15	0.39	0.56		0.18			0.16	0.34
v/c Ratio	0.70	0.92		0.68	0.96	0.06		0.69			0.65	0.20
Control Delay	68.0	50.6		65.8	55.6	1.0		29.7			56.3	4.9
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.3			0.0	0.0
Total Delay	68.0	50.6		65.8	55.6	1.0		30.0			56.3	4.9
LOS	E	D		E	E	A		C			E	A
Approach Delay		52.7			54.9			30.0			42.7	
Approach LOS		D			D			C			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow, Master Intersection		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.96		
Intersection Signal Delay: 49.8	Intersection LOS: D	
Intersection Capacity Utilization 76.2%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 3: Hammond Street & Boylston Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	170	1250	173	1331	54	440	346	124
v/c Ratio	0.70	0.92	0.68	0.96	0.06	0.69	0.65	0.20
Control Delay	68.0	50.6	65.8	55.6	1.0	29.7	56.3	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	68.0	50.6	65.8	55.6	1.0	30.0	56.3	4.9
Queue Length 50th (ft)	138	531	138	577	0	180	145	0
Queue Length 95th (ft)	211	#827	215	#901	6	96	188	38
Internal Link Dist (ft)		630		690		271	513	
Turn Bay Length (ft)	220		330		150			100
Base Capacity (vph)	293	1361	290	1387	998	755	678	647
Starvation Cap Reductn	0	0	0	0	0	50	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.92	0.60	0.96	0.05	0.62	0.51	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

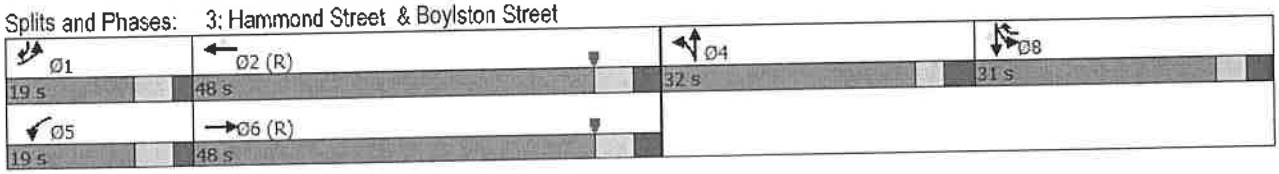
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1068	38	216	1256	35	78	408	58	130	236	84
Future Volume (vph)	154	1068	38	216	1256	35	78	408	58	130	236	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	12	12	12	13	12	12	10	11
Storage Length (ft)	220		0	330		150	0		0	0		100
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	1.00
Frt		0.995				0.850		0.984				0.850
Flt Protected	0.950			0.950				0.993			0.983	
Satd. Flow (prot)	1728	3500	0	1678	3539	1615	0	3573	0	0	3312	1561
Flt Permitted	0.950			0.950				0.993			0.983	
Satd. Flow (perm)	1728	3500	0	1678	3539	1615	0	3573	0	0	3312	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				76		9				93
Link Speed (mph)		40			45			25			25	
Link Distance (ft)		710			770			351			593	
Travel Time (s)		12.1			11.7			9.6			16.2	
Peak Hour Factor	0.87	0.87	0.87	0.84	0.84	0.84	0.90	0.90	0.90	0.75	0.75	0.75
Heavy Vehicles (%)	1%	2%	20%	4%	2%	0%	3%	0%	15%	0%	0%	0%
Adj. Flow (vph)	177	1228	44	257	1495	42	87	453	64	173	315	112
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	1272	0	257	1495	42	0	604	0	0	488	112
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.04	1.00	1.00	1.00	0.96	1.00	1.00	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA		Split	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2	8	4	4		8	8	1
Permitted Phases						2						8
Detector Phase	1	6		5	2	8	4	4		8	8	1
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	10.0	60.0		10.0	60.0	30.0	30.0	30.0		30.0	30.0	10.0
Total Split (s)	19.0	48.0		19.0	48.0	31.0	32.0	32.0		31.0	31.0	19.0
Total Split (%)	14.6%	36.9%		14.6%	36.9%	23.8%	24.6%	24.6%		23.8%	23.8%	14.6%
Maximum Green (s)	13.0	41.0		13.0	41.0	25.0	26.0	26.0		25.0	25.0	13.0
Yellow Time (s)	4.0	4.0		4.0	4.0	3.0	3.0	3.0		3.0	3.0	4.0
All-Red Time (s)	2.0	3.0		2.0	3.0	3.0	3.0	3.0		3.0	3.0	2.0
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0	-2.0		-2.0			-2.0	-2.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	Ped	Ped	Ped		Ped	Ped	None
Walk Time (s)		20.0			20.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		20.0			20.0	18.0	19.0	19.0		18.0	18.0	
Pedestrian Calls (#/hr)		10			10	3	8	8		3	3	
Act Effct Green (s)	15.8	44.0		16.4	44.6	70.8		27.4			26.2	46.0
Actuated g/C Ratio	0.12	0.34		0.13	0.34	0.54		0.21			0.20	0.35
v/c Ratio	0.84	1.07		1.22	1.23	0.05		0.79			0.73	0.18
Control Delay	88.3	88.9		180.1	149.3	0.4		22.0			55.8	8.6
Queue Delay	0.0	0.0		0.0	0.0	0.0		3.1			0.0	0.0
Total Delay	88.3	88.9		180.1	149.3	0.4		25.2			55.8	8.6
LOS	F	F		F	F	A		C			E	A
Approach Delay		88.9			150.2			25.2			47.0	
Approach LOS		F			F			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow, Master Intersection
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.23
Intersection Signal Delay: 99.3 — Intersection LOS: F
Intersection Capacity Utilization 82.3% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: Hammond Street & Boylston Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	177	1272	257	1495	42	604	488	112
v/c Ratio	0.84	1.07	1.22	1.23	0.05	0.79	0.73	0.18
Control Delay	88.3	88.9	180.1	149.3	0.4	22.0	55.8	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
Total Delay	88.3	88.9	180.1	149.3	0.4	25.2	55.8	8.6
Queue Length 50th (ft)	149	~625	~280	~825	0	98	202	10
Queue Length 95th (ft)	#270	#722	#414	#864	1	m121	213	34
Internal Link Dist (ft)		630		690		271	513	
Turn Bay Length (ft)	220		330		150			100
Base Capacity (vph)	210	1186	211	1213	923	776	687	612
Starvation Cap Reductn	0	0	0	0	0	94	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	1.07	1.22	1.23	0.05	0.89	0.71	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

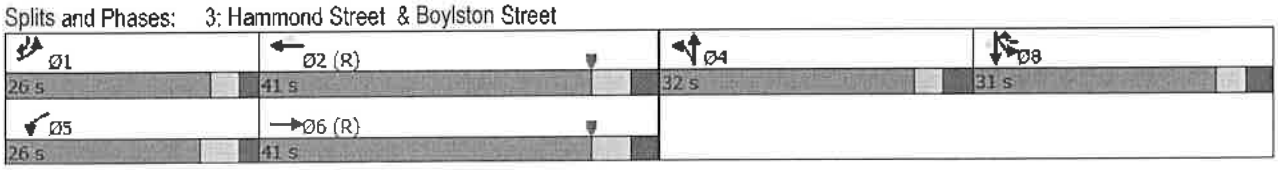
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	1113	56	170	1251	51	149	148	69	122	215	118
Future Volume (vph)	158	1113	56	170	1251	51	149	148	69	122	215	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	12	12	12	13	12	12	10	11
Storage Length (ft)	220		0	330		150	0		0	0		100
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	1.00
Frt		0.993				0.850		0.972				0.850
Flt Protected	0.950			0.950				0.980			0.982	
Satd. Flow (prot)	1728	3548	0	1694	3539	1615	0	3435	0	0	3267	1561
Flt Permitted	0.950			0.950				0.980			0.982	
Satd. Flow (perm)	1728	3548	0	1694	3539	1615	0	3435	0	0	3267	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				76		20				124
Link Speed (mph)		40			45			25			25	
Link Distance (ft)		710			770			351			593	
Travel Time (s)		12.1			11.7			9.6			16.2	
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.80	0.80	0.80	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	2%	3%	2%	0%	2%	0%	14%	0%	2%	0%
Adj. Flow (vph)	170	1197	60	181	1331	54	186	185	86	128	226	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	170	1257	0	181	1331	54	0	457	0	0	354	124
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.04	1.00	1.00	1.00	0.96	1.00	1.00	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA		Split	NA	pm+ov

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2	8	4	4		8	8	1
Permitted Phases						2						8
Detector Phase	1	6		5	2	8	4	4		8	8	1
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	10.0	60.0		10.0	60.0	29.0	30.0	30.0		29.0	29.0	10.0
Total Split (s)	26.0	41.0		26.0	41.0	31.0	32.0	32.0		31.0	31.0	26.0
Total Split (%)	20.0%	31.5%		20.0%	31.5%	23.8%	24.6%	24.6%		23.8%	23.8%	20.0%
Maximum Green (s)	21.0	34.0		20.0	34.0	25.0	26.0	26.0		25.0	25.0	21.0
Yellow Time (s)	3.0	4.0		4.0	4.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	3.0		2.0	3.0	3.0	3.0	3.0		3.0	3.0	2.0
Lost Time Adjust (s)	-1.0	-3.0		-2.0	-3.0	-2.0		-2.0			-2.0	-1.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	None	None	None		None	None	None
Walk Time (s)		10.0			10.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		20.0			20.0	18.0	19.0	19.0		18.0	18.0	
Pedestrian Calls (#/hr)		11			11	5	7	7		5	5	
Act Effct Green (s)	18.3	48.6		19.9	50.2	71.8		23.9			21.6	43.9
Actuated g/C Ratio	0.14	0.37		0.15	0.39	0.55		0.18			0.17	0.34
v/c Ratio	0.70	0.95		0.70	0.97	0.06		0.71			0.65	0.20
Control Delay	68.4	55.0		66.7	58.9	1.0		27.3			56.1	4.9
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.3			0.0	0.0
Total Delay	68.4	55.0		66.7	58.9	1.0		27.6			56.1	4.9
LOS	E	D		E	E	A		C			E	A
Approach Delay		56.6			57.8			27.6			42.9	
Approach LOS		E			E			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow, Master Intersection
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 52.0 Intersection LOS: D
Intersection Capacity Utilization 76.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Hammond Street & Boylston Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	170	1257	181	1331	54	457	354	124
v/c Ratio	0.70	0.95	0.70	0.97	0.06	0.71	0.65	0.20
Control Delay	68.4	55.0	66.7	58.9	1.0	27.3	56.1	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	68.4	55.0	66.7	58.9	1.0	27.6	56.1	4.9
Queue Length 50th (ft)	138	545	145	584	0	148	148	0
Queue Length 95th (ft)	212	#835	225	#901	6	90	192	38
Internal Link Dist (ft)		630		690		271	513	
Turn Bay Length (ft)	220		330		150			100
Base Capacity (vph)	292	1329	291	1366	989	755	678	650
Starvation Cap Reductn	0	0	0	0	0	50	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.95	0.62	0.97	0.05	0.65	0.52	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

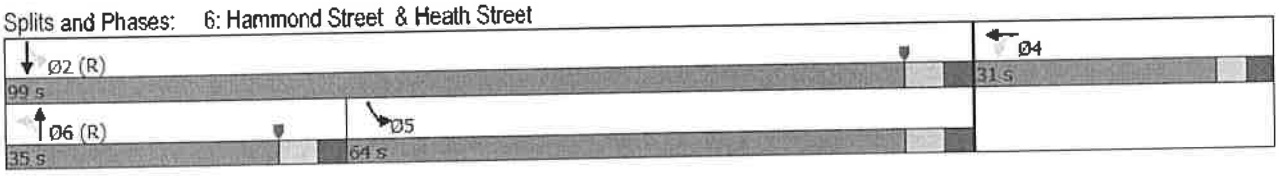
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	70	16	68	6	442	168	20	369	11
Future Volume (vph)	0	0	0	70	16	68	6	442	168	20	369	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.940			0.959			0.996	
Flt Protected					0.978						0.998	
Satd. Flow (prot)	0	0	0	0	1728	0	0	3404	0	0	3389	0
Flt Permitted					0.978			0.949			0.950	
Satd. Flow (perm)	0	0	0	0	1728	0	0	3230	0	0	3226	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					28			39			5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		250			609			1186			351	
Travel Time (s)		6.8			16.6			32.3			9.6	
Peak Hour Factor	0.92	0.92	0.92	0.75	0.75	0.75	0.93	0.93	0.93	0.76	0.76	0.76
Heavy Vehicles (%)	0%	0%	100%	1%	6%	0%	0%	2%	1%	10%	2%	0%
Adj. Flow (vph)	0	0	0	93	21	91	6	475	181	26	486	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	205	0	0	662	0	0	526	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2		1	2	
Detector Template				Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)				20	100		20	100		20	100	
Trailing Detector (ft)				0	0		0	0		0	0	
Detector 1 Position(ft)				0	0		0	0		0	0	
Detector 1 Size(ft)				20	6		20	6		20	6	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases					4			6		5	2	
Permitted Phases				4			6			2		
Detector Phase				4	4		6	6		5	2	

Hammond Street at Heath Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)				26.0	26.0		23.0	23.0		11.0	23.0	
Total Split (s)				31.0	31.0		35.0	35.0		64.0	99.0	
Total Split (%)				23.8%	23.8%		26.9%	26.9%		49.2%	76.2%	
Maximum Green (s)				25.0	25.0		28.0	28.0		57.0	92.0	
Yellow Time (s)				3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)					-2.0			-3.0			-3.0	
Total Lost Time (s)					4.0			4.0			4.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode				None	None		C-Max	C-Max		Max	C-Max	
Walk Time (s)				7.0	7.0		5.0	5.0			5.0	
Flash Dont Walk (s)				13.0	13.0		5.0	5.0			11.0	
Pedestrian Calls (#/hr)				10	10		2	2			6	
Act Effct Green (s)					20.6			37.4			101.4	
Actuated g/C Ratio					0.16			0.29			0.78	
v/c Ratio					0.69			0.69			0.20	
Control Delay					56.2			44.0			0.6	
Queue Delay					0.0			0.0			0.3	
Total Delay					56.2			44.0			0.9	
LOS					E			D			A	
Approach Delay					56.2			44.0			0.9	
Approach LOS					E			D			A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 28 (22%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow		
Natural Cycle: 60		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.69		
Intersection Signal Delay: 29.5	Intersection LOS: C	
Intersection Capacity Utilization 41.0%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 6: Hammond Street & Heath Street



Queues
6: Hammond Street & Heath Street

Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	205	662	526
v/c Ratio	0.69	0.69	0.20
Control Delay	56.2	44.0	0.6
Queue Delay	0.0	0.0	0.3
Total Delay	56.2	44.0	0.9
Queue Length 50th (ft)	143	247	7
Queue Length 95th (ft)	171	341	m10
Internal Link Dist (ft)	529	1106	271
Turn Bay Length (ft)			
Base Capacity (vph)	381	957	2593
Starvation Cap Reductn	0	0	1355
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.54	0.69	0.42

Intersection Summary

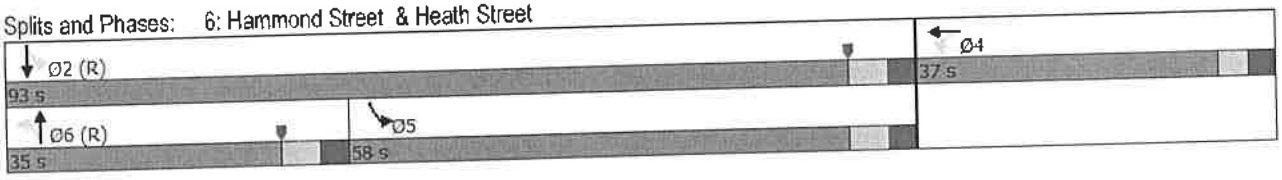
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	54	15	67	11	249	86	21	349	23
Future Volume (vph)	0	0	0	54	15	67	11	249	86	21	349	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.934			0.963			0.991	
Flt Protected					0.981			0.998			0.997	
Satd. Flow (prot)	0	0	0	0	1702	0	0	3372	0	0	3388	0
Flt Permitted					0.981			0.934			0.945	
Satd. Flow (perm)	0	0	0	0	1702	0	0	3156	0	0	3211	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					36			33			11	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		250			629			214			351	
Travel Time (s)		6.8			17.2			5.8			9.6	
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%	0%	4%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	0	67	19	83	12	280	97	25	420	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	169	0	0	389	0	0	473	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2		1	2	
Detector Template				Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)				20	100		20	100		20	100	
Trailing Detector (ft)				0	0		0	0		0	0	
Detector 1 Position(ft)				0	0		0	0		0	0	
Detector 1 Size(ft)				20	6		20	6		20	6	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases					4			6		5	2	
Permitted Phases				4			6			2		
Detector Phase				4	4		6	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)				26.0	26.0		23.0	23.0		11.0	23.0	
Total Split (s)				37.0	37.0		35.0	35.0		58.0	93.0	
Total Split (%)				28.5%	28.5%		26.9%	26.9%		44.6%	71.5%	
Maximum Green (s)				31.0	31.0		28.0	28.0		51.0	86.0	
Yellow Time (s)				3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)					-2.0			-3.0			-3.0	
Total Lost Time (s)					4.0			4.0			4.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode				None	None		C-Max	C-Max		Max	C-Max	
Walk Time (s)				7.0	7.0		5.0	5.0			5.0	
Flash Dont Walk (s)				13.0	13.0		5.0	5.0			11.0	
Pedestrian Calls (#/hr)				7	7		3	3			7	
Act Effct Green (s)					17.7			46.3			104.3	
Actuated g/C Ratio					0.14			0.36			0.80	
v/c Ratio					0.65			0.34			0.18	
Control Delay					52.3			29.9			2.0	
Queue Delay					0.0			0.0			0.6	
Total Delay					52.3			29.9			2.6	
LOS					D			C			A	
Approach Delay					52.3			29.9			2.6	
Approach LOS					D			C			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 92 (71%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 21.0		Intersection LOS: C	
Intersection Capacity Utilization 38.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Hammond Street & Heath Street



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	169	389	473
v/c Ratio	0.65	0.34	0.18
Control Delay	52.3	29.9	2.0
Queue Delay	0.0	0.0	0.6
Total Delay	52.3	29.9	2.6
Queue Length 50th (ft)	107	114	9
Queue Length 95th (ft)	152	169	24
Internal Link Dist (ft)	549	134	271
Turn Bay Length (ft)			
Base Capacity (vph)	458	1145	2651
Starvation Cap Reductn	0	0	1722
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.37	0.34	0.51

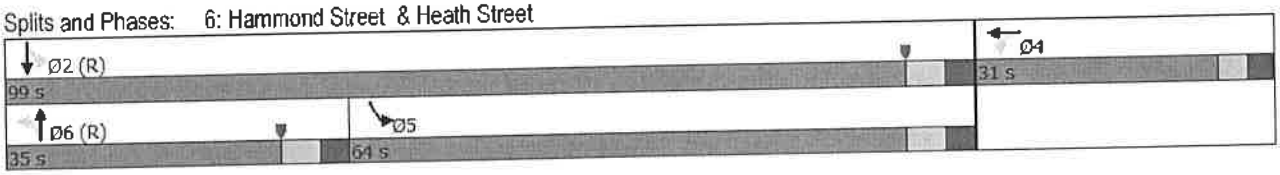
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	75	17	73	6	474	180	21	397	12
Future Volume (vph)	0	0	0	75	17	73	6	474	180	21	397	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.940			0.959			0.996	
Flt Protected					0.978						0.998	
Satd. Flow (prot)	0	0	0	0	1728	0	0	3404	0	0	3298	0
Flt Permitted					0.978			0.949			0.946	
Satd. Flow (perm)	0	0	0	0	1728	0	0	3230	0	0	3127	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					28			39			6	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		250			359			1036			351	
Travel Time (s)		6.8			9.8			28.3			9.6	
Peak Hour Factor	0.92	0.92	0.92	0.75	0.75	0.75	0.93	0.93	0.93	0.76	0.76	0.76
Heavy Vehicles (%)	0%	0%	100%	1%	6%	0%	0%	2%	1%	10%	2%	100%
Adj. Flow (vph)	0	0	0	100	23	97	6	510	194	28	522	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	220	0	0	710	0	0	566	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2		1	2	
Detector Template				Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)				20	100		20	100		20	100	
Trailing Detector (ft)				0	0		0	0		0	0	
Detector 1 Position(ft)				0	0		0	0		0	0	
Detector 1 Size(ft)				20	6		20	6		20	6	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases					4			6		5	2	
Permitted Phases				4			6			2		
Detector Phase				4	4		6	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)				26.0	26.0		23.0	23.0		11.0	23.0	
Total Split (s)				31.0	31.0		35.0	35.0		64.0	99.0	
Total Split (%)				23.8%	23.8%		26.9%	26.9%		49.2%	76.2%	
Maximum Green (s)				25.0	25.0		28.0	28.0		57.0	92.0	
Yellow Time (s)				3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)					-2.0			-3.0			-3.0	
Total Lost Time (s)					4.0			4.0			4.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode				None	None		C-Max	C-Max		Max	C-Max	
Walk Time (s)				7.0	7.0		5.0	5.0			5.0	
Flash Dont Walk (s)				13.0	13.0		5.0	5.0			11.0	
Pedestrian Calls (#/hr)				10	10		2	2			6	
Act Effct Green (s)					21.4			36.6			100.6	
Actuated g/C Ratio					0.16			0.28			0.77	
v/c Ratio					0.72			0.76			0.23	
Control Delay					57.4			47.1			0.7	
Queue Delay					0.0			0.1			0.3	
Total Delay					57.4			47.2			1.0	
LOS					E			D			A	
Approach Delay					57.4			47.2			1.0	
Approach LOS					E			D			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 28 (22%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 31.2		Intersection LOS: C	
Intersection Capacity Utilization 43.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Hammond Street & Heath Street



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	220	710	566
v/c Ratio	0.72	0.76	0.23
Control Delay	57.4	47.1	0.7
Queue Delay	0.0	0.1	0.3
Total Delay	57.4	47.2	1.0
Queue Length 50th (ft)	155	275	8
Queue Length 95th (ft)	183	#398	m10
Internal Link Dist (ft)	279	956	271
Turn Bay Length (ft)			
Base Capacity (vph)	381	937	2500
Starvation Cap Reductn	0	0	1266
Spillback Cap Reductn	0	14	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.58	0.77	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

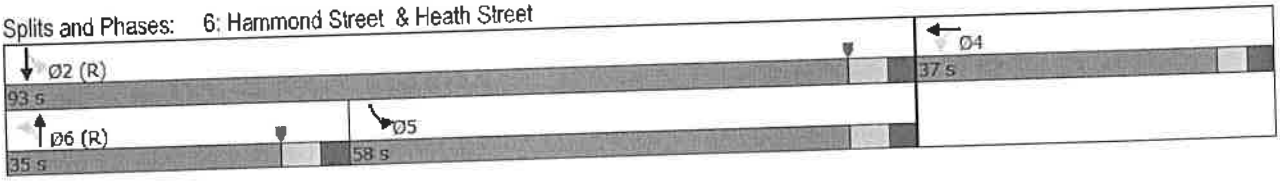
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	58	16	72	12	267	92	23	374	25
Future Volume (vph)	0	0	0	58	16	72	12	267	92	23	374	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.934			0.963			0.991	
Flt Protected					0.980			0.998			0.997	
Satd. Flow (prot)	0	0	0	0	1700	0	0	3372	0	0	3388	0
Flt Permitted					0.980			0.931			0.941	
Satd. Flow (perm)	0	0	0	0	1700	0	0	3146	0	0	3198	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					36			32			11	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		250			499			214			351	
Travel Time (s)		6.8			13.6			5.8			9.6	
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%	0%	4%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	0	72	20	89	13	300	103	28	451	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	181	0	0	416	0	0	509	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2		1	2	
Detector Template				Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)				20	100		20	100		20	100	
Trailing Detector (ft)				0	0		0	0		0	0	
Detector 1 Position(ft)				0	0		0	0		0	0	
Detector 1 Size(ft)				20	6		20	6		20	6	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases					4			6		5	2	
Permitted Phases				4			6			2		
Detector Phase				4	4		6	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)				26.0	26.0		23.0	23.0		11.0	23.0	
Total Split (s)				37.0	37.0		35.0	35.0		58.0	93.0	
Total Split (%)				28.5%	28.5%		26.9%	26.9%		44.6%	71.5%	
Maximum Green (s)				31.0	31.0		28.0	28.0		51.0	86.0	
Yellow Time (s)				3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)					-2.0			-3.0			-3.0	
Total Lost Time (s)					4.0			4.0			4.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode				None	None		C-Max	C-Max		Max	C-Max	
Walk Time (s)				7.0	7.0		5.0	5.0			5.0	
Flash Dont Walk (s)				13.0	13.0		5.0	5.0			11.0	
Pedestrian Calls (#/hr)				7	7		3	3			7	
Act Effct Green (s)					18.7			45.3			103.3	
Actuated g/C Ratio					0.14			0.35			0.79	
v/c Ratio					0.66			0.37			0.19	
Control Delay					52.8			31.3			2.2	
Queue Delay					0.0			0.0			0.3	
Total Delay					52.8			31.3			2.5	
LOS					D			C			A	
Approach Delay					52.8			31.3			2.5	
Approach LOS					D			C			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 32 (25%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 21.5		Intersection LOS: C	
Intersection Capacity Utilization 40.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Hammond Street & Heath Street



Queues
6: Hammond Street & Heath Street

Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	181	416	509
v/c Ratio	0.66	0.37	0.19
Control Delay	52.8	31.3	2.2
Queue Delay	0.0	0.0	0.3
Total Delay	52.8	31.3	2.5
Queue Length 50th (ft)	117	126	16
Queue Length 95th (ft)	161	185	m52
Internal Link Dist (ft)	419	134	271
Turn Bay Length (ft)			
Base Capacity (vph)	458	1118	2623
Starvation Cap Reductn	0	0	1383
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.40	0.37	0.41

Intersection Summary

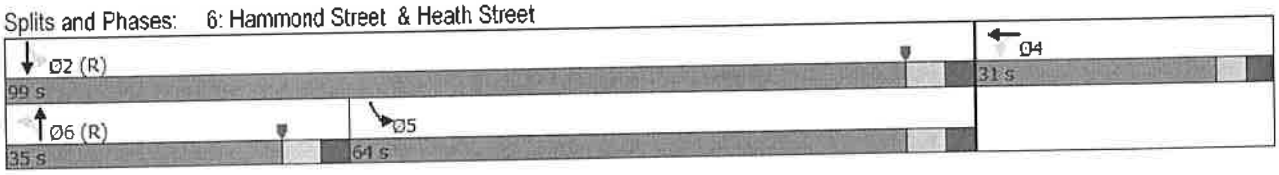
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	119	24	90	6	474	252	43	430	12
Future Volume (vph)	0	0	0	119	24	90	6	474	252	43	430	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.948			0.948			0.996	
Flt Protected					0.975						0.996	
Satd. Flow (prot)	0	0	0	0	1737	0	0	3367	0	0	3292	0
Flt Permitted					0.975			0.949			0.796	
Satd. Flow (perm)	0	0	0	0	1737	0	0	3195	0	0	2631	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					22			69			5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		250			359			1036			351	
Travel Time (s)		6.8			9.8			28.3			9.6	
Peak Hour Factor	0.92	0.92	0.92	0.75	0.75	0.75	0.93	0.93	0.93	0.76	0.76	0.76
Heavy Vehicles (%)	0%	0%	100%	1%	6%	0%	0%	2%	1%	10%	2%	100%
Adj. Flow (vph)	0	0	0	159	32	120	6	510	271	57	566	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	311	0	0	787	0	0	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2		1	2	
Detector Template				Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)				20	100		20	100		20	100	
Trailing Detector (ft)				0	0		0	0		0	0	
Detector 1 Position(ft)				0	0		0	0		0	0	
Detector 1 Size(ft)				20	6		20	6		20	6	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases					4			6		5	2	
Permitted Phases				4			6			2		
Detector Phase				4	4		6	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)				26.0	26.0		23.0	23.0		11.0	23.0	
Total Split (s)				31.0	31.0		35.0	35.0		64.0	99.0	
Total Split (%)				23.8%	23.8%		26.9%	26.9%		49.2%	76.2%	
Maximum Green (s)				25.0	25.0		28.0	28.0		57.0	92.0	
Yellow Time (s)				3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)					-2.0			-3.0			-3.0	
Total Lost Time (s)					4.0			4.0			4.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode				None	None		C-Max	C-Max		Max	C-Max	
Walk Time (s)				7.0	7.0		5.0	5.0			5.0	
Flash Dont Walk (s)				13.0	13.0		5.0	5.0			11.0	
Pedestrian Calls (#/hr)				10	10		2	2			6	
Act Effct Green (s)					25.7			32.3			96.3	
Actuated g/C Ratio					0.20			0.25			0.74	
v/c Ratio					0.86			0.93			0.28	
Control Delay					69.9			61.9			1.0	
Queue Delay					0.0			3.1			0.4	
Total Delay					69.9			65.0			1.4	
LOS					E			E			A	
Approach Delay					69.9			65.0			1.4	
Approach LOS					E			E			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 28 (22%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 42.5		Intersection LOS: D	
Intersection Capacity Utilization 58.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Hammond Street & Heath Street



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	311	787	639
v/c Ratio	0.86	0.93	0.28
Control Delay	69.9	61.9	1.0
Queue Delay	0.0	3.1	0.4
Total Delay	69.9	65.0	1.4
Queue Length 50th (ft)	236	322	14
Queue Length 95th (ft)	273	#455	m13
Internal Link Dist (ft)	279	956	271
Turn Bay Length (ft)			
Base Capacity (vph)	378	846	2256
Starvation Cap Reductn	0	0	1034
Spillback Cap Reductn	0	26	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.82	0.96	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

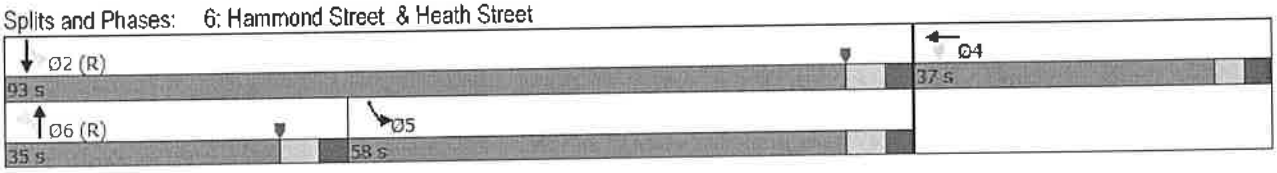
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	93	22	84	12	269	125	38	374	25
Future Volume (vph)	0	0	0	93	22	84	12	269	125	38	374	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.943			0.954			0.991	
Flt Protected					0.977			0.999			0.996	
Satd. Flow (prot)	0	0	0	0	1713	0	0	3352	0	0	3386	0
Flt Permitted					0.977			0.932			0.908	
Satd. Flow (perm)	0	0	0	0	1713	0	0	3127	0	0	3087	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					27			51			11	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		250			499			214			351	
Travel Time (s)		6.8			13.6			5.8			9.6	
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%	0%	4%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	0	115	27	104	13	302	140	46	451	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	246	0	0	455	0	0	527	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2		1	2	
Detector Template				Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)				20	100		20	100		20	100	
Trailing Detector (ft)				0	0		0	0		0	0	
Detector 1 Position(ft)				0	0		0	0		0	0	
Detector 1 Size(ft)				20	6		20	6		20	6	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases					4			6		5	2	
Permitted Phases				4			6			2		
Detector Phase				4	4		6	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)				26.0	26.0		23.0	23.0		11.0	23.0	
Total Split (s)				37.0	37.0		35.0	35.0		58.0	93.0	
Total Split (%)				28.5%	28.5%		26.9%	26.9%		44.6%	71.5%	
Maximum Green (s)				31.0	31.0		28.0	28.0		51.0	86.0	
Yellow Time (s)				3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)					-2.0			-3.0			-3.0	
Total Lost Time (s)					4.0			4.0			4.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode				None	None		C-Max	C-Max		Max	C-Max	
Walk Time (s)				7.0	7.0		5.0	5.0			5.0	
Flash Dont Walk (s)				13.0	13.0		5.0	5.0			11.0	
Pedestrian Calls (#/hr)				7	7		3	3			7	
Act Effct Green (s)					24.1			39.9			97.9	
Actuated g/C Ratio					0.19			0.31			0.75	
v/c Ratio					0.73			0.46			0.22	
Control Delay					56.0			35.0			3.2	
Queue Delay					0.0			0.0			0.3	
Total Delay					56.0			35.0			3.4	
LOS					E			C			A	
Approach Delay					56.0			35.0			3.4	
Approach LOS					E			C			A	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 32 (25%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 25.6 Intersection LOS: C
Intersection Capacity Utilization 45.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Hammond Street & Heath Street



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	246	455	527
v/c Ratio	0.73	0.46	0.22
Control Delay	56.0	35.0	3.2
Queue Delay	0.0	0.0	0.3
Total Delay	56.0	35.0	3.4
Queue Length 50th (ft)	176	144	20
Queue Length 95th (ft)	218	212	m66
Internal Link Dist (ft)	419	134	271
Turn Bay Length (ft)			
Base Capacity (vph)	454	994	2451
Starvation Cap Reductn	0	0	1197
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.54	0.46	0.42

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	119	24	90	6	474	252	43	430	12
Future Volume (vph)	0	0	0	119	24	90	6	474	252	43	430	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.948			0.948			0.996	
Flt Protected					0.975						0.996	
Satd. Flow (prot)	0	0	0	0	1737	0	0	3367	0	0	3292	0
Flt Permitted					0.975						0.996	
Satd. Flow (perm)	0	0	0	0	1737	0	0	3367	0	0	3292	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					24			69			2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		250			352			1127			260	
Travel Time (s)		6.8			9.6			30.7			7.1	
Peak Hour Factor	0.92	0.92	0.92	0.75	0.75	0.75	0.93	0.93	0.93	0.76	0.76	0.76
Heavy Vehicles (%)	0%	0%	100%	1%	6%	0%	0%	2%	1%	10%	2%	100%
Adj. Flow (vph)	0	0	0	159	32	120	6	510	271	57	566	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	311	0	0	787	0	0	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2		1	2	
Detector Template				Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)				20	100		20	100		20	100	
Trailing Detector (ft)				0	0		0	0		0	0	
Detector 1 Position(ft)				0	0		0	0		0	0	
Detector 1 Size(ft)				20	6		20	6		20	6	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Split	NA		Split	NA	
Protected Phases					6		8	8		10	10	
Permitted Phases				6								
Detector Phase				6	6		8	8		10	10	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)				26.0	26.0		23.0	23.0		23.0	23.0	
Total Split (s)				40.0	40.0		35.0	35.0		32.0	32.0	
Total Split (%)				30.8%	30.8%		26.9%	26.9%		24.6%	24.6%	
Maximum Green (s)				34.0	34.0		28.0	28.0		25.0	25.0	
Yellow Time (s)				3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)					-2.0			-3.0			-3.0	
Total Lost Time (s)					4.0			4.0			4.0	
Lead/Lag							Lead	Lead				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode				C-Max	C-Max		None	None		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)					36.0			31.0			43.0	
Actuated g/C Ratio					0.28			0.24			0.33	
v/c Ratio					0.62			0.92			0.59	
Control Delay					44.2			60.8			10.2	
Queue Delay					0.0			6.6			4.1	
Total Delay					44.2			67.5			14.2	
LOS					D			E			B	
Approach Delay					44.2			67.5			14.2	
Approach LOS					D			E			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2: and 6:WBTL, Start of Yellow			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 43.7		Intersection LOS: D	
Intersection Capacity Utilization 58.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Hammond Street & Heath Street

Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	23.0
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	15
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	311	787	639
v/c Ratio	0.62	0.92	0.59
Control Delay	44.2	60.8	10.2
Queue Delay	0.0	6.6	4.1
Total Delay	44.2	67.5	14.2
Queue Length 50th (ft)	213	316	27
Queue Length 95th (ft)	246	#436	m144
Internal Link Dist (ft)	272	1047	180
Turn Bay Length (ft)			
Base Capacity (vph)	498	855	1090
Starvation Cap Reductn	0	0	360
Spillback Cap Reductn	0	50	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.62	0.98	0.88

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

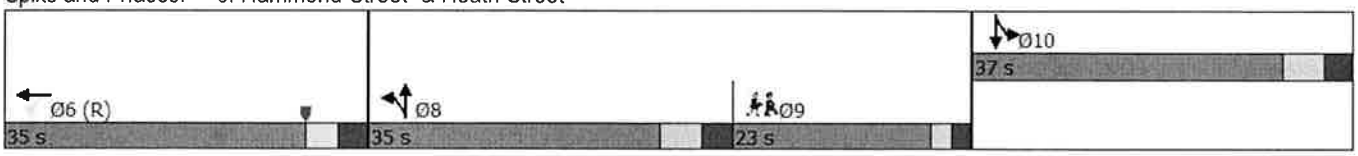
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	93	22	84	12	269	125	38	374	25
Future Volume (vph)	0	0	0	93	22	84	12	269	125	38	374	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.943			0.954			0.991	
Flt Protected					0.977			0.999			0.996	
Satd. Flow (prot)	0	0	0	0	1713	0	0	3352	0	0	3386	0
Flt Permitted					0.977			0.999			0.996	
Satd. Flow (perm)	0	0	0	0	1713	0	0	3352	0	0	3386	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					27			51			5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		250			398			214			255	
Travel Time (s)		6.8			10.9			5.8			7.0	
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%	0%	4%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	0	115	27	104	13	302	140	46	451	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	246	0	0	455	0	0	527	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2		1	2	
Detector Template				Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)				20	100		20	100		20	100	
Trailing Detector (ft)				0	0		0	0		0	0	
Detector 1 Position(ft)				0	0		0	0		0	0	
Detector 1 Size(ft)				20	6		20	6		20	6	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Split	NA		Split	NA	
Protected Phases					6		8	8		10	10	
Permitted Phases				6								
Detector Phase				6	6		8	8		10	10	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)				26.0	26.0		23.0	23.0		23.0	23.0	
Total Split (s)				35.0	35.0		35.0	35.0		37.0	37.0	
Total Split (%)				26.9%	26.9%		26.9%	26.9%		28.5%	28.5%	
Maximum Green (s)				29.0	29.0		28.0	28.0		30.0	30.0	
Yellow Time (s)				3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)					-2.0			-3.0			-3.0	
Total Lost Time (s)					4.0			4.0			4.0	
Lead/Lag							Lead	Lead				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)				3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode				C-Max	C-Max		None	None		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)					31.0			24.7			54.3	
Actuated g/C Ratio					0.24			0.19			0.42	
v/c Ratio					0.57			0.67			0.37	
Control Delay					44.8			47.8			12.6	
Queue Delay					0.0			0.0			0.8	
Total Delay					44.8			47.8			13.5	
LOS					D			D			B	
Approach Delay					44.8			47.8			13.5	
Approach LOS					D			D			B	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2: and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 32.5 Intersection LOS: C
Intersection Capacity Utilization 45.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Hammond Street & Heath Street



Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	23.0
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	15
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	246	455	527
v/c Ratio	0.57	0.67	0.37
Control Delay	44.8	47.8	12.6
Queue Delay	0.0	0.0	0.8
Total Delay	44.8	47.8	13.5
Queue Length 50th (ft)	164	167	38
Queue Length 95th (ft)	221	211	m178
Internal Link Dist (ft)	318	134	175
Turn Bay Length (ft)			
Base Capacity (vph)	429	838	1416
Starvation Cap Reductn	0	0	571
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.57	0.54	0.62

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Hammond Street at Soule Recreation Drive and Private Drive

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	4	0	3	0	585	6	8	430	1
Future Vol, veh/h	0	0	1	4	0	3	0	585	6	8	430	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	88	88	88	93	93	93	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	3	0
Mvmt Flow	0	0	1	5	0	3	0	629	6	11	573	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	911	1231	287	941	1228	318	574	0	0	635	0	0
Stage 1	596	596	-	632	632	-	-	-	-	-	-	-
Stage 2	315	635	-	309	596	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	232	179	716	221	180	684	1009	-	-	958	-	-
Stage 1	462	495	-	440	477	-	-	-	-	-	-	-
Stage 2	676	476	-	682	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	228	176	716	218	177	684	1009	-	-	958	-	-
Mov Cap-2 Maneuver	228	176	-	218	177	-	-	-	-	-	-	-
Stage 1	462	487	-	440	477	-	-	-	-	-	-	-
Stage 2	673	476	-	669	487	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	17	0	0.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1009	-	-	716	308	958	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.026	0.011	-	-
HCM Control Delay (s)	0	-	-	10	17	8.8	0.1	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

5: Hammond Street & Private Drive/Soule Reacreation Drive

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	2	2	0	5	0	328	3	3	386	2
Future Vol, veh/h	0	0	2	2	0	5	0	328	3	3	386	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	93	93	93	84	84	84
Heavy Vehicles, %	0	0	50	0	0	0	0	3	0	0	3	0
Mvmt Flow	0	0	3	3	0	7	0	353	3	4	460	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	646	825	231	593	825	178	462	0	0	356	0	0
Stage 1	469	469	-	355	355	-	-	-	-	-	-	-
Stage 2	177	356	-	238	470	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.8	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	361	310	643	393	310	841	1110	-	-	1214	-	-
Stage 1	549	564	-	641	633	-	-	-	-	-	-	-
Stage 2	813	633	-	750	563	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	357	309	643	390	309	841	1110	-	-	1214	-	-
Mov Cap-2 Maneuver	357	309	-	390	309	-	-	-	-	-	-	-
Stage 1	549	562	-	641	633	-	-	-	-	-	-	-
Stage 2	807	633	-	744	561	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	10.8	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1110	-	-	643	632	1214	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.015	0.003	-	-
HCM Control Delay (s)	0	-	-	10.6	10.8	8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	4	0	3	0	627	6	9	461	1
Future Vol, veh/h	0	0	1	4	0	3	0	627	6	9	461	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	88	88	88	93	93	93	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	3	0
Mvmt Flow	0	0	1	5	0	3	0	674	6	12	615	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	977	1320	308	1009	1317	340	616	0	0	680	0	0
Stage 1	640	640	-	677	677	-	-	-	-	-	-	-
Stage 2	337	680	-	332	640	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	208	158	694	197	159	662	974	-	-	922	-	-
Stage 1	435	473	-	414	455	-	-	-	-	-	-	-
Stage 2	656	454	-	661	473	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	204	155	694	194	156	662	974	-	-	922	-	-
Mov Cap-2 Maneuver	204	155	-	194	156	-	-	-	-	-	-	-
Stage 1	435	464	-	414	455	-	-	-	-	-	-	-
Stage 2	653	454	-	647	464	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	18.3	0	0.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	974	-	-	694	278	922	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.029	0.013	-	-
HCM Control Delay (s)	0	-	-	10.2	18.3	9	0.1	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

5: Hammond Street & Private Drive/Soule Reacreation Drive

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑↑			↑↑	
Traffic Vol, veh/h	0	0	2	2	0	5	0	352	3	3	414	2
Future Vol, veh/h	0	0	2	2	0	5	0	352	3	3	414	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	93	93	93	84	84	84
Heavy Vehicles, %	0	0	50	0	0	0	0	3	0	0	3	0
Mvmt Flow	0	0	3	3	0	7	0	378	3	4	493	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	691	883	248	635	883	191	495	0	0	381	0	0
Stage 1	502	502	-	380	380	-	-	-	-	-	-	-
Stage 2	189	381	-	255	503	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.8	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	335	287	625	367	287	825	1079	-	-	1189	-	-
Stage 1	525	545	-	619	617	-	-	-	-	-	-	-
Stage 2	800	617	-	733	545	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	331	286	625	364	286	825	1079	-	-	1189	-	-
Mov Cap-2 Maneuver	331	286	-	364	286	-	-	-	-	-	-	-
Stage 1	525	542	-	619	617	-	-	-	-	-	-	-
Stage 2	794	617	-	726	542	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	11	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1079	-	-	625	606	1189	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.015	0.003	-	-
HCM Control Delay (s)	0	-	-	10.8	11	8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	0	0	1	4	0	3	0	669	6	9	539	1
Future Vol, veh/h	0	0	1	4	0	3	0	669	6	9	539	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	88	88	88	93	93	93	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	3	0
Mvmt Flow	0	0	1	5	0	3	0	719	6	12	719	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1104	1469	360	1106	1466	363	720	0	0	725	0	0
Stage 1	744	744	-	722	722	-	-	-	-	-	-	-
Stage 2	360	725	-	384	744	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	168	129	642	168	129	640	891	-	-	887	-	-
Stage 1	377	424	-	389	434	-	-	-	-	-	-	-
Stage 2	636	433	-	616	424	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	164	126	642	165	126	640	891	-	-	887	-	-
Mov Cap-2 Maneuver	164	126	-	165	126	-	-	-	-	-	-	-
Stage 1	377	414	-	389	434	-	-	-	-	-	-	-
Stage 2	633	433	-	601	414	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	20.4	0	0.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	891	-	-	642	242	887	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.033	0.014	-	-
HCM Control Delay (s)	0	-	-	10.6	20.4	9.1	0.1	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	0	0	2	2	0	5	0	387	3	3	449	2
Future Vol, veh/h	0	0	2	2	0	5	0	387	3	3	449	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	93	93	93	84	84	84
Heavy Vehicles, %	0	0	50	0	0	0	0	3	0	0	3	0
Mvmt Flow	0	0	3	3	0	7	0	416	3	4	535	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	752	963	269	694	963	210	537	0	0	419	0	0
Stage 1	544	544	-	418	418	-	-	-	-	-	-	-
Stage 2	208	419	-	276	545	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.8	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	303	258	603	333	258	802	1041	-	-	1151	-	-
Stage 1	496	522	-	588	594	-	-	-	-	-	-	-
Stage 2	780	593	-	712	522	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	299	257	603	330	257	802	1041	-	-	1151	-	-
Mov Cap-2 Maneuver	299	257	-	330	257	-	-	-	-	-	-	-
Stage 1	496	519	-	588	594	-	-	-	-	-	-	-
Stage 2	774	593	-	705	519	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	11.4	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1041	-	-	603	569	1151	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.016	0.003	-	-
HCM Control Delay (s)	0	-	-	11	11.4	8.1	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Hammond Street at Woodland Road

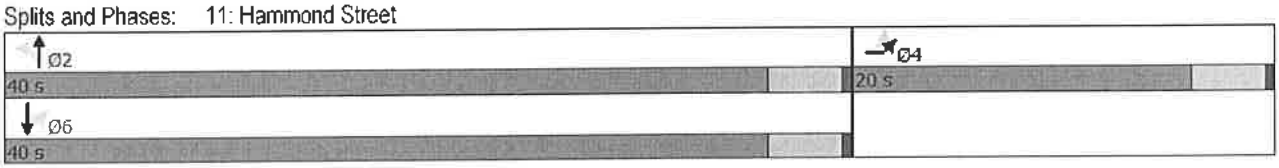
Lane Group	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	27	94	34	130	604	464	5	325	109	0	0
Future Volume (vph)	27	94	34	130	604	464	5	325	109	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	13	13	12	12	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00
Frt		0.971			0.942			0.963			
Flt Protected		0.962			0.995			0.999			
Satd. Flow (prot)	0	1999	0	0	3337	0	0	3580	0	0	0
Flt Permitted		0.962			0.805			0.940			
Satd. Flow (perm)	0	1999	0	0	2700	0	0	3369	0	0	0
Right Turn on Red			Yes			Yes			Yes		
Satd. Flow (RTOR)		23			418			133			
Link Speed (mph)		30			25			30		30	
Link Distance (ft)		1286			355			1186		897	
Travel Time (s)		29.2			9.7			27.0		20.4	
Peak Hour Factor	0.75	0.75	0.75	0.85	0.85	0.85	0.75	0.75	0.75	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	2%	1%	20%	0%	0%	0%	0%
Adj. Flow (vph)	36	125	45	153	711	546	7	433	145	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	206	0	0	1410	0	0	585	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		16			0			0		0	
Link Offset(ft)		0			0			0		0	
Crosswalk Width(ft)		16			16			16		16	
Two way Left Turn Lane											
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00	0.96	0.96	1.00	1.00	1.00
Turning Speed (mph)	15	15	9	15		9	15		9	15	9
Number of Detectors	1	1		1	2		1	2			
Detector Template	Left	Left		Left	Thru		Left	Thru			
Leading Detector (ft)	20	20		20	100		20	100			
Trailing Detector (ft)	0	0		0	0		0	0			
Detector 1 Position(ft)	0	0		0	0		0	0			
Detector 1 Size(ft)	20	20		20	6		20	6			
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 2 Position(ft)					94			94			
Detector 2 Size(ft)					6			6			
Detector 2 Type					Cl+Ex			Cl+Ex			
Detector 2 Channel											
Detector 2 Extend (s)					0.0			0.0			
Turn Type	Perm	Prot		Perm	NA		Perm	NA			
Protected Phases		4			2			6			
Permitted Phases	4			2			6				
Detector Phase	4	4		2	2		6	6			

Lane Group	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Switch Phase											
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0			
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0			
Total Split (s)	20.0	20.0		40.0	40.0		40.0	40.0			
Total Split (%)	33.3%	33.3%		66.7%	66.7%		66.7%	66.7%			
Maximum Green (s)	16.0	16.0		36.0	36.0		36.0	36.0			
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5			
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5			
Lost Time Adjust (s)		0.0			0.0			0.0			
Total Lost Time (s)		4.0			4.0			4.0			
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			
Recall Mode	None	None		Max	Max		Max	Max			
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)	0	0		0	0		0	0			
Act Effct Green (s)		10.7			40.8			40.8			
Actuated g/C Ratio		0.18			0.69			0.69			
v/c Ratio		0.54			0.71			0.25			
Control Delay		24.1			6.9			3.4			
Queue Delay		0.0			0.0			0.0			
Total Delay		24.1			6.9			3.4			
LOS		C			A			A			
Approach Delay		24.1			6.9			3.4			
Approach LOS		C			A			A			

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 59.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.5 Intersection LOS: A
Intersection Capacity Utilization 66.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 11: Hammond Street



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	206	1410	585
v/c Ratio	0.54	0.71	0.25
Control Delay	24.1	6.9	3.4
Queue Delay	0.0	0.0	0.0
Total Delay	24.1	6.9	3.4
Queue Length 50th (ft)	57	76	23
Queue Length 95th (ft)	82	157	38
Internal Link Dist (ft)	1206	275	1106
Turn Bay Length (ft)			
Base Capacity (vph)	556	1981	2350
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.37	0.71	0.25

Intersection Summary

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Traffic Vol, veh/h	14	9	15	318	77	0	395	10	0	0
Future Vol, veh/h	14	9	15	318	77	0	395	10	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	None	-	-
Storage Length	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	75	75	94	94	94	93	93	93	92	92
Heavy Vehicles, %	0	0	0	4	0	0	2	0	0	0
Mvmt Flow	19	12	16	338	82	0	425	11	0	0

Major/Minor	Minor2		Major1			Major2		
Conflicting Flow All	632	218	436	0	0	420	0	0
Stage 1	431	-	-	-	-	-	-	-
Stage 2	201	-	-	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	417	792	1134	-	-	1150	-	-
Stage 1	629	-	-	-	-	-	-	-
Stage 2	819	-	-	-	-	-	-	-
Platoon blocked, %				-	-		-	-
Mov Cap-1 Maneuver	409	792	1134	-	-	1150	-	-
Mov Cap-2 Maneuver	409	-	-	-	-	-	-	-
Stage 1	617	-	-	-	-	-	-	-
Stage 2	819	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1134	-	-	576	1150	-	-
HCM Lane V/C Ratio	0.014	-	-	0.067	-	-	-
HCM Control Delay (s)	8.2	0.1	-	11.7	0	-	-
HCM Lane LOS	A	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	-	-

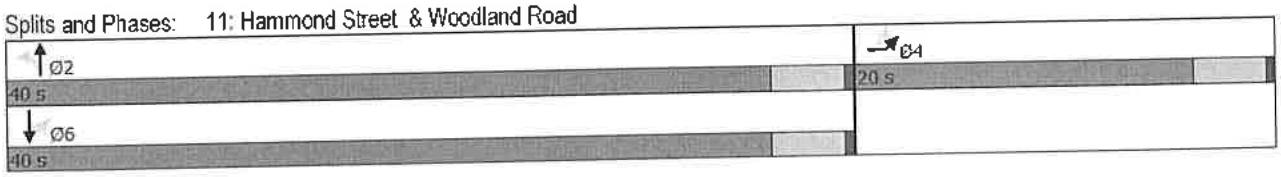
Lane Group	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	29	101	36	140	648	497	5	348	117	0	0
Future Volume (vph)	29	101	36	140	648	497	5	348	117	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	13	13	12	12	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00
Frt		0.971			0.942			0.963			
Flt Protected		0.962			0.995			0.999			
Satd. Flow (prot)	0	1999	0	0	3337	0	0	3581	0	0	0
Flt Permitted		0.962			0.791			0.939			
Satd. Flow (perm)	0	1999	0	0	2653	0	0	3366	0	0	0
Right Turn on Red			Yes			Yes			Yes		
Satd. Flow (RTOR)		23			416			134			
Link Speed (mph)		30			25			30		30	
Link Distance (ft)		554			286			1036		559	
Travel Time (s)		12.6			7.8			23.5		12.7	
Peak Hour Factor	0.75	0.75	0.75	0.85	0.85	0.85	0.75	0.75	0.75	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	2%	1%	20%	0%	0%	0%	0%
Adj. Flow (vph)	39	135	48	165	762	585	7	464	156	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	222	0	0	1512	0	0	627	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		16			0			0		0	
Link Offset(ft)		0			0			0		0	
Crosswalk Width(ft)		16			16			16		16	
Two way Left Turn Lane											
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00	0.96	0.96	1.00	1.00	1.00
Turning Speed (mph)	15	15	9	15		9	15		9	15	9
Number of Detectors	1	1		1	2		1	2			
Detector Template	Left	Left		Left	Thru		Left	Thru			
Leading Detector (ft)	20	20		20	100		20	100			
Trailing Detector (ft)	0	0		0	0		0	0			
Detector 1 Position(ft)	0	0		0	0		0	0			
Detector 1 Size(ft)	20	20		20	6		20	6			
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 2 Position(ft)					94			94			
Detector 2 Size(ft)					6			6			
Detector 2 Type					Cl+Ex			Cl+Ex			
Detector 2 Channel											
Detector 2 Extend (s)					0.0			0.0			
Turn Type	Perm	Prot		Perm	NA		Perm	NA			
Protected Phases		4			2			6			
Permitted Phases	4			2			6				
Detector Phase	4	4		2	2		6	6			

Lane Group	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Switch Phase											
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0			
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0			
Total Split (s)	20.0	20.0		40.0	40.0		40.0	40.0			
Total Split (%)	33.3%	33.3%		66.7%	66.7%		66.7%	66.7%			
Maximum Green (s)	16.0	16.0		36.0	36.0		36.0	36.0			
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5			
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5			
Lost Time Adjust (s)		0.0			0.0			0.0			
Total Lost Time (s)		4.0			4.0			4.0			
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			
Recall Mode	None	None		Max	Max		Max	Max			
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)	0	0		0	0		0	0			
Act Effct Green (s)		11.2			40.3			40.3			
Actuated g/C Ratio		0.19			0.68			0.68			
v/c Ratio		0.56			0.78			0.27			
Control Delay		24.3			9.4			3.6			
Queue Delay		0.0			0.0			0.0			
Total Delay		24.3			9.4			3.6			
LOS		C			A			A			
Approach Delay		24.3			9.4			3.6			
Approach LOS		C			A			A			

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 59.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 9.3 — Intersection LOS: A
Intersection Capacity Utilization 70.8% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 11: Hammond Street & Woodland Road



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	222	1512	627
v/c Ratio	0.56	0.78	0.27
Control Delay	24.3	9.4	3.6
Queue Delay	0.0	0.0	0.0
Total Delay	24.3	9.4	3.6
Queue Length 50th (ft)	61	98	27
Queue Length 95th (ft)	88	205	44
Internal Link Dist (ft)	474	206	956
Turn Bay Length (ft)			
Base Capacity (vph)	555	1931	2323
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.40	0.78	0.27

Intersection Summary

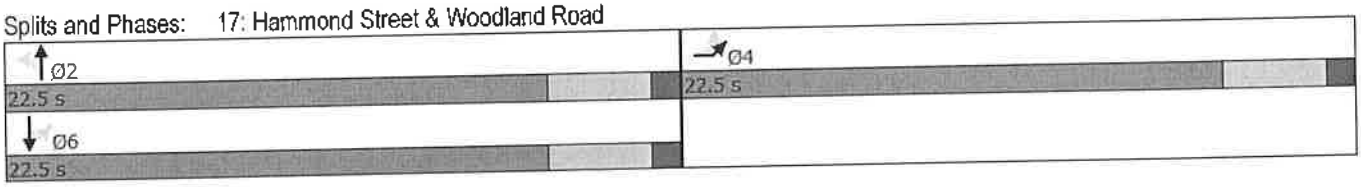
Lane Group	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	10	15	10	16	341	83	0	423	10	0	0
Future Volume (vph)	10	15	10	16	341	83	0	423	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	12	12	13	12	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00
Frt		0.962			0.972			0.996			
Flt Protected		0.965			0.998						
Satd. Flow (prot)	0	1999	0	0	3397	0	0	3527	0	0	0
Flt Permitted		0.965			0.937						
Satd. Flow (perm)	0	1999	0	0	3189	0	0	3527	0	0	0
Right Turn on Red			Yes			Yes			Yes		
Satd. Flow (RTOR)		36			74			6			
Link Speed (mph)		30			30			30		30	
Link Distance (ft)		565			1216			889		662	
Travel Time (s)		12.8			27.6			20.2		15.0	
Peak Hour Factor	0.75	0.75	0.75	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	4%	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	13	20	13	17	363	88	0	455	11	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	46	0	0	468	0	0	466	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		16			0			0		0	
Link Offset(ft)		0			0			0		0	
Crosswalk Width(ft)		16			16			16		16	
Two way Left Turn Lane											
Headway Factor	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00
Turning Speed (mph)	15	15	9	15		9	15		9	15	9
Number of Detectors	1	1		1	2		1	2			
Detector Template	Left	Left		Left	Thru		Left	Thru			
Leading Detector (ft)	20	20		20	100		20	100			
Trailing Detector (ft)	0	0		0	0		0	0			
Detector 1 Position(ft)	0	0		0	0		0	0			
Detector 1 Size(ft)	20	20		20	6		20	6			
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 2 Position(ft)					94			94			
Detector 2 Size(ft)					6			6			
Detector 2 Type					Cl+Ex			Cl+Ex			
Detector 2 Channel											
Detector 2 Extend (s)					0.0			0.0			
Turn Type	Perm	Prot		Perm	NA			NA			
Protected Phases		4			2			6			
Permitted Phases	4			2			6				
Detector Phase	4	4		2	2		6	6			

Lane Group	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Switch Phase											
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5			
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5			
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%			
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0			
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5			
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			
Lost Time Adjust (s)		0.0			0.0			0.0			
Total Lost Time (s)		4.5			4.5			4.5			
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			
Recall Mode	None	None		Min	Min		Min	Min			
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)	0	0		0	0		0	0			
Act Effct Green (s)		6.0			26.3			26.3			
Actuated g/C Ratio		0.21			0.92			0.92			
v/c Ratio		0.10			0.16			0.14			
Control Delay		6.8			1.3			1.4			
Queue Delay		0.0			0.0			0.0			
Total Delay		6.8			1.3			1.4			
LOS		A			A			A			
Approach Delay		6.8			1.3			1.4			
Approach LOS		A			A			A			

Intersection Summary

Area Type: Other
Cycle Length: 45
Actuated Cycle Length: 28.7
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.16
Intersection Signal Delay: 1.6 — Intersection LOS: A
Intersection Capacity Utilization 35.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 17: Hammond Street & Woodland Road



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	46	468	466
v/c Ratio	0.10	0.16	0.14
Control Delay	6.8	1.3	1.4
Queue Delay	0.0	0.0	0.0
Total Delay	6.8	1.3	1.4
Queue Length 50th (ft)	1	0	0
Queue Length 95th (ft)	14	30	33
Internal Link Dist (ft)	485	1136	809
Turn Bay Length (ft)			
Base Capacity (vph)	1296	2926	3230
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.04	0.16	0.14

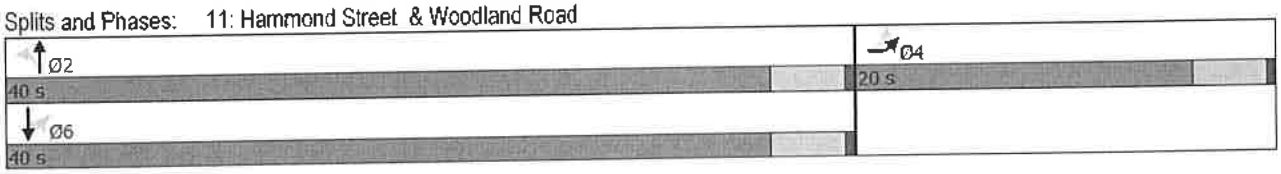
Intersection Summary

Lane Group	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	38	101	36	140	721	513	23	392	117	0	0
Future Volume (vph)	38	101	36	140	721	513	23	392	117	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	13	13	12	12	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00
Frt		0.972			0.944			0.967			
Flt Protected		0.962			0.995			0.998			
Satd. Flow (prot)	0	2002	0	0	3343	0	0	3569	0	0	0
Flt Permitted		0.962			0.779			0.849			
Satd. Flow (perm)	0	2002	0	0	2617	0	0	3036	0	0	0
Right Turn on Red			Yes			Yes			Yes		
Satd. Flow (RTOR)		21			367			107			
Link Speed (mph)		30			25			30		30	
Link Distance (ft)		554			286			1036		559	
Travel Time (s)		12.6			7.8			23.5		12.7	
Peak Hour Factor	0.75	0.75	0.75	0.85	0.85	0.85	0.75	0.75	0.75	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	2%	1%	20%	0%	0%	0%	0%
Adj. Flow (vph)	51	135	48	165	848	604	31	523	156	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	234	0	0	1617	0	0	710	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		16			0			0		0	
Link Offset(ft)		0			0			0		0	
Crosswalk Width(ft)		16			16			16		16	
Two way Left Turn Lane											
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00	0.96	0.96	1.00	1.00	1.00
Turning Speed (mph)	15	15	9	15		9	15		9	15	9
Number of Detectors	1	1		1	2		1	2			
Detector Template	Left	Left		Left	Thru		Left	Thru			
Leading Detector (ft)	20	20		20	100		20	100			
Trailing Detector (ft)	0	0		0	0		0	0			
Detector 1 Position(ft)	0	0		0	0		0	0			
Detector 1 Size(ft)	20	20		20	6		20	6			
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 2 Position(ft)					94			94			
Detector 2 Size(ft)					6			6			
Detector 2 Type					Cl+Ex			Cl+Ex			
Detector 2 Channel											
Detector 2 Extend (s)					0.0			0.0			
Turn Type	Perm	Prot		Perm	NA		Perm	NA			
Protected Phases		4			2			6			
Permitted Phases	4			2			6				
Detector Phase	4	4		2	2		6	6			

Lane Group	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Switch Phase											
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0			
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0			
Total Split (s)	20.0	20.0		40.0	40.0		40.0	40.0			
Total Split (%)	33.3%	33.3%		66.7%	66.7%		66.7%	66.7%			
Maximum Green (s)	16.0	16.0		36.0	36.0		36.0	36.0			
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5			
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5			
Lost Time Adjust (s)		0.0			0.0			0.0			
Total Lost Time (s)		4.0			4.0			4.0			
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			
Recall Mode	None	None		Max	Max		Max	Max			
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)	0	0		0	0		0	0			
Act Effct Green (s)		11.6			40.0			40.0			
Actuated g/C Ratio		0.19			0.67			0.67			
v/c Ratio		0.58			0.86			0.34			
Control Delay		24.7			13.6			4.5			
Queue Delay		0.0			0.0			0.0			
Total Delay		24.7			13.6			4.5			
LOS		C			B			A			
Approach Delay		24.7			13.6			4.5			
Approach LOS		C			B			A			

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 59.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 12.1		Intersection LOS: B	
Intersection Capacity Utilization 75.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: Hammond Street & Woodland Road



Queues
11: Hammond Street & Woodland Road

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	234	1617	710
v/c Ratio	0.58	0.86	0.34
Control Delay	24.7	13.6	4.5
Queue Delay	0.0	0.0	0.0
Total Delay	24.7	13.6	4.5
Queue Length 50th (ft)	65	137	36
Queue Length 95th (ft)	94	#358	57
Internal Link Dist (ft)	474	206	956
Turn Bay Length (ft)			
Base Capacity (vph)	554	1878	2074
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.42	0.86	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

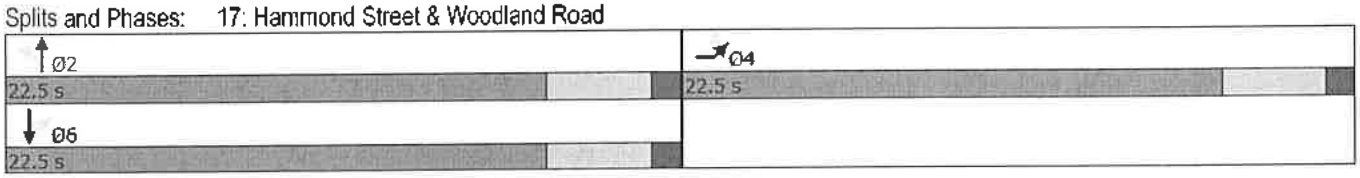
Lane Group	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	10	15	10	16	370	88	0	423	10	0	0
Future Volume (vph)	10	15	10	16	370	88	0	423	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	12	12	13	12	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00
Frt		0.962			0.972			0.996			
Flt Protected		0.965			0.998						
Satd. Flow (prot)	0	1999	0	0	3396	0	0	3527	0	0	0
Flt Permitted		0.965			0.939						
Satd. Flow (perm)	0	1999	0	0	3195	0	0	3527	0	0	0
Right Turn on Red			Yes			Yes			Yes		
Satd. Flow (RTOR)		36			73			6			
Link Speed (mph)		30			30			30		30	
Link Distance (ft)		565			1216			889		662	
Travel Time (s)		12.8			27.6			20.2		15.0	
Peak Hour Factor	0.75	0.75	0.75	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	4%	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	13	20	13	17	394	94	0	455	11	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	46	0	0	505	0	0	466	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		16			0			0		0	
Link Offset(ft)		0			0			0		0	
Crosswalk Width(ft)		16			16			16		16	
Two way Left Turn Lane											
Headway Factor	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00
Turning Speed (mph)	15	15	9	15		9	15		9	15	9
Number of Detectors	1	1		1	2		1	2			
Detector Template	Left	Left		Left	Thru		Left	Thru			
Leading Detector (ft)	20	20		20	100		20	100			
Trailing Detector (ft)	0	0		0	0		0	0			
Detector 1 Position(ft)	0	0		0	0		0	0			
Detector 1 Size(ft)	20	20		20	6		20	6			
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 2 Position(ft)					94			94			
Detector 2 Size(ft)					6			6			
Detector 2 Type					Cl+Ex			Cl+Ex			
Detector 2 Channel											
Detector 2 Extend (s)					0.0			0.0			
Turn Type	Perm	Prot		Perm	NA			NA			
Protected Phases		4			2			6			
Permitted Phases	4			2			6				
Detector Phase	4	4		2	2		6	6			

Lane Group	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Switch Phase											
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5			
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5			
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%			
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0			
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5			
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			
Lost Time Adjust (s)		0.0			0.0			0.0			
Total Lost Time (s)		4.5			4.5			4.5			
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			
Recall Mode	None	None		Min	Min		Min	Min			
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			
Pedestrian Calls (#/hr)	0	0		0	0		0	0			
Act Effct Green (s)		6.0			26.6			26.6			
Actuated g/C Ratio		0.21			0.92			0.92			
v/c Ratio		0.10			0.17			0.14			
Control Delay		6.9			1.3			1.4			
Queue Delay		0.0			0.0			0.0			
Total Delay		6.9			1.3			1.4			
LOS		A			A			A			
Approach Delay		6.9			1.3			1.4			
Approach LOS		A			A			A			

Intersection Summary

Area Type: Other
Cycle Length: 45
Actuated Cycle Length: 29
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.17
Intersection Signal Delay: 1.6 Intersection LOS: A
Intersection Capacity Utilization 36.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 17: Hammond Street & Woodland Road



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	46	505	466
v/c Ratio	0.10	0.17	0.14
Control Delay	6.9	1.3	1.4
Queue Delay	0.0	0.0	0.0
Total Delay	6.9	1.3	1.4
Queue Length 50th (ft)	1	0	0
Queue Length 95th (ft)	15	33	33
Internal Link Dist (ft)	485	1136	809
Turn Bay Length (ft)			
Base Capacity (vph)	1283	2935	3234
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.04	0.17	0.14

Intersection Summary

Heath Street at Oak Street

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	187	5	16	151	7	6
Future Vol, veh/h	187	5	16	151	7	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	75	75	75	75
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	223	6	21	201	9	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	229	0	469	226
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	243	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1351	-	556	818
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	802	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1351	-	546	818
Mov Cap-2 Maneuver	-	-	-	-	546	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	802	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	645	-	-	1351	-
HCM Lane V/C Ratio	0.027	-	-	0.016	-
HCM Control Delay (s)	10.7	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	108	1	0	128	2	2
Future Vol, veh/h	108	1	0	128	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	75	75	75	75
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	111	1	0	171	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	112	0	283	112
Stage 1	-	-	-	-	112	-
Stage 2	-	-	-	-	171	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1490	-	711	947
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	864	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1490	-	711	947
Mov Cap-2 Maneuver	-	-	-	-	711	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	864	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	812	-	-	1490	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Control Delay (s)	9.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	200	5	17	162	8	6
Future Vol, veh/h	200	5	17	162	8	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	75	75	75	75
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	238	6	23	216	11	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	244	0	503	241
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	262	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1334	-	532	803
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	786	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1334	-	521	803
Mov Cap-2 Maneuver	-	-	-	-	521	-
Stage 1	-	-	-	-	788	-
Stage 2	-	-	-	-	786	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	613	-	-	1334	-
HCM Lane V/C Ratio	0.03	-	-	0.017	-
HCM Control Delay (s)	11.1	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	116	1	0	137	2	2
Future Vol, veh/h	116	1	0	137	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	75	75	75	75
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	120	1	0	183	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	121	0	304	121
Stage 1	-	-	-	-	121	-
Stage 2	-	-	-	-	183	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1479	-	692	936
Stage 1	-	-	-	-	909	-
Stage 2	-	-	-	-	853	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1479	-	692	936
Mov Cap-2 Maneuver	-	-	-	-	692	-
Stage 1	-	-	-	-	909	-
Stage 2	-	-	-	-	853	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	796	-	-	1479	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Control Delay (s)	9.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	9.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	294	5	17	167	71	54
Future Vol, veh/h	294	5	17	167	71	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	63	63	40	40
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	432	7	27	265	178	135

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	439	0	755	436
Stage 1	-	-	-	-	436	-
Stage 2	-	-	-	-	319	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1132	-	379	625
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	741	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1132	-	368	625
Mov Cap-2 Maneuver	-	-	-	-	368	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	741	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	29.7
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	447	-	-	1132	-
HCM Lane V/C Ratio	0.699	-	-	0.024	-
HCM Control Delay (s)	29.7	-	-	8.3	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	5.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	164	1	0	145	47	12
Future Vol, veh/h	164	1	0	145	47	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	63	63	50	50
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	241	1	0	230	94	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	242	0	472	242
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	230	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1336	-	554	802
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	813	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1336	-	554	802
Mov Cap-2 Maneuver	-	-	-	-	554	-
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	813	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.6
HCM LOS			B

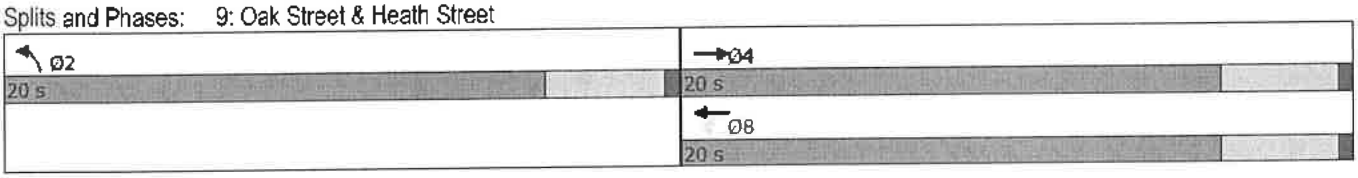
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	591	-	-	1336	-
HCM Lane V/C Ratio	0.2	-	-	-	-
HCM Control Delay (s)	12.6	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	294	5	17	167	71	54
Future Volume (vph)	294	5	17	167	71	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998				0.942	
Flt Protected				0.995	0.972	
Satd. Flow (prot)	1860	0	0	1873	1740	0
Flt Permitted				0.940	0.972	
Satd. Flow (perm)	1860	0	0	1770	1740	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				114	
Link Speed (mph)	30			25	30	
Link Distance (ft)	359			481	214	
Travel Time (s)	8.2			13.1	4.9	
Peak Hour Factor	0.68	0.68	0.63	0.63	0.40	0.40
Heavy Vehicles (%)	2%	0%	0%	1%	0%	0%
Adj. Flow (vph)	432	7	27	265	178	135
Shared Lane Traffic (%)						
Lane Group Flow (vph)	439	0	0	292	313	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Detector Phase	4		8	8	2	
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	20.0		20.0	20.0	20.0	
Total Split (s)	20.0		20.0	20.0	20.0	
Total Split (%)	50.0%		50.0%	50.0%	50.0%	
Maximum Green (s)	16.0		16.0	16.0	16.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.0			4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	11.7			11.7	9.2	
Actuated g/C Ratio	0.40			0.40	0.31	
v/c Ratio	0.59			0.41	0.50	
Control Delay	11.1			8.8	8.7	
Queue Delay	0.0			0.0	0.0	
Total Delay	11.1			8.8	8.7	
LOS	B			A	A	
Approach Delay	11.1			8.8	8.7	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 40			
Actuated Cycle Length: 29.3			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 36.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Oak Street & Heath Street



Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	439	292	313
v/c Ratio	0.59	0.41	0.50
Control Delay	11.1	8.8	8.7
Queue Delay	0.0	0.0	0.0
Total Delay	11.1	8.8	8.7
Queue Length 50th (ft)	43	26	21
Queue Length 95th (ft)	83	50	16
Internal Link Dist (ft)	279	401	134
Turn Bay Length (ft)			
Base Capacity (vph)	1070	1017	1048
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.41	0.29	0.30

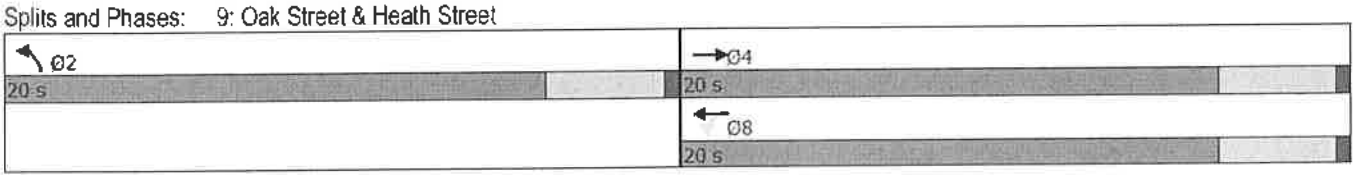
Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	164	1	0	145	47	12
Future Volume (vph)	164	1	0	145	47	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.973	
Flt Protected					0.962	
Satd. Flow (prot)	1898	0	0	1863	1778	0
Flt Permitted					0.962	
Satd. Flow (perm)	1898	0	0	1863	1778	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	1				24	
Link Speed (mph)	30			25	30	
Link Distance (ft)	499			375	281	
Travel Time (s)	11.3			10.2	6.4	
Peak Hour Factor	0.68	0.68	0.63	0.63	0.50	0.50
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	241	1	0	230	94	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	242	0	0	230	118	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA			NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Detector Phase	4		8	8	2	
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	20.0		20.0	20.0	20.0	
Total Split (s)	20.0		20.0	20.0	20.0	
Total Split (%)	50.0%		50.0%	50.0%	50.0%	
Maximum Green (s)	16.0		16.0	16.0	16.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.0			4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	8.3			8.3	10.6	
Actuated g/C Ratio	0.34			0.34	0.44	
v/c Ratio	0.37			0.36	0.15	
Control Delay	7.6			7.5	6.1	
Queue Delay	0.0			0.0	0.0	
Total Delay	7.6			7.5	6.1	
LOS	A			A	A	
Approach Delay	7.6			7.5	6.1	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 40			
Actuated Cycle Length: 24.2			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 7.3		**Intersection LOS: A**	
Intersection Capacity Utilization 18.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Oak Street & Heath Street



Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	242	230	118
v/c Ratio	0.37	0.36	0.15
Control Delay	7.6	7.5	6.1
Queue Delay	0.0	0.0	0.0
Total Delay	7.6	7.5	6.1
Queue Length 50th (ft)	16	16	7
Queue Length 95th (ft)	31	27	12
Internal Link Dist (ft)	419	295	201
Turn Bay Length (ft)			
Base Capacity (vph)	1269	1245	1318
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.19	0.18	0.09

Intersection Summary

Heath Street at Site Driveway (Entrance only)

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	279	69	42	184	0	0
Future Volume (Veh/h)	279	69	42	184	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.65	0.65	0.58	0.58	0.92	0.92
Hourly flow rate (vph)	429	106	72	317	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			535		943	482
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			535		943	482
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	100
cM capacity (veh/h)			1043		274	588

Direction, Lane #	EB 1	WB 1
Volume Total	535	389
Volume Left	0	72
Volume Right	106	0
cSH	1700	1043
Volume to Capacity	0.31	0.07
Queue Length 95th (ft)	0	6
Control Delay (s)	0.0	2.2
Lane LOS		A
Approach Delay (s)	0.0	2.2
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	140	36	19	145	0	0
Future Volume (Veh/h)	140	36	19	145	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.65	0.65	0.58	0.58	0.92	0.92
Hourly flow rate (vph)	215	55	33	250	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			270		558	242
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			270		558	242
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		100	100
cM capacity (veh/h)			1293		478	796

Direction, Lane #	EB 1	WB 1
Volume Total	270	283
Volume Left	0	33
Volume Right	55	0
cSH	1700	1293
Volume to Capacity	0.16	0.03
Queue Length 95th (ft)	0	2
Control Delay (s)	0.0	1.1
Lane LOS		A
Approach Delay (s)	0.0	1.1
Approach LOS		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		

Heath Street at Dunster Road

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰↱	
Traffic Vol, veh/h	172	23	170	3	16	4
Future Vol, veh/h	172	23	170	3	16	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	75	75	75	75
Heavy Vehicles, %	1	9	1	0	0	0
Mvmt Flow	198	26	227	4	21	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	231	0	-	0	651	229
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	422	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1343	-	-	-	436	815
Stage 1	-	-	-	-	814	-
Stage 2	-	-	-	-	666	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1343	-	-	-	371	815
Mov Cap-2 Maneuver	-	-	-	-	371	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	666	-

Approach	EB	WB	SB
HCM Control Delay, s	7.2	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1343	-	-	-	416
HCM Lane V/C Ratio	0.147	-	-	-	0.064
HCM Control Delay (s)	8.1	0	-	-	14.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.2

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰↱	
Traffic Vol, veh/h	78	30	123	0	25	6
Future Vol, veh/h	78	30	123	0	25	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	84	84	78	78
Heavy Vehicles, %	0	0	2	0	0	0
Mvmt Flow	85	33	146	0	32	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	146	0	-	0	349	146
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	203	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1448	-	-	-	652	906
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	836	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1448	-	-	-	613	906
Mov Cap-2 Maneuver	-	-	-	-	613	-
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	836	-

Approach	EB	WB	SB
HCM Control Delay, s	5.5	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1448	-	-	-	654
HCM Lane V/C Ratio	0.059	-	-	-	0.061
HCM Control Delay (s)	7.6	0	-	-	10.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰↱	
Traffic Vol, veh/h	184	25	182	3	17	4
Future Vol, veh/h	184	25	182	3	17	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	75	75	75	75
Heavy Vehicles, %	1	9	1	0	0	0
Mvmt Flow	211	29	243	4	23	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	247	0	-	0	696	245
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	451	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1325	-	-	-	411	799
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1325	-	-	-	344	799
Mov Cap-2 Maneuver	-	-	-	-	344	-
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	646	-

Approach	EB	WB	SB
HCM Control Delay, s	7.2	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1325	-	-	-	386
HCM Lane V/C Ratio	0.16	-	-	-	0.073
HCM Control Delay (s)	8.2	0	-	-	15.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.6	-	-	-	0.2

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↑	
Traffic Vol, veh/h	84	32	132	0	27	6
Future Vol, veh/h	84	32	132	0	27	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	84	84	78	78
Heavy Vehicles, %	0	0	2	0	0	0
Mvmt Flow	91	35	157	0	35	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	157	0	-	0	374	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	217	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1435	-	-	-	631	894
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	824	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1435	-	-	-	590	894
Mov Cap-2 Maneuver	-	-	-	-	590	-
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	824	-

Approach	EB	WB	SB
HCM Control Delay, s	5.6	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1435	-	-	-	629
HCM Lane V/C Ratio	0.064	-	-	-	0.067
HCM Control Delay (s)	7.7	0	-	-	11.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↾	
Traffic Vol, veh/h	216	66	221	3	19	12
Future Vol, veh/h	216	66	221	3	19	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	75	75	75	75
Heavy Vehicles, %	1	9	1	0	0	0
Mvmt Flow	248	76	295	4	25	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	299	0	-	0	869	297
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	572	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1268	-	-	-	325	747
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	569	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1268	-	-	-	259	747
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	-	-	-	603	-
Stage 2	-	-	-	-	569	-

Approach	EB	WB	SB
HCM Control Delay, s	6.5	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1268	-	-	-	347
HCM Lane V/C Ratio	0.196	-	-	-	0.119
HCM Control Delay (s)	8.5	0	-	-	16.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	0.4

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↑	
Traffic Vol, veh/h	87	51	153	3	27	12
Future Vol, veh/h	87	51	153	3	27	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	84	84	78	78
Heavy Vehicles, %	0	0	2	0	0	0
Mvmt Flow	95	55	182	4	35	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	186	0	-	0	429	184
Stage 1	-	-	-	-	184	-
Stage 2	-	-	-	-	245	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1401	-	-	-	587	864
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	800	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1401	-	-	-	546	864
Mov Cap-2 Maneuver	-	-	-	-	546	-
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	800	-

Approach	EB	WB	SB
HCM Control Delay, s	4.9	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1401	-	-	-	616
HCM Lane V/C Ratio	0.067	-	-	-	0.081
HCM Control Delay (s)	7.8	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3

Boylston Street (Route 9) at Dunster

Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑					↱
Traffic Vol, veh/h	1228	20	0	0	0	175
Future Vol, veh/h	1228	20	0	0	0	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	92	92	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1411	23	0	0	0	233

Major/Minor	Major1			Minor1	
Conflicting Flow All	0	0		-	717
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	-		-	6.94
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	-		-	3.32
Pot Cap-1 Maneuver	-	-		0	372
Stage 1	-	-		0	-
Stage 2	-	-		0	-
Platoon blocked, %	-	-			
Mov Cap-1 Maneuver	-	-		-	372
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	NB
HCM Control Delay, s	0	29.6
HCM LOS		D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	372	-	-
HCM Lane V/C Ratio	0.627	-	-
HCM Control Delay (s)	29.6	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	4.1	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑					↱
Traffic Vol, veh/h	1157	31	0	0	0	78
Future Vol, veh/h	1157	31	0	0	0	78
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	92	92	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1244	33	0	0	0	100

Major/Minor	Major1			Minor1	
Conflicting Flow All	0	0		-	639
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	-		-	6.94
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	-		-	3.32
Pot Cap-1 Maneuver	-	-		0	419
Stage 1	-	-		0	-
Stage 2	-	-		0	-
Platoon blocked, %	-	-			
Mov Cap-1 Maneuver	-	-		-	419
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	NB
HCM Control Delay, s	0	16.3
HCM LOS		C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	419	-	-
HCM Lane V/C Ratio	0.239	-	-
HCM Control Delay (s)	16.3	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.9	-	-

Intersection	
Int Delay, s/veh	4.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑					↱
Traffic Vol, veh/h	1226	21	0	0	0	187
Future Vol, veh/h	1226	21	0	0	0	187
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	92	92	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1409	24	0	0	0	249

Major/Minor	Major1			Minor1	
Conflicting Flow All	0	0		-	717
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	-		-	6.94
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	-		-	3.32
Pot Cap-1 Maneuver	-	-		0	372
Stage 1	-	-		0	-
Stage 2	-	-		0	-
Platoon blocked, %	-	-			
Mov Cap-1 Maneuver	-	-		-	372
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	NB
HCM Control Delay, s	0	32.3
HCM LOS		D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	372	-	-
HCM Lane V/C Ratio	0.67	-	-
HCM Control Delay (s)	32.3	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	4.7	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↳					↱
Traffic Vol, veh/h	1265	33	0	0	0	84
Future Vol, veh/h	1265	33	0	0	0	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	92	92	78	78
Heavy Vehicles, %	2	2	2	0	2	2
Mvmt Flow	1360	35	0	0	0	108

Major/Minor	Major1			Minor1	
Conflicting Flow All	0	0		-	698
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	-		-	6.94
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	-		-	3.32
Pot Cap-1 Maneuver	-	-		0	383
Stage 1	-	-		0	-
Stage 2	-	-		0	-
Platoon blocked, %	-	-			
Mov Cap-1 Maneuver	-	-		-	383
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	NB
HCM Control Delay, s	0	18
HCM LOS		C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	383	-	-
HCM Lane V/C Ratio	0.281	-	-
HCM Control Delay (s)	18	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.1	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑					↱
Traffic Vol, veh/h	1226	31	0	0	0	69
Future Vol, veh/h	1226	31	0	0	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	92	92	75	75
Heavy Vehicles, %	0	0	3	3	4	4
Mvmt Flow	1409	36	0	0	0	92

Major/Minor	Major1			Minor1	
Conflicting Flow All	0	0		-	723
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	-		-	6.98
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	-		-	3.34
Pot Cap-1 Maneuver	-	-		0	364
Stage 1	-	-		0	-
Stage 2	-	-		0	-
Platoon blocked, %	-	-			
Mov Cap-1 Maneuver	-	-		-	364
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	NB
HCM Control Delay, s	0	18.2
HCM LOS		C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	364	-	-
HCM Lane V/C Ratio	0.253	-	-
HCM Control Delay (s)	18.2	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑					↱
Traffic Vol, veh/h	1265	39	0	0	0	90
Future Vol, veh/h	1265	39	0	0	0	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	92	92	78	78
Heavy Vehicles, %	0	0	0	0	3	3
Mvmt Flow	1360	42	0	0	0	115

Major/Minor	Major1			Minor1	
Conflicting Flow All	0	0		-	701
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	-		-	6.96
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	-		-	3.33
Pot Cap-1 Maneuver	-	-		0	379
Stage 1	-	-		0	-
Stage 2	-	-		0	-
Platoon blocked, %	-	-			
Mov Cap-1 Maneuver	-	-		-	379
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	NB
HCM Control Delay, s	0	18.6
HCM LOS		C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	379	-	-
HCM Lane V/C Ratio	0.304	-	-
HCM Control Delay (s)	18.6	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.3	-	-

Heath Street at Cary Road

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	36	0	1	167	155	0	0	0	2	0	6
Future Vol, veh/h	3	36	0	1	167	155	0	0	0	2	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	6	0	0	0	0	0	0	0	3	0	8
Mvmt Flow	4	48	0	1	223	207	0	0	0	3	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	430	0	0	48	0	0	389	488	48	385	385	327
Stage 1	-	-	-	-	-	-	56	56	-	329	329	-
Stage 2	-	-	-	-	-	-	333	432	-	56	56	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1140	-	-	1572	-	-	574	483	1027	577	552	719
Stage 1	-	-	-	-	-	-	961	852	-	688	650	-
Stage 2	-	-	-	-	-	-	685	586	-	961	852	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1140	-	-	1572	-	-	565	481	1027	575	549	719
Mov Cap-2 Maneuver	-	-	-	-	-	-	565	481	-	575	549	-
Stage 1	-	-	-	-	-	-	957	849	-	685	649	-
Stage 2	-	-	-	-	-	-	677	585	-	957	849	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	0	10.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1140	-	-	1572	-	-	677
HCM Lane V/C Ratio	-	0.004	-	-	0.001	-	-	0.016
HCM Control Delay (s)	0	8.2	0	-	7.3	0	-	10.4
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	52	0	0	120	22	1	0	0	2	0	2
Future Vol, veh/h	3	52	0	0	120	22	1	0	0	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	85	85	85	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	60	0	0	141	26	1	0	0	3	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	167	0	0	60	0	0	222	233	60	220	220	154
Stage 1	-	-	-	-	-	-	66	66	-	154	154	-
Stage 2	-	-	-	-	-	-	156	167	-	66	66	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1423	-	-	1556	-	-	738	671	1011	740	682	897
Stage 1	-	-	-	-	-	-	950	844	-	853	774	-
Stage 2	-	-	-	-	-	-	851	764	-	950	844	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1423	-	-	1556	-	-	735	670	1011	739	681	897
Mov Cap-2 Maneuver	-	-	-	-	-	-	735	670	-	739	681	-
Stage 1	-	-	-	-	-	-	948	842	-	851	774	-
Stage 2	-	-	-	-	-	-	848	764	-	948	842	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	9.9	9.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	735	1423	-	-	1556	-	-	810
HCM Lane V/C Ratio	0.002	0.002	-	-	-	-	-	0.007
HCM Control Delay (s)	9.9	7.5	0	-	0	-	-	9.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	39	0	1	179	166	0	0	0	2	0	6
Future Vol, veh/h	3	39	0	1	179	166	0	0	0	2	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	6	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	52	0	1	239	221	0	0	0	3	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	460	0	0	52	0	0	416	522	52	412	412	350
Stage 1	-	-	-	-	-	-	60	60	-	352	352	-
Stage 2	-	-	-	-	-	-	356	462	-	60	60	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1112	-	-	1567	-	-	551	462	1021	554	533	698
Stage 1	-	-	-	-	-	-	957	849	-	669	635	-
Stage 2	-	-	-	-	-	-	666	568	-	957	849	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1112	-	-	1567	-	-	543	460	1021	552	530	698
Mov Cap-2 Maneuver	-	-	-	-	-	-	543	460	-	552	530	-
Stage 1	-	-	-	-	-	-	953	846	-	666	634	-
Stage 2	-	-	-	-	-	-	658	567	-	953	846	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	0	10.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1112	-	-	1567	-	-	655
HCM Lane V/C Ratio	-	0.004	-	-	0.001	-	-	0.016
HCM Control Delay (s)	0	8.2	0	-	7.3	0	-	10.6
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	56	0	0	129	24	1	0	0	2	0	2
Future Vol, veh/h	3	56	0	0	129	24	1	0	0	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	85	85	85	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	65	0	0	152	28	1	0	0	3	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	180	0	0	65	0	0	239	251	65	237	237	166
Stage 1	-	-	-	-	-	-	71	71	-	166	166	-
Stage 2	-	-	-	-	-	-	168	180	-	71	71	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1408	-	-	1550	-	-	719	656	1005	722	667	884
Stage 1	-	-	-	-	-	-	944	840	-	841	765	-
Stage 2	-	-	-	-	-	-	839	754	-	944	840	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1408	-	-	1550	-	-	715	655	1005	721	666	884
Mov Cap-2 Maneuver	-	-	-	-	-	-	715	655	-	721	666	-
Stage 1	-	-	-	-	-	-	942	838	-	839	765	-
Stage 2	-	-	-	-	-	-	836	754	-	942	838	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	10	9.6
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	715	1408	-	-	1550	-	-	794
HCM Lane V/C Ratio	0.002	0.002	-	-	-	-	-	0.007
HCM Control Delay (s)	10	7.6	0	-	0	-	-	9.6
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	67	0	1	218	180	0	0	0	7	0	6
Future Vol, veh/h	18	67	0	1	218	180	0	0	0	7	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	6	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	24	89	0	1	291	240	0	0	0	9	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	531	0	0	89	0	0	554	670	89	550	550	411
Stage 1	-	-	-	-	-	-	137	137	-	413	413	-
Stage 2	-	-	-	-	-	-	417	533	-	137	137	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1047	-	-	1519	-	-	446	381	975	449	446	645
Stage 1	-	-	-	-	-	-	871	787	-	620	597	-
Stage 2	-	-	-	-	-	-	617	528	-	871	787	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1047	-	-	1519	-	-	432	371	975	440	435	645
Mov Cap-2 Maneuver	-	-	-	-	-	-	432	371	-	440	435	-
Stage 1	-	-	-	-	-	-	850	768	-	605	596	-
Stage 2	-	-	-	-	-	-	609	527	-	850	768	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0	0	12.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1047	-	-	1519	-	-	516
HCM Lane V/C Ratio	-	0.023	-	-	0.001	-	-	0.034
HCM Control Delay (s)	0	8.5	0	-	7.4	0	-	12.2
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	73	0	0	151	34	1	0	0	13	0	2
Future Vol, veh/h	5	73	0	0	151	34	1	0	0	13	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	85	85	85	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	85	0	0	178	40	1	0	0	17	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	218	0	0	85	0	0	297	315	85	295	295	198
Stage 1	-	-	-	-	-	-	97	97	-	198	198	-
Stage 2	-	-	-	-	-	-	200	218	-	97	97	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1364	-	-	1524	-	-	659	604	980	661	620	848
Stage 1	-	-	-	-	-	-	914	819	-	808	741	-
Stage 2	-	-	-	-	-	-	806	726	-	914	819	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1364	-	-	1524	-	-	654	601	980	658	617	848
Mov Cap-2 Maneuver	-	-	-	-	-	-	654	601	-	658	617	-
Stage 1	-	-	-	-	-	-	909	815	-	804	741	-
Stage 2	-	-	-	-	-	-	803	726	-	909	815	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	10.5	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	654	1364	-	-	1524	-	-	678
HCM Lane V/C Ratio	0.002	0.004	-	-	-	-	-	0.029
HCM Control Delay (s)	10.5	7.7	0	-	0	-	-	10.5
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Heath Street at Woodland Road

Intersection	
Int Delay, s/veh	7.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↾	
Traffic Vol, veh/h	38	0	0	120	203	381
Future Vol, veh/h	38	0	0	120	203	381
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	6	0	0	1	0	1
Mvmt Flow	51	0	0	160	271	508

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	211	51
Stage 1	-	-	-	-	51	-
Stage 2	-	-	-	-	160	-
Critical Hdwy	-	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	-	0	0	-	782	1020
Stage 1	-	0	0	-	977	-
Stage 2	-	0	0	-	874	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	782	1020
Mov Cap-2 Maneuver	-	-	-	-	782	-
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	874	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	1563	-	-
HCM Lane V/C Ratio	0.498	-	-
HCM Control Delay (s)	9.6	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	2.9	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↾	
Traffic Vol, veh/h	54	0	0	120	22	77
Future Vol, veh/h	54	0	0	120	22	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	86	86	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	58	0	0	140	28	96

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	198	58
Stage 1	-	-	-	-	58	-
Stage 2	-	-	-	-	140	-
Critical Hdwy	-	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	795	1014
Stage 1	-	0	0	-	970	-
Stage 2	-	0	0	-	892	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	795	1014
Mov Cap-2 Maneuver	-	-	-	-	795	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	892	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	1304	-	-
HCM Lane V/C Ratio	0.095	-	-
HCM Control Delay (s)	8.1	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↾	
Traffic Vol, veh/h	41	0	0	129	217	408
Future Vol, veh/h	41	0	0	129	217	408
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	6	0	0	1	0	1
Mvmt Flow	55	0	0	172	289	544

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	227	55
Stage 1	-	-	-	-	55	-
Stage 2	-	-	-	-	172	-
Critical Hdwy	-	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	-	0	0	-	766	1015
Stage 1	-	0	0	-	973	-
Stage 2	-	0	0	-	863	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	766	1015
Mov Cap-2 Maneuver	-	-	-	-	766	-
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	863	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	1555	-	-
HCM Lane V/C Ratio	0.536	-	-
HCM Control Delay (s)	10	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	3.3	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↾	
Traffic Vol, veh/h	58	0	0	129	24	83
Future Vol, veh/h	58	0	0	129	24	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	86	86	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	62	0	0	150	30	104

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	212	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	150	-
Critical Hdwy	-	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	781	1009
Stage 1	-	0	0	-	966	-
Stage 2	-	0	0	-	883	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	781	1009
Mov Cap-2 Maneuver	-	-	-	-	781	-
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	883	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	1301	-	-
HCM Lane V/C Ratio	0.103	-	-
HCM Control Delay (s)	8.1	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-

Intersection	
Int Delay, s/veh	7.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↾	
Traffic Vol, veh/h	74	0	0	172	227	408
Future Vol, veh/h	74	0	0	172	227	408
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	6	0	0	1	0	1
Mvmt Flow	99	0	0	229	303	544

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	328	99
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	229	-
Critical Hdwy	-	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	-	0	0	-	671	960
Stage 1	-	0	0	-	930	-
Stage 2	-	0	0	-	814	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	671	960
Mov Cap-2 Maneuver	-	-	-	-	671	-
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	814	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	1494	-	-
HCM Lane V/C Ratio	0.567	-	-
HCM Control Delay (s)	10.5	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	3.8	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↾	
Traffic Vol, veh/h	86	0	0	154	31	84
Future Vol, veh/h	86	0	0	154	31	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	86	86	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	92	0	0	179	39	105

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	271	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	179	-
Critical Hdwy	-	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	723	971
Stage 1	-	0	0	-	937	-
Stage 2	-	0	0	-	857	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	723	971
Mov Cap-2 Maneuver	-	-	-	-	723	-
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	857	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	1329	-	-
HCM Lane V/C Ratio	0.108	-	-
HCM Control Delay (s)	8	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-

Heath Street at Randolph Road

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⋔	
Traffic Vol, veh/h	109	310	120	11	9	0
Future Vol, veh/h	109	310	120	11	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	3	1	1	0	0	0
Mvmt Flow	145	413	160	15	12	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	175	0	-	0	871	168
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	703	-
Critical Hdwy	4.13	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1395	-	-	-	324	881
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	495	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1395	-	-	-	280	881
Mov Cap-2 Maneuver	-	-	-	-	280	-
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	495	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	18.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1395	-	-	-	280
HCM Lane V/C Ratio	0.104	-	-	-	0.043
HCM Control Delay (s)	7.9	0	-	-	18.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↾	
Traffic Vol, veh/h	20	111	117	14	11	3
Future Vol, veh/h	20	111	117	14	11	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	75	75	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	23	129	156	19	14	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	175	0	-	0	341	166
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	175	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1414	-	-	-	659	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	860	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1414	-	-	-	647	884
Mov Cap-2 Maneuver	-	-	-	-	647	-
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1414	-	-	-	686
HCM Lane V/C Ratio	0.016	-	-	-	0.026
HCM Control Delay (s)	7.6	0	-	-	10.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⋎	
Traffic Vol, veh/h	117	332	129	12	10	0
Future Vol, veh/h	117	332	129	12	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	3	1	1	0	0	0
Mvmt Flow	156	443	172	16	13	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	188	0	-	0	935	180
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	755	-
Critical Hdwy	4.13	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1380	-	-	-	297	868
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	468	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1380	-	-	-	252	868
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	468	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	20.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1380	-	-	-	252
HCM Lane V/C Ratio	0.113	-	-	-	0.053
HCM Control Delay (s)	7.9	0	-	-	20.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	0.2

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰↱	
Traffic Vol, veh/h	21	120	126	15	12	3
Future Vol, veh/h	21	120	126	15	12	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	75	75	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	140	168	20	15	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	188	0	-	0	366	178
Stage 1	-	-	-	-	178	-
Stage 2	-	-	-	-	188	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1398	-	-	-	638	870
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	849	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1398	-	-	-	626	870
Mov Cap-2 Maneuver	-	-	-	-	626	-
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	849	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1398	-	-	-	663
HCM Lane V/C Ratio	0.017	-	-	-	0.028
HCM Control Delay (s)	7.6	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰↱	
Traffic Vol, veh/h	117	365	172	12	10	0
Future Vol, veh/h	117	365	172	12	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	3	1	1	0	0	0
Mvmt Flow	156	487	229	16	13	0

Major/Minor	Major1			Major2		Minor2	
Conflicting Flow All	245	0	-	0	1036	237	
Stage 1	-	-	-	-	237	-	
Stage 2	-	-	-	-	799	-	
Critical Hdwy	4.13	-	-	-	6.4	6.2	
Critical Hdwy Stg 1	-	-	-	-	5.4	-	
Critical Hdwy Stg 2	-	-	-	-	5.4	-	
Follow-up Hdwy	2.227	-	-	-	3.5	3.3	
Pot Cap-1 Maneuver	1315	-	-	-	259	807	
Stage 1	-	-	-	-	807	-	
Stage 2	-	-	-	-	446	-	
Platoon blocked, %		-	-	-			
Mov Cap-1 Maneuver	1315	-	-	-	217	807	
Mov Cap-2 Maneuver	-	-	-	-	217	-	
Stage 1	-	-	-	-	675	-	
Stage 2	-	-	-	-	446	-	

Approach	EB	WB	SB
HCM Control Delay, s	2	0	22.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1315	-	-	-	217
HCM Lane V/C Ratio	0.119	-	-	-	0.061
HCM Control Delay (s)	8.1	0	-	-	22.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	0.2

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↾	
Traffic Vol, veh/h	21	149	149	15	12	5
Future Vol, veh/h	21	149	149	15	12	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	75	75	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	173	199	20	15	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	219	0	-	0	430	209
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	221	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1362	-	-	-	586	836
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	821	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1362	-	-	-	575	836
Mov Cap-2 Maneuver	-	-	-	-	575	-
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	821	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1362	-	-	-	633
HCM Lane V/C Ratio	0.018	-	-	-	0.034
HCM Control Delay (s)	7.7	0	-	-	10.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Heath Street at Warren Street

Intersection	
Int Delay, s/veh	4.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	61	91	199	120	37	87
Future Vol, veh/h	61	91	199	120	37	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	77	77	76	76
Heavy Vehicles, %	0	1	0	0	0	2
Mvmt Flow	81	121	258	156	49	114

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	548	336	0	0	414	0
Stage 1	336	-	-	-	-	-
Stage 2	212	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	501	708	-	-	1156	-
Stage 1	728	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	478	708	-	-	1156	-
Mov Cap-2 Maneuver	478	-	-	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	828	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	14.2	0	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	593	1156	-
HCM Lane V/C Ratio	-	-	0.342	0.042	-
HCM Control Delay (s)	-	-	14.2	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.5	0.1	-

Intersection	
Int Delay, s/veh	2.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	32	16	54	32	33	83
Future Vol, veh/h	32	16	54	32	33	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	90	90	83	83
Heavy Vehicles, %	3	0	2	0	0	1
Mvmt Flow	37	19	60	36	40	100

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	258	78	0	0	96	0
Stage 1	78	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	729	988	-	-	1510	-
Stage 1	943	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	709	988	-	-	1510	-
Mov Cap-2 Maneuver	709	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	849	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	10	0	2.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	783	1510	-
HCM Lane V/C Ratio	-	-	0.071	0.026	-
HCM Control Delay (s)	-	-	10	7.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.5

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	65	98	213	129	40	93
Future Vol, veh/h	65	98	213	129	40	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	77	77	76	76
Heavy Vehicles, %	0	1	0	0	0	2
Mvmt Flow	87	131	277	168	53	122

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	589	361	0	0	445	0
Stage 1	361	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	474	686	-	-	1126	-
Stage 1	710	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	450	686	-	-	1126	-
Mov Cap-2 Maneuver	450	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	815	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	15.2	0	2.5
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	567	1126	-
HCM Lane V/C Ratio	-	-	0.383	0.047	-
HCM Control Delay (s)	-	-	15.2	8.4	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.8	0.1	-

Intersection	
Int Delay, s/veh	2.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	34	17	58	34	35	89
Future Vol, veh/h	34	17	58	34	35	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	90	90	83	83
Heavy Vehicles, %	3	0	2	0	0	1
Mvmt Flow	40	20	64	38	42	107

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	274	83	0	0	102	0
Stage 1	83	-	-	-	-	-
Stage 2	191	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	713	982	-	-	1503	-
Stage 1	938	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	692	982	-	-	1503	-
Mov Cap-2 Maneuver	692	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	839	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	10.1	0	2.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	768	1503	-
HCM Lane V/C Ratio	-	-	0.077	0.028	-
HCM Control Delay (s)	-	-	10.1	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	5.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	85	98	229	146	40	116
Future Vol, veh/h	85	98	229	146	40	116
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	77	77	76	76
Heavy Vehicles, %	0	1	0	0	0	2
Mvmt Flow	113	131	297	190	53	153

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	651	392	0	0	487	0
Stage 1	392	-	-	-	-	-
Stage 2	259	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	436	659	-	-	1086	-
Stage 1	687	-	-	-	-	-
Stage 2	789	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	413	659	-	-	1086	-
Mov Cap-2 Maneuver	413	-	-	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	789	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	18.1	0	2.2
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	516	1086	-
HCM Lane V/C Ratio	-	-	0.473	0.048	-
HCM Control Delay (s)	-	-	18.1	8.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.5	0.2	-

Intersection	
Int Delay, s/veh	2.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	42	17	74	47	35	104
Future Vol, veh/h	42	17	74	47	35	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	90	90	83	83
Heavy Vehicles, %	3	0	2	0	0	1
Mvmt Flow	49	20	82	52	42	125

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	317	108	0	0	134	0
Stage 1	108	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	674	951	-	-	1463	-
Stage 1	914	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	653	951	-	-	1463	-
Mov Cap-2 Maneuver	653	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	824	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	10.5	0	1.9
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	718	1463	-
HCM Lane V/C Ratio	-	-	0.096	0.029	-
HCM Control Delay (s)	-	-	10.5	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

James Horace Circle

MOVEMENT SUMMARY

Site: Existing AM

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lagrange Street											
3b	L3	36	2.0	2.322	646.7	LOS F	93.6	2376.8	1.00	4.27	3.3
3a	L1	190	2.0	2.322	646.7	LOS F	93.6	2376.8	1.00	4.27	3.3
8	T1	116	2.0	2.322	646.7	LOS F	93.6	2376.8	1.00	4.27	3.3
18	R2	136	2.0	2.322	646.7	LOS F	93.6	2376.8	1.00	4.27	3.3
Approach		478	2.0	2.322	646.7	LOS F	93.6	2376.8	1.00	4.27	3.3
East: Newton Street											
1	L2	189	2.0	0.727	26.0	LOS D	3.8	97.3	0.78	0.91	26.1
1a	L1	205	2.0	0.727	26.0	LOS D	3.8	97.3	0.78	0.91	25.6
16a	R1	959	2.0	1.690	336.7	LOS F	131.6	3343.8	1.00	6.01	5.7
16	R2	625	2.0	0.396	0.1	LOS A	0.0	0.0	0.00	0.00	37.2
Approach		1978	2.0	1.690	168.5	LOS F	131.6	3343.8	0.64	3.10	9.9
North: Hammond Street											
7	L2	192	4.0	0.620	26.2	LOS D	2.4	61.3	0.82	0.91	26.6
4	T1	51	4.0	0.620	26.2	LOS D	2.4	61.3	0.82	0.91	26.2
14a	R1	45	4.0	0.704	30.1	LOS D	2.9	75.4	0.83	0.96	25.4
14b	R3	249	4.0	0.704	30.1	LOS D	2.9	75.4	0.83	0.96	24.4
Approach		537	4.0	0.704	28.3	LOS D	2.9	75.4	0.82	0.94	25.4
NorthWest: Hammond Pond Parkway											
7bx	L3	382	1.0	1.188	120.6	LOS F	50.4	1271.1	1.00	3.18	13.2
7ax	L1	422	1.0	1.188	120.6	LOS F	50.4	1271.1	1.00	3.18	13.0
14ax	R1	94	1.0	0.338	10.0	LOS A	1.1	28.2	0.54	0.56	26.8
14x	R2	127	1.0	0.338	10.0	LOS A	1.1	28.2	0.54	0.56	26.1
Approach		1026	1.0	1.188	96.8	LOS F	50.4	1271.1	0.90	2.61	14.6
SouthWest: Newton Street (West)											
5x	L2	426	1.0	1.521	267.3	LOS F	84.8	2137.7	1.00	5.09	7.1
5ax	L1	297	1.0	1.521	267.3	LOS F	84.8	2137.7	1.00	5.09	7.1
12ax	R1	316	1.0	0.905	52.3	LOS F	6.7	170.0	0.94	1.29	20.8
12bx	R3	88	1.0	0.905	52.3	LOS F	6.7	170.0	0.94	1.29	19.7
Approach		1127	1.0	1.521	190.2	LOS F	84.8	2137.7	0.98	3.73	9.2
All Vehicles		5147	1.8	2.322	188.7	LOS F	131.6	3343.8	0.82	3.02	9.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

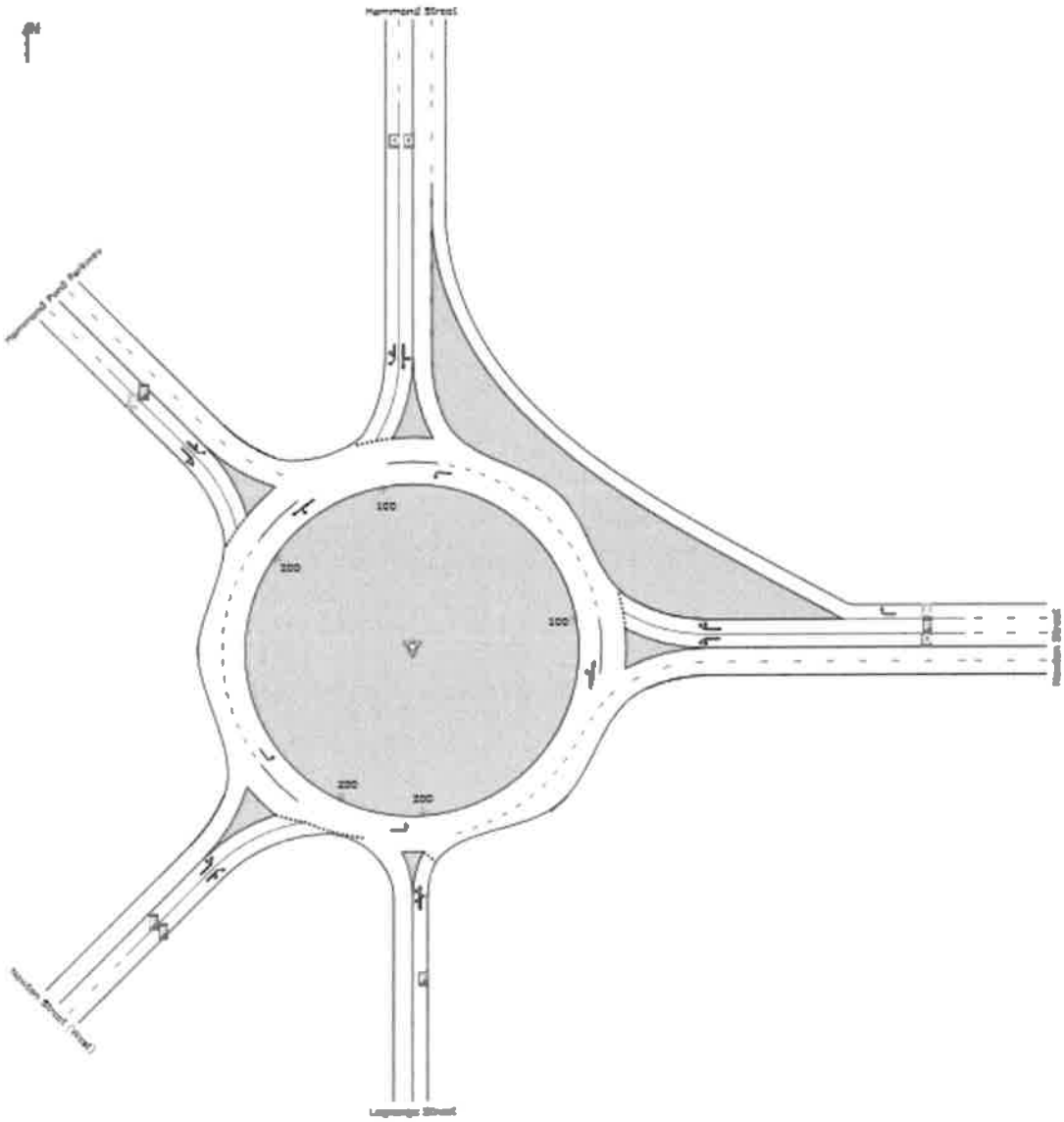
LEVEL OF SERVICE

Site: Existing AM

New Site
Roundabout

All Movement Classes

	South	East	North	Northwest	Southwest	Intersection
LOS	F	F	D	F	F	F



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

MOVEMENT SUMMARY

Site: Existing PM

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lagrange Street											
3b	L3	36	2.0	1.078	106.7	LOS F	17.6	448.3	1.00	2.05	13.7
3a	L1	131	2.0	1.078	106.7	LOS F	17.6	448.3	1.00	2.05	13.4
8	T1	53	2.0	1.078	106.7	LOS F	17.6	448.3	1.00	2.05	13.7
18	R2	147	2.0	1.078	106.7	LOS F	17.6	448.3	1.00	2.05	13.5
Approach		367	2.0	1.078	106.7	LOS F	17.6	448.3	1.00	2.05	13.5
East: Newton Street											
1	L2	199	1.0	0.662	16.9	LOS C	3.6	91.0	0.66	0.72	29.0
1a	L1	301	1.0	0.662	16.9	LOS C	3.6	91.0	0.66	0.72	28.4
16a	R1	360	1.0	0.490	12.0	LOS B	2.1	52.3	0.57	0.60	31.7
16	R2	194	1.0	0.122	0.0	LOS A	0.0	0.0	0.00	0.00	37.2
Approach		1054	1.0	0.662	12.1	LOS B	3.6	91.0	0.51	0.55	30.9
North: Hammond Street											
7	L2	185	3.0	0.505	17.2	LOS C	1.8	45.3	0.71	0.77	29.6
4	T1	62	3.0	0.505	17.2	LOS C	1.8	45.3	0.71	0.77	29.1
14a	R1	48	3.0	0.464	16.7	LOS C	1.6	41.1	0.72	0.77	30.0
14b	R3	165	3.0	0.464	16.7	LOS C	1.6	41.1	0.72	0.77	28.6
Approach		459	3.0	0.505	17.0	LOS C	1.8	45.3	0.71	0.77	29.2
NorthWest: Hammond Pond Parkway											
7bx	L3	180	1.0	1.119	97.9	LOS F	33.4	842.6	1.00	2.58	15.0
7ax	L1	514	1.0	1.119	97.9	LOS F	33.4	842.6	1.00	2.58	14.8
14ax	R1	177	1.0	0.651	19.9	LOS C	3.2	81.0	0.71	0.84	24.0
14x	R2	210	1.0	0.651	19.9	LOS C	3.2	81.0	0.71	0.84	23.5
Approach		1082	1.0	1.119	70.0	LOS F	33.4	842.6	0.90	1.96	17.0
SouthWest: Newton Street (West)											
5x	L2	130	2.0	0.431	16.7	LOS C	1.4	36.5	0.73	0.78	27.4
5ax	L1	56	2.0	0.431	16.7	LOS C	1.4	36.5	0.73	0.78	26.0
12ax	R1	169	2.0	0.490	17.6	LOS C	1.7	42.5	0.73	0.79	30.4
12bx	R3	56	2.0	0.490	17.6	LOS C	1.7	42.5	0.73	0.79	28.0
Approach		410	2.0	0.490	17.2	LOS C	1.7	42.5	0.73	0.79	28.7
All Vehicles		3373	1.5	1.119	42.2	LOS E	33.4	842.6	0.74	1.22	21.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

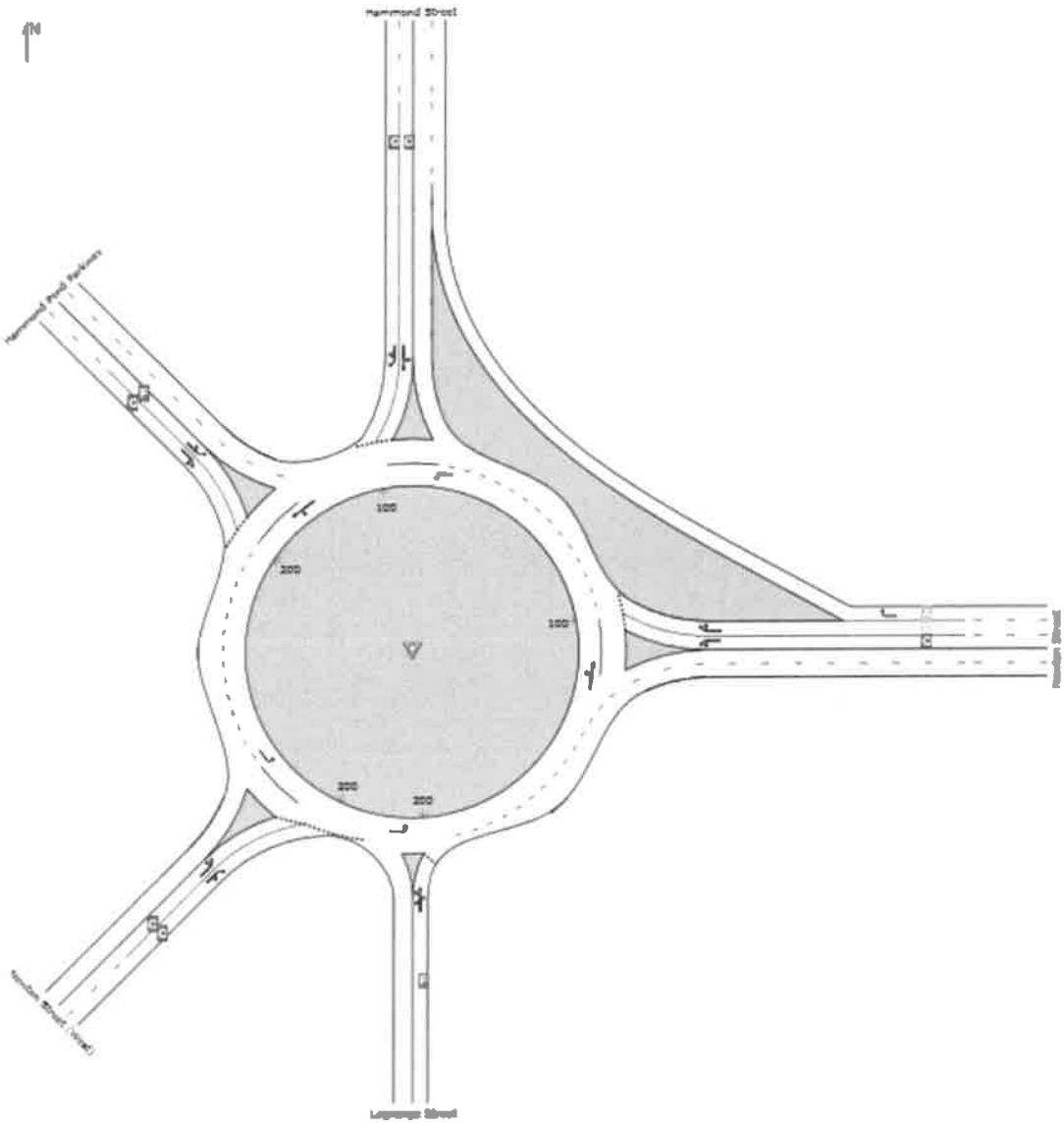
LEVEL OF SERVICE

Site: Existing PM

New Site
Roundabout

All Movement Classes

	South	East	North	Northwest	Southwest	Intersection
LOS	F	B	C	F	C	E



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

MOVEMENT SUMMARY

Site: No-Build AM

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lagrange Street											
3b	L3	38	2.0	2.514	732.0	LOS F	105.6	2681.4	1.00	4.43	2.9
3a	L1	204	2.0	2.514	732.0	LOS F	105.6	2681.4	1.00	4.43	2.9
8	T1	125	2.0	2.514	732.0	LOS F	105.6	2681.4	1.00	4.43	2.9
18	R2	146	2.0	2.514	732.0	LOS F	105.6	2681.4	1.00	4.43	2.9
Approach		513	2.0	2.514	732.0	LOS F	105.6	2681.4	1.00	4.43	2.9
East: Newton Street											
1	L2	201	2.0	0.768	28.9	LOS D	4.4	112.1	0.80	0.96	25.3
1a	L1	220	2.0	0.768	28.9	LOS D	4.4	112.1	0.80	0.96	24.8
16a	R1	1033	2.0	1.796	383.2	LOS F	152.8	3880.7	1.00	6.45	5.1
16	R2	671	2.0	0.425	0.1	LOS A	0.0	0.0	0.00	0.00	37.2
Approach		2125	2.0	1.796	192.0	LOS F	152.8	3880.7	0.65	3.33	9.0
North: Hammond Street											
7	L2	207	4.0	0.685	31.0	LOS D	2.8	72.3	0.84	0.97	25.3
4	T1	55	4.0	0.685	31.0	LOS D	2.8	72.3	0.84	0.97	24.9
14a	R1	48	4.0	0.769	36.4	LOS E	3.5	90.4	0.86	1.03	23.6
14b	R3	267	4.0	0.769	36.4	LOS E	3.5	90.4	0.86	1.03	22.8
Approach		576	4.0	0.769	34.0	LOS D	3.5	90.4	0.85	1.00	23.9
NorthWest: Hammond Pond Parkway											
7bx	L3	409	1.0	1.320	174.6	LOS F	75.4	1899.5	1.00	4.17	10.2
7ax	L1	454	1.0	1.320	174.6	LOS F	75.4	1899.5	1.00	4.17	10.1
14ax	R1	101	1.0	0.378	11.0	LOS B	1.3	33.0	0.57	0.60	26.5
14x	R2	136	1.0	0.378	11.0	LOS B	1.3	33.0	0.57	0.60	25.8
Approach		1101	1.0	1.320	139.3	LOS F	75.4	1899.5	0.91	3.40	11.6
SouthWest: Newton Street (West)											
5x	L2	456	1.0	1.649	322.9	LOS F	103.0	2595.3	1.00	5.64	6.1
5ax	L1	318	1.0	1.649	322.9	LOS F	103.0	2595.3	1.00	5.64	6.1
12ax	R1	338	1.0	0.981	68.9	LOS F	10.5	263.9	0.98	1.58	18.1
12bx	R3	95	1.0	0.981	68.9	LOS F	10.5	263.9	0.98	1.58	17.2
Approach		1207	1.0	1.649	231.8	LOS F	103.0	2595.3	0.99	4.19	7.9
All Vehicles		5523	1.8	2.514	223.9	LOS F	152.8	3880.7	0.83	3.39	8.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

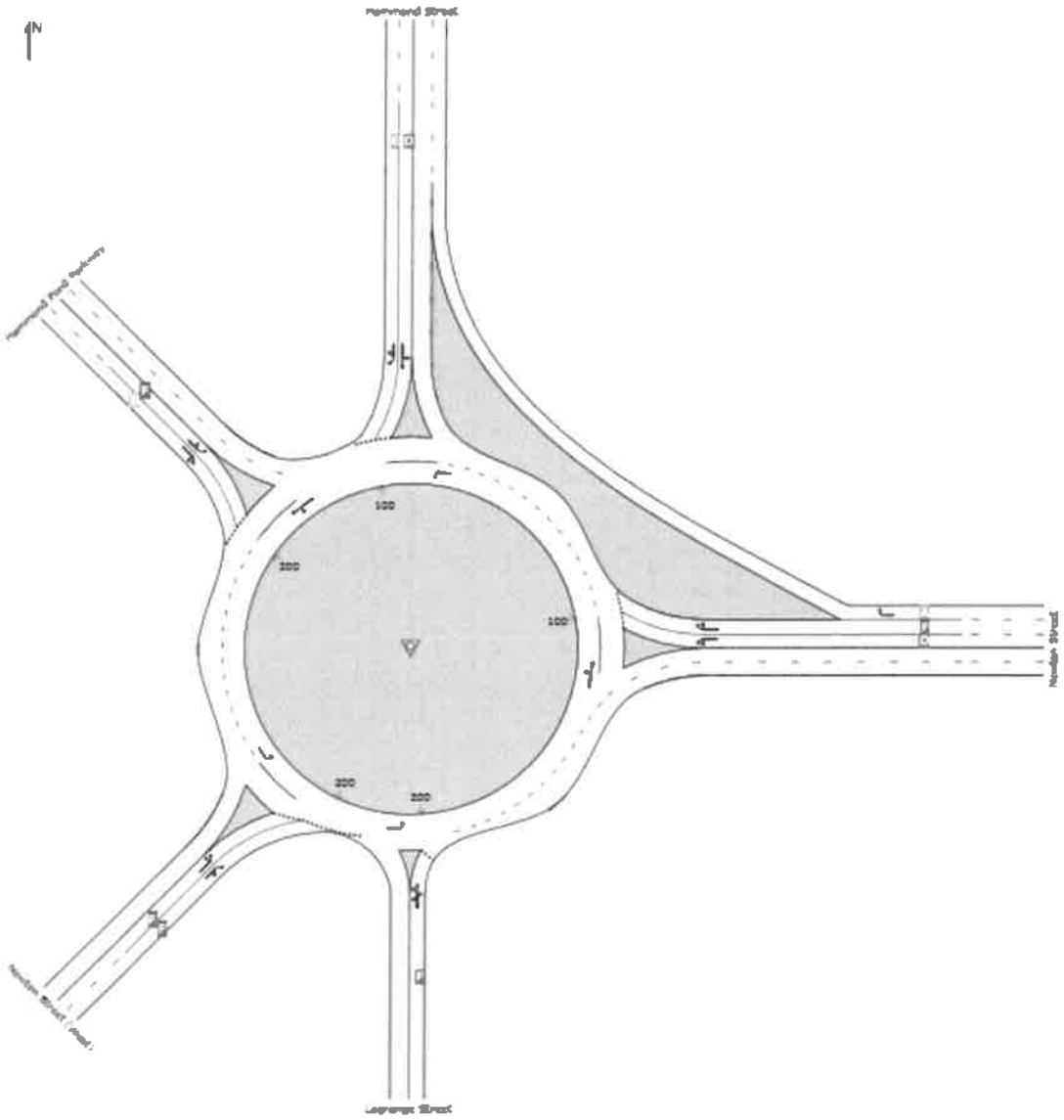
LEVEL OF SERVICE

Site: No-Build AM

New Site
Roundabout

All Movement Classes

	South	East	North	Northwest	Southwest	Intersection
LOS	F	F	D	F	F	F



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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MOVEMENT SUMMARY

Site: No-Build PM

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lagrange Street											
3b	L3	38	2.0	1.168	137.5	LOS F	25.9	657.4	1.00	2.48	11.6
3a	L1	141	2.0	1.168	137.5	LOS F	25.9	657.4	1.00	2.48	11.4
8	T1	57	2.0	1.168	137.5	LOS F	25.9	657.4	1.00	2.48	11.6
18	R2	157	2.0	1.168	137.5	LOS F	25.9	657.4	1.00	2.48	11.5
Approach		393	2.0	1.168	137.5	LOS F	25.9	657.4	1.00	2.48	11.4
East: Newton Street											
1	L2	213	1.0	0.711	19.2	LOS C	4.3	108.1	0.70	0.78	28.2
1a	L1	323	1.0	0.711	19.2	LOS C	4.3	108.1	0.70	0.78	27.7
16a	R1	391	1.0	0.533	13.0	LOS B	2.4	60.9	0.59	0.64	31.2
16	R2	209	1.0	0.131	0.0	LOS A	0.0	0.0	0.00	0.00	37.2
Approach		1137	1.0	0.711	13.5	LOS B	4.3	108.1	0.53	0.59	30.3
North: Hammond Street											
7	L2	198	3.0	0.573	20.6	LOS C	2.1	54.4	0.76	0.83	28.5
4	T1	67	3.0	0.573	20.6	LOS C	2.1	54.4	0.76	0.83	28.0
14a	R1	52	3.0	0.523	19.6	LOS C	1.9	48.5	0.76	0.83	28.9
14b	R3	176	3.0	0.523	19.6	LOS C	1.9	48.5	0.76	0.83	27.6
Approach		492	3.0	0.573	20.2	LOS C	2.1	54.4	0.76	0.83	28.1
NorthWest: Hammond Pond Parkway											
7bx	L3	193	1.0	1.263	153.5	LOS F	57.8	1457.1	1.00	3.69	11.2
7ax	L1	559	1.0	1.263	153.5	LOS F	57.8	1457.1	1.00	3.69	11.1
14ax	R1	190	1.0	0.729	25.1	LOS D	4.0	101.0	0.78	0.96	22.7
14x	R2	225	1.0	0.729	25.1	LOS D	4.0	101.0	0.78	0.96	22.3
Approach		1167	1.0	1.263	107.8	LOS F	57.8	1457.1	0.92	2.72	13.4
SouthWest: Newton Street (West)											
5x	L2	139	2.0	0.469	18.1	LOS C	1.6	40.9	0.75	0.81	27.0
5ax	L1	60	2.0	0.469	18.1	LOS C	1.6	40.9	0.75	0.81	27.6
12ax	R1	181	2.0	0.532	19.3	LOS C	1.9	48.0	0.75	0.82	29.7
12bx	R3	60	2.0	0.532	19.3	LOS C	1.9	48.0	0.75	0.82	27.4
Approach		439	2.0	0.532	18.8	LOS C	1.9	48.0	0.75	0.82	28.2
All Vehicles		3628	1.5	1.263	58.8	LOS F	57.8	1457.1	0.77	1.54	18.8

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

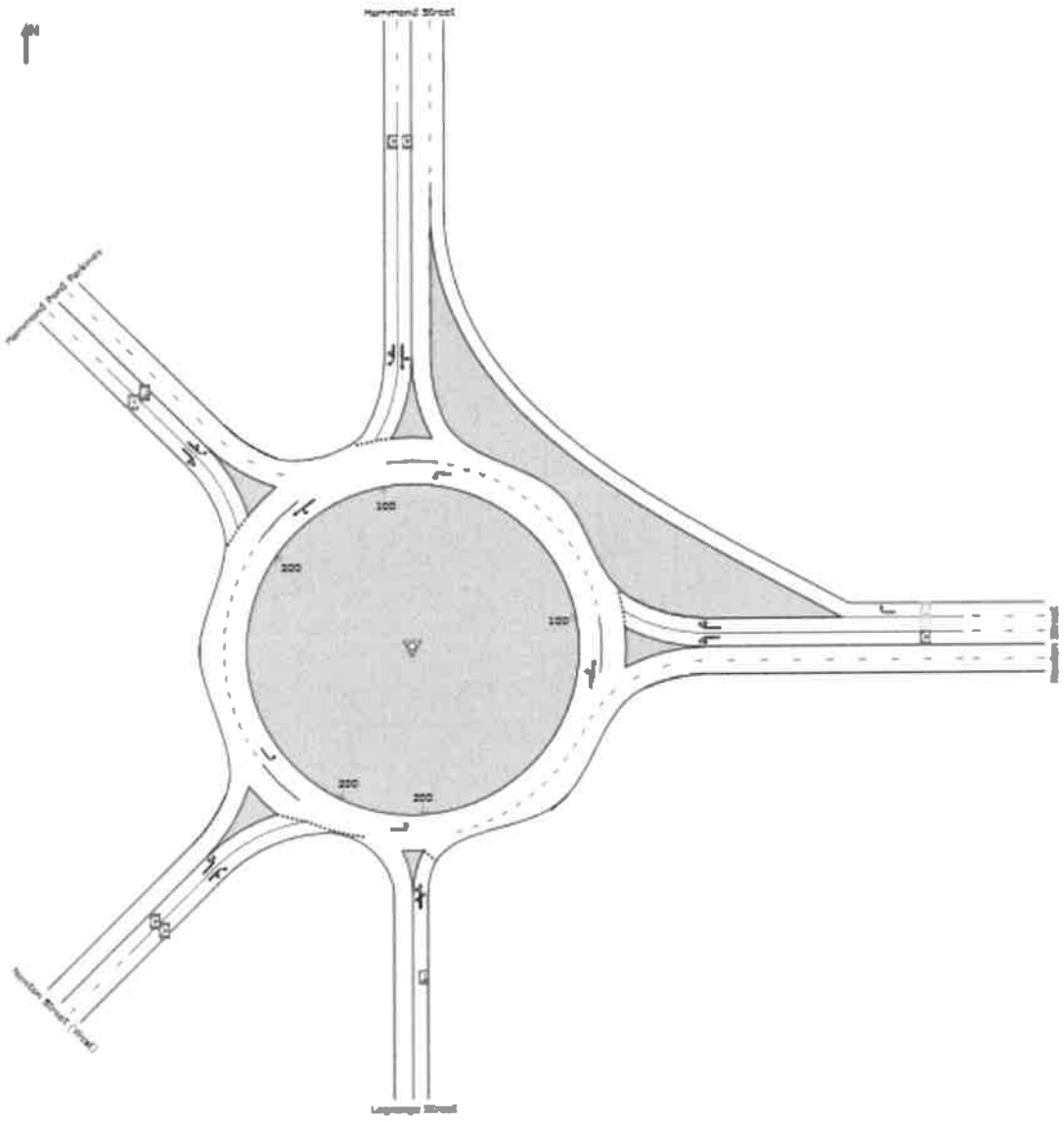
LEVEL OF SERVICE

Site: No-Build PM

New Site
Roundabout

All Movement Classes

	South	East	North	Northwest	Southwest	Intersection
LOS	F	B	C	F	C	F



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

MOVEMENT SUMMARY

Site: Build AM

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lagrange Street											
3b	L3	38	2.0	2.612	775.6	LOS F	112.0	2845.4	1.00	4.50	2.8
3a	L1	204	2.0	2.612	775.6	LOS F	112.0	2845.4	1.00	4.50	2.8
8	T1	145	2.0	2.612	775.6	LOS F	112.0	2845.4	1.00	4.50	2.8
18	R2	146	2.0	2.612	775.6	LOS F	112.0	2845.4	1.00	4.50	2.8
Approach		533	2.0	2.612	775.6	LOS F	112.0	2845.4	1.00	4.50	2.8
East: Newton Street											
1	L2	201	2.0	0.758	27.8	LOS D	4.3	109.3	0.79	0.94	25.6
1a	L1	220	2.0	0.758	27.8	LOS D	4.3	109.3	0.79	0.94	25.1
16a	R1	1033	2.0	1.775	373.4	LOS F	150.6	3826.2	1.00	6.40	5.2
16	R2	741	2.0	0.469	0.1	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		2195	2.0	1.775	181.1	LOS F	150.6	3826.2	0.62	3.19	9.4
North: Hammond Street											
7	L2	240	4.0	0.800	41.9	LOS E	3.9	101.9	0.89	1.09	22.7
4	T1	67	4.0	0.800	41.9	LOS E	3.9	101.9	0.89	1.09	22.4
14a	R1	61	4.0	0.798	39.5	LOS E	3.9	99.5	0.88	1.06	22.9
14b	R3	267	4.0	0.798	39.5	LOS E	3.9	99.5	0.88	1.06	22.1
Approach		635	4.0	0.800	40.6	LOS E	3.9	101.9	0.88	1.07	22.4
NorthWest: Hammond Pond Parkway											
7bx	L3	409	1.0	1.378	199.5	LOS F	83.4	2101.6	1.00	4.52	9.3
7ax	L1	454	1.0	1.378	199.5	LOS F	83.4	2101.6	1.00	4.52	9.2
14ax	R1	101	1.0	0.395	11.8	LOS B	1.4	35.0	0.59	0.63	26.2
14x	R2	136	1.0	0.395	11.8	LOS B	1.4	35.0	0.59	0.63	25.6
Approach		1101	1.0	1.378	159.0	LOS F	83.4	2101.6	0.91	3.68	10.6
SouthWest: Newton Street (West)											
5x	L2	456	1.0	1.708	349.3	LOS F	110.4	2782.1	1.00	5.84	5.7
5ax	L1	335	1.0	1.708	349.3	LOS F	110.4	2782.1	1.00	5.84	5.7
12ax	R1	338	1.0	0.995	73.1	LOS F	11.4	288.1	0.99	1.66	17.5
12bx	R3	95	1.0	0.995	73.1	LOS F	11.4	288.1	0.99	1.66	16.7
Approach		1224	1.0	1.708	251.7	LOS F	110.4	2782.1	1.00	4.36	7.4
All Vehicles		5688	1.8	2.612	232.0	LOS F	150.6	3826.2	0.82	3.42	7.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

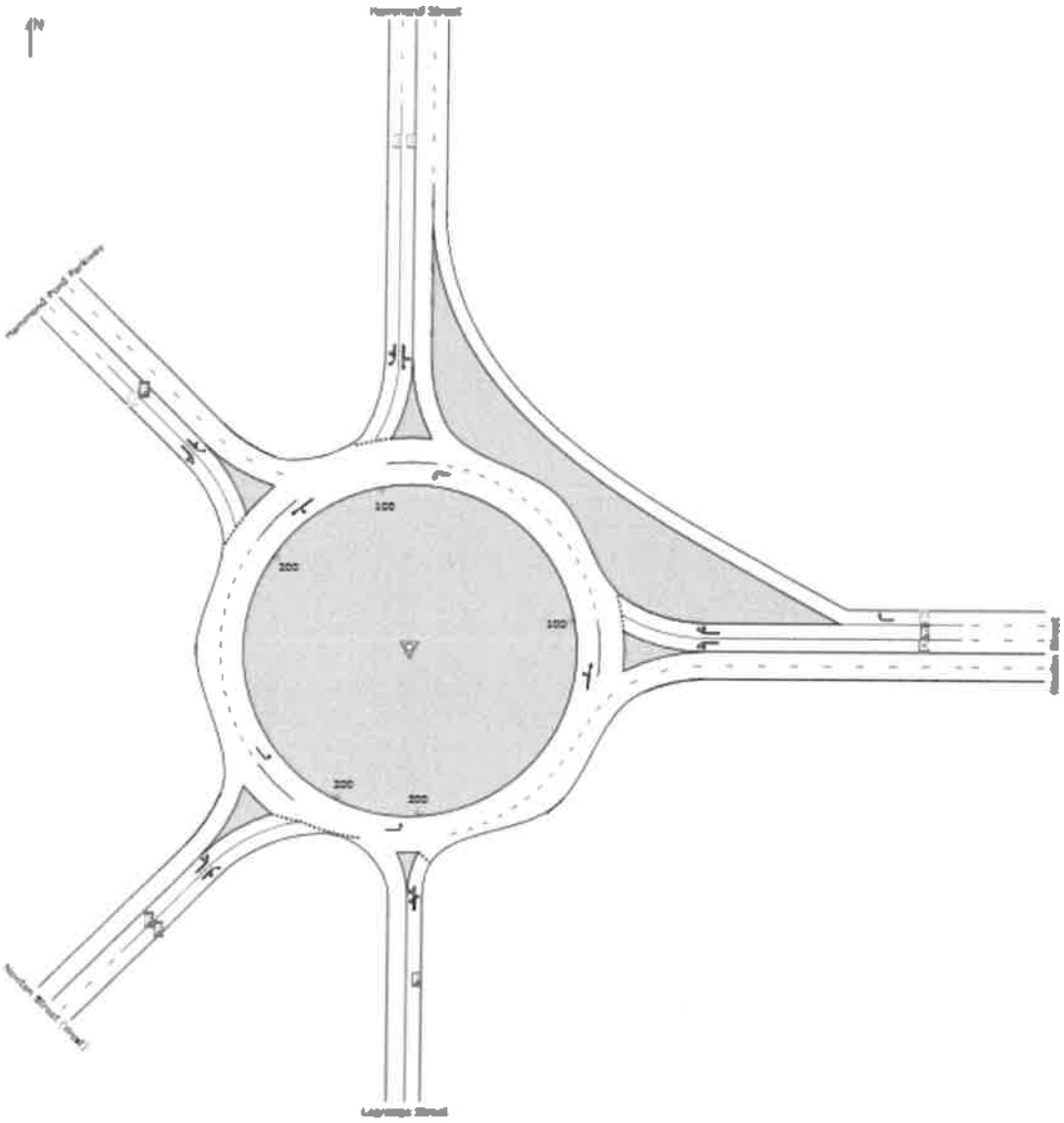
LEVEL OF SERVICE

Site: Build AM

New Site
Roundabout

All Movement Classes

	South	East	North	Northwest	Southwest	Intersection
LOS	F	F	E	F	F	F



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

MOVEMENT SUMMARY

Site: Build PM

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lagrange Street											
3b	L3	38	2.0	1.215	155.2	LOS F	30.0	762.5	1.00	2.68	10.6
3a	L1	141	2.0	1.215	155.2	LOS F	30.0	762.5	1.00	2.68	10.5
8	T1	65	2.0	1.215	155.2	LOS F	30.0	762.5	1.00	2.68	10.6
18	R2	157	2.0	1.215	155.2	LOS F	30.0	762.5	1.00	2.68	10.5
Approach		401	2.0	1.215	155.2	LOS F	30.0	762.5	1.00	2.68	10.5
East: Newton Street											
1	L2	213	1.0	0.713	19.3	LOS C	4.3	108.6	0.70	0.79	28.2
1a	L1	323	1.0	0.713	19.3	LOS C	4.3	108.6	0.70	0.79	27.6
16a	R1	391	1.0	0.535	13.1	LOS B	2.4	61.2	0.60	0.64	31.2
16	R2	231	1.0	0.145	0.0	LOS A	0.0	0.0	0.00	0.00	37.2
Approach		1159	1.0	0.713	13.4	LOS B	4.3	108.6	0.53	0.58	30.4
North: Hammond Street											
7	L2	223	3.0	0.642	23.8	LOS C	2.6	66.2	0.78	0.88	27.4
4	T1	75	3.0	0.642	23.8	LOS C	2.6	66.2	0.78	0.88	27.0
14a	R1	59	3.0	0.539	20.2	LOS C	2.0	50.7	0.76	0.83	28.7
14b	R3	176	3.0	0.539	20.2	LOS C	2.0	50.7	0.76	0.83	27.4
Approach		533	3.0	0.642	22.2	LOS C	2.6	66.2	0.77	0.86	27.5
NorthWest: Hammond Pond Parkway											
7bx	L3	193	1.0	1.299	168.9	LOS F	62.7	1581.0	1.00	3.92	10.4
7ax	L1	559	1.0	1.299	168.9	LOS F	62.7	1581.0	1.00	3.92	10.4
14ax	R1	190	1.0	0.752	27.4	LOS D	4.2	106.7	0.80	1.01	22.2
14x	R2	225	1.0	0.752	27.4	LOS D	4.2	106.7	0.80	1.01	21.8
Approach		1167	1.0	1.299	118.6	LOS F	62.7	1581.0	0.93	2.89	12.7
SouthWest: Newton Street (West)											
5x	L2	139	2.0	0.497	19.3	LOS C	1.7	44.3	0.76	0.83	26.7
5ax	L1	69	2.0	0.497	19.3	LOS C	1.7	44.3	0.76	0.83	27.2
12ax	R1	181	2.0	0.538	19.8	LOS C	1.9	48.7	0.76	0.83	29.5
12bx	R3	60	2.0	0.538	19.8	LOS C	1.9	48.7	0.76	0.83	27.2
Approach		448	2.0	0.538	19.5	LOS C	1.9	48.7	0.76	0.83	27.9
All Vehicles		3708	1.5	1.299	63.8	LOS F	62.7	1581.0	0.77	1.60	18.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

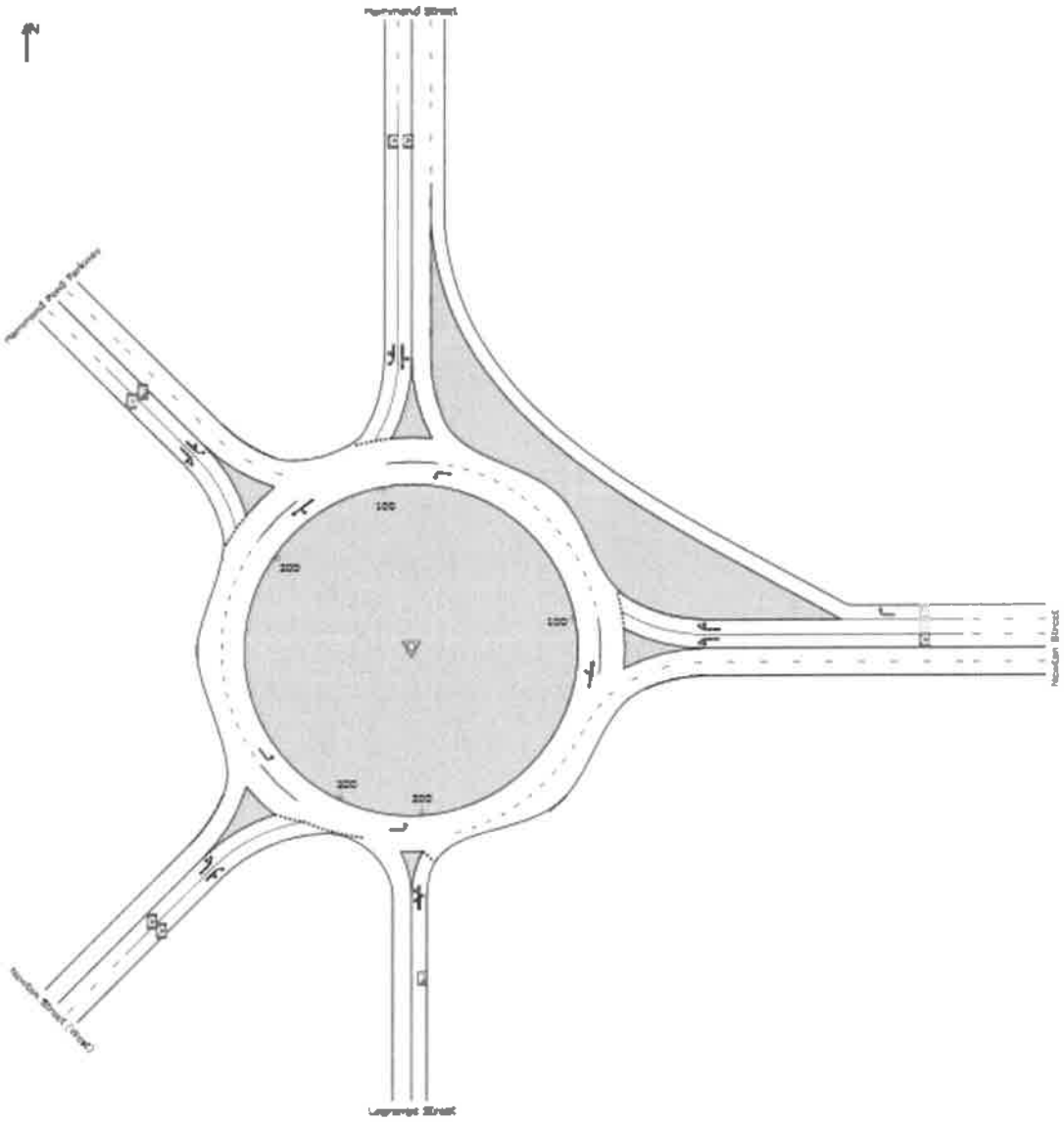
LEVEL OF SERVICE

Site: Build PM

New Site
Roundabout

All Movement Classes

	South	East	North	Northwest	Southwest	Intersection
LOS	F	B	C	F	C	F



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.