



**Hill International, Inc.**  
 75 Second Avenue, Suite 300  
 Needham, MA 02494  
 Tel: 617-778-0900  
 Fax: 617-778-0999  
 www.hillintl.com

December 8, 2021

Mr. Ray Masak, P.E.  
 Project Manager  
 Town of Brookline Building Department  
 333 Washington Street  
 Brookline, MA 02445

RE: Recommendation to approve NB Kenney Change Order 005

Dear Mr. Masak:

NB Kenney is submitting original copies of Change Order 005 for the Brookline High School Deferred Maintenance Project for acceptance by the Town of Brookline (ToB). Hill and WRA have previously reviewed, negotiated where applicable, and agree that all items listed in this Change Order are fair, reasonable for the described scope of work, and are compensable adjustments to the Lump Sum Contract. This change order is an additional cost funded from Owner' Hard Cost Contingency total **\$40,310.00**.

The PCO is categorized as follows:

- (3) PCOs result from Design Omission regarding the relocate UV-1 and disassemble of domestic hot water on skid and adding shimmer plates on boilers.
- (1) PCO results from unforeseen conditions to replace eight existing 4" butterfly valves.

An itemized summary is following:

PCO#	Description	Current Amount	Reason Code
7	Bulletin 5 Price to relocate UV-1 from the hallway to the weight/rowing room	\$23,566.00	Design Omission
8	Disassemble, truck and move and reassemble Domestic Hot Water Heater on Skid - RFI 12	\$7,730.00	Design Omission
10	Install 2" Thick Shim Plates under FLX Boilers as outlined in RFI-13	\$4,662.00	Design Omission
11	Replace eight (8) existing 4" Butterfly Valves	\$4,352.00	Unforeseen

Based on the above, Hill recommends to ToB approval of Change Order 005 to NB Kenney lump sum contract.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Andy Vo', with a stylized flourish at the end.

Andy Vo, PMP, CCM, LEED AP, MCPPO  
Sr. Project Manager



# AIA<sup>®</sup>

# Document G701<sup>™</sup> – 2017

## Change Order

**PROJECT: (name and address)**Brookline High School  
115 Greenough Street  
Brookline, MA 02445**OWNER: (name and address)**Town of Brookline - Represented by  
The Brookline Building Commission  
333 Washington Street  
Brookline, MA**CONTRACT INFORMATION:**Contract For: Deferred Maintenance  
Expansion Project**ARCHITECT: (name and address)**William Rawn Associates, Architects, Inc.  
10 Post Office Square  
Boston, MA 02109**CHANGE ORDER INFORMATION:**Change Order #: 5  
Date: November 29, 2021**CONTRACTOR: (name and address)**N.B. Kenney Company, Inc.  
68 Barnum Road  
Devens, MA 01434

The Contract is changed as follows:

*(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)*

NBK PCO # 007-R1 - Bulletin # 5 - Price to relocate UV-1 from the hallway to the weight/rowing room:	<b>\$23,566.00</b>
NBK PCO # 008 - Disassemble, truck, move and reassemble Domestic Water Heater Skid - RFI-12	<b>\$ 7,730.00</b>
NBK PCO # 010 - Install 2" Thick Shim Plates under FLX Boilers as outlined in RFI-13 Response:	<b>\$ 4,662.00</b>
NBK PCO # 011 - Replace eight (8) existing 4" Butterfly valves:	<b>\$ 4,352.00</b>

The original (Contract Sum) (Guaranteed Maximum Price) was	\$ <u>3,075,000.00</u>
The net change by previously authorized Change Orders	\$ <u>262,053.61</u>
The (Contract Sum) (Guaranteed Maximum Price) prior to this Change Order was	\$ <u>3,337,053.61</u>
The (Contract Sum) (Guaranteed Maximum Price) will be (increased) (decreased) (unchanged) by this Change Order in the amount of	\$ <u>40,310.00</u>
The new (Contract Sum) (Guaranteed Maximum Price), including this Change Order, will be	\$ <u>3,377,363.61</u>
The Contract Time will be <del>(increased)</del> <del>(decreased)</del> (unchanged) by	( 0 ) days.
The new date of Substantial Completion will be	Remains Unchanged

*NOTE: This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.*

**NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.**

\_\_\_\_\_  
WRA Architects, Inc.  
ARCHITECT (Firm name)

SIGNATURE

\_\_\_\_\_  
Andrew Jonic - Project Architect  
PRINTED NAME AND TITLE

DATE

12/8/21

\_\_\_\_\_  
N.B. Kenney Company, Inc.  
CONTRACTOR (Firm name)

SIGNATURE

\_\_\_\_\_  
Robert W. Dejadon - Vice President  
PRINTED NAME AND TITLE

DATE

11/29/2021

\_\_\_\_\_  
Town of Brookline  
OWNER (Firm name)

SIGNATURE

\_\_\_\_\_  
Raymond D. Masak - Project Manager  
PRINTED NAME AND TITLE

DATE

**CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.**



## Change Order Proposal Cost Summary

<b>Job Number:</b>	<b>020-025</b>	<b>Job Name:</b>	<b>Brookline High School - Deferred Maintenance</b>	
<b>Proposed Change Order Request No.:</b>	<b>PCO-007-R1</b>	115 Greenough Street, Brookline MA 02445		
<b>Description of Change:</b>	Costs associated with response to RFI #14 and Field Bulletin 005 dated 7/27/2021 which is to provide a price for the removal and replacement of the existing wall-mounted heat pump in Room 126 of the Main High School building. Price includes to ACC on pad, insulation and controls.			
<b>Exclusions:</b>				<b>MATERIALS &amp; EXPENSES</b>
<b>Labor - DESCRIPTION OF COSTS:</b>		<b>LABOR COSTS</b>		
		<b>HOURS</b>	<b>DIRECT</b>	<b>BURDEN</b>
				<b>TOTAL</b>
<b>Engineering</b>		3	\$96.13	\$15.80
<b>Pipefitter - Journeymen</b>	REGULAR RATE	30	\$96.13	\$15.80
<b>Pipefitter - Foreman</b>	REGULAR RATE	38	\$104.46	\$17.19
<b>Pipefitter - Supervisor</b>	REGULAR RATE	4	\$107.88	\$18.02
<b>Pipefitter - Supervisor</b>	Overtime @ 1.5			0.00
<b>Pipefitter - Journeymen</b>	Overtime @ 1.5			0.00
<b>Pipefitter - Foreman</b>				0.00
<b>Pipefitter - Supervisor</b>				0.00
<b>Trucking</b>				0.00
<b>LABOR TOTAL:</b>				\$8,819.99
				\$ -
Consumables			0.0%	0.00
Material Costs		See attached Detailed Spreadsheet		380.00
Equipment Costs		See attached Quote		0.00
		See attached Detailed Spreadsheet		0.00
<b>MATERIAL &amp; EQUIPMENT SUBTOTAL:</b>				<b>380.00</b>
<b>Sales Tax</b>		6.25% (if applicable)		
<b>TOTAL MATERIAL &amp; OTHER:</b>				380.00
<b>LABOR TOTAL:</b>				8,819.99
<b>TOTAL RAW COST:</b>				<b>9,199.99</b>
Metal On Sheet Metal fabrication and layout - see attached - less 8% Good Faith Discount				10,772.00
Brothers Electrical Cost - See attached				436.58
Viking Controls Cost - See attached				224.32
Viking Insulation Cost - See attached				167.73
Trucking				125.00
<b>Subcontractor Sub-Total</b>				<b>11,725.63</b>
<b>SUMMARY</b>				
		<b>N.B. Kenney Direct Costs - less 8% Good Faith Discount:</b>		8,464.00
		<b>NBK Overhead &amp; Profit on Direct Costs @ 15%</b>		1,269.60
		<b>Subcontractor Direct Costs</b>		11,725.63
		<b>Subcontractor O&amp;P on Direct Costs @ 10%</b>		1,172.56
		<b>NBK Overhead &amp; Profit on Subcontractors @ 5%</b>		586.28
<b>TOTAL COSTS</b>				<b>23,218.07</b>
Bond Costs at 1.5%:			1.5%	348.27
<b>Round off to nearest dollar</b>				<b>(0.35)</b>
<b>TOTAL PRICE FOR THIS CHANGE:</b>				<b>\$23,566.00</b>
This PCO labor is based on:		<b>YES</b>	<b>Straight Time</b>	<b>NO</b>
Schedule Impact due to Change is:		<b>0</b>	<b>Work Days</b>	<b>Overtime</b>

*This proposal is based on current market costs and conditions.*

*If the approval of this change is delayed to a point where changes occur in our costs and/or conditions, we reserve the right to cancel or modify this change order accordingly.*

**Revision # 1 - 11/16/2021**

**Submitted By:** Robert W. Dejadon

**Signature:** Robert W. Dejadon

**Date:** 11/1/2021



**Relocate UV-1 to Rowing & Weight Storage Room**

Hours	Description	Foreman Hours	Journeyman Hours
16	Disassemble UV-1 with Sheet Metal Composite crew and move in sections to Corridor C003, reassemble unit and lift into designated location..	8.0000	8.00
8	Installed the unit in cooridor as shown on attached photos. The unit could not be lifted high enough , the clearance was also impacted by the return air duct entering from the bottom of the unit.	4.0000	4.00
4	The unit was removed due to safety concerns with head room clearanmce	2.0000	2.00
8	The initial response to RFI was to move the unit West installing it in the Crew Room (Maintenance break room). Based on the response NBK investigated the proposed area and determined that the unit would not fit, there were too many obstruction preventing it from being installed and notified the Design Team and the unit was moved East to the Rowing Storage room. as shown on the SK issued with Bulletin 5.	8.0000	0.00
32	We then needed to remove the door jamb to the rowing room get the UV into position and install it in the air. Then all the connections needed to be re-routed to the new location and reinstall the door Jamb	16.0000	16.00
<b>TOTAL LABOR HOURS</b>		<b>38.0000</b>	<b>30.0000</b>
Miscellaneous heating and refigeration pipe and hangers required to reroute the existing pipe to the new location of the unit.			\$ 380.00



**N.B. KENNEY COMPANY, INC.**

**68 Barnum Road  
Devens, MA 01434**

978-849-5200

**MEMORANDUM**

TO: Andy Vo - Hill International  
FROM: Robert W. Dejadon  
DATE: 11/15/2021  
RE: Brookline High School Deferred Maintenance Project  
NBK PCO # 07 - Revisions to install UV-1

Following is our response to the review comments made regarding our PCO # 07. It is important to note that N.B. Kenney is a union shop signatory to Pipefitters Local 537; in addition, MetalOn is also a union company signatory to Local 17. Each of those unions have Collective Bargaining agreements that in part state that the work involve in placing any equipment that moves air through duct is done my a composite crew of fitters and sheet metal workers. Regardless, we have reduced our price by \$2,442.00 to \$23,566.00

<b>1</b>	<b>Comment:</b> Hours seem Excessive, between NBK and the Sheet Metal Sub they are submitting on 164 hours.
<b>1.A</b>	<b>Response:</b> Sheet Metal Hours which include shop fabrication time for new duct is 92 hours If you deduct the shop fabrication time of 10 hours the balance is 82 hours or 2 men 5 days. NBK's time excluding engineering for as built is 72 hours 2 men for 4.5 days. That makes the combined crew 4 men for one week .
<b>1.B</b>	The unit is approximately 11 feet long, 4 feet wide, 3 feet high and weighs 1,212 pounds. It contains a Heating Coil section and a DX Coil section, fan section, face & by-pass section with internal face & bypass dampers
<b>1.C</b>	Saying "4-man weeks" may sounds excessive however there was a lot of work done by 4 men in one week as outlined below.
<b>1.D</b>	Dismantle the unit into the following sections and weights: <b>Face &amp; Bypass Section</b> : 150 lbs, <b>Air Mixing Section:</b> 228 lbs, <b>Fan Section:</b> 571 lbs, <b>Heating Coil Section:</b> 144 lbs, and the <b>DX Coil Section:</b> 118 lbs
<b>1.E</b>	The elevators were not in service so ramps had to be buil on the stairs, the sections protected from damage and moved 1 piece at a time down the stairs to the lower level.
<b>1.F</b>	The unit was re-assembled and hoisted into position which resulted in NBK submitting the RFI.
<b>1.G</b>	The response to the RFI had the unit installed in the employee staff room on the opposite side of the hall; NBK & MetalOn spent time researching and determined that the unit would not fit and recommended it's current location to the owner and Design Team.
<b>1.H</b>	The door frame needed to be removed & reinstalled, the unit lowered down to the floor and then moved over to it's existing location and hung. Penetrations for the duct, hot water supply & return and refrigeration lines were made in existing CMU wall.
<b>2</b>	<b>Comment:</b> NBK Installed the unit without coordinating the installation.
<b>2.A</b>	<b>Response:</b> Coordination drawings are done in an attempt to reduce conflicts between different trades, the the subcontractors installing the duct work, piping, plumbing, electrical conduits & fire protection piping are coordinated on detailed MEP shop drawings so that the elevations and routing of one system does not interfere with that of another. This was not a coordination issue, we were to disconnect the existing unit and install the new unit in it's place.. The unit was the secified unit, it was not an alternate. The work is shown on contract drawing M2-01-F which clearly shows the existing unit being removed in Corridor 003 and the new unit being installed in the exact same location. It is incumbent on the designer to specify equipment that will physically "fit" in the designated area.
<b>2.B</b>	The attached photos of the old unit show how tight the area was; it appears thathe unit was installed and other work was done through the years working around the old unit. The lead times for the new equipment along with limited access required us to submit, receive approval and purchase the equipment quickly; coordination was a luxury we could not afford. We thought that we could possibly squeeze the unit into place by removing the bottom intake panel to the top of the unit however we could not get the new unit high enough to provide adequate head clearance and made a good faith effort to make it work. The amount of time spent putting the unit in the air to try and make it work was very minimal.
	This work has been completed and N.B. Kenney respectfully requests that this PCO be approved so we can all be compensated.

Respectfully Submitted,  
*Robert W. Dejadon*

Robert W. Dejadon  
Vice President

cc: PCO Project file



003  
00110000

FIRE

SKANSKA







325 NEW BOSTON STREET, UNIT 14  
 WOBURN, MA 01801  
 PH: 781-305-3467 FAX: 781-305-3544

N. B. Kenney Company, Inc.  
 68 Barnum Rd  
 Devens, Ma 01434

10-23-21

Attn: Bob Dejadon  
 Re: Brookline HS Relocate UV-1

CO-1

Bob,

Our cost to relocate UV-1 from the Hallway to the weight room is **\$12,958.16** Our cost breakdown is as follows:

• Composite crew with NBK to take unit apart and move into lower level:		
Foreman 4 hours at wage rate of \$120.01	\$	480.04
Journeyman 4 hours at wage rate of: \$113.59	\$	454.36
• Composite crew with NBK to reassemble unit once in position:		
Foreman 4 hours at wage rate of \$120.01	\$	480.04
Journeyman 4 hours at wage rate of: \$113.59	\$	454.36
• Work with NBK to hang unit and confirm heights and lack of clearance:		
Foreman 6 hours at wage rate of \$120.01	\$	720.06
• Work with NBK to move unit into weight storage area and hang in place:		
Foreman 12 hours at wage rate of \$120.01	\$	1,440.12
Journeyman 12 hours at wage rate of: \$113.59	\$	1,363.08
• Additional demolition to existing duct to make offset transitions:		
Foreman 2 hours at wage rate of \$120.01	\$	240.02
Journeyman 2 hours at wage rate of: \$113.59	\$	227.00
• Field Measure and make shop tickets for new duct:		
Foreman 4 hours at wage rate of \$120.01	\$	480.04
• Shop Labor to Fabricate new duct from tickets:		
Journeyman 10 hours at wage rate of: \$113.59	\$	1,135.90
• Labor to unload, move and install additional duct:		
Foreman 14 hours at wage rate of \$120.01	\$	1,680.14
Journeyman 14 hours at wage rate of: \$113.59	\$	1,590.26
• Material: Galvanized Metal	\$	963.00
<b>SUBTOTAL OF ABOVE:</b> <i>Reduced to \$10,772.00 per agreement on 11/15/21</i>	<del>\$11,700.60</del>	\$10,772.00
<b>OVERHEAD &amp; PROFIT @ 10%</b>	<del>\$ 1,170.86</del>	\$1,077.20
<b>SUB-TOTAL OF LABOR, MATERIAL OVERHEAD &amp; PROFIT:</b>	<del>\$12,879.46</del>	\$11,849.20
<b>TRUCKING:</b>	<del>\$ 175.00</del>	\$125.00
<b>GRAND TOTAL FOR THIS ADDITIONAL WORK:</b>	<del>\$13,054.46</del>	\$11,974.20

Please Call with any questions or concerns.

Regards  
 Robert Spengler



**SHEET METAL WORKERS' INTERNATIONAL ASSOCIATION LOCAL UNION NO. 17**  
of Eastern Massachusetts, Rhode Island, New Hampshire and Maine

1157 Adams Street • 2nd Floor • Dorchester, MA 02124-5788  
Telephone: (617) 296-1680-81 • Fax: (617) 296-1295  
WATTS: 1-800-426-6657

ROBERT BUTLER  
Business Manager

RUSSELL BARTASH  
Financial Secretary-Treasurer

**Business Agents**

MICHAEL BURNS  
JOHN GOODE  
RICHARD KEOGH  
ROBERT O'BRIEN  
MICHAEL SHEEHAN

**Labor Management Director**  
EDWARD J. MARENBURG

**Labor Management Representatives**  
JOHN CODY  
DONALD NAZAROFF

RHODE ISLAND LOCAL 17  
22 Amflex Drive  
Cranston, RI 02921  
Telephone: 1-401-944-3515  
Fax: 1-401-944-3591

NFW BEDFORD LOCAL 17  
558 Pleasant Street, Suite 310  
New Bedford, MA 02740  
Telephone: 1-508-999-0001  
Fax: 1-508-997-5609  
WATTS: 800-584-4598

NEW HAMPSHIRE LOCAL 17  
161 Londonderry Turnpike  
Hooksett, NH 03106  
Telephone: 1-603-626-5577  
Fax: 1-603-626-5559  
WATTS: 1-888-757-0086

MAINE LOCAL 17  
19 Enterprise Street  
Lewiston, ME 04240  
Telephone: 1-207-753-9377  
Fax: 1-207-753-9331

**EFFECTIVE – AUGUST 1, 2019**

**BOSTON COLLECTIVE BARGAINING AGREEMENT**  
**CONTRACT EXPIRES JULY 31, 2022**

By action of the membership at the June 4, 2019 Boston Union Meeting, one dollar and sixty cents (\$1.60), as of August 1, 2019, will be distributed as follows:

**JOURNEYMAN WAGE PACKAGE**

Wage	\$ 48.06*
National Pension	\$ 14.02
Local Supplemental Pension	\$ 3.29
ITI, NEMI, & SMOHI and Int.Scholarship	\$ 0.18
Local Insurance Fund	\$ 13.20
Local Training Fund	\$ 1.14
Local Industry Fund	\$ 0.53
Annuity Fund	\$ 6.81
Equality Fund	\$ 2.00
SASMI	\$ 2.56**

<b>Future Increases:</b>
2/1/20 - \$1.65
8/1/20 - \$1.60
2/1/21 - \$1.65
8/1/21 - \$1.75
2/1/22 - \$1.75

**TOTAL WAGE PACKAGE** **\$ 91.79**

\* Wage + \$1.56  
\*\* SASMI + \$0.04

**EFFECTIVE JANUARY 1, 2019**  
**IRS Standard Mileage Rate Increased**  
**Mileage Rate: \$0.58 per mile**

**Room and Board:**  
\$20.00 within jurisdiction of Agreement  
\$25.00 outside of jurisdiction of Agreement

**Working Dues Schedule**

	<u>JOURNEYMAN</u>	<u>APPRENTICE</u>
Building Fund	\$ 0.12	\$ 0.12
HAB Fund	\$ 0.06	\$ 0.06
Scholarship Fund	\$ 0.07***	\$ 0.07***
Entertainment Fund	\$ 0.09****	\$ 0.09****
Concerted Act/Comm Service	\$ 0.07	\$ 0.07
I.A. Dues	\$ 0.17	\$ 0.17
<u>Working Dues</u>	<u>\$ 1.99*****</u>	<u>\$ 0.85*****</u>
<b>TOTAL</b>	<b>\$ 2.57</b>	<b>\$ 1.43</b>
<b>PAL</b>	<b>\$ 0.08</b>	<b>\$ 0.08</b>
<b><u>TOTAL WITH PAL</u></b>	<b><u>\$ 2.65</u></b>	<b><u>\$ 1.51</u></b>

\*\*\* Scholarship + \$0.02                      \*\*\*\*\* Working Dues + \$0.03  
\*\*\*\* Entertainment + \$0.05

Fraternally, Russell Bartash - Financial Secretary-Treasurer

PROJECT NAME **Brookline High School - Deferred Maintenance Project**  
 CONTRACTOR **N.B. Kenney Company, Inc.**  
 SUBCONTRACTOR **Metal On - Sheet Metal**

PROJECT NO. **20-025**  
 CONTRACT NO. \_\_\_\_\_  
 DATE **10/29/2021**

### HOURLY LABOR RATE WORKSHEET

TRADE: **Journeyman Sheet Metal Worker - Local 17**

CLASSIFICATION: **Sheet Metal Worker**

Item	Rate	Prevailing Wage Rate			Notes
		Regular Time	Overtime	Double Time	
<b>(1) Base Labor Rate</b>	2/1/2020    8/1/2020    2/1/2021	\$ 52.96	\$ 79.44	\$ 105.92	Verify w/ Prevailing Union Wage Rate
	\$ 48.06    \$ 1.65    \$ 1.60    \$ 1.65				
<b>(2) Fringe Benefits</b>			-	-	Verify w/ Prevailing Union Wage Rate
a. Local Insurance Fund		\$ 13.20	\$ 13.20	\$ 13.20	
b. National Pension		\$ 14.02	\$ 14.02	\$ 14.02	
c. Annuity Fund		\$ 6.81	\$ 6.81	\$ 6.81	
d. Local Supplemental Pension		\$ 3.29	\$ 3.29	\$ 3.29	
e. Stabilization Agreement for the Sheet Metal Industry (SASMI)		\$ 2.56	\$ 2.56	\$ 2.56	
f. ITI, NEMI & SMOHI & International Scholarship		\$ 0.18	\$ 0.18	\$ 0.18	
g. Local Training Fund		\$ 1.14	\$ 1.14	\$ 1.14	
h. Equality Fund		\$ 2.00	\$ 2.00	\$ 2.00	
i. Local Industry Fund		\$ 0.53	\$ 0.53	\$ 0.53	
j. Travel - \$15.00 per day / 8 hours		\$ 1.88	\$ 1.88	\$ 1.88	
			-	-	
<b>(2). Fringe Benefits Subtotal</b>		\$ 45.61	\$ 45.61	\$ 45.61	
<b>(1 + 2) Total DIRECT LABOR Hourly Rate</b>		\$ 98.57	\$ 108.73	\$ 133.82	Base Labor Rate (1) + Fringe Benefits (2)
<b>(3). Burden: Taxes &amp; Insurance</b>					
a. FICA - Social Security	6.20%	\$ 3.28	\$ 4.93	\$ 6.57	Fixed Federal Rate
b. FICA - Medicare	1.45%	\$ 0.77	\$ 1.15	\$ 1.54	Fixed Federal Rate
c. FUTA - Federal Unemployment	0.60%	\$ 0.32	\$ 0.48	\$ 0.64	Fixed Federal Rate
d. UI - MA State Unemployment Insurance	11.13%	\$ 5.89	\$ 8.84	\$ 11.79	Contractor provide rate.
e. EMAC - MA Unemployment Health Insurance	0.48%	\$ 0.25	\$ 0.38	\$ 0.51	Fixed State Rate
f. MA Workforce Training Fund	0.056%	\$ 0.03	\$ 0.04	\$ 0.06	Fixed State Rate
g. Workers Compensation	6.53%	\$ 3.46	\$ 5.19	\$ 6.92	Contractor provide rate
h. Sick Time - MGL	1.92%	\$ 1.02	\$ 1.53	\$ 2.03	
i. General Liability - Not allowed	0.00%	\$ -	\$ -	\$ -	
j. Umbrella - Not Allowed	0.00%	\$ -	\$ -	\$ -	
k. Auto - Not allowed	0.00%	\$ -	\$ -	\$ -	
<b>(3). Burden Subtotal</b>		\$ 28.37	\$ 15.02	\$ 22.53	\$ 30.05
Small Tools	1.50%				Supplemental cost
Other (payment bonds, performance bonds, etc.)	2.00%	N/A	N/A	N/A	
<b>TOTAL HOURLY RATE (Total DIRECT Labor Hourly Rate + Burden)</b>		\$ 113.59	\$ 129.79	\$ 166.97	=(1) + (2) +(3)

Rates certified by:	<u>Robert Spengler</u> <small>(print name)</small>	Company Name:	Metal On
Signature:	<i>Robert Spengler</i>		

PROJECT NAME Brookline High School - Deferred Maintenance  
 CONTRACTOR N.B. Kenney Company, Inc.  
 SUBCONTRACTOR Metal On - Sheet Metal

PROJECT NO. 20-025  
 CONTRACT NO. \_\_\_\_\_  
 DATE 10/29/2021

**HOURLY LABOR RATE WORKSHEET**

TRADE: Journeyman Sheet Metal Worker - Local 17

CLASSIFICATION: Sheet Metal Worker - Foreman

Item	Rate	Prevailing Wage Rate			Notes
		Regular Time	Overtime	Double Time	
<b>(1) Base Labor Rate</b>		<b>\$ 57.96</b>	<b>\$ 79.79</b>	<b>\$ 106.38</b>	Verify with Prevailing Wage Rate or Contract
<b>(2) Fringe Benefits</b>			-	-	Verify with Prevailing Wage Rate or Contract
a. Local Insurance Fund	\$	13.20	\$ 13.20	\$ 13.20	
b. National Pension	\$	14.02	\$ 14.02	\$ 14.02	
c. Annuity Fund	\$	6.81	\$ 6.81	\$ 6.81	
d. Local Supplemental Pension	\$	3.29	\$ 3.29	\$ 3.29	
e. Stabilization Agreement for the Sheet Metal Industry (SASMI)	\$	2.56	\$ 2.56	\$ 2.56	
f. ITI, NEMI & SMOHI & International Scholarship	\$	0.18	\$ 0.18	\$ 0.18	
g. Local Training Fund	\$	1.14	\$ 1.14	\$ 1.14	
h. Equality Fund	\$	2.00	\$ 2.00	\$ 2.00	
i. Local Industry Fund	\$	0.53	\$ 0.53	\$ 0.53	
j. Travel - \$15.00 per day / 8 hours	\$	1.88	\$ 1.88	\$ 1.88	
k.			-	-	
<b>(2). Fringe Benefits Subtotal</b>		<b>\$ 45.61</b>	<b>\$ 45.61</b>	<b>\$ 45.61</b>	
<b>(1 + 2) Total DIRECT LABOR Hourly Rate</b>		<b>\$ 103.57</b>	<b>\$ 125.39</b>	<b>\$ 151.99</b>	<i>Base Labor Rate (1) + Fringe Benefits (2)</i>
<b>(3). Burden: Taxes &amp; Insurance</b>					
a. FICA - Social Security	6.20%	\$ 3.59	\$ 4.95	\$ 6.60	Fixed Federal Rate
b. FICA - Medicare	1.45%	\$ 0.84	\$ 1.16	\$ 1.54	Fixed Federal Rate
c. FUTA - Federal Unemployment	0.60%	\$ 0.35	\$ 0.48	\$ 0.64	Fixed Federal Rate
d. UI - MA State Unemployment Insurance	11.13%	\$ 6.45	\$ 8.88	\$ 11.84	Contractor provide rate.
e. EMAC - MA Unemployment Health Insurance	0.48%	\$ 0.28	\$ 0.38	\$ 0.51	Fixed State Rate
f. MA Workforce Training Fund	0.056%	\$ 0.03	\$ 0.04	\$ 0.06	Fixed State Rate
g. Workers Compensation	6.53%	\$ 3.78	\$ 5.21	\$ 6.95	Contractor provide rate
h. Sick Time - MGL	1.92%	\$ 1.11	\$ 1.53	\$ 2.04	
i. General Liability - Not allowed	0.00%	\$ -	\$ -	\$ -	
j. Umbrella - Not Allowed	0.00%	\$ -	\$ -	\$ -	
k. Auto - Not allowed	0.00%	\$ -	\$ -	\$ -	
<b>(3). Burden Subtotal</b>		<b>\$ 16.44</b>	<b>\$ 22.63</b>	<b>\$ 30.18</b>	
Small Tools	1.50%	\$ -	\$ -	\$ -	Supplemental cost
Other (payment bonds, performance bonds, etc.)	2.00%	N/A	N/A	N/A	
<b>TOTAL HOURLY RATE (Total DIRECT Labor Hourly Rate + Burden)</b>		<b>\$ 120.01</b>	<b>\$ 148.02</b>	<b>\$ 182.16</b>	<i>=(1) + (2) +(3)</i>

Rates certified by: Robert Spengler Company Name: Metal On  
 (print name)  
 Signature: Robert Spengler

## BROTHERS ELECTRICAL CORPORATION

October 26, 2021

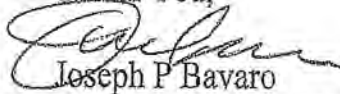
RE: Brookline High School - Deferred Maintenance - Bulletin # 5

Mr. Dejadon,

Pursuant to your request the price to extend the wiring to UV-1 in the Main Building is \$436.58 plus O&P of \$43.66 at 10% for a total price of \$480.24

Please contact me with any questions.

Thank You,



Joseph P Bavaro

Senior Estimator, PM, EE.

October 20, 2021

TO: Robert Dejadon  
N.B. Kenney Company, Inc.  
68 Barnum Road,  
Devens MA 01434

RE: Bulletin # 5 - Relocate UV-1 in Main Building

Mr. Dejadon,

As you requested, our price for changes in relocating UV-1 at the High School Main Building is \$224.32 plus overhead and profit as allowed at 10% in the amount of \$22.43 for a total of: \$246.75.

Please contact us with any questions or concerns.

Regards  
Karl Maseng  
Viking Controls

If enclosures are not as noted, kindly notify us at once.

VISIT US AT: [www.vikingcontrols.com](http://www.vikingcontrols.com)

**Proposal- REVISED**  
**VIKING INDUSTRIES, INC.**  
 Commercial - Industrial Insulation  
 P. O. Box 32  
 BARRINGTON, RHODE ISLAND 02806  
 (401) 246-1855  
 (401) 246-1366 FAX

Proposal submitted to: N.B. Kenney Company		Phone	Date 10/22/2021
Street		Job Name	
City, State And Zip Code			
Attention: Bob Dejadon	Date of Plans		Job Phone

We hereby submit specifications and estimates for:

We are pleased to submit a price for the additional work required to locate UV-1 to the weight room in the amount of \$184.50 which includes \$16.77 for O&P as allowed at 10%.

**NOTE: This quote is based on material pricing at time of quote and availability when required. For more information please call. Thank You.**

We propose here by to furnish material and labor - complete in accordance with above specifications, for the sum of **One-Hundred & Eighty Four dollars and fifty cents**

Payment to be made as follows:

**THIRTY DAYS AFTER BILLING DATE**

All Material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration of deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado, and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance.

We do not guarantee against mold growing.

Viking Industries, Inc.  
 Authorized Signature Douglas N. Carlson  
 Douglas N. Carlson, CEO

Note: This proposal may be withdrawn by us if not accepted with Seven (7) Days

Bid subject to reasonable terms and conditions pursuant to a written contract between the parties.

If this quote is used by a Contractor or Subcontractor as part of their quote to win a job, Viking Industries Inc. must be Notified (in writing) of the award within **One Working Day** so Viking can have time to review the quote and Approve or Withdraw it.

Acceptance of Proposal -The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do work as specified. Payment will be made as outlined above

Date of Acceptance: \_\_\_\_\_

Signature \_\_\_\_\_  
 Signature \_\_\_\_\_



**N.B. Kenney Company, Inc.**

68 Barnum Road  
Devens, MA 01434  
Tel: 978-849-5200

**Request for Information**

RFI Number: 14- R1  
Date: 08/15/2021  
Page 1

**To:**  
Hill International  
75 Second Ave  
Needham, MA 0249  
Attn: Andy Vo

**Job:** 20025 - Brookline HS Deferred  
**Title:** Clearance with UV-1 in Main Building

<b>Requested By:</b> Robert W. Dejadon	<b>Phone:</b> (978) 849-5200	<b>E-mail:</b> rdejadon@nbkenney.com
---	---------------------------------	---

**Question(s):**

We are hereby submitting the following questions for your response. These issues have potential time and cost impacts. Reference is made to drawing M2-01-F that shows a new UV-1 in the basement level of the High School Main Building in Corridor C003 and drawing M5-01-F Mechanical Schedule. The schedule calls out for the new unit to be a Trane CSAA006 Performance Climate Changer; this unit was submitted, approved, and installed. As you can see from the attached four (4) photo's the new unit is considerably larger than the old unit being replaced. Currently, the bottom of the unit provides head clearance of 6'-4", in addition the access doors are somewhat restricted in their opening. The airflow configuration for this unit is per the attached sketch, the outside air connects to the back end of the unit and the return air connects to the bottom of the unit. When the return duct is connected there will be approximately 5' of head clearance which we believe presents a safety issue as anyone over 5 feet tall could hit their head causing bodily harm. The outside air and return air connect to the unit's mixing box, there is a possibility that the parallel blade damper could be removed and relocated to the top of the mixing box leaving a head clearance of 6'4" and while not ideal is certainly better than 5 feet. Please review and advise on how we are to proceed.

**Remarks/Suggestions:**

**Answer(s):**

*(For your convenience, you can "Reply" to the email with your response.)*

**Please respond by: 08/17/2021**

**Requested By:** *Robert W. Dejadon*

Robert W. Dejadon  
N.B. Kenney Company, Inc.

Andy Vo  
Hill International



**Response:**

The simplest solution to this issue would be to shift the unit west into the "Crew Room". This would allow for the access to the unit to remain on the side of the unit as delivered. We believe this space has a depressed slab so this would alleviate the head height issue and allow the return duct to be connected to the bottom of the unit. The ductwork, power, piping and controls connections would need to be extended to the new unit location. This relocation must be coordinated and confirmed by the Town. If approved by the Town a field bulletin will follow.

RFS Response by: Harris Zeidman / Eric Bernow

RFS Engineering, P.C.

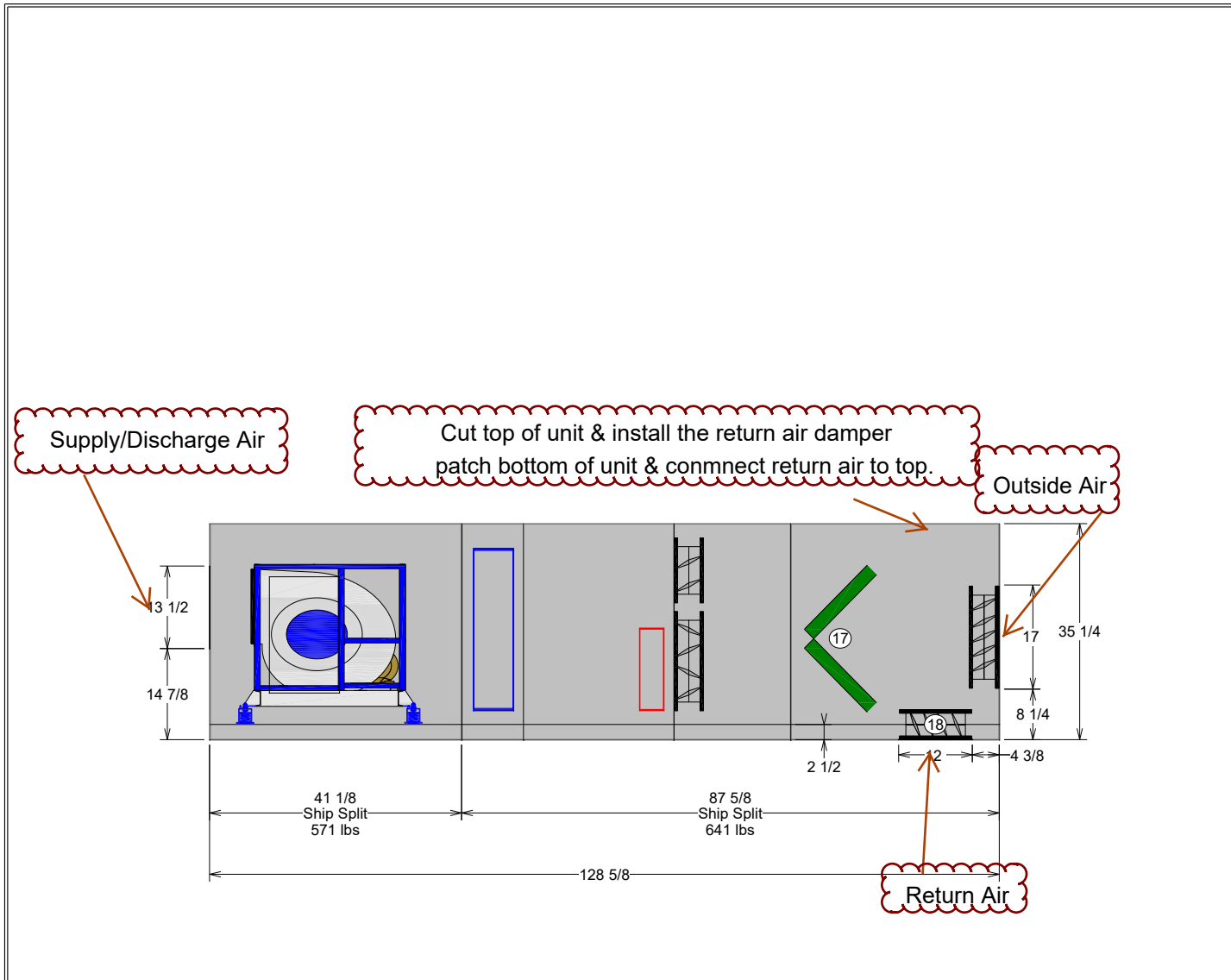
Date: 08/16/2021

**WRA response:**

See RFS response above. Prior to any re-installation, NB Kenney is to verify the dimensions of the room to the west of the current UV-1 location. The design team will provide direction once the potential head height and access clearances are known.

Mark Borreliz, AIA WRA 2021-08-16

- 1 1" N.P.T.E
- 2 1.25" (NPTE) Supply
- 3 1.25" (NPTE) Return
- 4 1.625" Suction Con.
- 5 1.125" Liquid Dist.
- 6 1.25" (NPTE) Supply
- 7 1.25" (NPTE) Return
- 8 1.625" Suction Con.
- 9 1.125" Liquid Dist.
- 10 FTTP discharge opening  
13.500 x 15.630
- 11 External fan starter LH
- 12 Housed fan - 12in.  
diameter AF, H press  
Supply fan 1.5 hp 460/3
- 13 Cooling coil - 4 Coil type  
UF
- 14 Heating coil - 1 Coil type  
5W
- 15 Face and bypass damper front  
28.750 x 40.000
- 16 Damper back-parallel  
blade  
17.000 x 28.250
- 17 Angled filters -
- 18 Damper bottom-parallel  
blade  
12.000 x 23.500
  
- Doors  
17 width x 29 height  
29 width x 29 height



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length shown.

*OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE*

Unit size: 6	Job Name:	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 2300 cfm	
Integral base frame: 2.5in. integral base frame		
Paint: Unpainted/field painted		Rigging/Installed Weight: 1207.0 lb/ 1212.3 lb









WILLIAM RAWN ASSOCIATES  
Architects, Inc.  
10 Post Office Square, Suite 1010  
Boston, MA 02109 617.423.3470

**PROJECT F – DEFERRED MAINTENANCE**

**Field Bulletin 005**

**UV-1 Relocation**

**Date:** 08/24/2021

**To:** NB Kenney Company Inc  
68 Barnum Rd  
Devens, MA 01434  
**Attn:** Robert Dejadon

**Project:** Brookline High School Expansion Project  
Project F  
Brookline, MA 02445  
**WRA Project #:** 21706

<b>CC:</b>	<b>X</b>	<b>Owner</b>	<b>X</b>	<b>Field</b>
	<b>X</b>	<b>Hill International</b>	<b>X</b>	<b>Other: Consultants</b>
	<b>X</b>	<b>Contractor</b>		

The Contractor shall proceed as directed by the appropriate action indicated below:

**ARCHITECT’S SUPPLEMENTAL INFORMATION [ASI]**

*The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract documents without change in Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time.*

**WORK CHANGE PROPOSAL REQUEST [PR]**

*Please submit an itemized proposal for changes in the Contract Sum and Contract Time for proposed modifications to the Contract Documents described herein. Submit proposal within (14) fourteen days, or notify the Architect in writing of the date on which you anticipate submitting your proposal. This is not a Change Order, a Construction Change Directive or a direction to proceed with the Work described in the proposed modifications.*

**CONSTRUCTION CHANGE DIRECTIVE [CCD]**

*You are hereby directed to make the change(s) in the Contract identified in accordance with the Description and Attachments listed below. Submit an itemized estimate for changes in the Contract Sum and Contract Time for proposed modifications to the Contract Documents described herein. Submit estimate within (14) fourteen days, or notify the Architect in writing of the date on which you anticipate submitting your estimate. Changes to Contract Time and Contract Sum shall be reviewed by the Owner for approval.*

**DESCRIPTION**

- Relocate UV-1 from the corridor into the adjacent room as shown.
- Remove the existing supply air smoke detector and reinstall in the new supply duct.
- Provide a new smoke detector in the return duct.

**ATTACHMENTS**

M2-01-F - Main Building Part Plans  
M6-03-F – Mechanical Controls  
E2-01-F - Main Building Basement Part Plans

*When authorized by the Owner and received by the Contractor, this document becomes effective immediately as a Construction Change Directive (CCD) and the Contractor shall incorporate into the work.*

William Rawn Associates, Architects, Inc.  
10 Post Office Square, Suite 1010, Boston, MA 02109

Town of Brookline (or Hill International, on behalf of Town of Brookline)  
Brookline, Massachusetts 02445



C Aubin 2021-08-24

Project Manager Date

Project Manager Date



WRA PROJECT # 21706

# TOWN OF BROOKLINE BROOKLINE HIGH SCHOOL EXPANSION BROOKLINE, MA 02445

## PROJECT F: DEFERRED MAINTENANCE

**ARCHITECT**  
William Rawm Associates, Architects, Inc. (617) 423-3470  
10 Post Office Square, Suite 1010  
Boston, Massachusetts 02109

**MEP, FP, IT, SECURITY ENGINEER**  
Risi-Frost-Shumway Engineering, P.C. (603) 524-4647  
71 Water Street  
Laconia, NH 03246

**CIVIL ENGINEER**  
Nitsch Engineering, Inc. (617) 338-0063  
2 Center Plaza, Suite 430  
Boston, MA 02108-1528

**CODE CONSULTING**  
Hastings Consulting (508) 397-8417  
142 Hanlon Road  
Holliston, MA 01746

**COST ESTIMATOR**  
PM&C Cost Estimating (781) 740-807  
20 Downer Ave Suite 1C,  
Hingham, MA 02043

**SPECIFICATIONS**  
Kalin Associates (617) 964-5477  
1121 Washington St.  
West Newton, MA 02465

**HAZMAT/ABATEMENT**  
Universal Environmental Consultants (508) 628-5466  
12 Brewster Rd.,  
Frammingham, MA

### CONSTRUCTION DOCUMENT SET

REVISIONS:		
REV. NO.	DATE	REVISION
A	09/18/2020	CD SET - ADDENDUM 1
B	12/11/2020	PERMIT SET
C	08/23/2021	BULLETN 005 - UV-T RELOCATION

KEY PLAN:

DRAWING TITLE:

### MAIN BUILDING PART PLANS

DRAWN BY: CAB

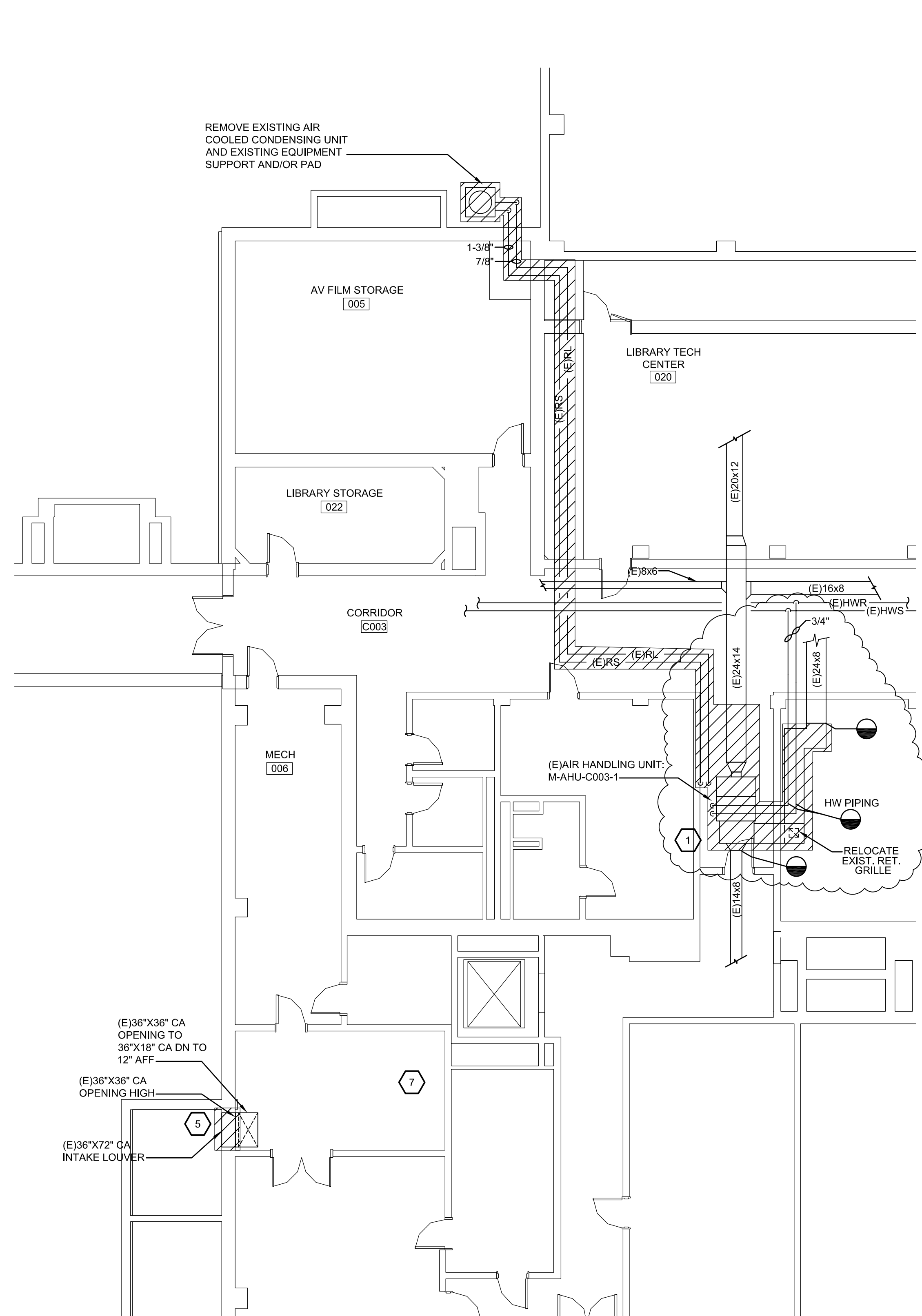
CHECKED BY: RDS

SCALE: AS NOTED

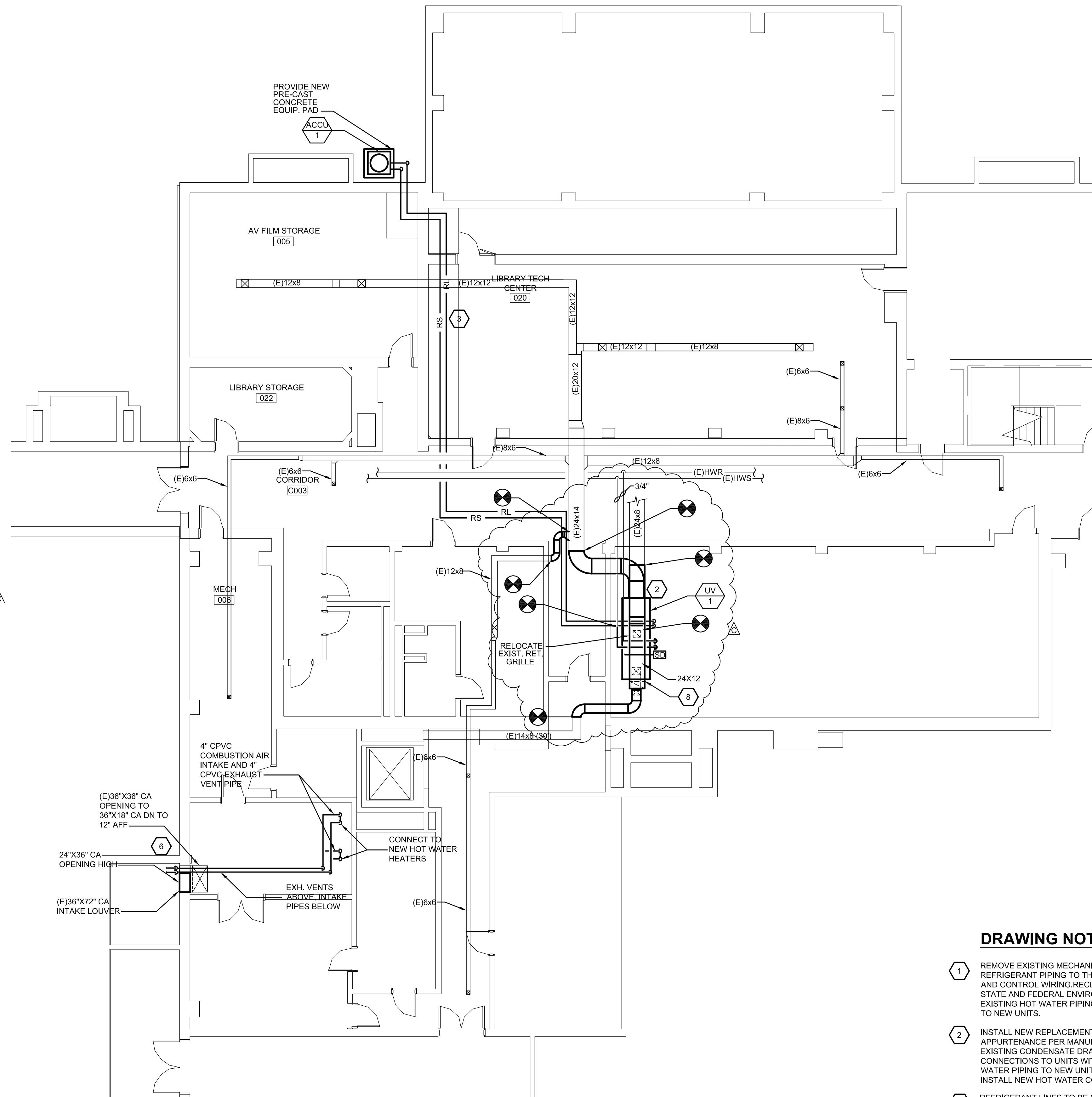
DATE: 08/28/2020

DRAWING NUMBER:

# M2-01-F



**1** BASEMENT MECHANICAL DEMOLITION PART PLAN  
SCALE: 1/8" = 1'-0"



**2** BASEMENT MECHANICAL NEW WORK PART PLAN  
SCALE: 1/8" = 1'-0"

### DRAWING NOTES:

- 1 REMOVE EXISTING MECHANICAL EQUIPMENT AND ASSOCIATED REFRIGERANT PIPING TO THE LIMITS SHOWN. DISCONNECT DUCTWORK AND CONTROL WIRING. RECLAIM REFRIGERANT IN ACCORDANCE WITH STATE AND FEDERAL ENVIRONMENTAL REGULATIONS. DISCONNECT EXISTING HOT WATER PIPING, PROVIDE TEMPORARY CAP FOR CONNECTION TO NEW UNITS.
- 2 INSTALL NEW REPLACEMENT UNIT, REFRIGERANT LINES AND APPURTENANCE PER MANUFACTURER RECOMMENDATION. RE-CONNECT EXISTING CONDENSATE DRAIN LINE. PROVIDE NEW DUCTWORK CONNECTIONS TO UNITS WITH FLEXIBLE CONNECTIONS. RE-CONNECT HOT WATER PIPING TO NEW UNITS RE-USE EXISTING PIPING COMPONENTS. INSTALL NEW HOT WATER CONTROL VALVE.
- 3 REFRIGERANT LINES TO BE SIZED BASED ON THE MANUFACTURERS RECOMMENDATION.
- 4 GENERAL NOTE. COORDINATE WITH GENERAL CONTRACTOR AND PROVIDE SEALING OF ALL EXTERIOR WALL, FLOOR AND ROOF PENETRATIONS IN ACCORDANCE WITH ARCHITECTURAL AND STRUCTURAL REQUIREMENTS.
- 5 REMOVE EXISTING 36"X36" COMBUSTION AIR DUCT CONNECTION HIGH.
- 6 EXTEND ALL PIPES THROUGH EXISTING LOUVER. TERMINATE INTAKE PIPES WITH MANUFACTURER APPROVED TERMINATION. TURN EXHAUST VENTS UP A MINIMUM OF 36" ABOVE THE INTAKE PIPES AND TERMINATE WITH MANUFACTURER APPROVED TERMINATION. PROVIDE TERMINATION PLATES AT LOUVER PENETRATION. BLANK OFF AND INSULATE OPEN LOUVER AT PIPING PENETRATIONS.
- 7 REMOVE TWO 14" DIAMETER ATMOSPHERIC VENT PIPES FROM EXISTING WATER HEATERS TO MAIN VENT CONNECTION AN CAP.
- 8 CONNECT EXISTING O.A. DUCT TO UNIT BOTTOM CONNECTION. CONNECT EXISTING RETURN DUCT TO UNIT BACK CONNECTION.

© 2013 WILLIAM RAWM ASSOCIATES, ARCHITECTS, INC.





WRA PROJECT # 21706

**TOWN OF BROOKLINE**  
**BROOKLINE HIGH SCHOOL**  
**EXPANSION**  
 BROOKLINE, MA 02445

**PROJECT F:**  
**DEFERRED MAINTENANCE**

**ARCHITECT**  
 William Rawm Associates, Architects, INC. (617) 423-3470  
 10 Post Office Square, Suite 1010  
 Boston, Massachusetts 02109

**MEP, FP, IT, SECURITY ENGINEER**  
 Riso-Frost-Shumway Engineering, P.C. (603) 524-4647  
 71 Water Street  
 Laconia, NH 03246

**CIVIL ENGINEER**  
 Nitsch Engineering, Inc. (617) 338-0063  
 2 Center Plaza, Suite 430  
 Boston, MA 02108-1528

**CODE CONSULTING**  
 Hastings Consulting (508) 397-8417  
 142 Hanlon Road  
 Holliston, MA 01746

**COST ESTIMATOR**  
 PM&C Cost Estimating (781) 740-807  
 20 Downer Ave Suite 1C,  
 Hingham, MA 02043

**SPECIFICATIONS**  
 Kalin Associates (617) 964-5477  
 1121 Washington St.  
 West Newton, MA 02465

**HAZMAT/ABATEMENT**  
 Universal Environmental Consultants (508) 628-5486  
 12 Brewster Rd.  
 Framingham, MA

**CONSTRUCTION**  
**DOCUMENT SET**

REV. NO.	DATE	REVISION
A	12/11/2020	PERMIT SET
B	08/23/2021	BULLETIN 005 - UV-1 RELOCATION

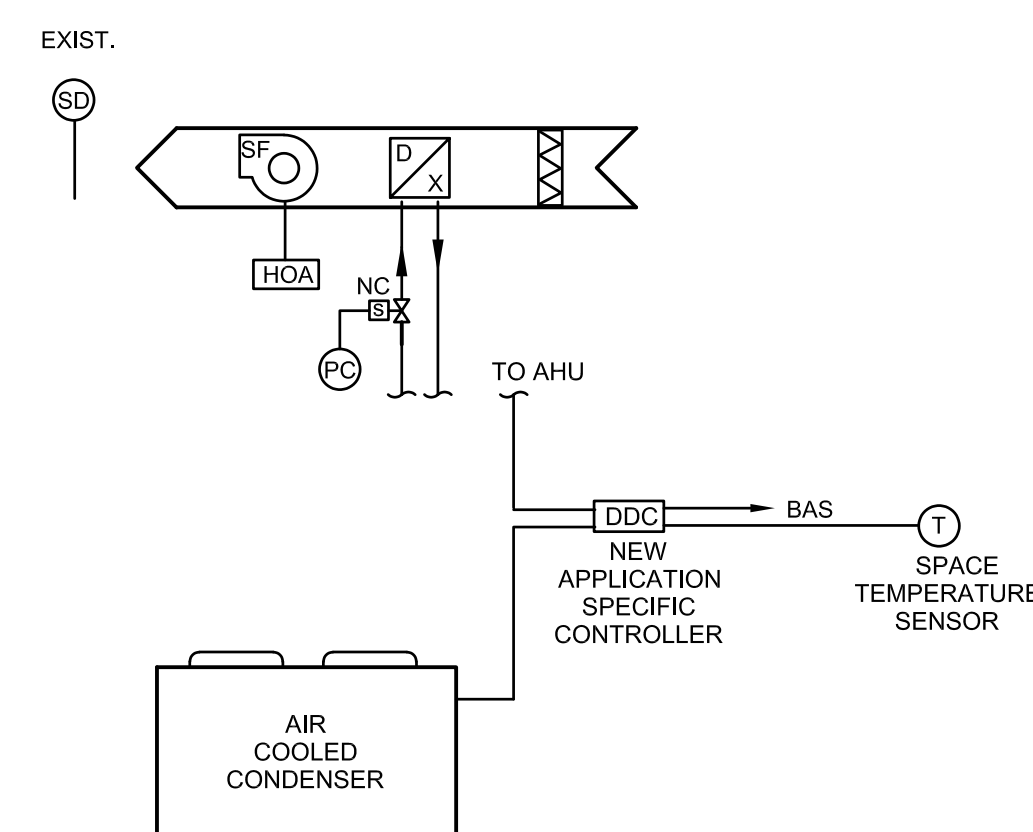
KEY PLAN:

DRAWING TITLE:  
**MECHANICAL CONTROLS**

DRAWN BY: CAB
CHECKED BY: RDS
SCALE: NO SCALE
DATE: 08/28/2020

DRAWING NUMBER:

**M6-03-F**



**SEQUENCE OF OPERATION**

**GENERAL:**

- TEMPERATURE CONTROL SHALL BE PROVIDED BY THE ATC CONTRACTOR.
- REFER TO FLOOR PLANS FOR DEVICE LOCATIONS.
- ALL INTERCONNECTING WIRING SHALL BE PROVIDED BY THE ATC CONTRACTOR.
- ATC CONTRACTOR SHALL PROVIDE CONTROL SEQUENCES FOR EQUIPMENT BEING REPLACED TO MATCH EXISTING EQUIPMENT CONTROL SEQUENCES.

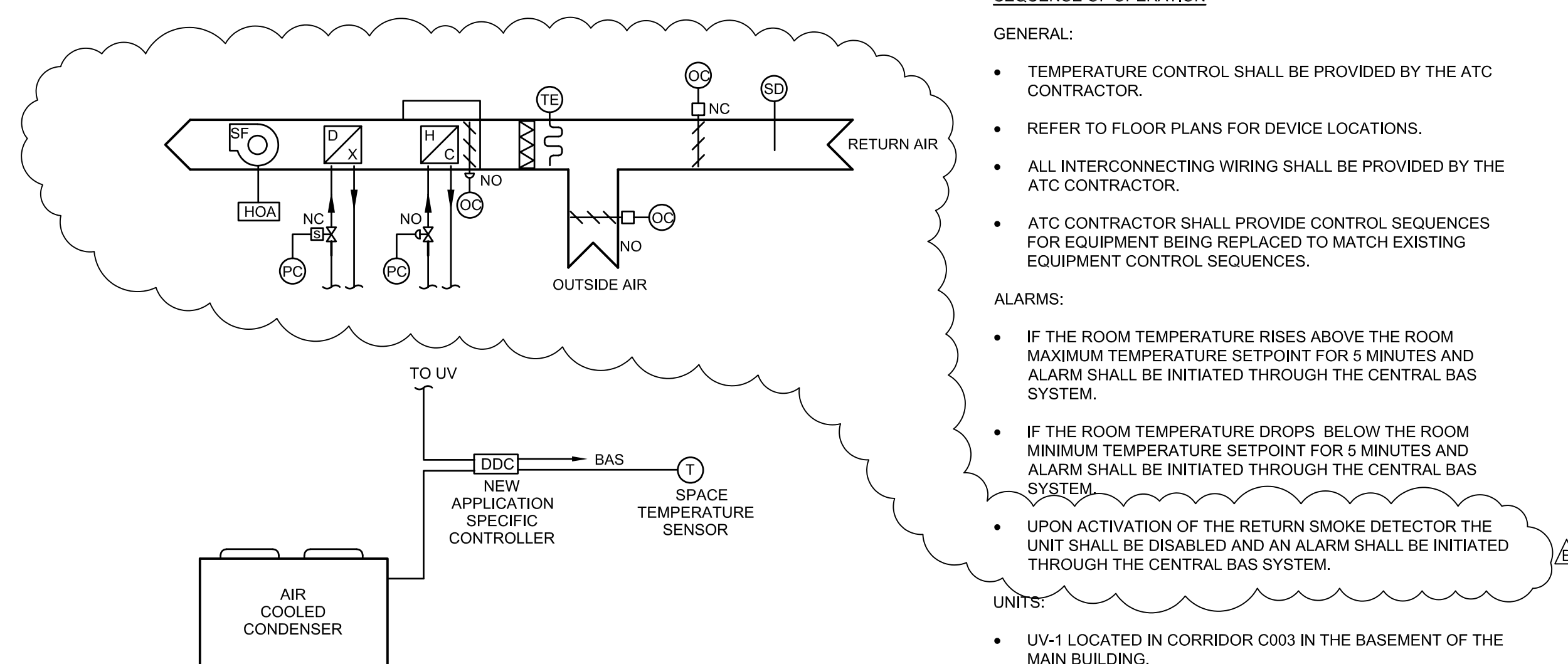
**ALARMS:**

- IF THE ROOM TEMPERATURE RISES ABOVE THE ROOM MAXIMUM TEMPERATURE SETPOINT FOR 5 MINUTES AND ALARM SHALL BE INITIATED THROUGH THE CENTRAL BAS SYSTEM.
- IF THE ROOM TEMPERATURE DROPS BELOW THE ROOM MINIMUM TEMPERATURE SETPOINT FOR 5 MINUTES AND ALARM SHALL BE INITIATED THROUGH THE CENTRAL BAS SYSTEM.

**UNITS:**

- AHU-1 LOCATED IN OFFICE 23 IN THE UNIFIED ARTS BUILDING.
- AHU-2 LOCATED IN ROOM 31A IN THE UNIFIED ARTS BUILDING.
- AHU-3 LOCATED IN ROOM 31 IN THE UNIFIED ARTS BUILDING.
- AHU-4 LOCATED IN ROOM 38 IN THE UNIFIED ARTS BUILDING.

**UAB AHU- 2, 3, 4 EXISTING**  
**SEQUENCE OF OPERATION**



**SEQUENCE OF OPERATION**

**GENERAL:**

- TEMPERATURE CONTROL SHALL BE PROVIDED BY THE ATC CONTRACTOR.
- REFER TO FLOOR PLANS FOR DEVICE LOCATIONS.
- ALL INTERCONNECTING WIRING SHALL BE PROVIDED BY THE ATC CONTRACTOR.
- ATC CONTRACTOR SHALL PROVIDE CONTROL SEQUENCES FOR EQUIPMENT BEING REPLACED TO MATCH EXISTING EQUIPMENT CONTROL SEQUENCES.

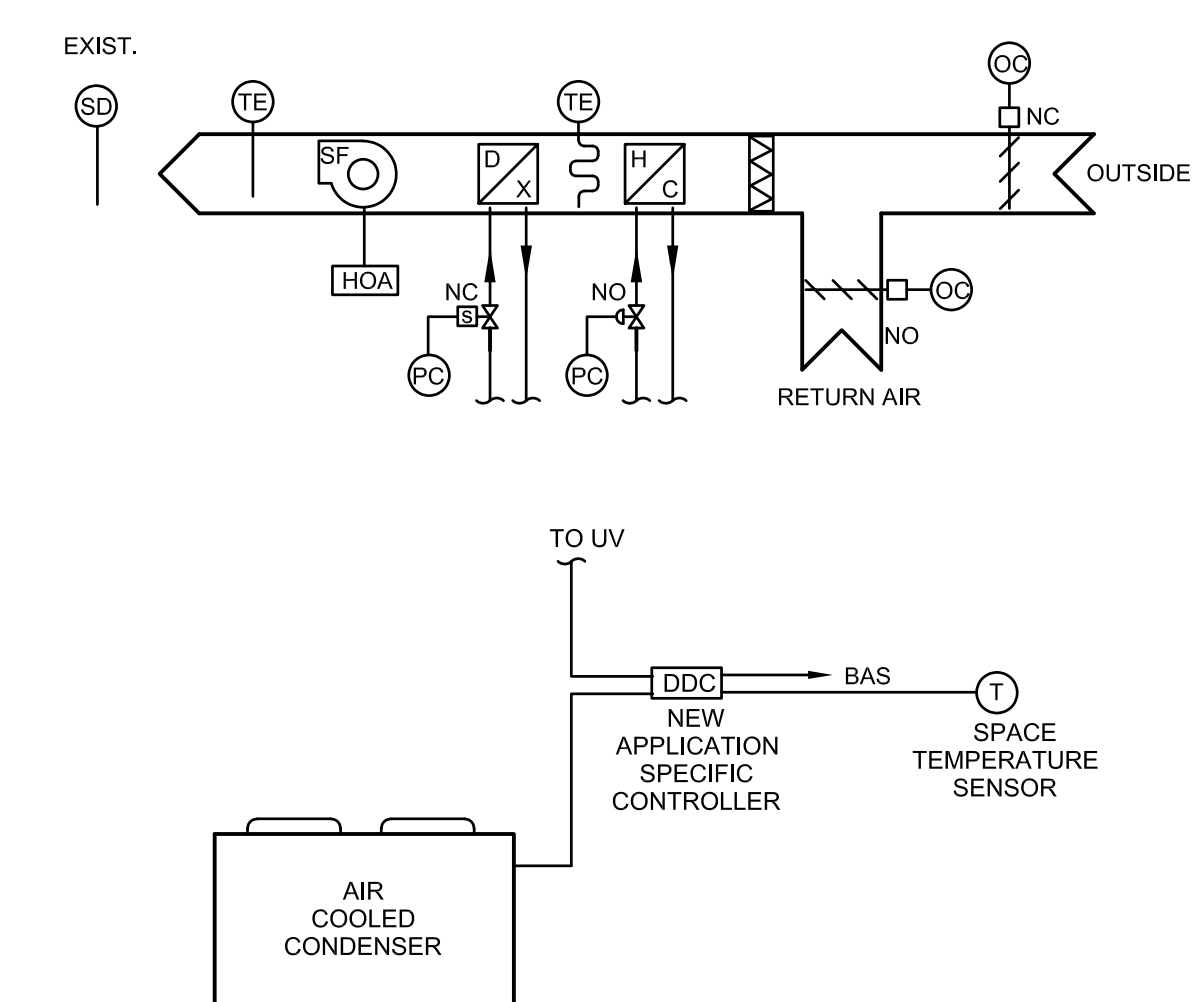
**ALARMS:**

- IF THE ROOM TEMPERATURE RISES ABOVE THE ROOM MAXIMUM TEMPERATURE SETPOINT FOR 5 MINUTES AND ALARM SHALL BE INITIATED THROUGH THE CENTRAL BAS SYSTEM.
- IF THE ROOM TEMPERATURE DROPS BELOW THE ROOM MINIMUM TEMPERATURE SETPOINT FOR 5 MINUTES AND ALARM SHALL BE INITIATED THROUGH THE CENTRAL BAS SYSTEM.
- UPON ACTIVATION OF THE RETURN SMOKE DETECTOR THE UNIT SHALL BE DISABLED AND AN ALARM SHALL BE INITIATED THROUGH THE CENTRAL BAS SYSTEM.

**UNITS:**

- UV-1 LOCATED IN CORRIDOR C003 IN THE BASEMENT OF THE MAIN BUILDING.

**UNIT VENTILATOR UV-1**  
**CONTROL INTEGRATION**



**SEQUENCE OF OPERATION**

**GENERAL:**

- TEMPERATURE CONTROL SHALL BE PROVIDED BY THE ATC CONTRACTOR.
- REFER TO FLOOR PLANS FOR DEVICE LOCATIONS.
- ALL INTERCONNECTING WIRING SHALL BE PROVIDED BY THE ATC CONTRACTOR.
- ATC CONTRACTOR SHALL PROVIDE CONTROL SEQUENCES FOR EQUIPMENT BEING REPLACED TO MATCH EXISTING EQUIPMENT CONTROL SEQUENCES.

**ALARMS:**

- IF THE ROOM TEMPERATURE RISES ABOVE THE ROOM MAXIMUM TEMPERATURE SETPOINT FOR 5 MINUTES AND ALARM SHALL BE INITIATED THROUGH THE CENTRAL BAS SYSTEM.
- IF THE ROOM TEMPERATURE DROPS BELOW THE ROOM MINIMUM TEMPERATURE SETPOINT FOR 5 MINUTES AND ALARM SHALL BE INITIATED THROUGH THE CENTRAL BAS SYSTEM.

**UNITS:**

- UV-2 LOCATED IN ROOM 122 ON THE FIRST FLOOR OF THE MAIN BUILDING.
- UV-3 LOCATED IN ROOM 226 ON THE SECOND FLOOR OF THE MAIN BUILDING.
- UV-4 LOCATED IN ROOM 230 ON THE SECOND FLOOR OF THE MAIN BUILDING.
- UV-5 LOCATED IN ROOM 275 ON THE SECOND FLOOR OF THE MAIN BUILDING.

**UNIT VENTILATOR UV-2,3,4,5**  
**CONTROL INTEGRATION**

**DRAWING NOTES**

- 1 DISCONNECT AND MAKE SAFE FOR EQUIPMENT REMOVAL. CIRCUIT TO REMAIN FOR FUTURE USE.
- 2 CONNECT TO EXISTING CIRCUIT. PROVIDE PROPERLY SIZED DISCONNECT SWITCH.
- 3 DISCONNECT, REMOVE AND STORE EXISTING LIGHT FIXTURE FOR FUTURE INSTALLATION.
- 4 INSTALL AND RECONNECT LIGHT FIXTURE. VERIFY FIXTURE IS FULLY OPERATIONAL.



WRA PROJECT # 21706

**TOWN OF BROOKLINE  
BROOKLINE HIGH SCHOOL  
EXPANSION  
BROOKLINE, MA 02445**

**PROJECT F:  
DEFERRED MAINTENANCE**

**ARCHITECT**  
William Rawm Associates, Architects, INC. (617) 423-3470  
10 Post Office Square, Suite 1010  
Boston, Massachusetts 02109

**MEP, FP, IT, SECURITY ENGINEER**  
Rist-Frost-Shumway Engineering, P.C. (603) 524-4647  
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Laconia, NH 03246

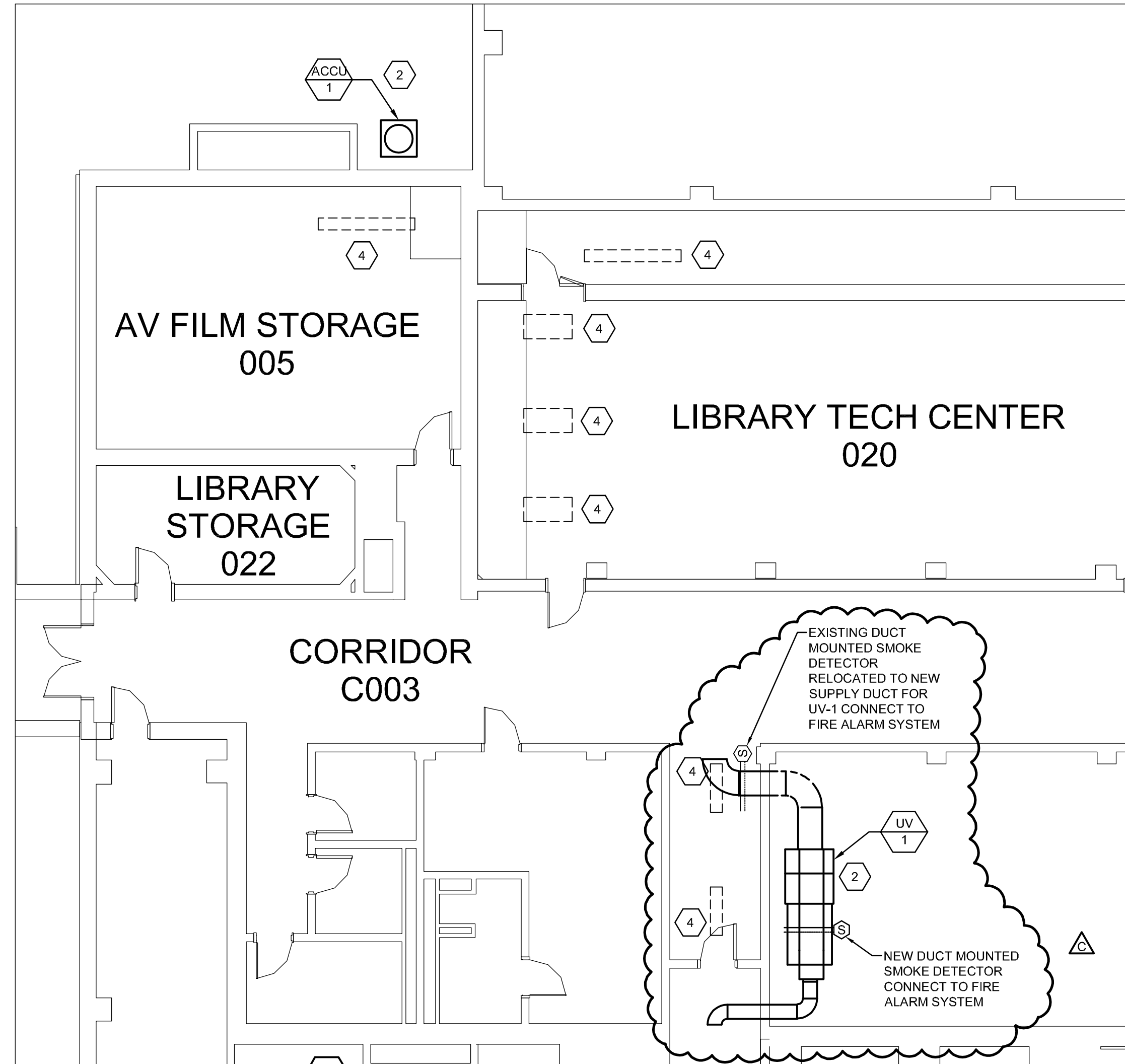
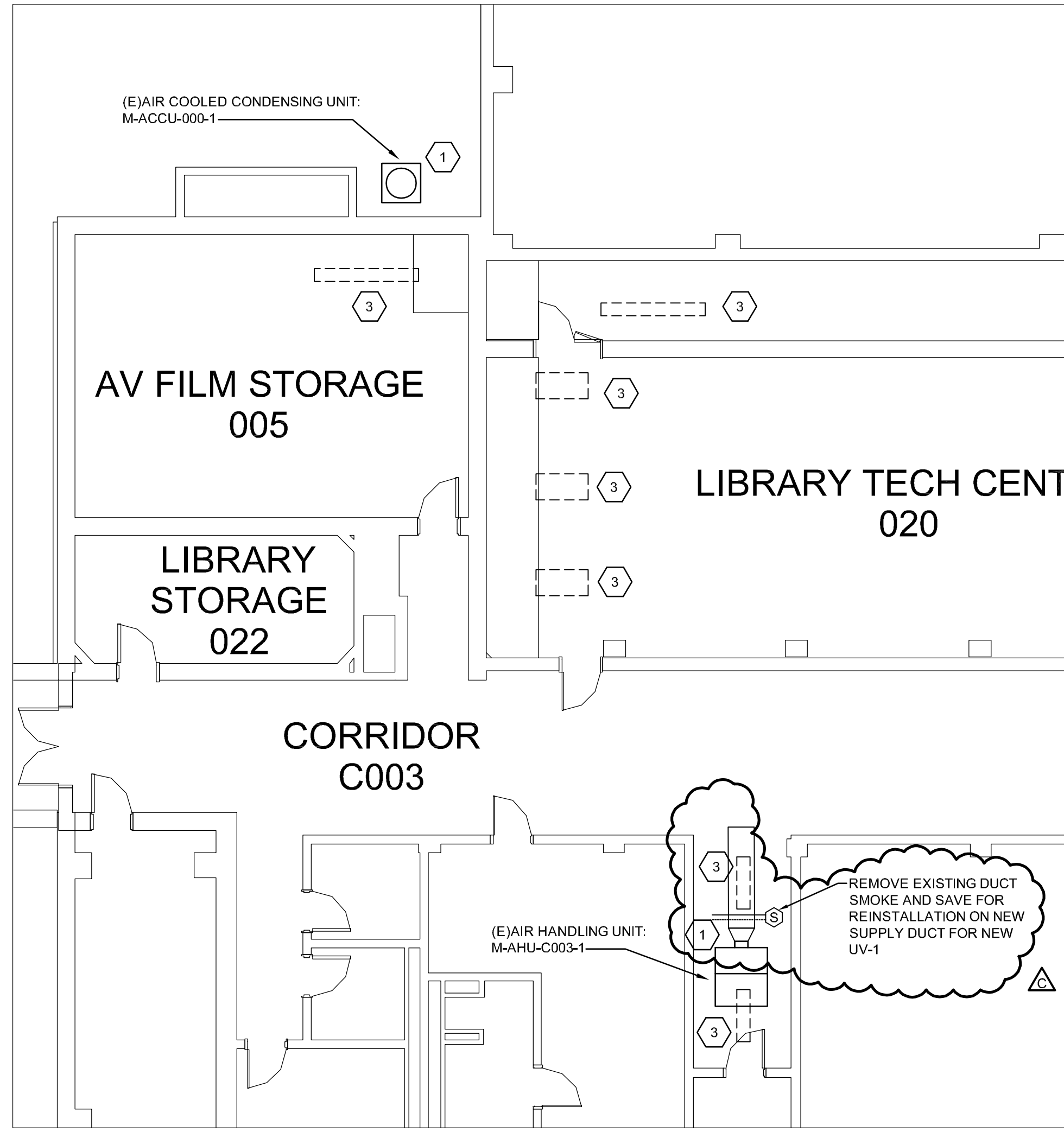
**CIVIL ENGINEER**  
Nitsch Engineering, Inc. (617) 338-0063  
2 Center Plaza, Suite 430  
Boston, MA 02108-1928

**CODE CONSULTING**  
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**COST ESTIMATOR**  
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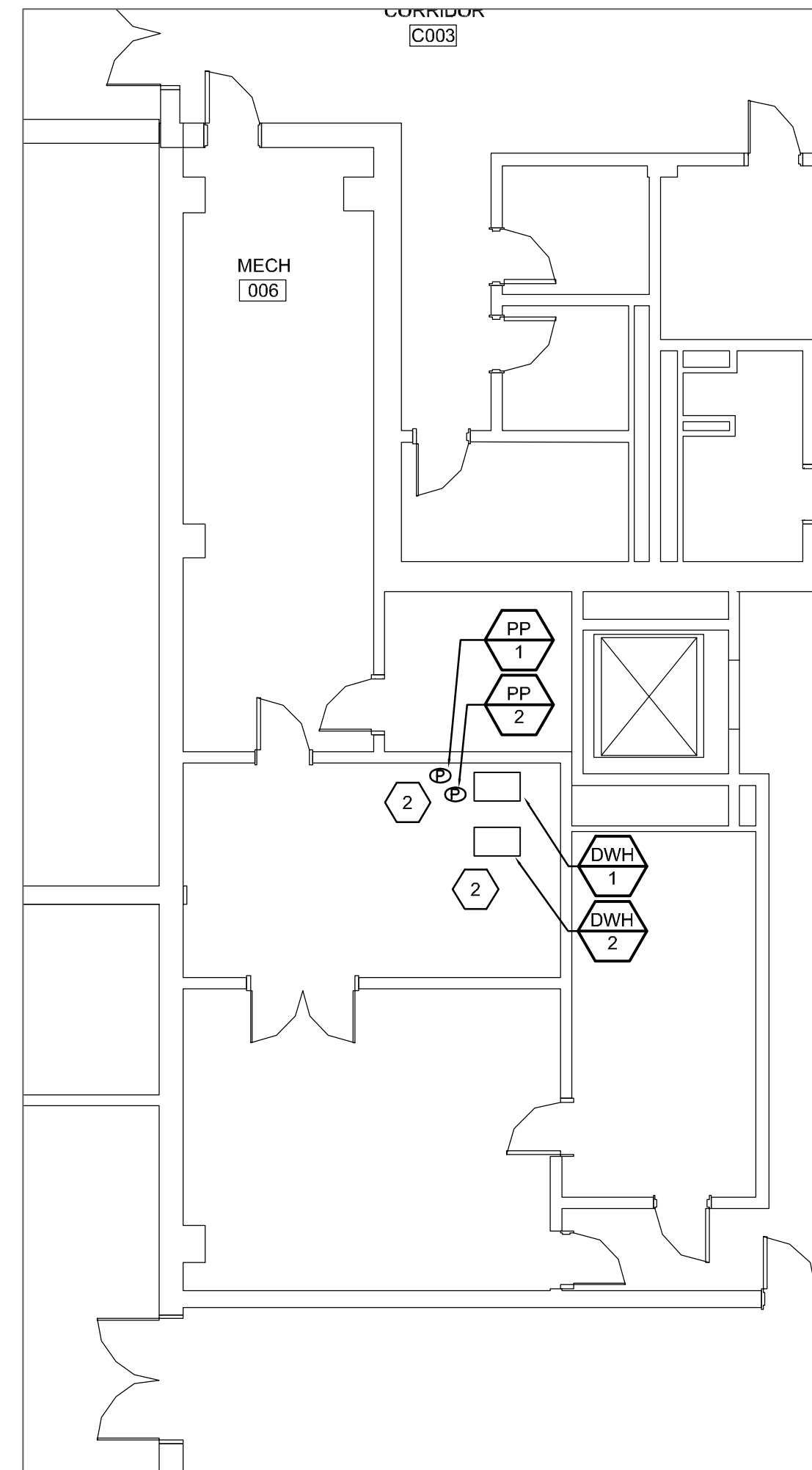
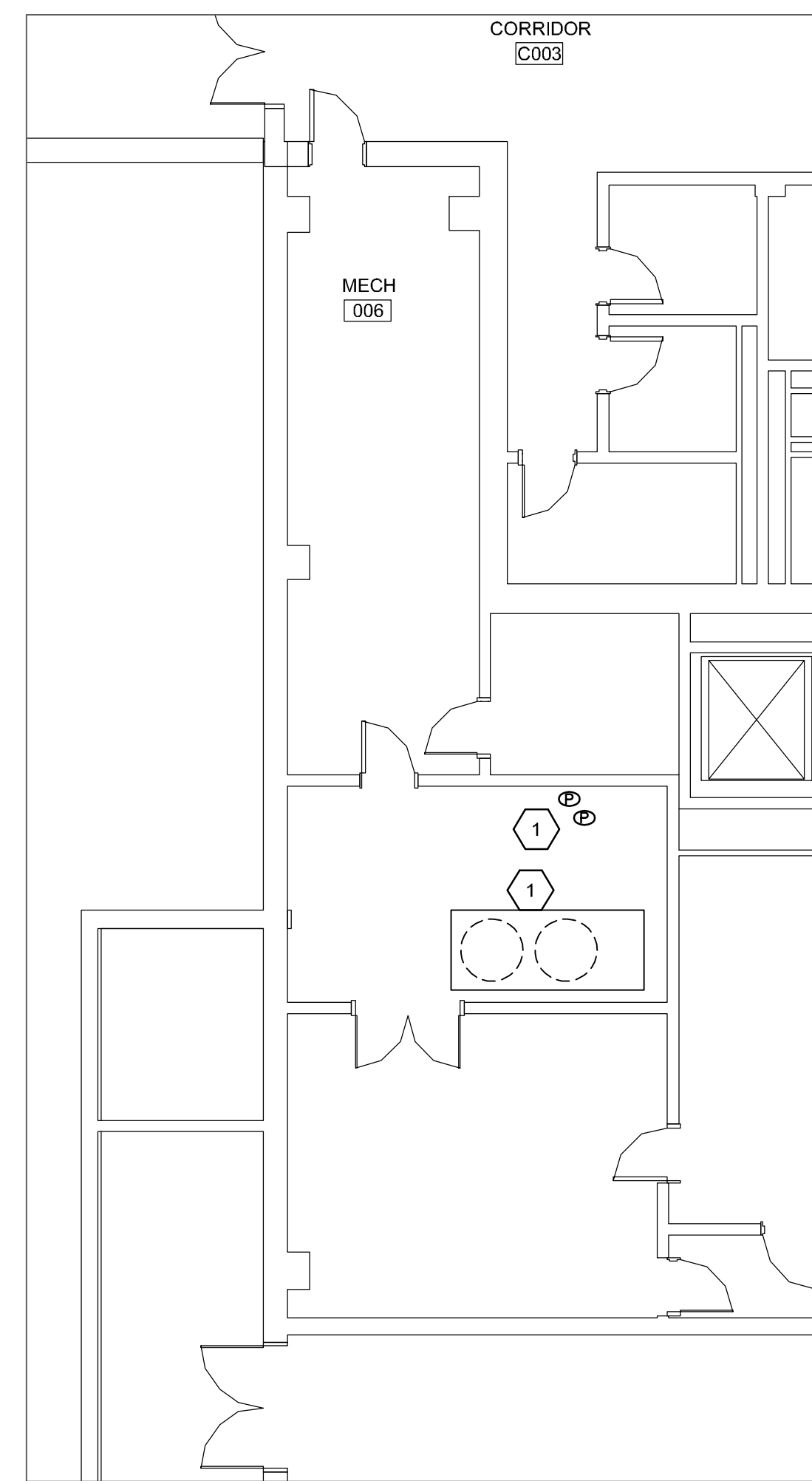
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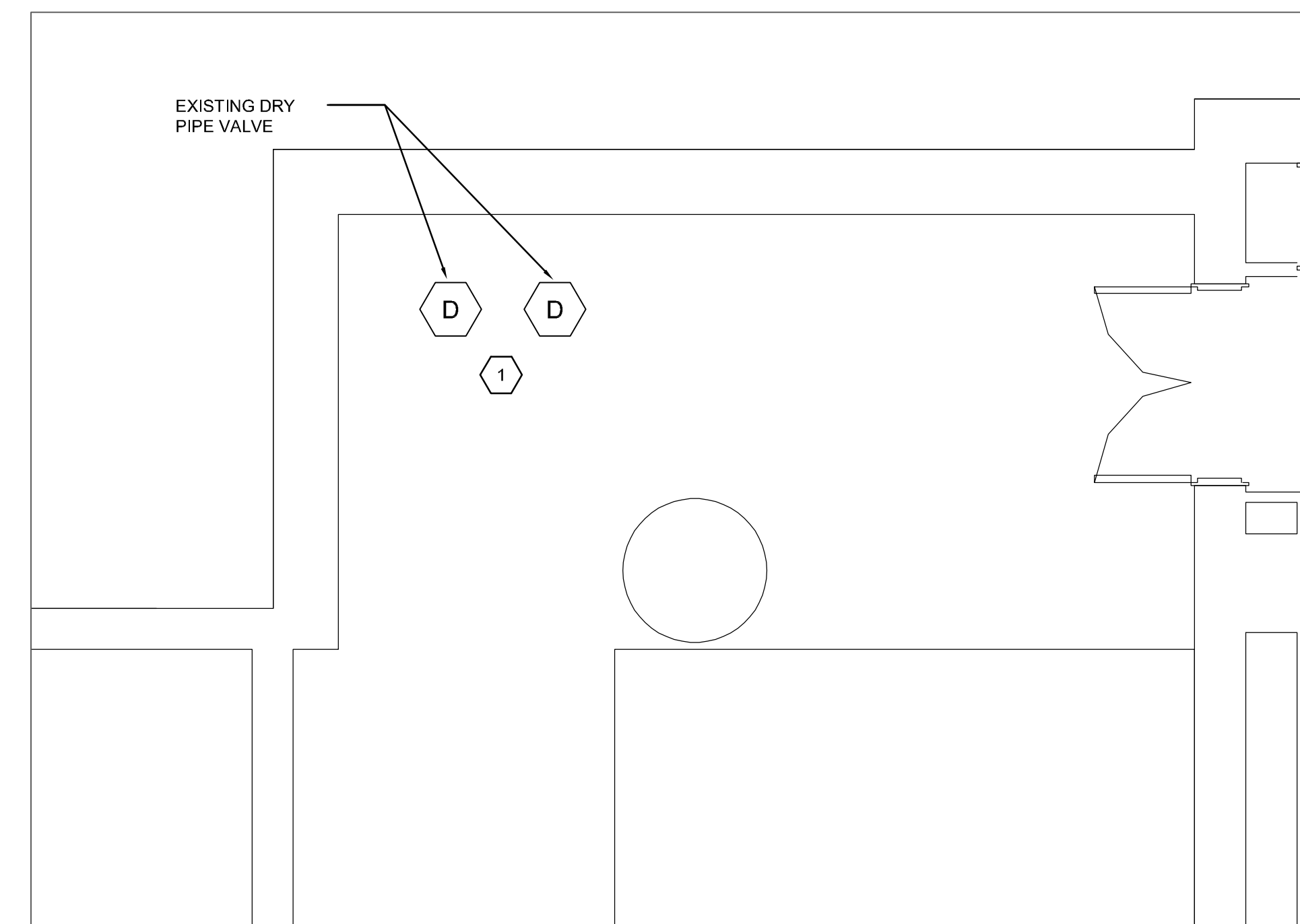
1 BASEMENT ELECTRICAL DEMOLITION PART PLAN  
SCALE: 1/8" = 1'-0"

2 BASEMENT ELECTRICAL NEW WORK PART PLAN  
SCALE: 1/8" = 1'-0"

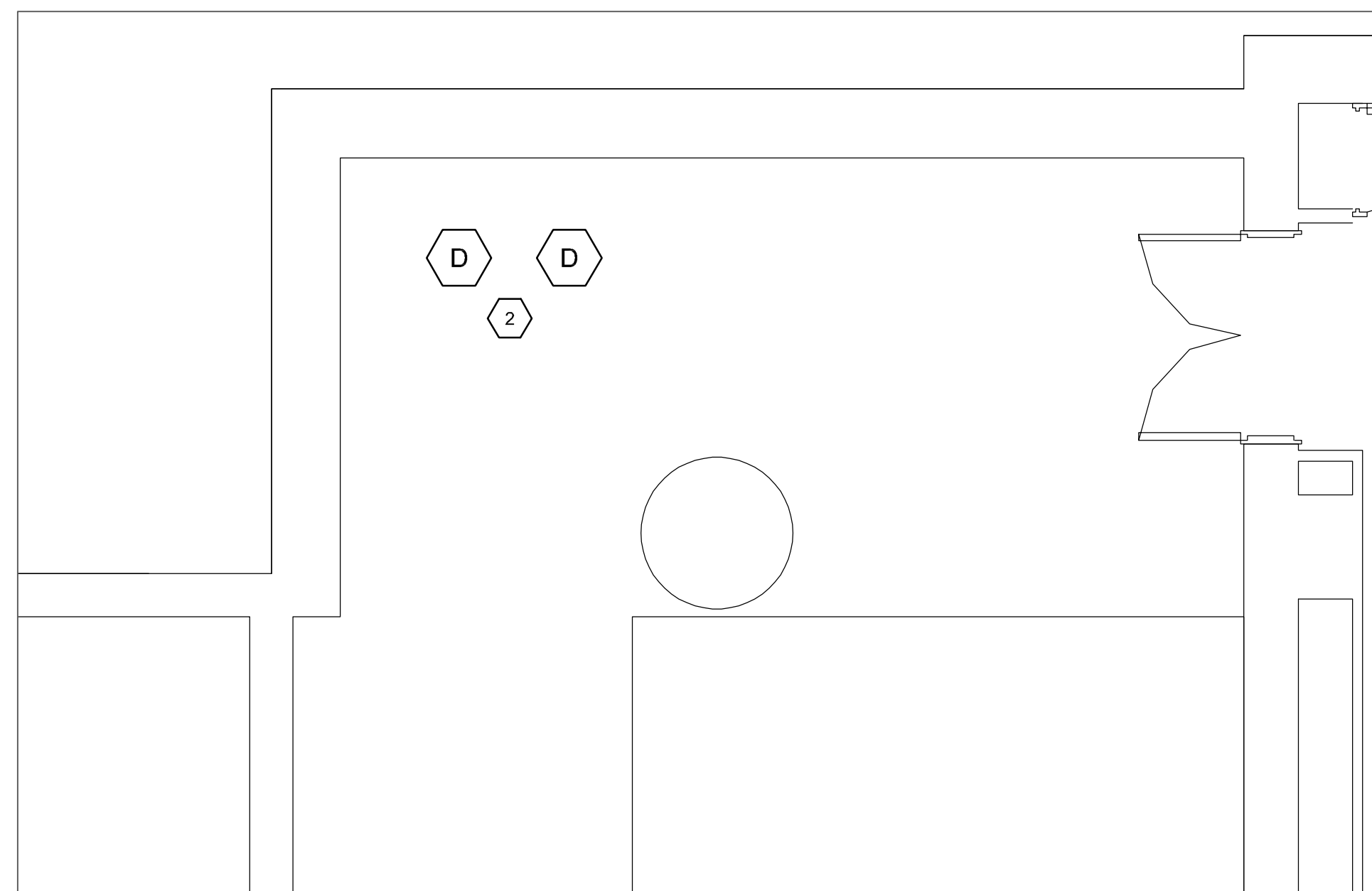


3 BASEMENT ELECTRICAL DEMOLITION PART PLAN  
SCALE: 1/8" = 1'-0"

4 BASEMENT ELECTRICAL NEW WORK PART PLAN  
SCALE: 1/8" = 1'-0"



5 BASEMENT ELECTRICAL DEMOLITION PART PLAN  
SCALE: 1/4" = 1'-0"



6 BASEMENT ELECTRICAL NEW WORK PART PLAN  
SCALE: 1/4" = 1'-0"

**CONSTRUCTION  
DOCUMENT SET**

REVISIONS:		
REV. NO.	DATE	REVISION
A	02/11/2020	PERMIT SET
B	04/23/2021	FIELD BULLETIN 003
C	08/23/2021	FIELD BULLETIN 005-UV-1 RELOCATION

KEY PLAN:

DRAWING TITLE:  
**MAIN BUILDING BASEMENT  
PART PLANS**

DRAWN BY: FPW

CHECKED BY: BAN

SCALE: AS NOTED

DATE: 09/28/2020

DRAWING NUMBER:

**E2-01-F**



## Change Order Proposal Cost Summary

<b>Job Number:</b>	<b>020-025</b>	<b>Job Name:</b>	<b>Brookline High School - Deferred Maintenance</b>	
<b>Proposed Change Order Request No.:</b>	<b>PCO-008</b>	115 Greenough Street, Brookline MA 02445		
<b>Description of Change:</b>	Costs associated with response to RFI #12 - The expectation was that domestic water was going to be in sections in placed in the mechanical room as shown on the attached "crop" of the plumbing drawing. The heater was delivered as one large skid that would not fit into the building. This required us to disassemble the components and send them to the site individually and then to reassemble the parts in the mechanical room.			
NOTE - See comments on pages 8, 9 and 10 regarding comments to RFI 12.				
<b>Exclusions:</b>				<b>MATERIALS &amp; EXPENSES</b>
<b>LABOR COSTS</b>				
<b>Labor - DESCRIPTION OF COSTS:</b>	<b>HOURS</b>	<b>DIRECT</b>	<b>BURDEN</b>	<b>TOTAL</b>
Engineering	0			\$0.00
Plumber - Journeymen	27	\$96.07	\$17.84	\$3,075.57
Plumber - Foreman	15	\$101.07	\$21.41	\$1,837.20
Plumber - Supervisor	4	\$106.07	\$21.41	\$509.92
Plumber - Journeymen	Overtime @ 1.5			0.00
Plumber - Foreman	Overtime @ 1.5			0.00
Plumber - Supervisor	Overtime @ 1.5			0.00
				0.00
Trucking				0.00
<b>LABOR TOTAL:</b>				<b>\$5,422.69</b>
Consumables			0.0%	0.00
Material Costs		See attached Detailed Spreadsheet		0.00
Equipment Costs		See attached Quote		0.00
		See attached Detailed Spreadsheet		0.00
<b>MATERIAL &amp; EQUIPMENT SUBTOTAL:</b>				<b>0.00</b>
	<b>Sales Tax</b>	6.25% (if applicable)		
<b>TOTAL MATERIAL &amp; OTHER:</b>				<b>0.00</b>
<b>LABOR TOTAL:</b>				<b>5,422.69</b>
<b>TOTAL RAW COST:</b>				<b>5,422.69</b>
Sheet Mtal				0.00
Electrical				0.00
Controls				0.00
Insulation				0.00
Trucking				175.00
<b>Subcontractor Sub-Total</b>				<b>1,200.00</b>
<b>SUMMARY</b>				
	<b>N.B. Kenney Direct Costs</b>			5,422.69
	<b>NBK Overhead &amp; Profit on Direct Costs @ 15%</b>			813.40
	<b>Subcontractor Direct Costs</b>			1,200.00
	<b>Subcontractor Overhead &amp; Profit on Direct Costs @ 10%</b>			120.00
	<b>NBK Overhead &amp; Profit on Subcontractors @ 5%</b>			60.00
	<b>TOTAL COSTS</b>			<b>7,616.09</b>
Bond Costs at 1.5%:			<b>1.5%</b>	<b>114.24</b>
<b>Round off to nearest dollar</b>				<b>(0.33)</b>
<b>TOTAL PRICE FOR THIS CHANGE:</b>				<b>\$7,730.00</b>
This PCO labor is based on: <b>YES</b> Straight Time <b>NO</b> Overtime				
Schedule Impact due to Change is: <b>0</b> Work Days				

*This proposal is based on current market costs and conditions.*

*If the approval of this change is delayed to a point where changes occur in our costs and/or conditions, we reserve the right to cancel or modify this change order accordingly.*

**Submitted By:** Robert W. Dejadon

**Signature:** Robert W. Dejadon

**Date:** 11/2/2021

PROJECT NAME **Brookline High School - Defferred Maintenance**  
 CONTRACTOR **N.B. Kenney Company, Inc.**  
 SUBCONTRACTOR

PROJECT NO. **20-025**  
 CONTRACT NO. \_\_\_\_\_  
 Effective Dates: **3/01/2021 to 8/31/2021**

### HOURLY LABOR RATE WORKSHEET

TRADE: **Journeyman Plumber - Local 12**

CLASSIFICATION: **Plumber**

Item	Rate	Prevailing Wage Rate			Notes
		Regular Time	Overtime	Double Time	
<b>(1) Base Labor Rate</b>		\$ 64.44	\$ 96.66	\$ 128.88	Verify with Prevailing Wage Rate or Contract
<b>(2) Fringe Benefits</b>			-	-	Verify with Prevailing Wage Rate or Contract
a. Health & Welfare	\$ 11.57	\$ 11.57	\$ 11.57		
b. Pension	\$ 9.96	\$ 9.96	\$ 9.96		
c. Annuity	\$ 5.00	\$ 5.00	\$ 5.00		
d. National Pension	\$ 0.30	\$ 0.30	\$ 0.30		
e. Education	\$ 1.35	\$ 1.35	\$ 1.35		
f. Industry Improvement	\$ 0.50	\$ 0.50	\$ 0.50		
Labor Management Trust Fund	\$ 2.95	\$ 2.95	\$ 2.95		
h.	\$ -	\$ -	\$ -		
i.		-	-		
j.		-	-		
k.		-	-		
<b>(2). Fringe Benefits Subtotal</b>		\$ 31.63	\$ 31.63	\$ 31.63	Note 1 below
<b>(1 + 2) Total DIRECT LABOR Hourly Rate</b>		\$ 96.07	\$ 128.29	\$ 160.51	Base Labor Rate (1) + Fringe Benefits (2)
<b>(3). Burden: Taxes &amp; Insurance</b>					
a. FICA - Social Security	6.20%	\$ 4.00	\$ 5.99	\$ 7.99	Fixed Federal Rate
b. FICA - Medicare	1.45%	\$ 0.93	\$ 1.40	\$ 1.87	Fixed Federal Rate
c. FUTA - Federal Unemployment	0.60%	\$ 0.39	\$ 0.58	\$ 0.77	Fixed Federal Rate
d. UI - MA State Unemployment Insurance	11.13%	\$ 7.17	\$ 10.76	\$ 14.34	Contractor provide rate.
e. EMAC - MA Unemployment Health Insurance	0.48%	\$ 0.31	\$ 0.46	\$ 0.62	Fixed State Rate
f. MA Workforce Training Fund	0.056%	\$ 0.04	\$ 0.05	\$ 0.07	Fixed State Rate
g. Workers Compensation	5.85%	\$ 3.77	\$ 5.65	\$ 7.54	
h. General Liability	0.00%	\$ -	\$ -	\$ -	
i. Umbrella	0.00%	\$ -	\$ -	\$ -	
j. Auto	0.00%	\$ -	\$ -	\$ -	
k. Sick Time	1.92%	\$ 1.24	\$ 1.10	\$ 1.10	MGL c149 §§ 148C & 148D
l.		-	-	-	
<b>(3). Burden Subtotal</b>	27.69%	\$ 17.84	\$ 26.01	\$ 34.31	
Small Tools	1.50%	\$ 0.97	\$ 1.45	\$ 1.93	Supplemental cost
Other (payment bonds, performance bonds, etc.)	2.00%	N/A	N/A	N/A	Supplemental Cost @ end of p
<b>TOTAL HOURLY RATE (Total DIRECT Labor Hourly Rate + Burden)</b>		\$ 114.88	\$ 155.75	\$ 196.75	=(1) + (2) +(3)

<sup>1</sup> Costs for Overtime and Double Time are same as for Regular Time.

Rates certified by: Robert W. Dejadon  
 (print name)

Company Name: N.B. Kenney Company, Inc.

Signature: Robert W. Dejadon

## HOURLY LABOR RATE WORKSHEET

TRADE: **Plumbing Foreman - Local 12**      CLASSIFICATION: **Plumber - Foreman**

Item	Rate	Prevailing Wage Rate			Notes
		Regular Time	Overtime	Double Time	
<b>(1) Base Labor Rate</b>		\$ 69.44	\$ 104.16	\$ 138.88	Verify with Prevailing Wage Rate or Contr
<b>(2) Fringe Benefits</b>			-	-	Verify with Prevailing Wage Rate or Contr
a. Health & Welfare	\$ 11.57	\$ 11.57	\$ 11.57		
b. Pension	\$ 9.96	\$ 9.96	\$ 9.96		
c. Annuity	\$ 5.00	\$ 5.00	\$ 5.00		
d. National Pension	\$ 0.30	\$ 0.30	\$ 0.30		
e. Education	\$ 1.35	\$ 1.35	\$ 1.35		
f. Industry Improvement	\$ 0.50	\$ 0.50	\$ 0.50		
g. Labor Management Trust Fund	\$ 2.95	\$ 2.95	\$ 2.95		
h.	\$ -	\$ -	\$ -		
k.		-	-		
l.		-	-		
<b>(2). Fringe Benefits Subtotal</b>		\$ 31.63	\$ 31.63	\$ 31.63	Note 1 below
<b>(1 + 2) Total DIRECT LABOR Hourly Rate</b>		\$ 101.07	\$ 135.79	\$ 170.51	Base Labor Rate (1) + Fringe Benefits (2)
<b>(3). Burden: Taxes &amp; Insurance</b>					
a. FICA - Social Security	6.20%	\$ 4.31	\$ 6.46	\$ 8.61	Fixed Federal Rate
b. FICA - Medicare	1.45%	\$ 1.01	\$ 1.51	\$ 2.01	Fixed Federal Rate
c. FUTA - Federal Unemployment	0.60%	\$ 0.42	\$ 0.62	\$ 0.83	Fixed Federal Rate
d. UI - MA State Unemployment Insurance	11.13%	\$ 7.73	\$ 11.59	\$ 15.46	Contractor provide rate.
e. EMAC - MA Unemployment Health Insurance	0.48%	\$ 0.33	\$ 0.50	\$ 0.67	Fixed State Rate
f. MA Workforce Training Fund	0.056%	\$ 0.04	\$ 0.06	\$ 0.08	Fixed State Rate
g. Workers Compensation	5.85%	\$ 4.06	\$ 6.09	\$ 8.12	
h. General Liability	1.68%	\$ 1.17	\$ 1.75	\$ 2.33	
i. Umbrella	1.08%	\$ 0.75	\$ 1.12	\$ 1.50	
j. Auto	0.38%	\$ 0.26	\$ 0.40	\$ 0.53	
k. Sick Time	1.92%	\$ 1.33	\$ 1.19	\$ 1.19	MGL c149 §§ 148C & 148D
		-	-	-	
<b>(3). Burden Subtotal</b>		30.83%	\$ 21.41	\$ 31.30	\$ 41.33
Small Tools	1.50%	\$ 1.04	\$ 1.56	\$ 2.08	Supplemental cost
Other (payment bonds, performance bonds, etc.)	2.00%	N/A	N/A	N/A	Supplemental Cost @ end of proj
<b>TOTAL HOURLY RATE (Total DIRECT Labor Hourly Rate + Burden)</b>		\$ 123.52	\$ 168.65	\$ 213.93	=(1) + (2) +(3)

<sup>1</sup> Costs for Overtime and Double Time are same as for Regular Time.

Rates certified by: Robert W. Dejadon      Company Name: N.B. Kenney, Company, Inc.  
(print name)

Signature: Robert W. Dejadon

## HOURLY LABOR RATE WORKSHEET

**TRADE:** Superintendent - Plumbers Local 12      **CLASSIFICATION:** Plumber - Superintendent

Item	Rate	Prevailing Wage Rate			Notes
		Regular Time	Overtime	Double Time	
<b>(1) Base Labor Rate</b>		\$ 74.44	\$ 111.66	\$ 148.88	Verify with Prevailing Wage Rate or C
<b>(2) Fringe Benefits</b>			-	-	Verify with Prevailing Wage Rate or C
a. Health & Welfare		\$ 11.57	\$ 11.57	\$ 11.57	
b. Pension		\$ 9.96	\$ 9.96	\$ 9.96	
c. Annuity		\$ 5.00	\$ 5.00	\$ 5.00	
d. National Pension		\$ 0.30	\$ 0.30	\$ 0.30	
e. Education		\$ 1.35	\$ 1.35	\$ 1.35	
f. Industry Improvement		\$ 0.50	\$ 0.50	\$ 0.50	
g. Labor Management Trust Fund		\$ 2.95	\$ 2.95	\$ 2.95	
h. Travel		\$ -	\$ -	\$ -	
k.		-	-	-	
l.		-	-	-	
<b>(2). Fringe Benefits Subtotal</b>		\$ 31.63	\$ 31.63	\$ 31.63	Note 1 - below
<b>(1 + 2) Total DIRECT LABOR Hourly Rate</b>		\$ 106.07	\$ 143.29	\$ 180.51	Base Labor Rate (1) + Fringe Benefits (2)
<b>(3). Burden: Taxes &amp; Insurance</b>					
a. FICA - Social Security	6.20%	\$ 4.62	\$ 6.92	\$ 9.23	Fixed Federal Rate
b. FICA - Medicare	1.45%	\$ 1.08	\$ 1.62	\$ 2.16	Fixed Federal Rate
c. FUTA - Federal Unemployment	0.60%	\$ 0.45	\$ 0.67	\$ 0.89	Fixed Federal Rate
d. UI - MA State Unemployment Insurance	11.13%	\$ 8.29	\$ 12.43	\$ 16.57	Contractor provide rate.
e. EMAC - MA Unemployment Health Insurance	0.48%	\$ 0.36	\$ 0.54	\$ 0.71	Fixed State Rate
f. MA Workforce Training Fund	0.056%	\$ 0.04	\$ 0.06	\$ 0.08	Fixed State Rate
g. Workers Compensation	5.85%	\$ 4.35	\$ 6.53	\$ 8.71	Contractor provide rate
h. General Liability	0.00%	\$ -	\$ -	\$ -	
i. Umbrella	0.00%	\$ -	\$ -	\$ -	
j. Auto	0.00%	\$ -	\$ -	\$ -	
k. Sick Time	1.92%	\$ 1.43	\$ 1.25	\$ 1.25	MGL c149 §§ 148C & 148D
		-	-	-	
<b>(3). Burden Subtotal</b>	<b>27.69%</b>	\$ 20.61	\$ 30.02	\$ 39.61	
Small Tools	1.50%	\$ 1.12	\$ 1.67	\$ 2.23	Supplemental cost
Other (payment bonds, performance bonds, etc.)	2.00%	N/A	N/A	N/A	Supplemental Cost @ end of
<b>TOTAL HOURLY RATE (Total DIRECT Labor Hourly Rate + Burden)</b>		\$ 127.80	\$ 174.99	\$ 222.35	=(1) + (2) +(3)

<sup>1</sup> Costs for Overtime and Double Time are same as for Regular Time.

Rates certified by: Robert W. Dejadon      Company Name: N.B. Kenney, Company, Inc.  
(print name)

Signature: *Robert W. Dejadon*





# Invoice

P.O. Box 285  
Shrewsbury, MA 01545

Date	Invoice #
9/1/2021	7235
Phone #	Fax #
508-329-1784	508-329-1770

N. B. Kenney Company Inc.  
68 Barnum Road  
Devens, MA 01434

P.O. No.	Terms	Project
20-025	Due on receipt	Brookline High School

Item	Quantity	Date	Description	Rate	Amount
Loading & Hauling		8/25/2021	Pick up water hear parts at 68 Barnum road, wrap & protect parts - deliver and unload at Brookline High School.	1,200.00	1,200.00

Thank you for your business.

**Total** \$1,200.00





**N.B. Kenney Company, Inc.**

68 Barnum Road  
Devens, MA 01434  
Tel: 978-849-5200

**Request for Information**

RFI Number: 12  
Date: 08/09/2021  
Page 1

**To:**  
Hill International  
75 Second Ave  
Needham, MA 0249  
Attn: Andy Vo

**Job:** 20025 - Brookline HS Deferred  
**Title:** Domestic Heater and Storage Tanks

<b>Requested By:</b> Robert Dejadon	<b>Phone:</b> (978) 849-5200	<b>E-mail:</b> rdejadon@nbkenney.com
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**Question(s):**

*We are hereby submitting the following questions for your response. These issues have potential time and cost impacts.* Reference is made to the attached 6 pages, one is a crop of P1-01-F, one is a sketch of the domestic water heater & storage tank skid along with 4 pictures for a total of 7 pages. This equipment is all mounted on a skid as shown, the skid is approximately 14' long and 7' wide. There is no way to get this unit into the basement where it replaces the existing system.

The skid is currently at the riggers yard however it cannot be delivered to the site in its current condition. NBK recommends that this skid be trucked to our facility in Devens, MA and that the components are removed from the skid into sections that will fit into the elevator and through the doors. Each section will be categorized and protected for delivery. Upon completion, all of the sections will be reassembled for use.

A review of the "crop" section of P1-01-F shows a layout that entirely different than the skid, Upon checking with Lochinvar this equipment is not available as independent components. NBK has no provisions to disassemble and reassemble this skid, in fact the skid will not fit in the designated area and a revised layout will need to be determined with installation.

Please review and advise if we are to proceed as outlined above or if there is another recommendation that we are not aware of.

**Remarks/Suggestions:**

Please respond by: 08/12/2021

**Requested By:**  
*Robert W. Dejadon*  
Robert Dejadon  
N.B. Kenney Company, Inc.

Andy Vo  
Hill International

RFS response:

By specification and submittal, the DWH and Tank is a Lochnivar Packaged Solution. The manufacturer submittal refers to this assembly as a package system on submittal pages 5, 6 and 7. On page 7 of the submittal, the notes state that packaged solutions with multiple units (there are 2 boilers and 2 tanks) are designed as breakaway systems and breakaway systems are factory disassembled for shipping and require field assembly. NBK should verify with manufacturer why the packaged solution was delivered as one assembly.

RFS agrees the package needs to be disassembled and reassembled in place. The submittal does not provide specific dimensions for the entire skid – only the individual pieces. Submittal 224500-2.1 indicates the size of a 119 gallon tank as 62 1/2" tall by 28" diameter. It appears all individual units will fit in the elevator and through the doors. NBK should verify all dimensions and the path through the building to the final location. GC is responsible for coordinating unit sizes with installation and clearance requirements within the building.

Chad Monterose, P.E. RFS Engineering, P.C.  
Mark Borreliz, AIA WRA  
Date: 08-10-2021

**In response to RFS Comments we offer the following:**

**NBK did contact the manufacturer in an attempt to have the components shipped disassembled and were informed that was not possible. A review of the attached submittal information will confirm that breakaway systems are available only for tanks above 500 gallons, these tanks are 119 gallons and are not available as a breakaway system.**

**In addition, it appears from the contract drawings that RFS anticipated these sections being shipped as individual sections as the layout on the contract drawings shows the heaters and storage tanks being installed in an "L" pattern which is not possible, we were able to get the skid on the existing pad by extending the existing concrete pad about 2 feet.**

**The designer is responsible for specifying equipment that will fit in the building and in the designated location; it is not incumbent on a contractor when estimating a project to ensure the equipment will fit unless they submit a product as an alternate. This system is the basis of design, it is not an alternate. In addition, the elevators were inoperable as they were being serviced. Subsequently, NBK had to make "ramps" to bring the equipment parts down the stairs and into the designated location.**



**Lochinvar**<sup>®</sup>  
HIGH EFFICIENCY BOILERS & WATER HEATERS

**ARMOR<sup>®</sup> CONDENSING WATER HEATER PACKAGE SOLUTION**

Submittal Sheet

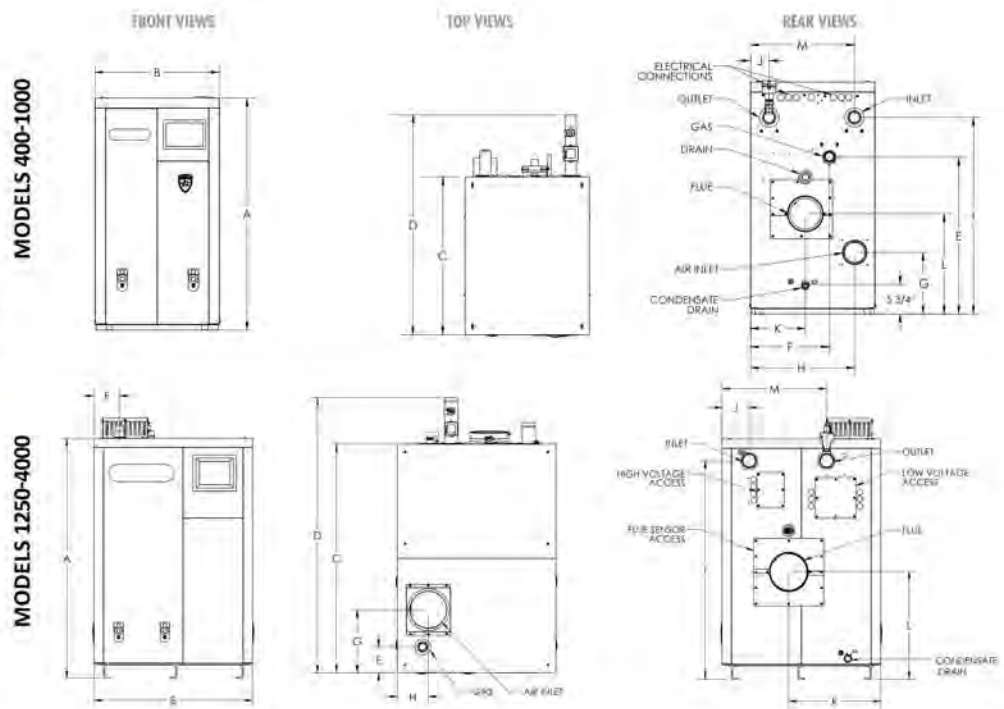
**AWHP-Sub-03**

**ARMOR CONDENSING WATER HEATER / 400,000 – 4,000,000 BTU/HR PACKAGE SOLUTION**

Job Name: Brookline High School Deferred Maint. Model No. AWH0400NPM  
 Location: Brookline, MA Type Gas Natural Gas Btu/Hr Input 399,000  
 Engineer: Rist-Frost Shumway Engineering Recovery Rate in GPH 479 @ 100 °F Rise  
 Agent/Wholesaler: FIA Inc - Chris Ryan Equipment Tag(s):  
 Contractor: N.B. Kenney DWH-1-2

**NOTES:**

Providing a factory mounted and pre-piped skid system included Qty (2) AWH0400NPM Water Heaters with Qty (2) RJA120 Storage Tanks.



Model Number	Btu/Hr Input	Thermal Efficiency	GPH 100°F Rise
✓ AWH0400NPM	399,000	99%	479
○ AWH0500NPM	500,000	99%	600
○ AWH0650NPM	650,000	98%	772
○ AWH0800NPM	800,000	98%	950
○ AWH1000NPM	999,000	98%	1,187
○ AWH1250NPM	1,250,000	98%	1,485
○ AWH1500NPM	1,500,000	98%	1,782
○ AWH2000NPM	1,999,000	98%	2,375
○ AWH3000NPM	3,000,000	98%	3,564
○ AWH4000NPM	4,000,000	98%	4,752

Model Number	A	B	C	D	E	F	G	H	I	J	K	L	M	Gas Conn.	Water Conn.	Air Inlet	Vent Size	Ship Wgt. (lbs.)
✓ AWH0400NPM	45"	24"	30-1/2"	42-1/2"	29-3/4"	20-1/4"	12"	20"	38"	3-1/2"	10-1/2"	19-1/4"	20"	1"	2"	4"	4"	326
AWH0500NPM	45"	24"	30-1/2"	42-1/2"	29-3/4"	20-1/4"	12"	20"	38"	3-1/2"	10-1/2"	19-1/4"	20"	1"	2"	4"	4"	333
AWH0650NPM	45"	24"	41"	53"	30-1/2"	15-1/4"	12"	20"	38"	3-1/2"	10-1/2"	19-1/4"	20"	1-1/4"	2"	4"	4"	424
AWH0800NPM	45"	24"	41"	53"	30-1/2"	15-1/4"	12"	20"	38"	3-1/2"	10-1/2"	19-1/4"	20"	1-1/4"	2"	4"	6"	433
AWH1000NPM	45"	24"	48"	62"	30-1/2"	15-3/4"	12"	20"	38"	3-1/2"	10-1/2"	19-1/4"	20"	1-1/4"	2-1/2"	6"	6"	494
AWH1250NPM	51-1/2"	34"	49"	59"	5-1/2"	5-1/2"	13-1/2"	6-3/4"	46-3/4"	5-3/4"	19-3/4"	23"	22-1/2"	1-1/2"	2-1/2"	8"	8"	1,519
AWH1500NPM	51-1/2"	34"	52-3/4"	62-3/4"	4-1/2"	4-1/2"	13-1/2"	6-3/4"	46-3/4"	5-3/4"	19-3/4"	23"	22-1/2"	1-1/2"	2-1/2"	8"	8"	1,672
AWH2000NPM	51-1/2"	34"	65-1/2"	75-1/2"	7"	5-3/4"	14-3/4"	7-1/4"	46-3/4"	6-3/4"	18-3/4"	23"	22-1/2"	1-1/2"	2-1/2"	8"	8"	1,931
AWH3000NPM	67-1/4"	48-1/4"	79-3/4"	93-3/4"	4-3/4"	6-3/4"	17-3/4"	8-3/4"	60-1/4"	8-1/2"	25-1/2"	29-1/2"	40"	2"	4"	10"	10"	3,147
AWH4000NPM	67-1/4"	48-1/4"	96"	110"	5"	7-1/2"	17-3/4"	8-3/4"	60-1/4"	8-1/2"	25-1/2"	29-1/2"	40"	2-1/2"	4"	12"	12"	3,694

Change "N" to "L" for LP gas models. No deration on LP models. Performance data is based on manufacturer test results.  
 Add "O" at end of AWH1250-4000 model number for Outdoor models.

# ARMOR® Package Solutions DIMENSIONS & SPECIFICATIONS

All configurations are shown with an AWH0400-4000 and a 119-504 gallon capacity jacketed and insulated Lock-Temp tank.

All package solutions are skid mounted. Add 3" to tank  $H_T$  for channel iron skid.

JACKETED TANK DIMENSIONS			
Gallon	$H_T$	$D_T$	Weight (lbs.)
119	62-1/2"	28"	345
200	77-1/4"	32"	600
257	91"	34"	1108
318	80"	40"	1290
432	80"	46"	1,512
504	92"	46"	1,623

### NOTES:

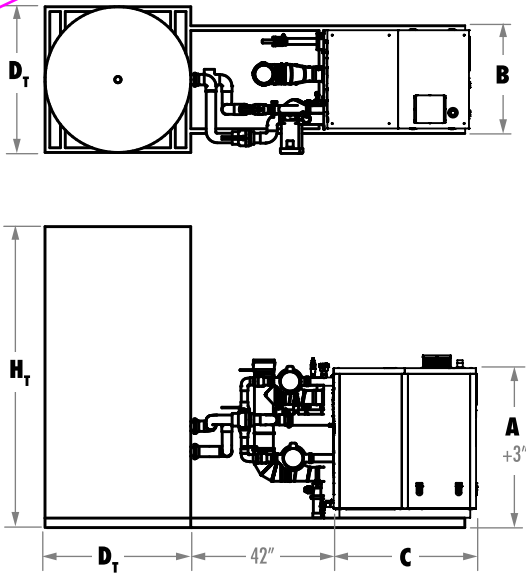
- Tanks over 500 gallon are available for package solutions.
- Package solutions with multiple units or storage tanks 752 gallons and larger will be designed as a "Breakaway" system.
- Vertical tanks over 650 gallons require breakaway frames for shipping purposes.

Breakaway systems and frames are factory disassembled for shipping purposes and require some field reassembly.

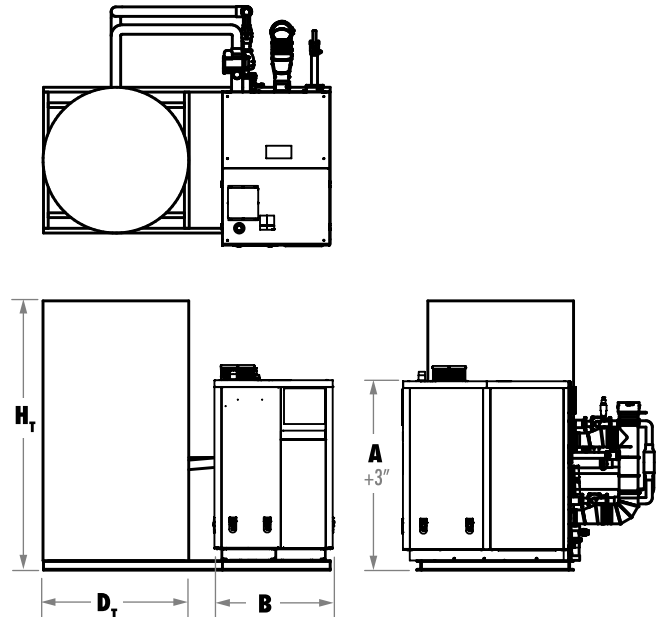
Consult factory for additional information and if equipment room dimensions are critical.

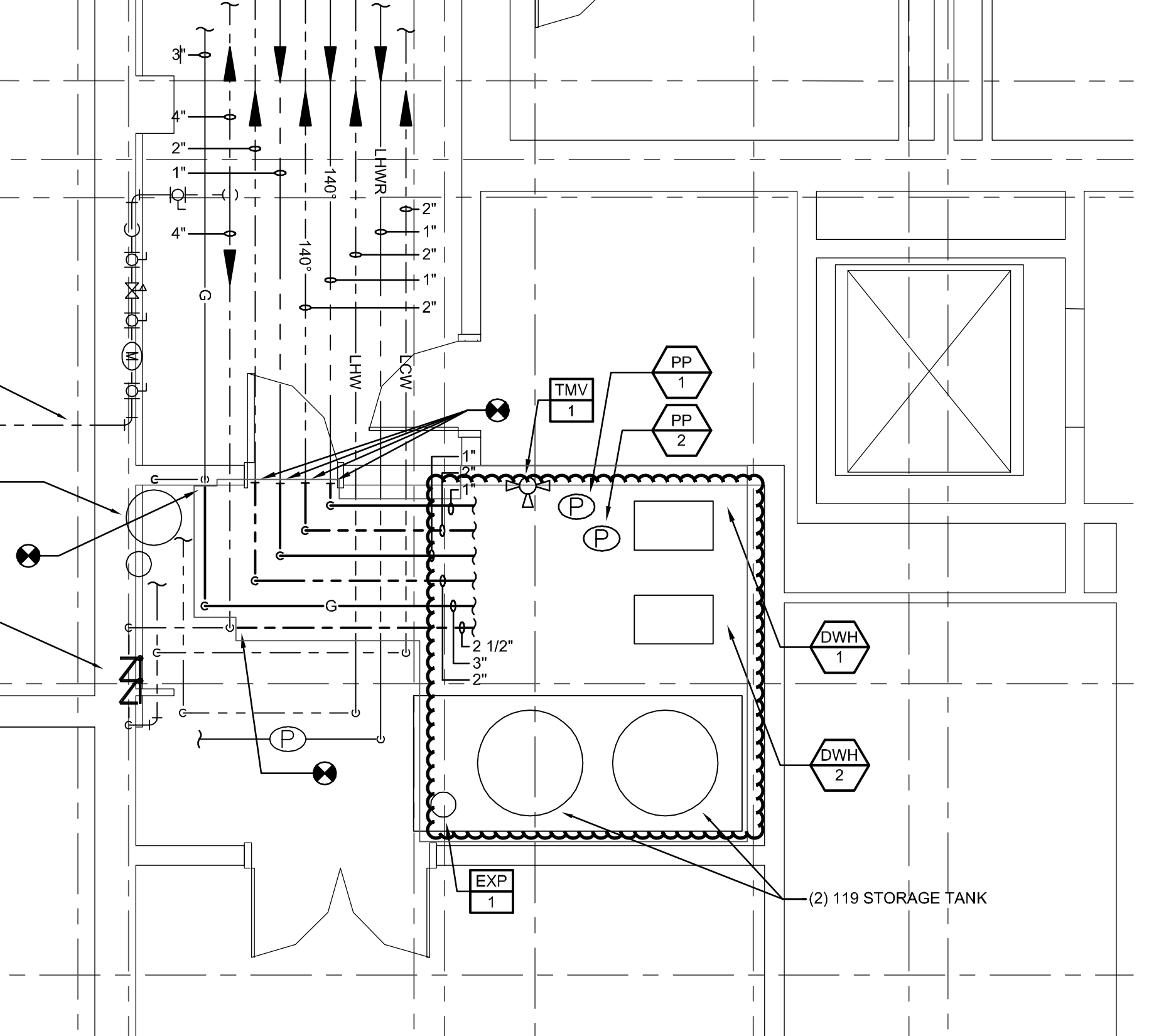


## PS Configuration



## PU Configuration





3"

4"

2"

1"

4"

G

140°

140°

LHM/R

LHM/W

LCW

2"

1"

2"

1"

2"

TMV  
1

PP  
1

PP  
2

P

P

DWH  
1

DWH  
2

EXP  
1

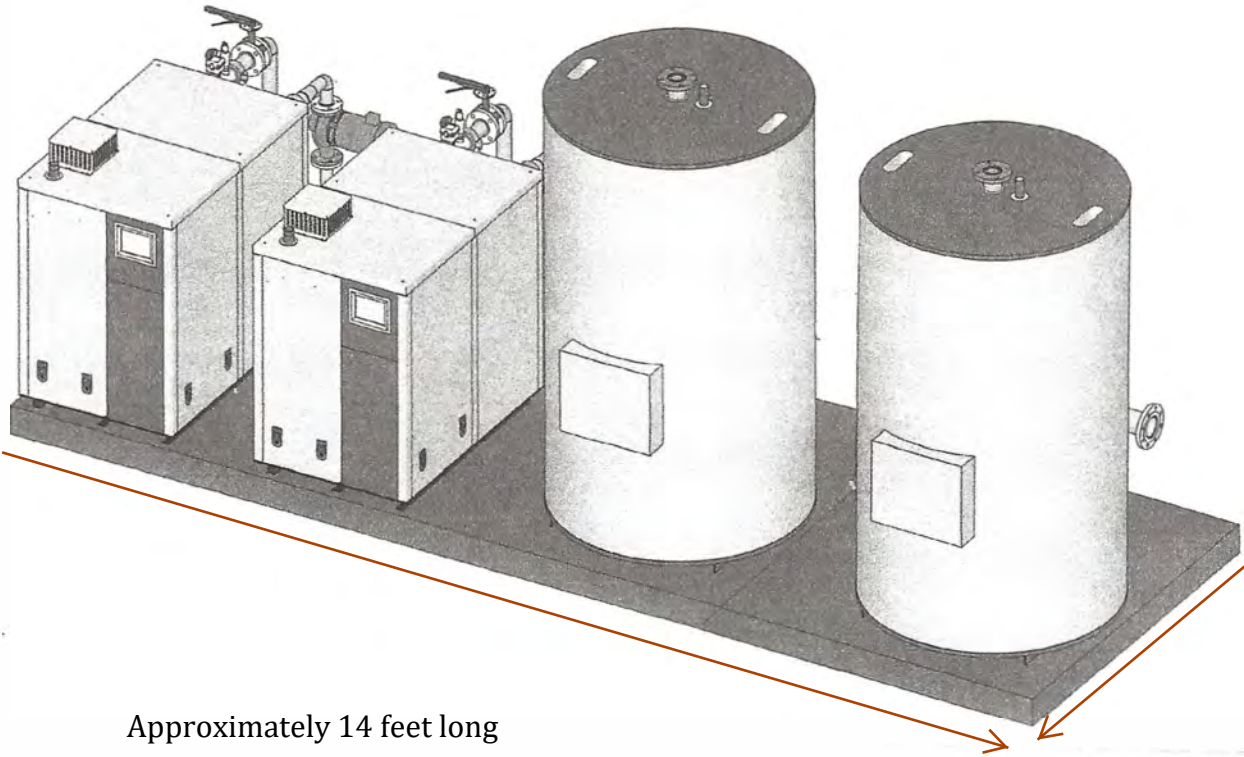
(2) 119 STORAGE TANK

2 1/2"

3"

2"





Approximately 14 feet long

Approximately 7 feet wide













## Change Order Proposal Cost Summary

Job Number:	<b>020-025</b>	Job Name:	<b>Brookline High School - Deferred Maintenance</b>	
Proposed Change Order Request No.:	<b>PCO-010</b>	115 Greenough Street, Brookline MA 02445		
Description of Change:	Cost to purchase and install shim,/lift blocks so raise FLX boilers so that drainage connections could be installed in response to RFI-11. The connection we were to close the pad and could not be piped to drain.			
<b>Exclusions:</b>				<b>MATERIALS &amp; EXPENSES</b>
<b>Labor - DESCRIPTION OF COSTS:</b>	<b>HOURS</b>	<b>DIRECT</b>	<b>BURDEN</b>	<b>TOTAL</b>
Engineering	0	\$96.13	\$16.37	\$0.00
Pipefitter - Journeymen	8	\$96.13	\$16.37	\$900.03
Pipefitter - Foreman	8	\$104.46	\$17.81	\$978.15
Pipefitter - Supervisor	0	\$0.00	\$0.00	\$0.00
Pipefitter - Journeymen	<b>Overtime @ 1.5</b>			0.00
Pipefitter - Foreman	<b>Overtime @ 1.5</b>			0.00
Pipefitter - Supervisor	<b>Overtime @ 1.5</b>			0.00
				0.00
<b>LABOR TOTAL:</b>				\$1,878.18
Consumables			0.0%	0.00
Material Costs			See attached Invoice	1,941.12
Trucking Cost to Site			See attached Quote	175.00
			See attached Detailed Spreadsheet	0.00
<b>MATERIAL &amp; EQUIPMENT SUBTOTAL:</b>				2,116.12
	<b>Sales Tax</b>	6.25% (if applicable)		
<b>TOTAL MATERIAL &amp; OTHER:</b>				2,116.12
<b>LABOR TOTAL:</b>				1,878.18
<b>TOTAL RAW COST:</b>				3,994.30
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
<b>Subcontractor Costs Sub-Total</b>				0.00
<b>SUMMARY</b>				
	<b>N.B. Kenney Direct Costs</b>			3,994.30
	<b>NBK Overhead &amp; Profit on Direct Costs @ 15%</b>			599.14
	<b>Subcontractor Direct Costs</b>			0.00
	<b>Subcontractor Overhead &amp; Profit on Direct Costs @ 10%</b>			0.00
	<b>NBK Overhead &amp; Profit on Subcontractors @ 5%</b>			0.00
	<b>TOTAL COSTS</b>			<b>4,593.44</b>
Bond Costs at 1.5%:			1.5%	68.90
Round off to nearest dollar				(0.34)
<b>TOTAL PRICE FOR THIS CHANGE:</b>				<b>\$4,662.00</b>
This PCO labor is based on:		<b>YES</b>	<b>Straight Time</b>	<b>NO</b>
Schedule Impact due to Change is:		<b>0</b>	<b>Work Days</b>	<b>Overtime</b>
<p><i>This proposal is based on current market costs and conditions.</i></p> <p><i>If the approval of this change is delayed to a point where changes occur in our costs and/or conditions, we reserve the right to cancel or modify this change order accordingly.</i></p>				
<b>Submitted By:</b> Robert W. Dejadon		<b>Signature:</b> <i>Robert W. Dejadon</i>		<b>Date:</b> 11/22/021



# Turner Steel Co., Inc.

RECEIVED  
SEP 15 2021

128 North Main Street  
P.O. Box 399  
West Bridgewater, MA 02379  
Phone: 800-521-8881  
Fax: 508-580-4542  
Website: <http://www.turnersteelcoinc.com/>

Invoice No: **666474**

Bill To: NB Kenney Mechanical Contractors  
68 Barnum Road  
Devens, MA 01434

Ship To: NB Kenney Mechanical Contractors  
68 Barnum Road  
Devens, MA 01434

Attn: Patrick Savage

Customer PO: 20025 Brookline  
Terms: 1/2% 10 - NET 30  
Sales 1: Laurie Jones

F.O.B.: Delivered

Ship Via: Our Truck  
Order#: 215949  
Invoice Date: 9/14/2021

Sales 2: Glenn Turner

BO Qty	Qty Shipped	UM	Description	Width	Length	Weight	Price UM	Extension	Tax
0	16	P	2"x4"x24" carbon steel shim plates - cut to length ASTM A500 GR.S&C	4"	2'-0"	679.00	121.32 E	\$1,941.12	T

Total Weight **679.00**

*20-025*

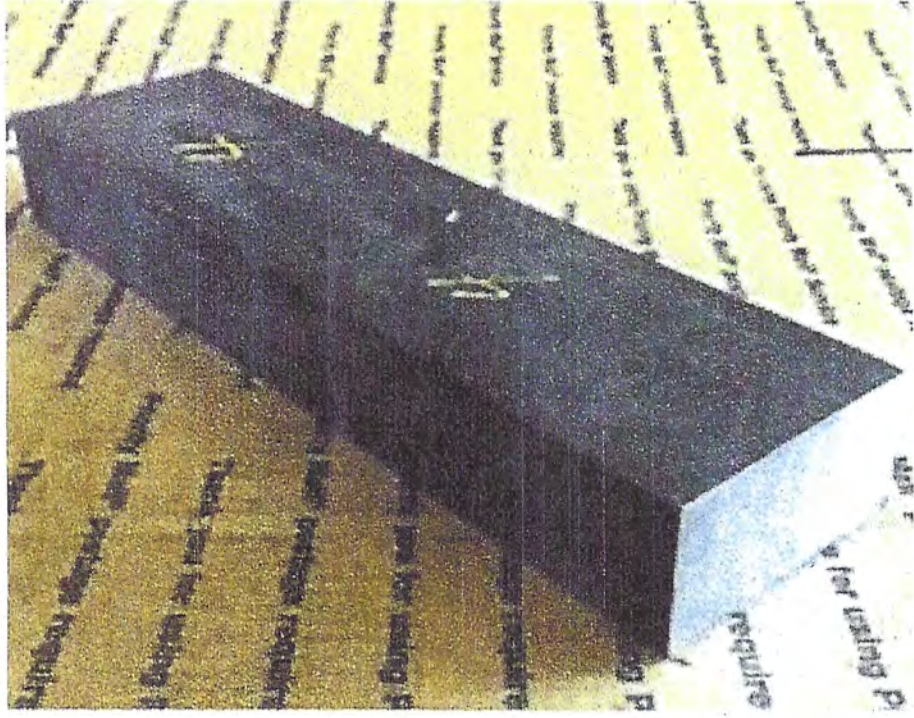
Subtotal Non taxable **\$0.00**  
Subtotal taxable **\$1,941.12**

Massachusetts: 6.25% ~~-\$121.32~~

**Tax Exempt**

Total ~~\$2,062.44~~  
**\$1,941.12**

20.62 may be deducted  
if paid before 9/24/2021





## N.B. Kenney Company, Inc.

68 Barnum Road  
Devens, MA 01434  
Tel: 978-849-5200

## Request for Information

RFI Number: 11  
Date: 08/09/2021  
Page 1

**To:**  
Hill International  
75 Second Ave  
Needham, MA 0249  
Attn: Andy Vo

**Job:** 20025 - Brookline HS Deferred  
**Title:** FLX Boiler Spacer Blocks

<b>Requested By:</b> Robert W. Dejadon	<b>Phone:</b> (978) 849-5200	<b>E-mail:</b> rdejadon@nbkenney.com
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### Question(s):

We are hereby submitting the following questions for your response. These issues have potential time and cost impacts. Reference is made to the attached two (2) photos of the FLX boilers as they sit on the concrete pads. The bottom of the boiler drain pipe is about 1-3/4" from the top of the slab, This is not enough room to install fittings and a shut-off valve.

NBK recommends putting blocks that are 6" x 6" x 2" (high) under each of the boiler legs. Each boiler has 4 legs for a total of 16 blocks. Please review and advise if this is acceptable.

### Remarks/Suggestions:

### Answer(s):

(For your convenience, you can "Reply" to the email with your response.)

RFS response:  
RFS takes no exceptions installing blocks as proposed provide blocking is solid brick (not wood).  
RFS response by: Alex Mason / John Adkins  
RFS Engineering, P.C.  
Date: 08-09-2021

WRA additional response following OAC Meeting:  
Per discussion at OAC on 8/10/21, NB Kenney is recommending the use of steel as a method for raising the flex tube boilers. The design team takes no exception to this proposal pending review of NB Kenney's proposed detail.  
Mark Borreliz, AIA WRA

**Please respond by: 08/12/2021**

### Requested By:

*Robert W. Dejadon*

Robert W. Dejadon  
N.B. Kenney Company, Inc.

Andy Vo  
Hill International





Blocks would be installed under each support angle.





## Change Order Proposal Cost Summary

Job Number:	<b>020-025</b>	Job Name:	<b>Brookline High School - Deferred Maintenance</b>	
Proposed Change Order Request No.:	<b>PCO-011</b>	<b>115 Greenough Street, Brookline MA 02445</b>		
Description of Change:	Cost to replace existing 4" butterfly lug valves that were scheduled to stay. When the existing heating system was isolated the existing vave seals dried out and failed. These were the original valves, the seals just "dry rotted" when the system was dry,			
<b>Exclusions:</b>				<b>MATERIALS &amp; EXPENSES</b>
<b>Labor - DESCRIPTION OF COSTS:</b>		<b>LABOR COSTS</b>		
		<b>HOURS</b>	<b>DIRECT</b>	<b>BURDEN</b>
				<b>TOTAL</b>
Engineering		0	\$96.13	\$16.37
Pipefitter - Journeymen	REGULAR RATE	4	\$96.13	\$16.37
Pipefitter - Foreman	REGULAR RATE	2	\$104.46	\$17.81
Pipefitter - Supervisor	REGULAR RATE	0	\$0.00	\$0.00
Pipefitter - Journeymen	Overtime @ 1.5			0.00
Pipefitter - Foreman	Overtime @ 1.5			0.00
Pipefitter - Supervisor	Overtime @ 1.5			0.00
				0.00
<b>LABOR TOTAL:</b>				\$694.55
				\$ -
Consumables			0.0%	0.00
Material Costs			See attached Invoice	2,858.80
Trucking Cost to Site			See attached Quote	175.00
			See attached Detailed Spreadsheet	0.00
<b>MATERIAL &amp; EQUIPMENT SUBTOTAL:</b>				<b>3,033.80</b>
<b>Sales Tax</b>		6.25% (if applicable)		
<b>TOTAL MATERIAL &amp; OTHER:</b>				3,033.80
<b>LABOR TOTAL:</b>				694.55
<b>TOTAL RAW COST:</b>				<b>3,728.35</b>
				0.00
				0.00
				0.00
				0.00
				0.00
<b>Subcontractor Costs Sub-Total</b>				<b>0.00</b>
<b>SUMMARY</b>				
	<b>N.B. Kenney Direct Costs</b>			3,728.35
	<b>NBK Overhead &amp; Profit on Direct Costs @ 15%</b>			559.25
	<b>Subcontractor Direct Costs</b>			0.00
	<b>Subcontractor Overhead &amp; Profit on Direct Costs @ 10%</b>			0.00
	<b>NBK Overhead &amp; Profit on Subcontractors @ 5%</b>			0.00
<b>TOTAL COSTS</b>				<b>4,287.61</b>
Bond Costs at 1.5%:				<b>64.31</b>
Round off to nearest dollar				<b>0.08</b>
<b>TOTAL PRICE FOR THIS CHANGE:</b>				<b>\$4,352.00</b>
This PCO labor is based on:		<b>YES</b>	<b>Straight Time</b>	<b>NO</b>
Schedule Impact due to Change is:		<b>0</b>	<b>Work Days</b>	<b>Overtime</b>
<p><i>This proposal is based on current market costs and conditions.</i></p> <p><i>If the approval of this change is delayed to a point where changes occur in our costs and/or conditions, we reserve the right to cancel or modify this change order accordingly.</i></p>				
<b>Submitted By:</b> Robert W. Dejadon			<b>Signature:</b> Robert W. Dejadon	
			<b>Date:</b> 11/23/021	

# INDEPENDENT

Pipe and Supply Corp.

## Price Quotation

6 WHITMAN ROAD  
CANTON, MA 02021  
781-828-8500 / Fax: 781-828-1321

Date	Quote #	Page:
09/23/21	128676	1
Expiration Date	Quoted To	
10/22/21	KENNNB	

Quoted To:	Ship To:
N. B. KENNEY CO., INC. 68 BARNUM ROAD DEVENS, MA 01434	N. B. KENNEY CO., INC. 68 BARNUM ROAD DEVENS, MA 01434
Phone: 978-849-5200 Fax: 978-849-5298	Requested By: Job Name: BROOKLINE PCO PRICING

Writer:	Salesman:	Notes:	Writers Email:
SDF	GMN		SFinnegan@indpipe.com

Line:	Qty:	Description:	UOM:	Net Amt:	Ext Amt:
		<b>DUE TO UNPRECEDENTED MARKET VOLATILITY, ALL QUOTATIONS ARE ONLY VALID FOR TWO (2) DAYS.</b>			
1	8	4 C/I 200# LUG BFV MS W/LL Milw CL223E EPDM Sleeve BFV LEAD FREE	EA	324.870	2598.96
2	8	8 BOLT/NUT/GASKET KIT Includes (1) 8 N-Asb Ring Gasket with (8) 3/4x3-1/2 Bolts & Nuts Zinc Plated	EA	32.48	259.84

**Quotation Total \$2,858.80**

We are now stocking MegaPress and MegaPressG [www.viega.net](http://www.viega.net) fittings (Viega's new press system for black pipe) and high efficiency condensing boilers.  
Please inquire with your salesperson or visit us at [www.indpipe.com](http://www.indpipe.com) for more information.