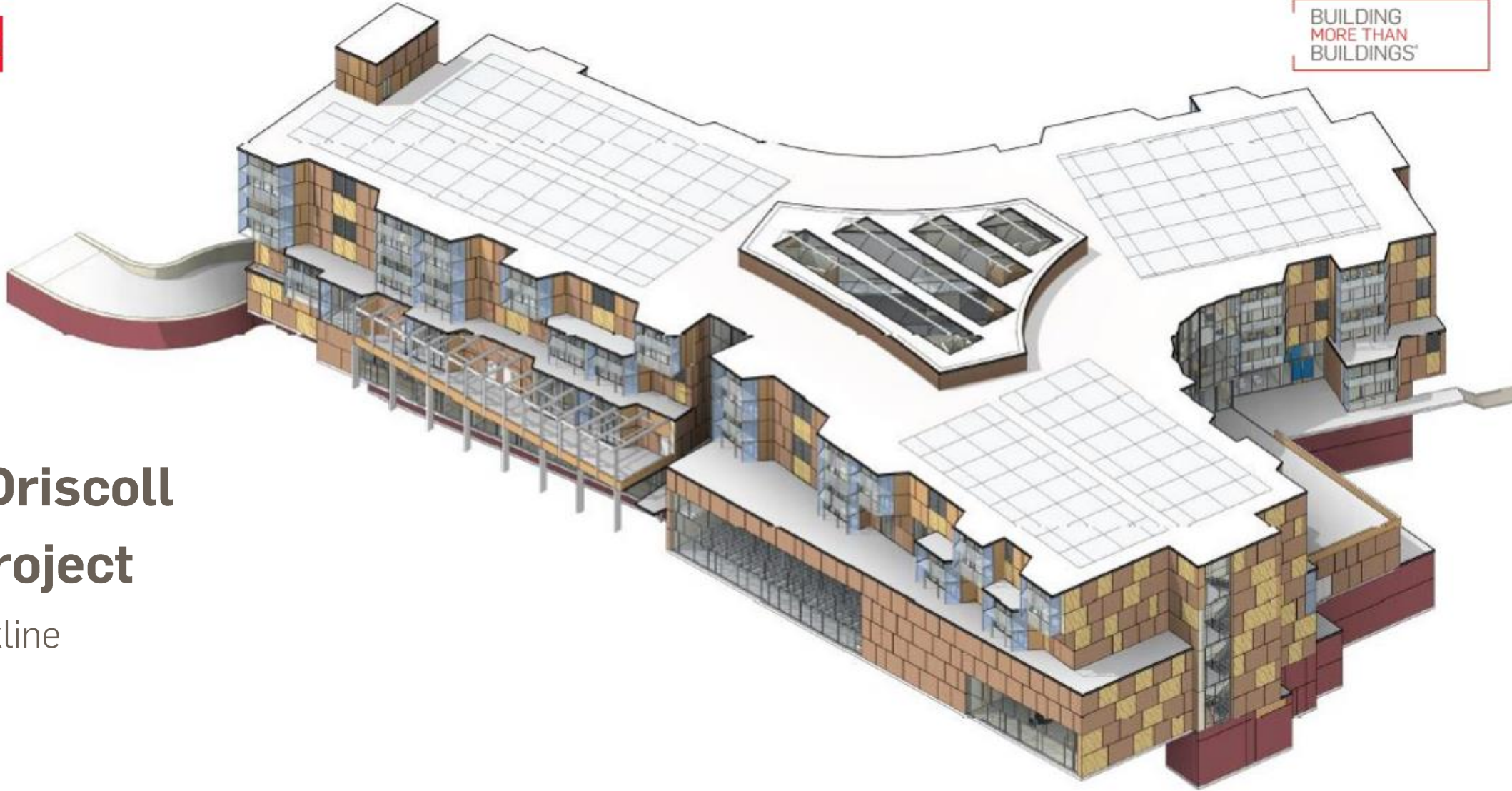




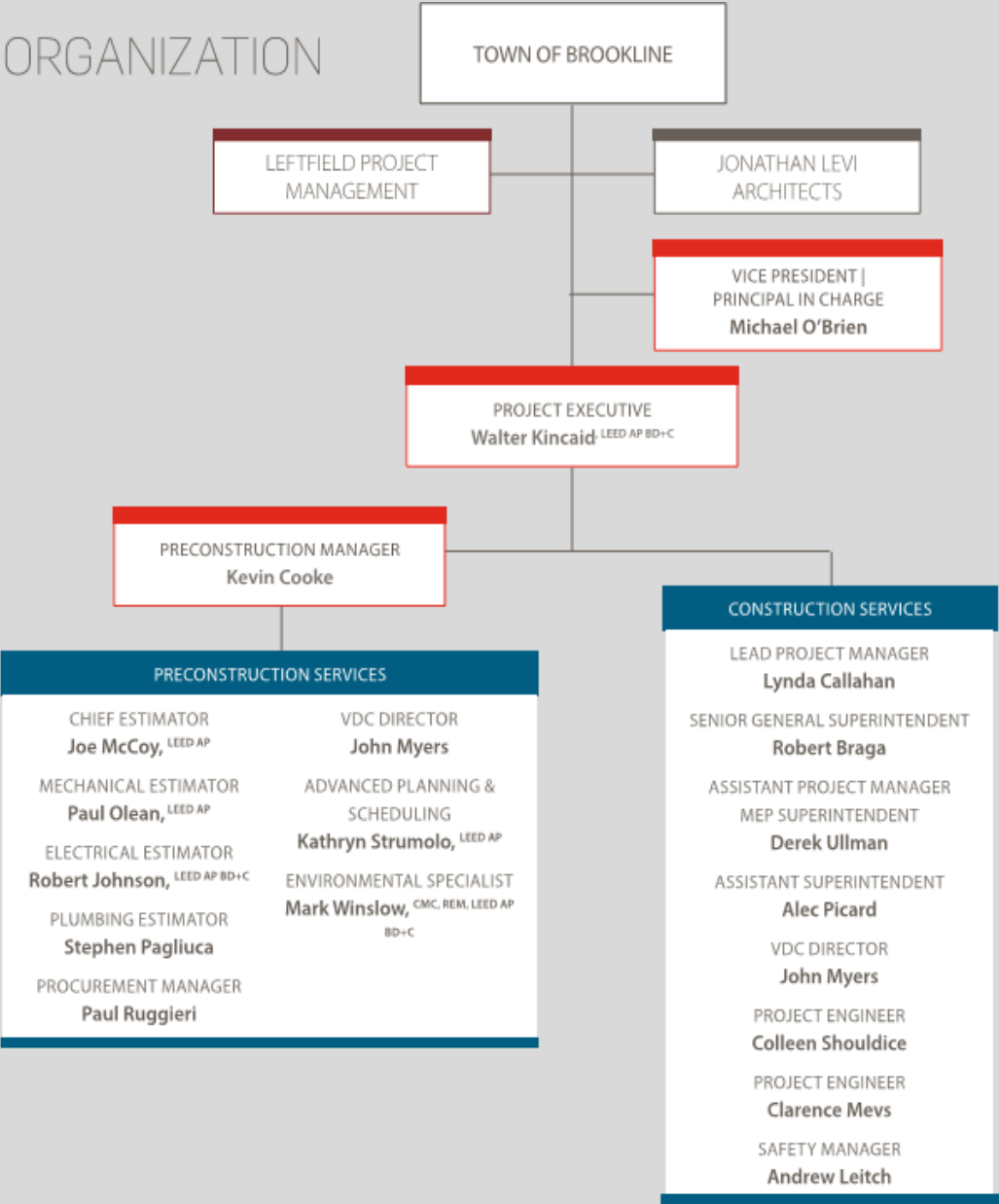
# Michael Driscoll School Project

Town of Brookline  
*Brookline, MA*

April 16, 2020

School Building Advisory Committee Meeting

# ORGANIZATION







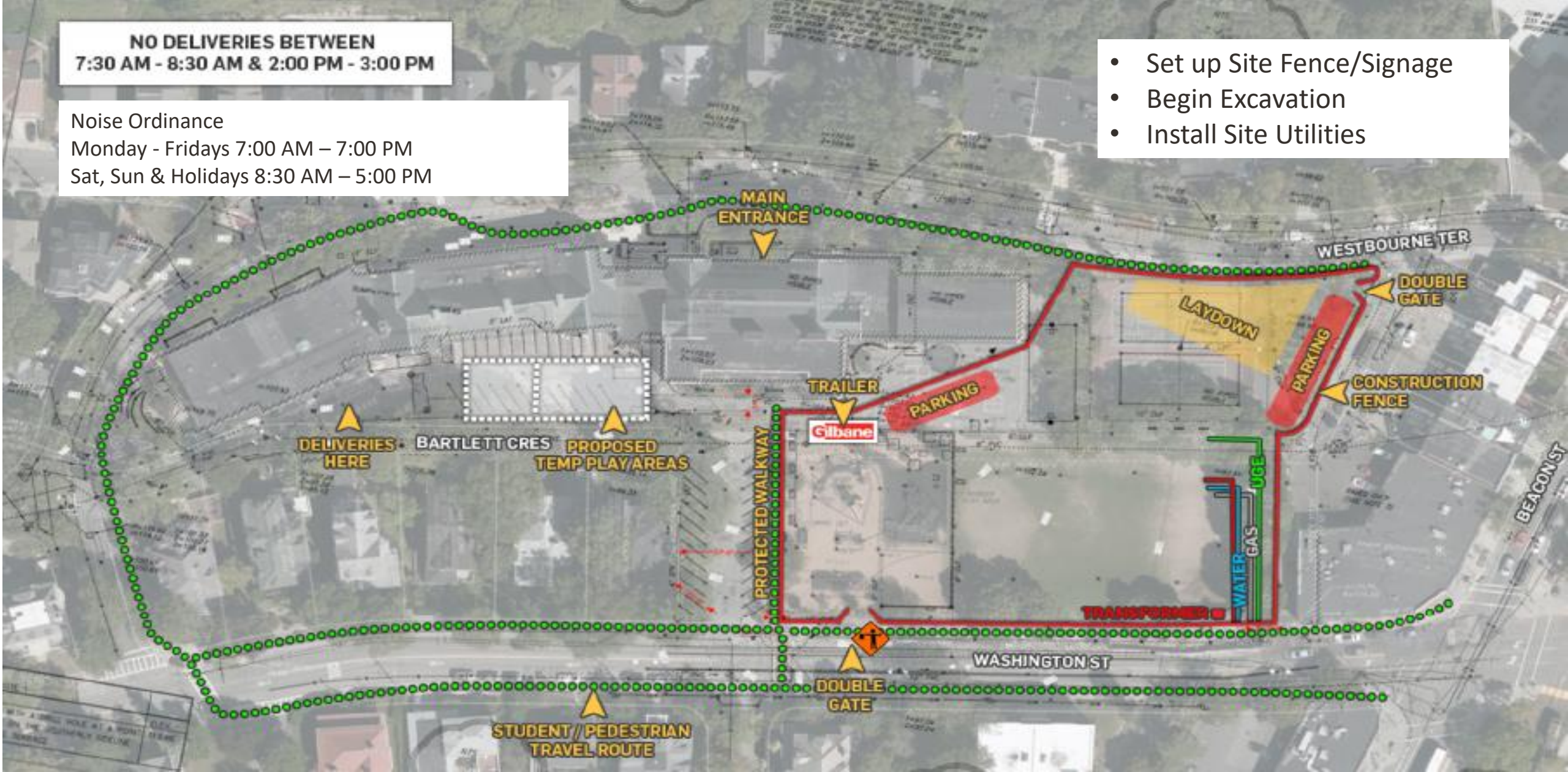
**NO DELIVERIES BETWEEN  
7:30 AM - 8:30 AM & 2:00 PM - 3:00 PM**

Noise Ordinance

Monday - Fridays 7:00 AM – 7:00 PM

Sat, Sun & Holidays 8:30 AM – 5:00 PM

- Set up Site Fence/Signage
- Begin Excavation
- Install Site Utilities





**NO DELIVERIES BETWEEN  
7:30 AM - 8:30 AM & 2:00 PM - 3:00 PM**

Noise Ordinance

Monday - Fridays 7:00 AM – 7:00 PM

Sat, Sun & Holidays 8:30 AM – 5:00 PM

- Foundations
- Steel
- Envelope
- Underground Utilities Complete



**Michael Driscoll School Project Logistics**  
Construction July 2021 – October 2022







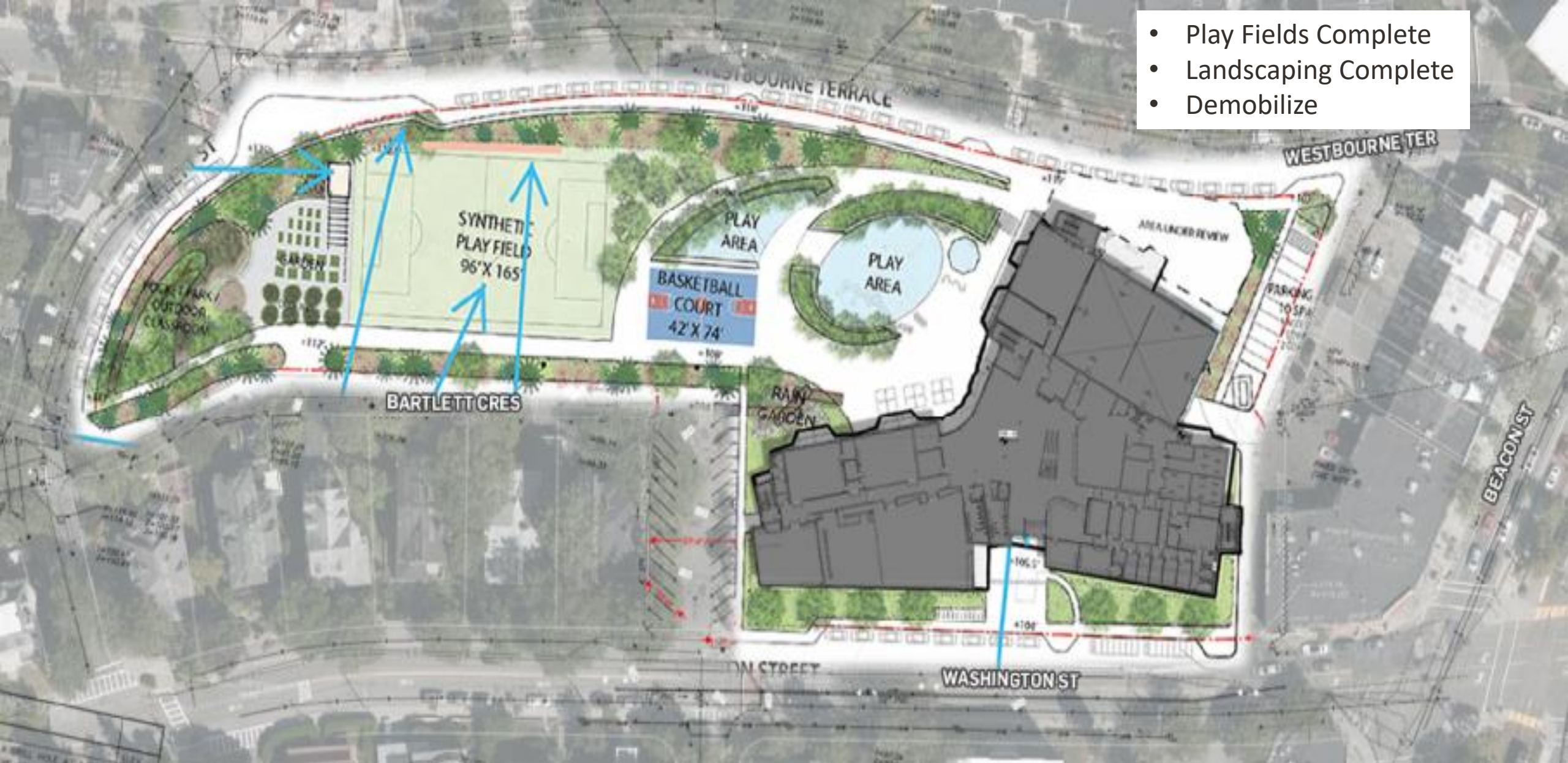




Michael Driscoll School Project Logistics  
Dust Mitigation Processes  
January 2023



- Play Fields Complete
- Landscaping Complete
- Demobilize





# COVID-19 Update:

- Daily Sanitary Cleaning and Disinfecting throughout project spaces
- Hot water hand washing stations
- Onsite Medic for Wellness Screening
- No Trade Car Pooling
- Keep trades separated by 6' while working



## It starts...NOW

- > Education
- > Listening
- > Police/Fire  
Coordination
- > Project Website
  - Neighborhood Portal
    - » Photos
    - » Look Aheads
    - » NO SURPRISES

# Community Engagement



BUILDING  
MORE THAN  
BUILDINGS®

# Questions & Answers

**Gilbane**



BROOKLINE  
DRISCOLL SCHOOL EXPANSION

School Building Advisory Committee  
April 16, 2020





# Agenda

1. Sustainability
2. Systems update
3. Toilet Rooms
4. Landscape Design

# Agenda

## 1. Sustainability



# Sustainability – LEED Scorecard

## Driscoll School: LEED Schools v4 Project Checklist



57 13 24 15 Total (Silver Certification is targeted) Possible Points: 110

|        |          |             |            |
|--------|----------|-------------|------------|
| Likely | Possible | Less Likely | Not Viable |
| L      | P        | LL          | NV         |
|        |          |             | 1          |

Certified 40 points  
Silver 50 points  
Gold 60 points  
Platinum 80 points

Developed in accordance with 3/12/20 drawings

Integrative Process Possible Points: 1

### Comments

Requires energy modeling and water system analyses prior to SD

7 5 3 Location and Transportation Possible Points: 15

|   |  |   |    |
|---|--|---|----|
| 1 |  |   | 15 |
|   |  |   |    |
|   |  | 2 |    |
|   |  |   |    |
|   |  | 3 |    |
|   |  |   |    |
|   |  | 3 |    |
|   |  |   |    |
|   |  |   |    |
|   |  |   |    |
|   |  |   |    |

Credit 1 LEED for Neighborhood Development Location  
Credit 2 Sensitive Land Protection  
Credit 3 High Priority Site  
Credit 4 Surrounding Density and Diverse Uses  
Credit 5 Access to Quality Transit  
Credit 6 Bicycle Facilities  
Credit 7 Reduced Parking Footprint  
Credit 8 Green Vehicles

### Comments

Project is not within an ND location  
Site is previously developed  
Less likely unless soil contamination is present  
Neighborhood density, services determine viability  
Green Line stops within 1/2 mile, pts dependent on frequency of service  
Bike lanes on Washington, Westbourne, covered racks, staff shower  
Total parking capacity to be 30% below ITE basis of 0.25/student  
2% parking (2 space minimum) to include electric charging stations

7 2 2 Sustainable Sites Possible Points: 12

|   |   |  |   |
|---|---|--|---|
| Y |   |  |   |
| Y |   |  |   |
|   | 1 |  |   |
|   |   |  | 2 |
|   |   |  |   |
|   |   |  |   |
|   |   |  |   |
|   |   |  |   |
|   |   |  |   |
|   |   |  |   |
|   |   |  |   |

Prereq 1 Construction Activity Pollution Prevention  
Prereq 2 Environmental Site Assessment  
Credit 1 Site Assessment  
Credit 2 Site Development--Protect or Restore Habitat  
Credit 3 Open Space  
Credit 4 Rainwater Management  
Credit 5 Heat Island Reduction  
Credit 6 Light Pollution Reduction  
Credit 7 Site Master Plan  
Credit 8 Joint Use of Facilities

### Comments

RQD ESC drawings will address requirements  
RQD Phase I / II ESA must be performed  
Existing conditions to be evaluated for compliance  
30% site restoration to native/adaptive plantings, soils unlikely  
Courtyards, playground, landscaped areas sufficient to earn credit  
Onsite infiltration with large playfields, some structural measures  
Achievable through roofing, paving material selection, limited parking  
Design to be developed to meet criteria for uplight and light trespass  
Not applicable to single building site design  
Achievable if spaces are shared with community after school hours

4 4 4 Water Efficiency Possible Points: 12

|   |  |  |  |
|---|--|--|--|
| Y |  |  |  |
| Y |  |  |  |
| Y |  |  |  |
|   |  |  |  |
|   |  |  |  |
|   |  |  |  |
|   |  |  |  |
|   |  |  |  |
|   |  |  |  |
|   |  |  |  |

Prereq 1 Outdoor Water Use Reduction  
Prereq 2 Indoor Water Use Reduction  
Prereq 3 Building-Level Water Metering  
Credit 1 Outdoor Water Use Reduction  
Credit 2 Indoor Water Use Reduction  
Credit 3 Cooling Tower Water Use  
Credit 4 Water Metering

### Comments

RQD No potable water used for irrigation; native/adaptive plantings  
RQD Achievable through fixture selection  
RQD All required meters to be included  
2 No potable water used for irrigation; native/adaptive plantings  
7 Achievable through fixture selection  
2 Design, water testing will determine viability  
1 Requires submetering of 2 systems (i.e. irrigation, DHW)



# Sustainability – LEED Scorecard

## Driscoll School: LEED Schools v4 Project Checklist



| 17 | 7 | 6 | 1 | Energy and Atmosphere                                                             | Possible Points: | 31 | Comments                                                                |
|----|---|---|---|-----------------------------------------------------------------------------------|------------------|----|-------------------------------------------------------------------------|
| Y  |   |   |   | Prereq 1 Fundamental Commissioning and Verification                               | RQD              |    | CxA will be included on team                                            |
| Y  |   |   |   | Prereq 2 Minimum Energy Performance                                               | RQD              |    | Design will exceed required 5% improvement over ASHRAE 90.1-2010        |
| Y  |   |   |   | Prereq 3 Building-Level Energy Metering                                           | RQD              |    | All required meters to be included                                      |
| Y  |   |   |   | Prereq 4 Fundamental Refrigerant Management                                       | RQD              |    | Equipment will meet requirements                                        |
| 3  | 2 |   | 1 | Credit 1 Enhanced Commissioning                                                   | 6                |    | School to determine scope (Enhanced, Monitoring based, Envelope)        |
| 13 | 3 |   |   | Credit 2 Optimize Energy Performance                                              | 16               |    | EEMS, fossil fuel reduction evaluated with whole building modeling      |
|    |   | 1 |   | Credit 3 Advanced Energy Metering                                                 | 1                |    | Additional costs to meter all individual energy uses ≥ 10%              |
|    |   | 2 |   | Credit 4 Demand Response                                                          | 2                |    | Availability of program from local utility will determine viability     |
| 1  | 1 | 1 |   | Credit 5 Renewable Energy Production                                              | 3                |    | PV array on roof (points earned for 1%,5%,10%)                          |
|    | 1 |   |   | Credit 6 Enhanced Refrigerant Management                                          | 1                |    | Dependent on HVAC equipment, refrigerant types/charge                   |
|    |   | 2 |   | Credit 7 Green Power and Carbon Offsets                                           | 2                |    | School to determine viability, requires purchase of RECs and offsets    |
| 4  |   | 5 | 4 | Materials and Resources                                                           | Possible Points: | 13 | Comments                                                                |
| Y  |   |   |   | Prereq 1 Storage and Collection of Recyclables                                    | RQD              |    | Collection and storage areas required                                   |
| Y  |   |   |   | Prereq 2 Construction and Demolition Waste Management Planning                    | RQD              |    | Requirements to be included in project specifications                   |
|    |   | 4 | 1 | Credit 1 Building Life-Cycle Impact Reduction                                     | 5                |    | Requires building LCA, demonstrable reduction possible with mass timber |
| 1  |   |   | 1 | Credit 2 Building Product Disclosure and Optimization - EPDs                      | 2                |    | 1 pt achievable through product selection                               |
| 1  |   |   | 1 | Credit 3 Building Product Disclosure and Optimization - Sourcing of Raw Materials | 2                |    | 1 pt achievable through product selection                               |
| 1  |   |   | 1 | Credit 4 Building Product Disclosure and Optimization - Material Ingredients      | 2                |    | 1 pt achievable through product selection                               |
| 1  |   | 1 |   | Credit 5 Construction and Demolition Waste Management                             | 2                |    | Requires onsite separation, diversion targets of 50%,75%                |
| 14 | 3 | 2 |   | Indoor Environmental Quality                                                      | Possible Points: | 16 | Comments                                                                |
| Y  |   |   |   | Prereq 1 Minimum Indoor Air Quality Performance                                   | RQD              |    | Based on ASHRAE 62.1- 2010, airflow,exhaust measurement                 |
| Y  |   |   |   | Prereq 2 Environmental Tobacco Smoke Control                                      | RQD              |    | Will require site and building signage                                  |
| Y  |   |   |   | Prereq 3 Minimum Acoustic Performance                                             | RQD              |    | Requires acoustical analysis of site, reverberation,mechanical noise    |
| 2  |   |   |   | Credit 1 Enhanced Indoor Air Quality Strategies                                   | 2                |    | Walk off mats, MERV 13 filters, neg pressurization; CO2 monitoring      |
| 3  |   |   |   | Credit 2 Low-Emitting Materials                                                   | 3                |    | Achievable through product selection and specification                  |
| 1  |   |   |   | Credit 3 Construction Indoor Air Quality Management Plan                          | 1                |    | Based on SMACNA measures                                                |
| 1  | 1 |   |   | Credit 4 Indoor Air Quality Assessment                                            | 2                |    | Achievable through flush-out (1pt)or IAQ testing (2pts)                 |
|    | 1 |   |   | Credit 5 Thermal Comfort                                                          | 1                |    | ASHRAE 55-2010 compliance, 100% shared, 50% individual controls         |
| 1  |   | 1 |   | Credit 6 Interior Lighting                                                        | 2                |    | Lighting control option is achievable, Lighting Quality to be evaluated |
| 1  | 1 |   |   | Credit 7 Daylight                                                                 | 3                |    | Classrooms design, glazing and lightshelves to maximize daylight        |
| 1  |   |   |   | Credit 8 Quality Views                                                            | 1                |    | 75% of regularly occupied spaces to have direct view to outdoors        |
|    |   | 1 |   | Credit 9 Acoustic Performance                                                     | 1                |    | Difficult to achieve HVAC background noise less than 35 dB              |





# Sustainability – LEED Scorecard

## Driscoll School: LEED Schools v4 Project Checklist



| 6 |  |  |  | Innovation                                                         | Possible Points: | 6 |
|---|--|--|--|--------------------------------------------------------------------|------------------|---|
| 1 |  |  |  | Credit 1 ID Green Cleaning Program                                 | 1                |   |
| 1 |  |  |  | Credit 2 ID Integrated Pest Management Plan                        | 1                |   |
| 1 |  |  |  | Credit 3 ID Occupant Comfort Survey or Design for Active Occupants | 1                |   |
| 1 |  |  |  | Credit 4 ID School as a Teaching Tool / Green Education            | 1                |   |
| 1 |  |  |  | Credit 5 Pilot- Assessment and Planning for Resiliency             | 1                |   |
| 1 |  |  |  | Credit 6 LEED Accredited Professional                              | 1                |   |

| Comments                                                   |
|------------------------------------------------------------|
| Plan to be based on LEED Existing Building criteria        |
| Plan to be based on LEED Existing Building criteria        |
| Survey occupants or Design to promote physical activity    |
| Integrate sustainable features into curriculum             |
| Address long-term building performance in changing climate |
| Many project team members are LEED APs                     |

| 1 | 1 | 2 |  | Regional Priority                                     | Possible Points: | 4 |
|---|---|---|--|-------------------------------------------------------|------------------|---|
| 1 |   |   |  | Credit 1 Optimize Energy Performance (8 pts)          | 1                |   |
|   | 1 |   |  | Credit 2 Renewable Energy Production (2 pts)          | 1                |   |
|   |   | 1 |  | Credit 3 Building Life Cycle Impact Reduction (2 pts) | 1                |   |
|   |   | 1 |  | Credit 4 Access to Quality Transit (1 pt)             | 1                |   |

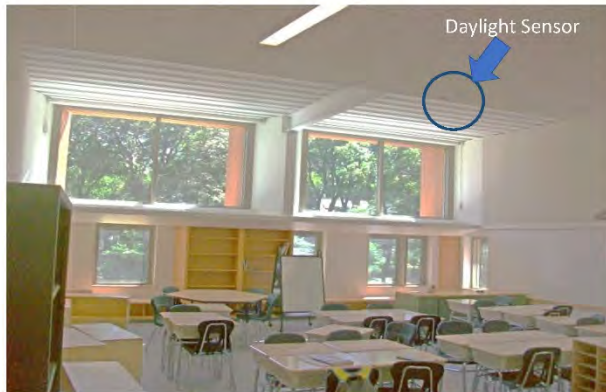
| Comments |
|----------|
|----------|

| 57                                                                                       | 13 | 24 | 15 | Total | Possible Points: | 110 |
|------------------------------------------------------------------------------------------|----|----|----|-------|------------------|-----|
| Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110 |    |    |    |       |                  |     |



# Sustainability – Daylighting

## HIGH EFFICIENCY LED LIGHTING WITH OCCUPANCY SENSOR & DAYLIGHT HARVESTING



Wellington Elementary School Daylighting



Dearborn Academy Daylighting

- Dual Technology Occupancy Sensor & Daylight Photosensor
- Lighting Control System
- LPD Target of .4 to .5



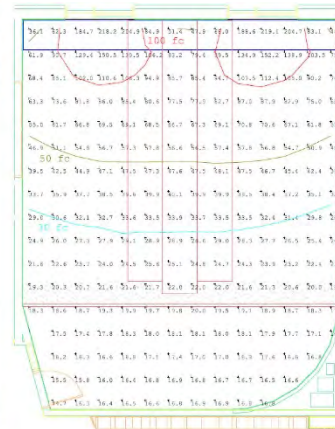
Cove Lighting



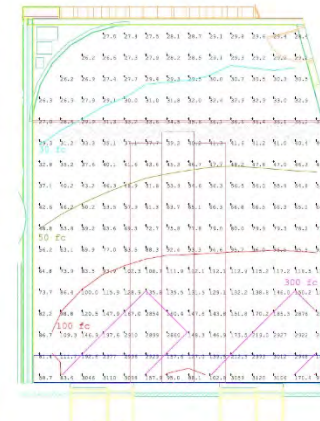
Occupancy/Daylight Sensor

LEED V4 DAYLIGHT CREDIT REQUIREMENTS:  
DEMONSTRATE THROUGH COMPUTER MODELING THAT  
ILLUMINANCE LEVELS WILL BE BETWEEN 30 AND 300  
FOOTCANDLES FOR 9AM AND 3PM ON A CLEAR SKY DAY AT THE  
EQUINOX, FOR THE FLOOR AREA INDICATED IN THE TABLE:

| PERCENTAGE OF REGULARLY OCCUPIED FLOOR AREA | POINTS |
|---------------------------------------------|--------|
| 75%                                         | 1      |
| 90%                                         | 2      |



48.32 FOOTCANDLE AVERAGE,  
NORTH FACING CLASSROOM WITH NATURAL LIGHTING ONLY  
(MARCH 30TH, 2018 - 3:00PM, CLEAR SKY)

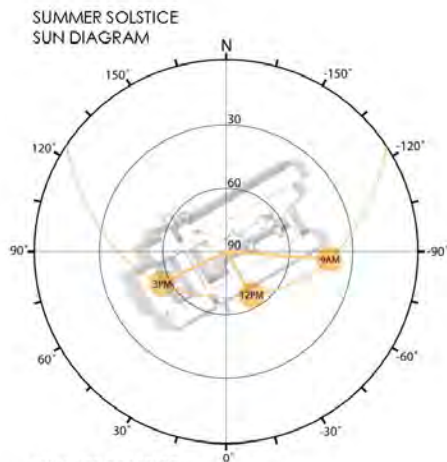


326.88 FOOTCANDLE AVERAGE,  
SOUTH FACING CLASSROOM WITH NATURAL LIGHTING ONLY  
WITH EXTERIOR WINDOW SUNSHADES  
(MARCH 30TH, 2018 - 3:00PM, CLEAR SKY)

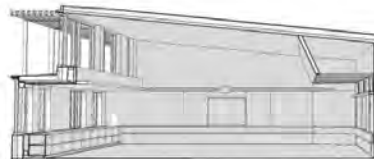




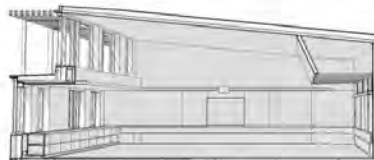
# Sustainability – Daylighting



SUMMER SOLSTICE  
SUPPORTING IMAGES



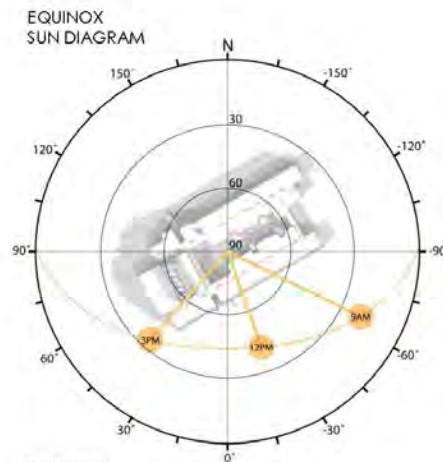
SUMMER SOLSTICE  
SOUTH CLASSROOM 9:00 AM



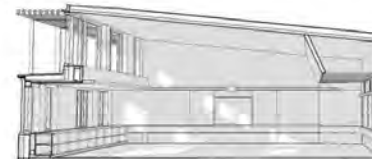
SUMMER SOLSTICE  
SOUTH CLASSROOM 12:00 PM



SUMMER SOLSTICE  
NORTH CLASSROOM 3:00 PM



EQUINOX  
SUPPORTING IMAGES



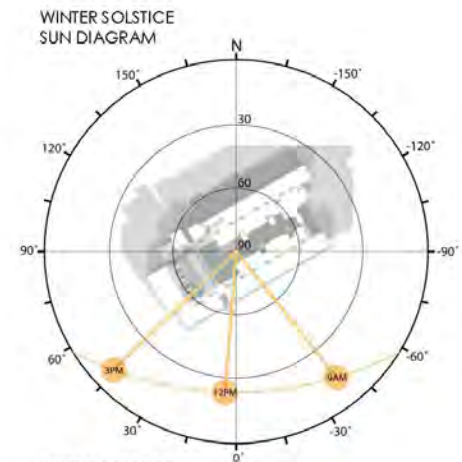
EQUINOX  
SOUTH CLASSROOM 9:00 AM



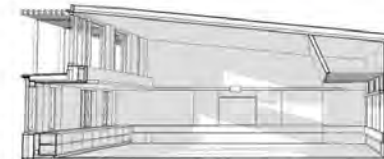
EQUINOX  
SOUTH CLASSROOM 12:00 PM



EQUINOX  
NORTH CLASSROOM 3:00 PM



WINTER SOLSTICE  
SUPPORTING IMAGES



WINTER SOLSTICE  
SOUTH CLASSROOM 9:00 AM



WINTER SOLSTICE  
SOUTH CLASSROOM 12:00 PM



WINTER SOLSTICE  
NORTH CLASSROOM 3:00 PM

# Sustainability – Daylighting



## Light Shelf Radiant Panel

### RPLS

Price Light Shelf Radiant Panel, RPLS, offers a unique way to passively channel natural daylight while maintaining a comfortable environment with radiant heating or cooling. The upper surface of this panel will reflect sunlight on the ceiling of a room, allowing the light to penetrate deeper in the occupied space, and reducing the need for artificial lighting.

Increased natural light and architectural appeal.



Increased natural light and architectural appeal with various face finishes



Simple installation process with pre-drilled fastener clips



Upper surface reflects sunlight on the ceiling of a room



Light shelf options include activated radiant top and bulbous end finish

[www.price-hvac.com](http://www.price-hvac.com) for additional product information, including product videos and brochures.

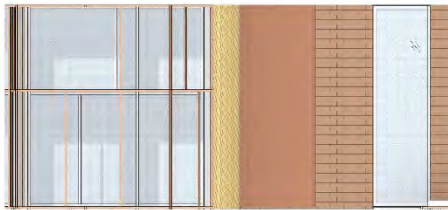




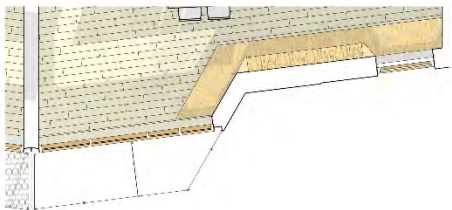
# Sustainability – Daylighting



EXTERIOR ELEVATION - SIDE



EXTERIOR ELEVATION - FRONT



PLAN OF TYPICAL CLASSROOM WINDOW BAY



3D VIEW OF CLASSROOM FENESTRATION / SOLAR SHADING

CLASSROOM FENESTRATION/ SOLAR SHADING

0' 4' 8' 16'

32'



 Jonathan Levi Architects

MARCH 30, 2020  
DESIGN DEVELOPMENT WORKSHOP 5  
DRISCOLL SCHOOL



Jonathan Levi Architects

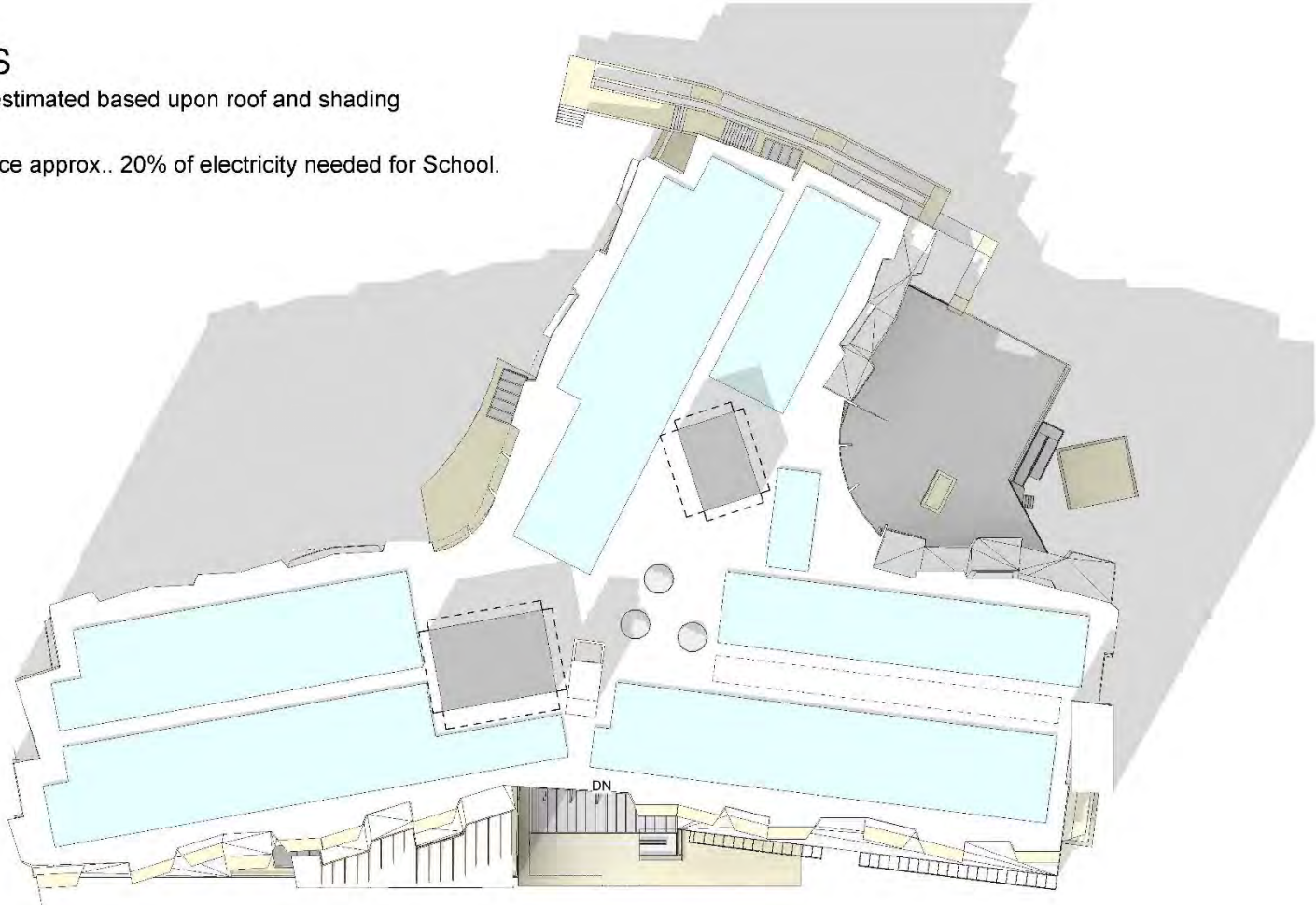
Mar. 30, 2020

DRISCOLL SCHOOL, BROOKLINE

# Sustainability – Photovoltaic Energy

## PV SYSTEMS

- 180 KW PV array estimated based upon roof and shading
- PV array will produce approx.. 20% of electricity needed for School.





# Sustainability – Mass Timber



# Sustainability – Mass Timber

## Embodied Carbon Materials Comparison

|    |                                            | Quartz Project - Global Warming Potential |       |                                                    |         |                                                                   |       | Rank<br>Low to<br>High |
|----|--------------------------------------------|-------------------------------------------|-------|----------------------------------------------------|---------|-------------------------------------------------------------------|-------|------------------------|
|    |                                            | Cradle-to-gate LCA Results                |       | End-of-life LCA Results                            |         | Combined LCA Results<br>(Not including Installation + Use Phases) |       |                        |
| #  | Material Type                              | kg CO2e                                   | %     | kg CO2e                                            | %       | kg CO2e                                                           | %     |                        |
| 1  | Ready-mix Concrete, NW (3,000 - 4,000 psi) | 0.2420                                    | ---   | 0.0265                                             | ---     | 0.2685                                                            | ---   | 7                      |
|    | No slag or flyash                          | 1 kg of product                           |       | 55% for recovery; 45% landfilled                   |         |                                                                   |       |                        |
| 2  | Ready-mix Concrete, NW (3,000 - 4,000 psi) | 0.1940                                    | 80%   | 0.0265                                             | 100%    | 0.2205                                                            | 82%   | 6                      |
|    | 35% Flyash replacement                     | 1 kg of product                           |       | 55% for recovery; 45% landfilled                   |         |                                                                   |       |                        |
| 3  | Ready-mix Concrete, NW (3,000 - 4,000 psi) | 0.1420                                    | 59%   | 0.0265                                             | 100%    | 0.1685                                                            | 63%   | 5                      |
|    | 70% GGBFS replacement                      | 1 kg of product                           |       | 55% for recovery; 45% landfilled                   |         |                                                                   |       |                        |
| 4  | Glulam structure                           | (1.4300)                                  | -591% | 0.6640                                             | 2506%   | (0.7660)                                                          | -285% | 2                      |
|    |                                            | 1 kg of product                           |       | 17.5% incinerated; 17.5% recycled; 65% to landfill |         |                                                                   |       |                        |
| 5  | Cross-laminated Timber                     | (1.1500)                                  | -475% | 0.6340                                             | 2392%   | (0.5160)                                                          | -192% | 3                      |
|    |                                            | 1 kg of product                           |       | 17.5% incinerated; 17.5% recycled; 65% to landfill |         |                                                                   |       |                        |
| 6  | Medium Density Fiberboard                  | (0.9230)                                  | -381% | 0.6350                                             | 2396%   | (0.2880)                                                          | -107% | 4                      |
|    |                                            | 1 kg of product                           |       | 17.5% incinerated; 17.5% recycled; 65% to landfill |         |                                                                   |       |                        |
| 7  | Plywood                                    | (1.5300)                                  | -632% | 0.6650                                             | 2509%   | (0.8650)                                                          | -322% | 1                      |
|    |                                            | 1 kg of product                           |       | 17.5% incinerated; 17.5% recycled; 65% to landfill |         |                                                                   |       |                        |
| 8  | Anodized Aluminum Curtainwall              | 6.5700                                    | 2715% | (4.3000)                                           | -16226% | 2.2700                                                            | 845%  | 11                     |
|    | 29% post-consumer recycled content         | 1 kg of product                           |       | 95% recovered, 5% landfilled                       |         |                                                                   |       |                        |
| 9  | Double-pane IGU                            | 2.7000                                    | 1116% | 0.0688                                             | 260%    | 2.7688                                                            | 1031% | 12                     |
|    | 3.56% aluminum scrap content               | 1 kg of product                           |       | 100% to landfill                                   |         |                                                                   |       |                        |
| 10 | Steel I-beams                              | 0.9380                                    | 388%  | 0.2270                                             | 857%    | 1.1650                                                            | 434%  | 9                      |
|    | 100% post-consumer recycled content        | 1 kg of product                           |       | 97.5% recycled, 2.5% to landfill                   |         |                                                                   |       |                        |
| 11 | Steel stud                                 | 2.3600                                    | 975%  | (0.7880)                                           | -2974%  | 1.5720                                                            | 585%  | 10                     |
|    | 45% post-consumer recycled content         | 1 kg of product                           |       | 97.5% recycled, 2.5% to landfill                   |         |                                                                   |       |                        |
| 12 | Gypsum wallboard                           | 0.3640                                    | 150%  | 0.0872                                             | 329%    | 0.4512                                                            | 168%  | 8                      |
|    | Natural gypsum                             | 1 kg of product                           |       | 100% landfilled                                    |         |                                                                   |       |                        |

Prepared by Vidaris Inc.



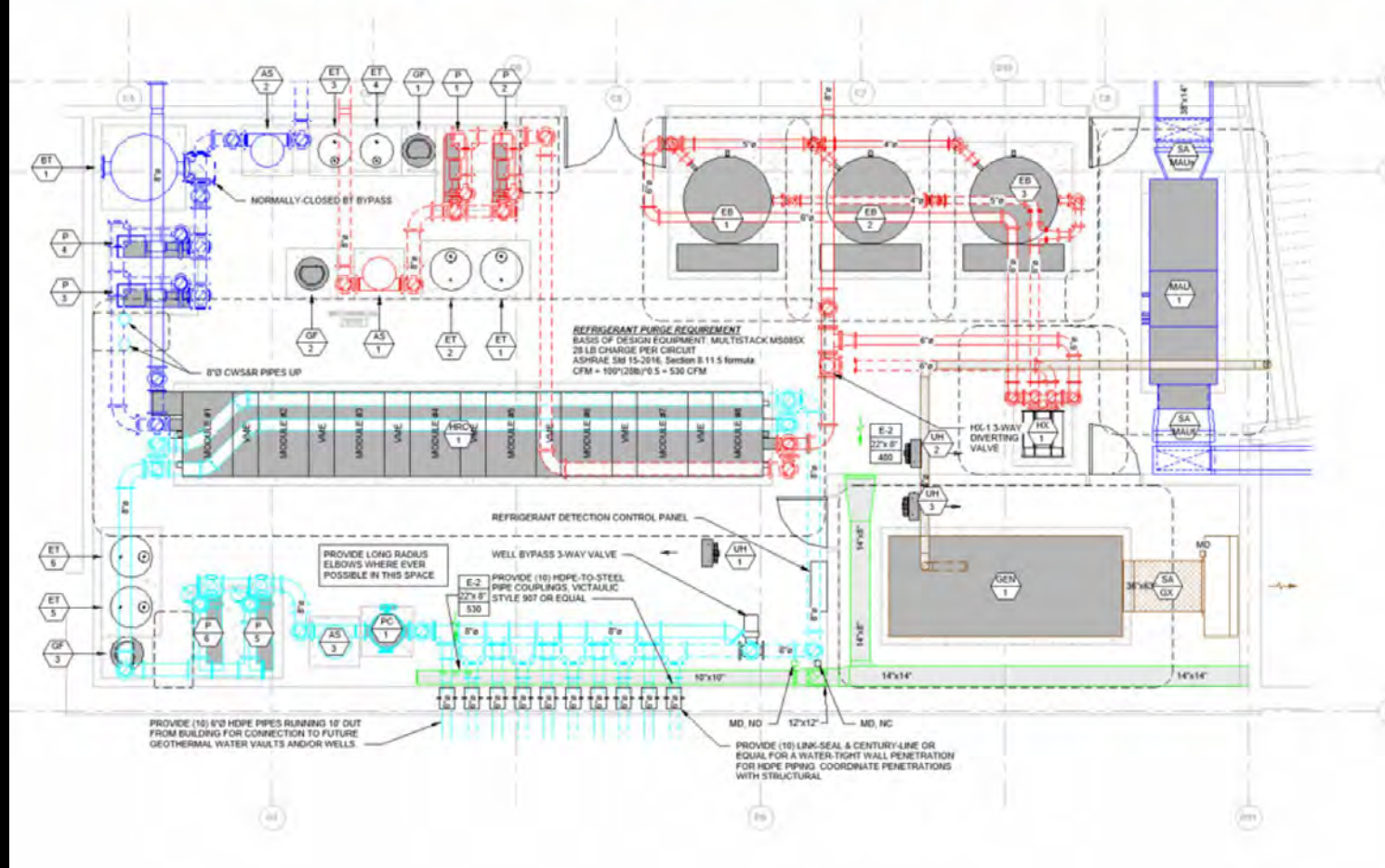
# Agenda

1. Sustainability
2. Systems Update



# Workshop 5 – Systems

## High-Efficiency Water-To-Water Source Simultaneous Heating/Cooling Heat Pump Chillers w/ Heat Recovery Plant



# Workshop 5 – Systems

## PLUMBING SYSTEMS

### Water Conserving Fixtures:

- Water Closets w/ 1.28 gpf
- Urinals w/ 0.125 gpm
- Lavatories w/ 0.35 gpm faucet
- Staff/Classroom Sinks w/manual 0.5 GPM faucet
- Accessible shower w/1.5 GPM shower head
- Water Coolers with Bottle Fillers

- Water Sub-Meters with integration into Building Energy Management System



- \* Point of use electric for remote toilets
- High Efficiency Domestic Hot Water heat pump System with Storage Tank and Circulator Pump



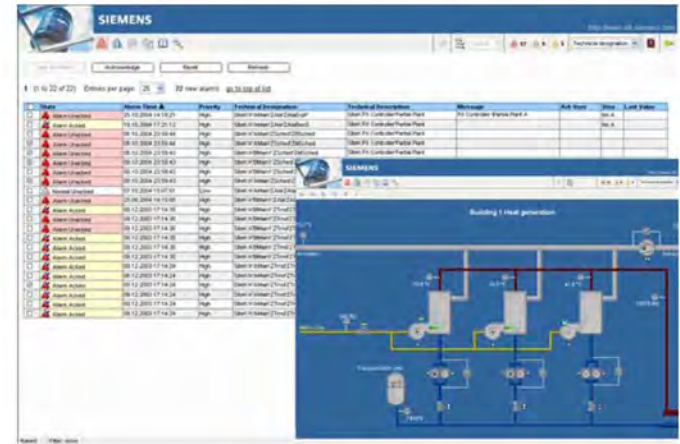
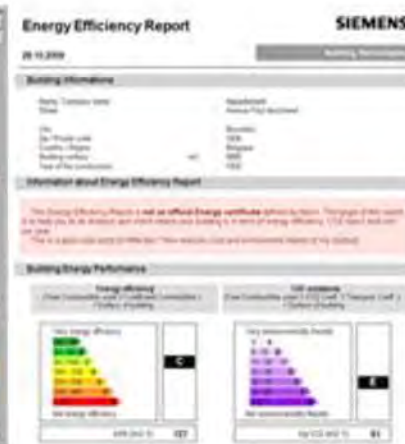


# Workshop 5 – Systems

## BUILDING AUTOMATION AND ENERGY MANAGEMENT SYSTEM

### BUILDING DASHBOARD SYSTEM Johnson Metasys

- Utility Data
- On-Site Generation System
- Submetering
- Water and electric meters



# Workshop 5 – Systems

## HIGH EFFICIENCY LED LIGHTING WITH OCCUPANCY SENSOR & DAYLIGHT HARVESTING

- Local Dual Technology Occupancy Sensor & Daylight Photosensor
- Lighting Control System
- LPD Target of 0.4 to .5
- Low light power density (LPD) 40% below code
- Lower LPD improves HVAC system efficiency
- Energy reduction by harvesting natural daylight
- 90% reflective ceiling surface for improved light levels



*Daylight/Occupancy Sensor*



GGD

# Workshop 5 – Systems

## INTEGRATED ELECTRONIC SECURITY SYSTEM

### Security System Components

- Access Control
- CCTV
- Intrusion
- Integration
  - With each other
  - With other systems
  - Paging/Lighting

Security Cameras



Master Intercom Station



Exterior Intercom Station Security Card Reader/Keypad



### Sequence of operations of key elements

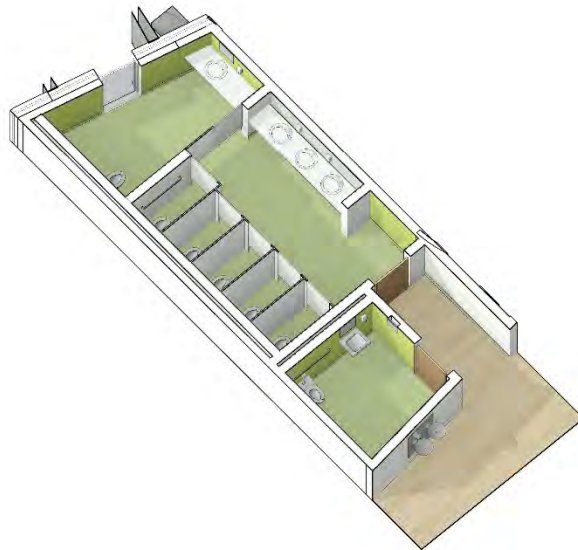
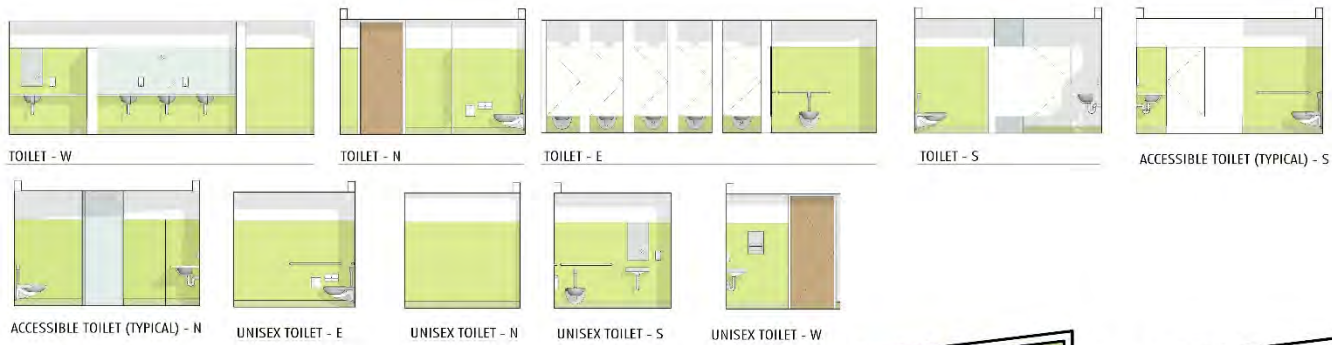
- Typical access control door
- Main Entrance
- CCTV video retrieval
- Intrusion system



# Agenda

1. Sustainability
2. Systems – Electrical & Fire Protection
3. Toilets

# Workshop 5 – Toilets



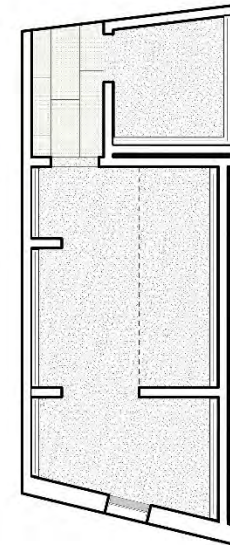
TOILETS

01 41 81 161 321

 Jonathan Levi Architects



THIRD AND FOURTH FLOOR TOILETS - PLAN



THIRD AND FOURTH FLOOR TOILETS - RCP

MARCH 30, 2020  
DESIGN DEVELOPMENT WORKSHOP 5  
DRISCOLL SCHOOL

# Workshop 5 – Toilets



PRE-K/ K TOILET - N



PRE-K/ K TOILET - E



PRE-K/ K TOILET - W



PRE-K/ K TOILET - S



1 AND 2 GRADE - N



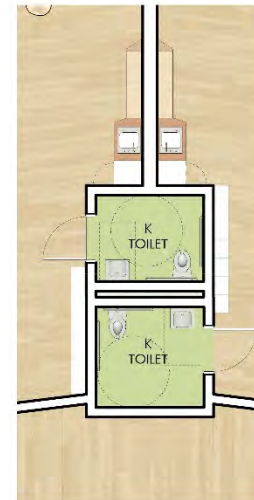
1 AND 2 GRADE - E



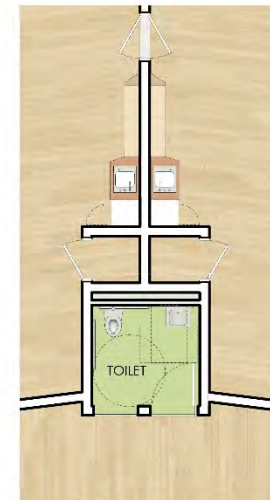
1 AND 2 GRADE - W



1 AND 2 GRADE - S



SECOND FLOOR PRE-K AND K TOILETS



SECOND FLOOR - GRADE 1 AND 2 TOILETS

## TOILETS

0' 4' 8' 16'

32'

 Jonathan Levi Architects

MARCH 30, 2020  
DESIGN DEVELOPMENT WORKSHOP 5  
DRISCOLL SCHOOL



# Preferred Concept



|                 | School Building Footprint |    | Car / Truck Zone |    | Usable Open Space | Unoccupied Space | Total      |
|-----------------|---------------------------|----|------------------|----|-------------------|------------------|------------|
| Existing Site   | 39,500                    | SF | 23,800           | SF | 80,700 SF         | 29,000 SF        | 173,000 SF |
| Proposed Design | 38,200                    | SF | 14,200           | SF | 97,800 SF         | 22,800 SF        | 173,000 SF |



# Small Community Playground



Jonathan Levi Architects

DRISCOLL SCHOOL, BROOKLINE

# Playground Equipment

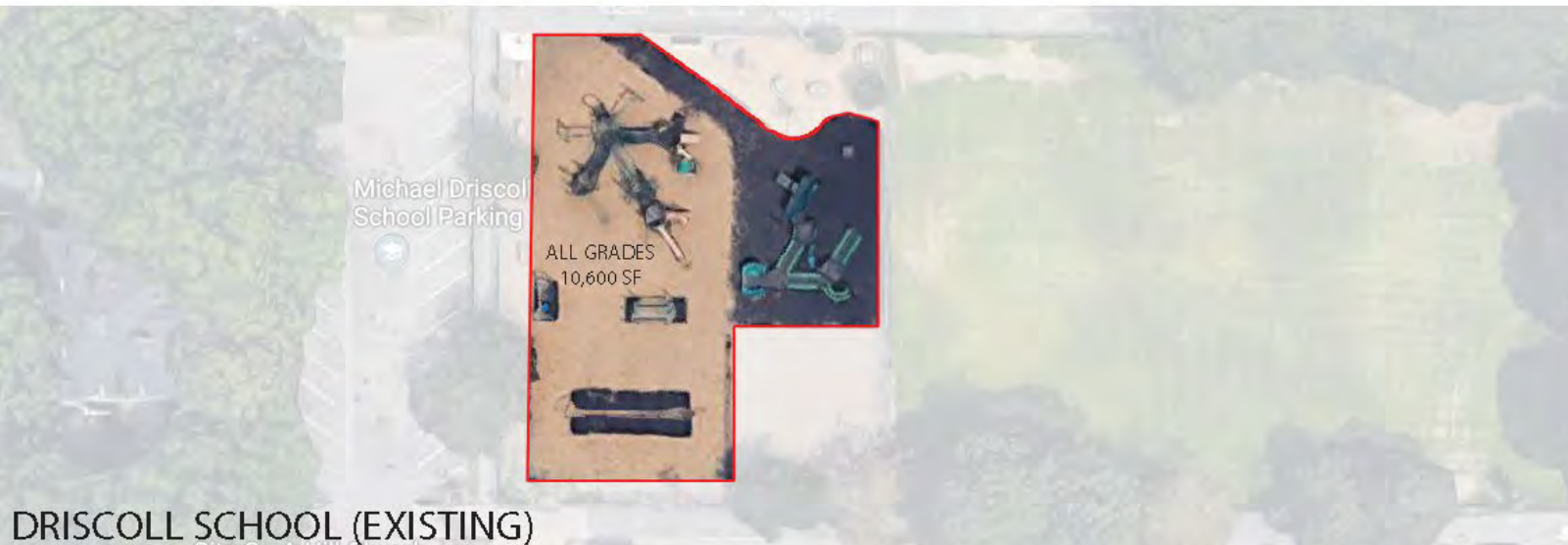


**Desired capacity = 256 children\***

\*1/3 of 800 children w/  
4% absentee factor

**Proposed capacity**  
Grades pre-k, k: 50-80  
Grades 2-5: 90+-  
Grades 5-8: 90+-  
**Total: 230-280 children**

**Total area = 13,200 sf**



**Total area = 10,600 sf**



# Agenda

1. Sustainability
2. Systems – Electrical & Fire Protection
3. Toilets
4. Landscape Design

# Kompan - Pre-K, K



Jonathan Levi Architects

DRISCOLL SCHOOL, BROOKLINE

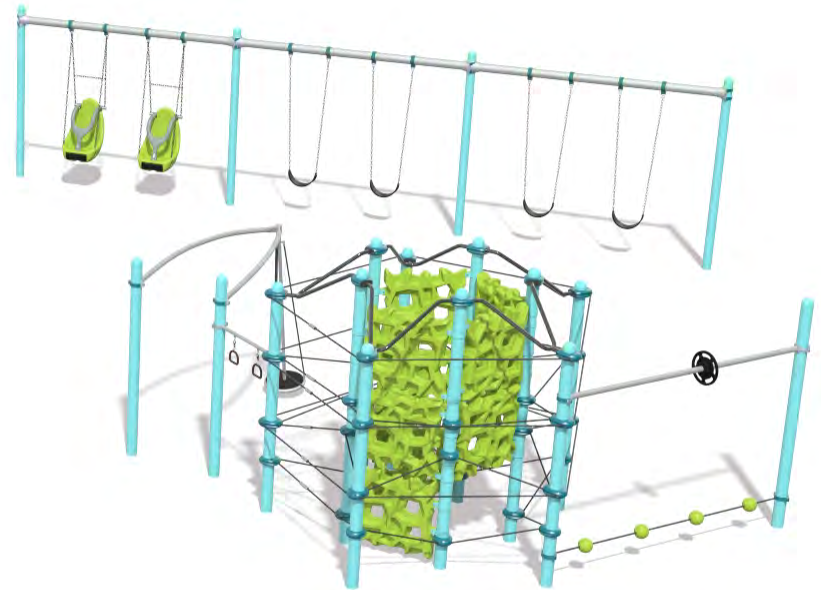
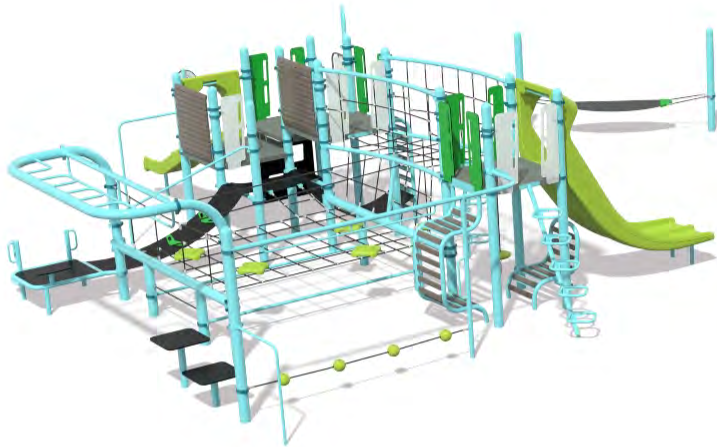


# Kompan - Pre-K, K





# Landscape Structures - Grades 1-4



*landscape  
structures*

DRISCOLL SCHOOL

MEO20263 3D2 • 04.10.2020

**O'BRIEN  
& SONS**  
ELEMENTS FOR A GREAT OUTDOORS

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# Berliner- Grades 5-8



  
**Berliner**  
Play equipment for life



# MICHAEL DRISCOLL SCHOOL PROJECT

## Project Highlights

- Transportation Board –
  - Total 116 parking spaces approved through a combination of on-site and permitted on-street spaces
- 50% Design Development Set to be Issued for Estimates
  - Set to be issued 4/17
  - Gilbane and Daedalus estimates due 5/8
  - Estimates reconciled week of 5/11
- 04/18 - 04/25 – Test Geothermal Well Installation
  - A single test well will be installed
  - Well will require cool off period
  - Well will be tested in early May
- Planning Board
  - JLA has submitted application
  - Project will be on next Planning Board agenda
- 05/06 Gilbane Construction Community Forum Kick-off



## Total Project Budget Status Report

| Description                        | Total Project Budget | Authorized Changes | Revised Total Budget | Total Committed     | % Cmtd to Date | Actual Spent to Date | % Spent to Date | Balance To Spend    | Comments |
|------------------------------------|----------------------|--------------------|----------------------|---------------------|----------------|----------------------|-----------------|---------------------|----------|
| <b>FEASIBILITY STUDY AGREEMENT</b> |                      |                    |                      |                     |                |                      |                 |                     |          |
| OPM Schematic Design               | \$ 34,015            |                    | \$ 34,015            | \$ 34,015           | 100%           | \$ 34,015            | 100%            | \$ -                |          |
| A/E Schematic Design               | \$ 1,179,260         |                    | \$ 1,179,260         | \$ 1,179,260        | 100%           | \$ 1,179,260         | 100%            | \$ -                |          |
| <b>TOTAL SD</b>                    | <b>\$ 1,213,275</b>  | <b>\$ -</b>        | <b>\$ 1,213,275</b>  | <b>\$ 1,213,275</b> | <b>100%</b>    | <b>\$ 1,213,275</b>  | <b>100%</b>     | <b>\$ -</b>         |          |
| <b>ADMINISTRATION</b>              |                      |                    |                      |                     |                |                      |                 |                     |          |
| Legal Fees                         | \$ 106,563           |                    | \$ 106,563           | \$ -                | 0%             |                      | 0%              | \$ 106,563          |          |
| Owner's Project Manager            | \$ 3,182,090         | \$ -               | \$ 3,182,090         | \$ 3,182,090        | 100%           | \$ 215,932           | 7%              | \$ 2,966,158        |          |
| Design Development                 | \$ 429,575           |                    | \$ 429,575           | \$ 429,575          | 100%           | \$ 215,932           | 50%             | \$ 213,643          |          |
| Construction Documents             | \$ 524,441           |                    | \$ 524,441           | \$ 524,441          | 100%           | \$ -                 | 0%              | \$ 524,441          |          |
| Bidding                            | \$ 188,436           |                    | \$ 188,436           | \$ 188,436          | 100%           | \$ -                 | 0%              | \$ 188,436          |          |
| Construction Administration        | \$ 1,989,628         |                    | \$ 1,989,628         | \$ 1,989,628        | 100%           | \$ -                 | 0%              | \$ 1,989,628        |          |
| Closeout                           | \$ 50,010            |                    | \$ 50,010            | \$ 50,010           | 100%           | \$ -                 | 0%              | \$ 50,010           |          |
| Extra Services                     | \$ -                 |                    | \$ -                 | \$ -                |                | \$ -                 |                 | \$ -                |          |
| Reimbursable Services              | \$ -                 |                    | \$ -                 | \$ -                |                | \$ -                 |                 | \$ -                |          |
| Cost Estimates                     | \$ -                 |                    | \$ -                 | \$ -                |                | \$ -                 |                 | \$ -                |          |
| Advertising & Printing             | \$ 31,969            | \$ -               | \$ 31,969            | \$ 589              | 2%             | \$ 589               | 2%              | \$ 31,380           |          |
| TOB Project Management Services    | \$ 576,500           | \$ -               | \$ 576,500           | \$ -                | 0%             | \$ -                 | 0%              | \$ 576,500          |          |
| PSB Project Management Services    | \$ 225,000           | \$ -               | \$ 225,000           | \$ -                | 0%             | \$ -                 | 0%              | \$ 225,000          |          |
| Owner's Insurance                  | \$ -                 | \$ -               | \$ -                 | \$ -                |                | \$ -                 |                 | \$ -                |          |
| Other Administrative Costs         | \$ -                 | \$ -               | \$ -                 | \$ -                |                | \$ -                 |                 | \$ -                |          |
| <b>SUB-TOTAL</b>                   | <b>\$ 4,122,122</b>  | <b>\$ -</b>        | <b>\$ 4,122,122</b>  | <b>\$ 3,182,679</b> | <b>77%</b>     | <b>\$ 216,521</b>    | <b>5%</b>       | <b>\$ 3,905,601</b> |          |
| <b>A&amp;E</b>                     |                      |                    |                      |                     |                |                      |                 |                     |          |
| A/E Basic Services                 | \$ 7,259,063         | \$ -               | \$ 7,259,063         | \$ 7,259,063        | 100%           | \$ 816,645           | 11%             | \$ 6,442,418        |          |
| Design Development                 | \$ 1,814,766         |                    | \$ 1,814,766         | \$ 1,814,766        | 100%           | \$ 816,645           | 45%             | \$ 998,121          |          |
| Construction Documents             | \$ 2,540,672         |                    | \$ 2,540,672         | \$ 2,540,672        | 100%           | \$ -                 | 0%              | \$ 2,540,672        |          |
| Bidding                            | \$ 290,363           |                    | \$ 290,363           | \$ 290,363          | 100%           | \$ -                 | 0%              | \$ 290,363          |          |
| Construction Administration        | \$ 2,540,672         |                    | \$ 2,540,672         | \$ 2,540,672        | 100%           | \$ -                 | 0%              | \$ 2,540,672        |          |
| Closeout                           | \$ 72,590            |                    | \$ 72,590            | \$ 72,590           | 100%           | \$ -                 | 0%              | \$ 72,590           |          |
| Other Basic Services               | \$ -                 |                    | \$ -                 | \$ -                |                | \$ -                 |                 | \$ -                |          |
| Extra/Reimbursable Services        | \$ 500,000           | \$ 117,673         | \$ 617,673           | \$ 602,410          |                | \$ -                 |                 | \$ 617,673          |          |
| Other Reimbursables                | \$ 500,000           | \$ (361,564)       | \$ 138,436           | \$ 123,173          | 89%            | \$ -                 | 0%              | \$ 138,436          | *1, 2, 3 |
| HazMat (incl. monitoring)          | \$ -                 | \$ 138,512         | \$ 138,512           | \$ 138,512          | 100%           | \$ -                 | 0%              | \$ 138,512          | *2       |
| Geotechnical/Geo-Environmental     | \$ -                 | \$ 340,725         | \$ 340,725           | \$ 340,725          | 100%           | \$ -                 | 0%              | \$ 340,725          | *3       |
| Site Survey & Site Requirements    | \$ -                 |                    | \$ -                 | \$ -                |                | \$ -                 |                 | \$ -                |          |
| Wetlands                           | \$ -                 |                    | \$ -                 | \$ -                |                | \$ -                 |                 | \$ -                |          |
| Traffic Studies                    | \$ -                 |                    | \$ -                 | \$ -                |                | \$ -                 |                 | \$ -                |          |
| <b>SUB-TOTAL</b>                   | <b>\$ 7,759,063</b>  | <b>\$ 117,673</b>  | <b>\$ 7,876,736</b>  | <b>\$ 7,861,473</b> | <b>100%</b>    | <b>\$ 816,645</b>    | <b>10%</b>      | <b>\$ 7,060,091</b> |          |

## Total Project Budget Status Report

| Description                        | Total Project Budget | Authorized Changes | Revised Total Budget | Total Committed | % Cmt'd to Date | Actual Spent to Date | % Spent to Date | Balance To Spend | Comments |
|------------------------------------|----------------------|--------------------|----------------------|-----------------|-----------------|----------------------|-----------------|------------------|----------|
| <b>PRE CONSTRUCTION COSTS</b>      |                      |                    |                      |                 |                 |                      |                 |                  |          |
| CMR Pre-Con Services               | \$ 319,688           |                    | \$ 319,688           | \$ -            | 0%              | \$ -                 | 0%              | \$ 319,688       |          |
| SUB-TOTAL                          | \$ 319,688           | \$ -               | \$ 319,688           | \$ -            | 0%              | \$ -                 | 0%              | \$ 319,688       |          |
| <b>CONSTRUCTION COSTS</b>          |                      |                    |                      |                 |                 |                      |                 |                  |          |
| Construction Budget                | \$ 92,909,563        | \$ (117,673)       | \$ 92,791,890        | \$ -            | 0%              | \$ -                 | 0%              | \$ 92,791,890    | *1       |
| Change Orders                      | \$ -                 | \$ -               | \$ -                 | \$ -            |                 | \$ -                 |                 | \$ -             |          |
| SUB-TOTAL                          | \$ 92,909,563        | \$ (117,673)       | \$ 92,791,890        | \$ -            | 0%              | \$ -                 | 0%              | \$ 92,791,890    |          |
| <b>OTHER PROJECT COSTS</b>         |                      |                    |                      |                 |                 |                      |                 |                  |          |
| Construction Contingency           | \$ 4,645,478         | \$ -               | \$ 4,645,478         | \$ -            | 0%              | \$ -                 | 0%              | \$ 4,645,478     |          |
| Miscellaneous Project Costs        | \$ 569,893           | \$ -               | \$ 569,893           | \$ -            | 0%              | \$ -                 | 0%              | \$ 569,893       |          |
| Utility Company Fees               | \$ 106,563           |                    | \$ 106,563           | \$ -            | 0%              | \$ -                 | 0%              | \$ 106,563       |          |
| Testing & Inspection Services      | \$ 127,875           |                    | \$ 127,875           | \$ -            | 0%              | \$ -                 | 0%              | \$ 127,875       |          |
| Commissioning                      | \$ 132,896           |                    | \$ 132,896           | \$ -            | 0%              | \$ -                 | 0%              | \$ 132,896       |          |
| Security                           | \$ 106,653           |                    | \$ 106,653           | \$ -            | 0%              | \$ -                 | 0%              | \$ 106,653       |          |
| Moving                             | \$ 95,906            |                    | \$ 95,906            | \$ -            | 0%              | \$ -                 | 0%              | \$ 95,906        |          |
| Other Project Costs                | \$ -                 |                    | \$ -                 | \$ -            |                 | \$ -                 |                 | \$ -             |          |
| Furnishings and Equipment          | \$ 2,774,400         | \$ -               | \$ 2,774,400         | \$ -            | 0%              | \$ -                 | 0%              | \$ 2,774,400     |          |
| Furnishings                        | \$ 1,654,400         |                    | \$ 1,654,400         | \$ -            | 0%              | \$ -                 | 0%              | \$ 1,654,400     |          |
| Technology Equipment               | \$ 1,120,000         |                    | \$ 1,120,000         | \$ -            | 0%              | \$ -                 | 0%              | \$ 1,120,000     |          |
| Owner's Contingency                | \$ 2,199,793         |                    | \$ 2,199,793         | \$ -            | 0%              | \$ -                 | 0%              | \$ 2,199,793     |          |
| SUB-TOTAL                          | \$ 10,189,564        | \$ -               | \$ 10,189,564        | \$ -            | 0%              | \$ -                 | 0%              | \$ 10,189,564    |          |
| TOTAL DD-CLO                       | \$ 115,300,000       | \$ -               | \$ 115,300,000       | \$ 11,044,152   | 10%             | \$ 1,033,165         | 1%              | \$ 114,266,835   |          |
| TOTAL PROJECT BUDGET               | \$ 116,513,275       | \$ -               | \$ 116,513,275       | \$ 12,257,427   | 11%             | \$ 2,246,440         | 2%              | \$ 114,266,835   |          |
| <b>CONSTRUCTION COST ESTIMATES</b> |                      |                    |                      |                 |                 |                      |                 |                  |          |
| SD Cost Estimate                   | 4/26/2019            | Daedalus           | \$ 87,200,254.00     | 155,632         | \$560.30        |                      |                 |                  |          |
| Re-Start Cost Estimate             | 01/14/20             | PM&C               | \$ 93,335,813.00     | 155,632         | \$599.72        |                      |                 |                  |          |
| 505 DD Cost Estimate               |                      |                    |                      |                 | #DIV/0!         |                      |                 |                  |          |

## Budget Transfers:

01

3/18/2020

Transfer \$117,673.00 from the Construction Budget to A/E Other Reimbursables Budget to cover the costs of furnishing and installing a geothermal test well.