

PROJECT MINUTES

| | | | |
|---------------|---|---------------|---------|
| Project: | New W. Edward Balmer Elementary School | Project No.: | 17020 |
| Prepared by: | Sarah Traniello | Meeting Date: | 2/27/19 |
| Re: | School Building Committee Meeting | Meeting No: | 38 |
| Location: | High School Media Center | Time: | 6:30pm |
| Distribution: | School Building Committee Members, Attendees (MF) | | |

Attendees:

| PRESENT | NAME | AFFILIATION | VOTING MEMBER |
|---------|------------------------|--|-------------------|
| ✓ | Joseph Strazzulla | Chairman, School Building Committee | Voting Member |
| ✓ | Melissa Walker | School Business Manager | Voting Member |
| ✓ | Alicia Cannon | Representative of the Board of Selectmen | Voting Member |
| ✓ | Michael LeBrasseur | Chairman, School Committee | Voting Member |
| ✓ | Paul Bedigian | Representative of the Building, Planning, Construction Committee | Voting Member |
| | Steven Gogolinski | Representative of the Finance Committee | Voting Member |
| ✓ | Jeffrey Tubbs | Community Member with building design and/or construction experience | Voting Member |
| | Peter L'Hommedieu | Community Member with building design and/or construction experience | Voting Member |
| ✓ | Jeff Lundquist | Community Member with building design and/or construction experience | Voting Member |
| | Andrew Chagnon | Community Member with building design and/or construction experience | Voting Member |
| ✓ | Spencer Pollock | Parent Representative | Voting Member |
| | Adam Gaudette | Town Manager | Non-Voting Member |
| ✓ | Dr. Catherine Stickney | Superintendent of Schools | Non-Voting Member |
| ✓ | Richard Maglione | Director of Facilities | Non-Voting Member |
| ✓ | Karlene Ross | Principal, W. Edward Balmer Elementary School | Non-Voting Member |
| ✓ | Jill Healy | Principal, Northbridge Elementary School | Non-Voting Member |
| ✓ | Gregory Rosenthal | Director of Pupil Personnel Services | Non-Voting Member |
| ✓ | Lee Dore | D & W, Architect | |
| ✓ | Thomas Hengelsberg | D & W, Architect | |
| | Berglind Davis | D & W, Architect | |
| ✓ | David Fontaine, Jr | Fontaine Bros, CM | |
| | David Barksdale | Fontaine Bros, CM | |
| | Jim Mauer | Fontaine Bros, CM | |
| ✓ | Joel Kent | Fontaine Bros, CM | |
| | Joel Seeley | SMMA, OPM | |
| ✓ | Sarah Traniello | SMMA, OPM | |
| | | | |

| Item # | Action | Discussion |
|--------|----------------|--|
| 38.1 | Record | Call to Order, 6:30 PM, meeting opened. |
| 38.2 | Record | J. Strazzulla announced the meeting will be video and audio recorded with live broadcast and future re-broadcast. |
| 38.3 | Record | Public Comments – no comments |
| 38.4 | Record | A motion was made by P. Bedigian and seconded by A. Cannon to approve the 2/5/19 School Building Committee meeting minutes. Motion passed unanimous by those attending. |
| 38.5 | Record | Warrant No. 21 was reviewed. A motion was made by M. LeBrasseur and seconded by A. Cannon to approve Warrant No. 21. No discussion, motion passed unanimous. |
| 38.6 | Record | Warrant No. 22 was reviewed. A motion was made by M. LeBrasseur and seconded by S. Pollock to approve Warrant No. 22. No discussion, motion passed unanimous. |
| 38.7 | Record | J. Kent distributed and reviewed the 2/6/19 Construction Logistics Working Group Meeting Minutes, attached. |
| 38.8 | M. DiSalvo | M. DiSalvo to work with the school department to define, in the specifications, sufficient training requirements for the school department's maintenance staff, including video-taping. |
| 38.9 | T. Hengelsberg | T. Hengelsberg to confirm that the turning radii for all parking lot exits are sufficient to not force the turning car into the oncoming lane of traffic. |
| 38.10 | T. Hengelsberg | T. Hengelsberg will provide detailed cut and fill analysis, by material, with the Design Development Pricing Set for Committee review. |
| 38.11 | T. Hengelsberg | T. Hengelsberg will provide existing top soil characterization for gradient and nutrient enhancements for Committee review. |
| 38.12 | T. Hengelsberg | T. Hengelsberg to refine the sidewalk layouts for a future Committee meeting. |
| 38.13 | T. Hengelsberg | T. Hengelsberg to provide options to the routing of the 36 inch storm line for review, such as reducing the depth of the line, installing a temporary line until Phase 2, routing around the building, use of concrete piping. |
| 38.14 | T. Hengelsberg | T. Hengelsberg to provide less costly exterior building material options at the back of the school for pricing in the Design Development estimate. |
| 38.15 | T. Hengelsberg | T. Hengelsberg will provide options to the Cape Cod Berm. |
| 38.16 | Record | <p>T. Hengelsberg presented the updated Site Plan, Floor Plan, Building Exteriors and Building Interiors design, attached, represented in the Design Development Pricing Set, issued on 2/22/19. The Committee can access the Set thru FBI's Procore site. The draft estimates are due on 3/12/19 and the reconciliation meeting will be held on 3/15/19. Value Engineering items will be developed from that meeting. The estimates and VE items will be presented to the Committee at the 3/19/19 meeting.</p> <p>Committee Discussion:</p> <ol style="list-style-type: none"> 1. J. Strazzulla asked if the estimate will accommodate items that have not been fully decided on? |

| Item # | Action | Discussion |
|--------|----------------|--|
| | | <p><i>L. Dore indicated yes, the estimate will include all the items shared with the Committee at this point, including some assumptions on materials, as the project is about 30% through the design process.</i></p> <p>2. J. Strazzulla asked if there are any changes or surprises in the scope or materials documented? <i>L. Dore indicated the exterior material change was a big change, but looks to be tracking close to where it was in Schematic Design. There has been some added casework, but these should be accommodated thru the contingency.</i></p> <p>3. J. Lundquist asked if FBI will be seeking market numbers for the estimate? <i>D. Fontaine indicated FBI will develop the estimate and has a lot of recent market pricing for the non-trade work such as metal panels, concrete, and steel, and even the mechanical trade subs. FBI tracks bids on an ongoing basis to see what the marketplace is pricing.</i></p> <p>4. T. Hengelsberg asked for the Committee's reaction to the Building Interiors material colors and themes. <i>J. Strazzulla indicated that the colors and theme is growing on him as he thinks about safety and having the colors guide the students and assist in wayfinding.</i></p> <p>5. J. Strazzulla asked if D&W is looking for any specific approval relating to the colors and themes at this point. <i>L. Dore indicated not at this time, only if the Committee has any strong negative reactions to the colors and themes.</i></p> |
| 38.17 | Record | T. Hengelsberg presented the updated LEED Scorecard, attached, indicating 41 definite points and 26 maybe points, which reflects achieving the MSBA required Certified level and potentially achieving Silver level. |
| 38.18 | Record | T. Hengelsberg presented the updated Energy Model, attached, reflecting a 32.9% energy savings above code, which is slightly lower than the 33.2% from the Schematic Design Phase. |
| 38.19 | Record | T. Hengelsberg presented a Daylight Study, attached, evaluating vertical sun shades versus the horizontal shades shown in the Schematic Design on the West Elevation. The horizontal sun shades provide the greater glare control and the Design Development documents reflect the horizontal sun shades. |
| 38.20 | T. Hengelsberg | <p>T. Hengelsberg distributed and reviewed "SecureShade" product literature for security window shades, attached.</p> <p>Committee Discussion:</p> <p>1. C. Stickney indicated feedback from teachers and staff is that it takes a certain amount of time to lower traditional window shades and this product provides a potential solution when the school is under a lockdown condition.</p> <p>2. A. Cannon indicated she was able to view the promotional video and that the two buttons (shades down button and contact first responders button) are too close to each other and could be mistaken. <i>L. Dore indicated that the first responder button on the updated model has to be pressed and held for a specified duration to issue the alert.</i></p> |

| Item # | Action | Discussion |
|--------|----------------|--|
| | | T. Hengelsberg will provide pricing impact and more detailed product information for Committee review. |
| 38.21 | | <p>Site Permitting</p> <p>Conservation Commission</p> <ol style="list-style-type: none"> 1. The same Peer Review firm will be used for Conservation Commission and Planning Board. <p>Planning Board</p> <ol style="list-style-type: none"> 1. T. Hengelsberg distributed and reviewed the Sanitary Sewage Design Flows to be utilized by CDM, the town's consultant, to perform a capacity analysis of the existing system sanitary sewer system, attached. 2. T. Hengelsberg distributed and reviewed a Staff Count and corresponding Daily and Event Parking Requirements Projection, attached. The Daily parking reflects 246 parking spaces. The Event parking reflects 300 parking spaces. Zoning Code requires 372 parking spaces. <ol style="list-style-type: none"> a. K. Ross and J. Healy indicated that the staff count may need adjusting as there are two staff members for each grade in SPED and the count does not include paraprofessionals. <i>T. Hengelsberg will further review with K. Ross and J. Healy.</i> b. J. Strazzulla indicated that the indicated parking requirements for weekend soccer are conservative and that he will work with Youth Soccer to develop a more accurate projection. c. P. Bedigian asked about how the parking requirement for a Large Community Meeting, for approximately 508 seats, was calculated? <i>T. Hengelsberg indicated the maximum seats the gymnasium can hold is 508 seats per Code. The parking requirement is based on the assumption that there will be at least 2 people per car.</i> d. M. Lebrasseur asked if the Police and Fire Departments have approved using the circulation loop for event parking. <i>T. Hengelsberg indicated that these scenarios have not been run by or approved Police and Fire Departments yet. J. Strazzulla indicated the scenarios should also be reviewed by the Safety Committee.</i> e. J. Tubbs asked if there will be Fire Department vehicular access to all the fire hydrants? <i>T. Hengelsberg indicated yes, there is Fire Department vehicular access to all the fire hydrants.</i> |
| 38.22 | T. Hengelsberg | <p>Committee Questions</p> <ol style="list-style-type: none"> 1. J. Tubbs asked if fire-proofing was added to the Wing A-B and Wing C structure, in addition to the areas around the Egress Stairs, can the 2-Hour Fire Wall and Horizontal Sliding Fire Door be eliminated? <i>T. Hengelsberg indicated he thought this question had been evaluated in the</i> |

Project: New W. Edward Balmer Elementary School

Meeting Date: 2/27/19

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| Item # | Action | Discussion |
|--------|--------|--|
| | | <i>Schematic Design phase and the fire wall was less expensive. T. Hengelsberg will review and provide direction to the Committee.</i> |
| 38.23 | Record | Old or New Business - None |
| 38.24 | Record | Next SBC Meeting: 3/5/19 at 6:30 pm at the High School Media Center. |
| 38.25 | Record | A Motion was made by P. Bedigian and seconded by J. Tubbs to adjourn the meeting. No discussion, motion passed unanimous. |

Attachments: Agenda, Warrant No. 21, Warrant No. 22, 2/6/19 Construction Logistics Working Group Meeting Minutes, "SecureShade" product literature, Sanitary Sewage Design Flows, Staff Count and corresponding Daily and Event Parking Requirements Projection Powerpoint

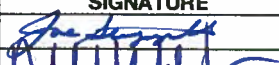

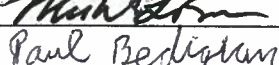
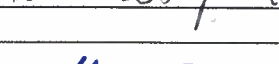



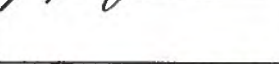

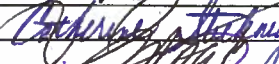
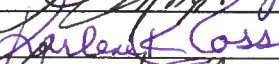






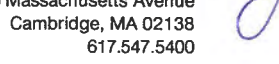

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes

PROJECT MEETING SIGN-IN SHEET

Project: New W. Edward Balmer Elementary School
 Prepared by: Joel Seeley
 Re: School Building Committee Meeting
 Location: High School Media Center
 427 Linwood Avenue, Whitinsville, MA

Project No.: 17020
 Meeting Date: 2/27/2019
 Meeting No: 38
 Time: 6:30pm

Distribution: Attendees, (MF)

| SIGNATURE | ATTENDEES | EMAIL | AFFILIATION |
|---|------------------------|--|---|
|  | Joseph Strazzulla | istrazzulla@nps.org | Chairman, School Building Committee |
|  | Melissa Walker | mwalker@nps.org | School Business Manager, MCPPO |
|  | Alicia Cannon | Cannonhome0927@gmail.com | Member, Board of Selectmen, CEO |
|  | Michael LeBrasseur | mlebrasseur@nps.org | Chairman, School Committee |
|  | Paul Bedigian | bedigianps@cdmsmith.com | Representative of the Building, Planning, Construction Committee |
| | Steven Gogolinski | steve@gogolinskicpa.com | Representative of the Finance Committee |
|  | Jeffrey Tubbs | jtubbs@charter.net | Member of community with architecture, engineering and/or construction experience |
| | Peter L'Hommedieu | PLHommedieu@shawmut.com | Member of community with architecture, engineering and/or construction experience |
|  | Jeff Lundquist | jlundquist@therichmondgroup.com | Member of community with architecture, engineering and/or construction experience |
| | Andrew Chagnon | achagnon@vertexeng.com | Member of community with architecture, engineering and/or construction experience |
|  | Spencer Pollock | spencerpollock22@gmail.com | Parent Representative |
|  | Adam Gaudette | agaudette@northbridgema.org | Town Manager |
|  | Dr. Catherine Stickney | cstickney@nps.org | Superintendent of Schools, NPS |
|  | Richard Maglione | rmaglione@nps.org | Building Maintenance Local Official |
|  | Karlene Ross | kross@nps.org | Principal, W. Edward Balmer Elementary School |
|  | Jill Healy | jhealy@nps.org | Principal, Northbridge Elementary School |
|  | Gregory Rosenthal | groenthal@nps.org | Director of Pupil Personnel Services |
|  | Lee P. Dore | lpdore@DoreandWhittier.com | Dore & Whittier Architects |
|  | Thomas Hengelsberg | thengelsberg@DoreandWhittier.com | Dore & Whittier Architects |
|  | David Fontaine, Sr. | DFontaine@fontainebros.com | Fontaine Bros., Inc. |
|  | David Fontaine, Jr. | dir@fontainebros.com | Fontaine Bros., Inc. |
| | Mark Abdella | mabdella@fontainebros.com | Fontaine Bros., Inc. |
| | Jim Mauer | jmauer@fontainebros.com | Fontaine Bros., Inc. |
|  | Sarah Traniello | straniello@smma.com | SMMA |
| | Joel Seeley | jseeley@smma.com | SMMA |

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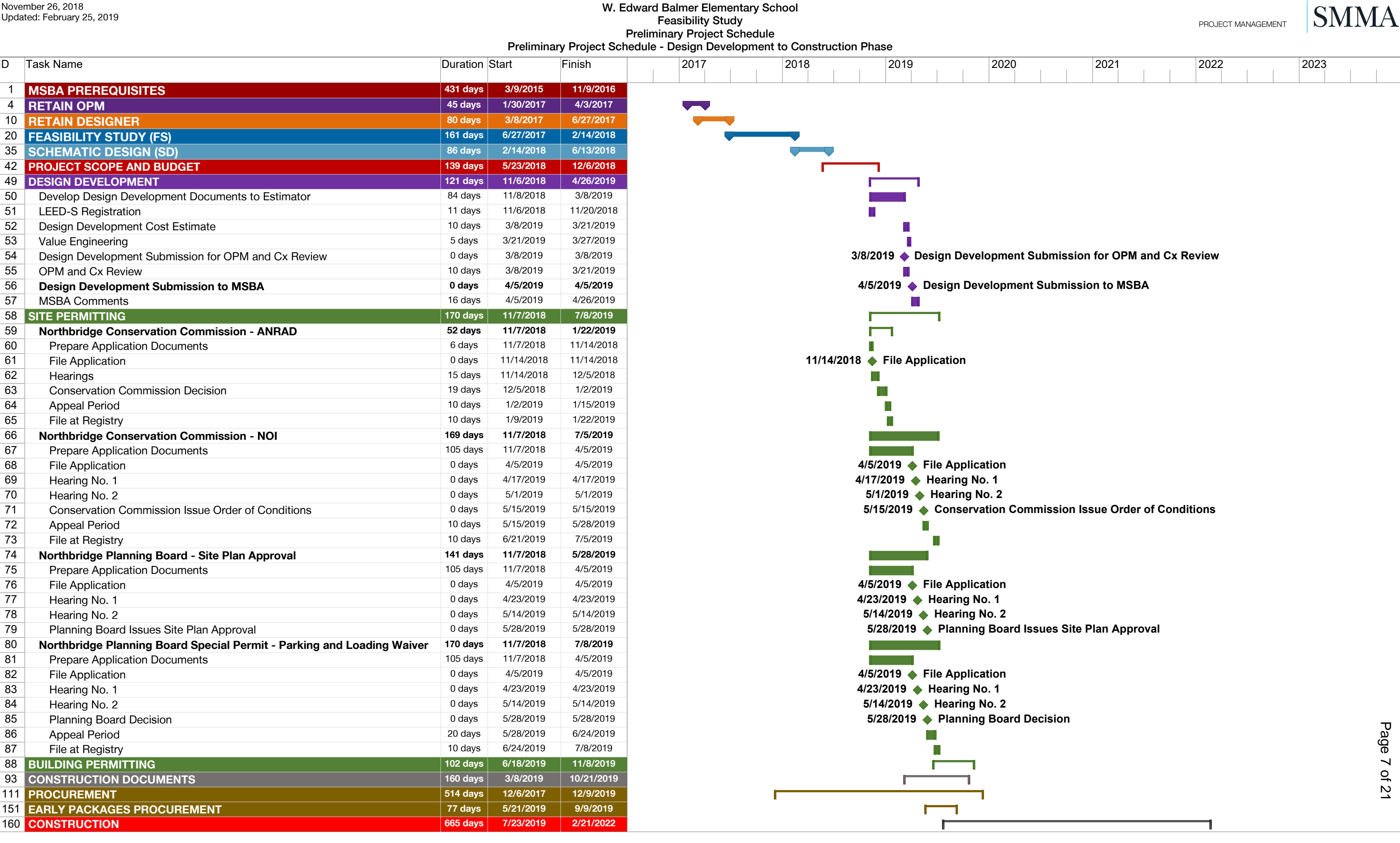
www.smma.com

 Joel Kent jkent@fontainebros.com Fontaine Bros., Inc.

Agenda

| | | | |
|-------------------|--|---------------|-----------|
| Project: | W. Edward Balmer Elementary School Feasibility Study | Project No.: | 17020 |
| Re: | School Building Committee Meeting | Meeting Date: | 2/27/2019 |
| Meeting Location: | High School Media Center | Meeting Time: | 6:30 PM |
| | 427 Linwood Avenue, Whitinsville, MA | Meeting No. | 38 |
| Prepared by: | Joel G. Seeley | | |
| Distribution: | Committee Members (MF) | | |

1. Call to Order
2. Public Comments
3. Approval of Minutes
4. Approval of Invoices and Commitments
5. Overview of Design Development Pricing Set
6. Review Updated Site and Floor Plans
7. Review Updated Interior Instructional Spaces
8. Review Interior Designs of Community Spaces
9. Review Updated Interior Materials
10. Review Preliminary Instructional Technology
11. Review LEED Scorecard, Energy Model and Daylight Studies
12. Site Permitting Update
 - Conservation Commission
 - Planning Board
13. New or Old Business
14. Committee Questions
15. Next Meeting: March 5, 2019
16. Adjourn



| Symmes Maini & McKee Associates, Inc. (SMMA) Northbridge School District Northbridge W. Edward Balmer Elementary School BUDGET SUMMARY | | | Original PS&B Budget 6/20/2018 | Budget Revisions | Current Budget | Contract Amount | Expended | (B - C) Remaining Contract Amount | Additional Projected Amount | (A - B - E) Budget Balance |
|---|------------------|--|--------------------------------------|------------------|-------------------|--------------------|-----------------|---|--------------------------------|----------------------------------|
| BUDGET TRACKING FORM as of: 2/28/2019 | | | | | | | | | | |
| | Propay code # | Name | | | A | B | C | D | E | |
| | | <u>Feasibility Study Agreement</u> | | | | | | | | |
| 1 | 0001-0000 | <u>OPM Feasibility Study</u> | 105,000.00 | | 105,000.00 | 105,000.00 | 105,000.00 | - | - | - |
| 2 | 0002-0000 | <u>A&E Feasibility Study</u> | 425,000.00 | | 425,000.00 | 425,000.00 | 425,000.00 | - | - | - |
| 3 | 0003-0000 | <u>Environmental and Site</u> | 150,000.00 | | 150,000.00 | 146,753.50 | 145,543.50 | 1,210.00 | - | 3,246.50 |
| 4 | 0004-0000 | <u>Other</u> | 95,000.00 | | 95,000.00 | 51,734.59 | 51,734.59 | - | - | 43,265.41 |
| Feasibility Study Agreement Subtotal | | | \$ 775,000.00 | \$ - | \$ 775,000.00 | \$ 728,488.09 | \$ 727,278.09 | \$ 1,210.00 | \$ - | \$ 46,511.91 |
| | | <u>Administration</u> | | | | | | | | |
| 6 | 0101-0000 | <u>Legal Fees</u> | 80,000.00 | | 80,000.00 | - | - | - | - | 80,000.00 |
| | | <u>Owner's Project Manager</u> | | | | | | | | |
| 7 | 0102-0400 | <u>> Design Development</u> | 180,250.00 | | 180,250.00 | 180,250.00 | 81,112.50 | 99,137.50 | - | - |
| 8 | 0102-0500 | <u>> Construction Contract Documents</u> | 250,025.00 | | 250,025.00 | 250,025.00 | - | 250,025.00 | - | - |
| 9 | 0102-0600 | <u>> Bidding</u> | 95,050.00 | | 95,050.00 | 95,050.00 | - | 95,050.00 | - | - |
| 10 | 0102-0700 | <u>> Construction Contract Administration</u> | 1,912,599.00 | | 1,912,599.00 | 1,912,599.00 | - | 1,912,599.00 | - | - |
| 11 | 0102-0800 | <u>> Closeout</u> | 120,080.00 | | 120,080.00 | 120,080.00 | - | 120,080.00 | - | - |
| 12 | 0102-0900 | <u>> Extra Services</u> | 100,000.00 | | 100,000.00 | - | - | - | - | 100,000.00 |
| 13 | 0102-1000 | <u>> Reimbursable & Other Services</u> | 40,000.00 | | 40,000.00 | - | - | - | - | 40,000.00 |
| 14 | 0102-1100 | <u>> Cost Estimates</u> | - | | - | - | - | - | - | - |
| 15 | 0103-0000 | <u>Advertising</u> | 20,000.00 | | 20,000.00 | - | - | - | - | 20,000.00 |
| 16 | 0104-0000 | <u>Permitting</u> | 50,000.00 | | 50,000.00 | - | - | - | - | 50,000.00 |
| 17 | 0105-0000 | <u>Owner's Insurance</u> | 80,000.00 | | 80,000.00 | - | - | - | - | 80,000.00 |
| 18 | 0199-0000 | <u>Other Administrative Costs</u> | 60,000.00 | | 60,000.00 | - | - | - | - | 60,000.00 |
| Administration Subtotal | | | \$ 2,988,004.00 | \$ - | \$ 2,988,004.00 | \$ 2,558,004.00 | \$ 81,112.50 | \$ 2,476,891.50 | \$ - | \$ 430,000.00 |
| | | <u>Architecture and Engineering</u> | | | | | | | | |
| | | <u>Basic Services</u> | | | | | | | | |
| 21 | 0201-0400 | <u>> Design Development</u> | 1,944,609.00 | | 1,944,609.00 | 1,944,609.00 | 1,166,765.40 | 777,843.60 | - | - |
| 22 | 0201-0500 | <u>> Construction Contract Documents</u> | 2,657,249.00 | | 2,657,249.00 | 2,657,249.00 | - | 2,657,249.00 | - | - |
| 23 | 0201-0600 | <u>> Bidding</u> | 227,830.00 | | 227,830.00 | 227,830.00 | - | 227,830.00 | - | - |
| 24 | 0201-0700 | <u>> Construction Contract Administration</u> | 2,252,218.00 | | 2,252,218.00 | 2,252,218.00 | - | 2,252,218.00 | - | - |
| 25 | 0201-0800 | <u>> Closeout</u> | 164,136.00 | | 164,136.00 | 164,136.00 | - | 164,136.00 | - | - |
| 26 | 0201-9900 | <u>> Other Basic Services</u> | - | | - | - | - | - | - | - |
| 27 | | BASIC SERVICES SUBTOTAL | \$ 7,246,042.00 | \$ - | \$ 7,246,042.00 | \$ 7,246,042.00 | \$ 1,166,765.40 | \$ 6,079,276.60 | \$ - | \$ - |
| | | <u>Reimbursable Services</u> | | | | | | | | |
| 28 | 0203-0100 | <u>> Construction Testing</u> | 30,000.00 | | 30,000.00 | - | - | - | - | 30,000.00 |
| 29 | 0203-0200 | <u>> Printing (over minimum)</u> | 20,000.00 | | 20,000.00 | - | - | - | - | 20,000.00 |
| 30 | 0203-9900 | <u>> Other Reimbursable Costs</u> | 100,000.00 | | 100,000.00 | - | - | - | - | 100,000.00 |
| 31 | 0204-0200 | <u>> Hazardous Materials</u> | 100,000.00 | | 100,000.00 | - | - | - | - | 100,000.00 |
| 32 | 0204-0300 | <u>> Geotech & Geo-Env.</u> | 85,000.00 | | 85,000.00 | - | - | - | - | 85,000.00 |
| 33 | 0204-0400 | <u>> Site Survey</u> | 40,000.00 | | 40,000.00 | - | - | - | - | 40,000.00 |
| 34 | 0204-0500 | <u>> Wetlands</u> | 40,000.00 | | 40,000.00 | - | - | - | - | 40,000.00 |
| 35 | 0204-1200 | <u>> Traffic Studies</u> | 35,000.00 | | 35,000.00 | - | - | - | - | 35,000.00 |
| Architectural and Engineering Subtotal | | | \$ 7,696,042.00 | \$ - | \$ 7,696,042.00 | \$ 7,246,042.00 | \$ 1,166,765.40 | \$ 6,079,276.60 | \$ - | \$ 450,000.00 |

| Symmes Maini & McKee Associates, Inc. (SMMA) Northbridge School District Northbridge W. Edward Balmer Elementary School BUDGET SUMMARY | | | | | | | | | | |
|---|-------------------------------------|--|--------------------------------------|------------------|-------------------|--------------------|-----------------|---|--------------------------------|----------------------------------|
| BUDGET TRACKING FORM as of: 2/28/2019 | | | Original PS&B Budget 6/20/2018 | Budget Revisions | Current Budget | Contract Amount | Expended | (B - C) Remaining Contract Amount | Additional Projected Amount | (A - B - E) Budget Balance |
| CM @ Risk Preconstruction Services | | | | | | | | | | |
| 36 | 0501-0000 | Pre-Construction Services | \$ 250,000.00 | | \$ 250,000.00 | \$ 210,000.00 | \$ 48,462.00 | \$ 161,538.00 | \$ - | \$ 40,000.00 |
| | 0502-0001 | Construction Budget | \$ 79,492,662.00 | | \$ 79,492,662.00 | \$ - | \$ - | \$ - | \$ - | \$ 79,492,662.00 |
| 89 | CSI Code | CSI Description | | | | | | | | |
| 89 | 0502-0100 | Division 1 - General Requirements | | | | - | - | - | - | - |
| 89 | 0502-0200 | Division 2 - Existing Conditions | | | | - | - | - | - | - |
| 89 | 0502-0300 | Division 3 - Concrete | | | | - | - | - | - | - |
| 89 | 0502-0400 | Division 4 - Masonry | | | | - | - | - | - | - |
| 89 | 0502-0500 | Division 5 - Metals | | | | - | - | - | - | - |
| 89 | 0502-0600 | Division 6 - Wood, Plastics and Composites | | | | - | - | - | - | - |
| 89 | 0502-0700 | Division 7 - Thermal & Moisture Protection | | | | - | - | - | - | - |
| 89 | 0502-0800 | Division 8 - Openings | | | | - | - | - | - | - |
| 89 | 0502-0900 | Division 9 - Finishes | | | | - | - | - | - | - |
| 89 | 0502-1000 | Division 10 - Specialties | | | | - | - | - | - | - |
| 89 | 0502-1100 | Division 11 - Equipment | | | | - | - | - | - | - |
| 89 | 0502-1200 | Division 12 - Furnishings | | | | - | - | - | - | - |
| 89 | 0502-1400 | Division 14 - Conveying Systems | | | | - | - | - | - | - |
| 89 | 0502-2100 | Division 21 - Fire Suppression | | | | - | - | - | - | - |
| 89 | 0502-2200 | Division 22 - Plumbing | | | | - | - | - | - | - |
| 89 | 0502-2300 | Division 23 - HVAC | | | | - | - | - | - | - |
| 89 | 0502-2600 | Division 26 - Electrical | | | | - | - | - | - | - |
| 89 | 0502-3100 | Division 31 - Earthwork | | | | - | - | - | - | - |
| 89 | 0502-3200 | Division 32 - Exterior Improvements | | | | - | - | - | - | - |
| 89 | 0502-3300 | Division 33 - Utilities | | | | - | - | - | - | - |
| 89 | 0502-9900 | Retainage | | | | - | - | - | - | - |
| 89 | 0508-0000 | Change Orders | | \$ - | - | - | - | - | - | |
| 89 | Construction Budget Subtotal | | \$ 79,492,662.00 | \$ - | \$ 79,492,662.00 | \$ - | \$ - | \$ - | \$ - | \$ 79,492,662.00 |
| | | Alternates | - | | - | | | | | |
| 90 | 0506-0000 | Ineligible Work (Maint Bldg, Press Box, Concession and Restroom) | | | | - | - | - | - | - |
| 90 | 0506-0000 | Retainage for Alternates/Ineligible Work | | | | - | - | - | | |
| | | | | | | | | | | |
| Alternates Subtotal | | | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | 0600-0000 | Miscellaneous Project Costs | 200,000.00 | | 200,000.00 | | | | | |
| 94 | 0601-0000 | Utility Company Fees | | | | - | - | - | - | 200,000.00 |
| 95 | 0602-0000 | Testing Services | | | | - | - | - | - | 300,000.00 |
| 96 | 0603-0000 | Swing Space / Modulares | | | | - | - | - | - | - |
| 97 | 0699-0000 | Other Project Costs (Mailing & Moving) | | | | - | - | - | - | 200,000.00 |
| | 0600-0000 | Miscellaneous Project Costs Subtotal | \$ 700,000.00 | \$ - | \$ 700,000.00 | \$ - | \$ - | \$ - | \$ - | \$ 700,000.00 |
| | 0700-0000 | Furnishings and Equipment | 1,648,000.00 | | 1,648,000.00 | | | | | |
| 99 | 0701-0000 | Furnishings | | | | - | - | - | - | 1,648,000.00 |
| | 0702-0000 | Equipment | | | | | | | | |
| 101 | 0703-0000 | Computer Equipment | | | | - | - | - | - | 1,854,000.00 |
| Furnishings and Equipment Subtotal | | | \$ 3,502,000.00 | \$ - | \$ 3,502,000.00 | \$ - | \$ - | \$ - | \$ - | \$ 3,502,000.00 |
| | | | 3,974,633.00 | - | 3,974,633.00 | | | | | |
| 103 | 0507-0000 | Owner's Construction Contingency | | | | - | - | - | - | 3,974,633.00 |
| 104 | 0801-0000 | Owners' (soft cost) Contingency | | | | - | - | - | - | 1,589,853.00 |
| Contingency Subtotal | | | \$ 5,564,486.00 | \$ - | \$ 5,564,486.00 | \$ - | \$ - | \$ - | \$ - | \$ 5,564,486.00 |
| | | | | | | | | | | |
| Total Project Budget | | | \$ 100,968,194.00 | \$ - | \$ 100,968,194.00 | \$ 10,742,534.09 | \$ 2,023,617.99 | \$ 8,718,916.10 | \$ - | \$ 90,225,659.91 |

Balmer Elem School

Construction Logistics / Safety Meeting

Meeting Date: February 6, 2019

Issue Date: February 21, 2019

Meeting #: 03

Next Meeting: March 19, 2019 - 3:00 p.m.

Prepared By: Jim Mauer – Sr Project Manager, FBI

| Attending | Name | Company | Phone Number | Email |
|-------------------------------------|-------------------|----------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Jim Mauer | Fontaine Bros Inc | 413-478-2798 | jmauer@Fontainebros.com |
| <input checked="" type="checkbox"/> | Renee Underwood | Balmer School | | runderwood@nps.org |
| <input checked="" type="checkbox"/> | Karlene Ross | Balmer School | 508-234-8161 | kross@mps.org |
| <input type="checkbox"/> | Mike Cavanaugh | Fontaine Bros Inc | 413-246-4007 | Mcavanaugh@fontainebros.com |
| <input checked="" type="checkbox"/> | Joel Kent | Fontaine Bros Inc | 781-291-9625 | jkent@fontainebros.com |
| <input checked="" type="checkbox"/> | Sharyn Tritone | Balmer Parent | | jandstritone@yahoo.com |
| <input type="checkbox"/> | Stephanie Dec | Balmer School | | sdec@nps.org |
| <input checked="" type="checkbox"/> | Laurie Miller | Balmer School | | lmiller@nps.org |
| <input checked="" type="checkbox"/> | Joan Thorne | Balmer School | | jthorne@nps.org |
| <input type="checkbox"/> | David Fontaine Jr | Fontaine Bros Inc | | djr@fontainebros.com |
| <input checked="" type="checkbox"/> | Sharon Poitras | Balmer School | | spoitras@nps.org |
| <input checked="" type="checkbox"/> | Tom Hengelsberg | Dore & Whittier | | thengelsberg@doreandwhittier.com |
| <input checked="" type="checkbox"/> | Richard Maglione | Northbridge Public Schools | | rmaglione@nps.org |
| <input checked="" type="checkbox"/> | Theresa Gould | Balmer School | | tgould@nps.org |
| <input checked="" type="checkbox"/> | CathyStickney | Northbridge Public Schools | | cstickney@nps.org |
| <input type="checkbox"/> | | | | |
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Balmer Elem School

Construction Logistics / Safety Meeting

| | Topic | Required By | Responsible | Description |
|-----|-------------|-------------|-------------|--|
| 1.1 | Parking | | ALL | <p>Added Parking to replace lost on East of building</p> <ul style="list-style-type: none"> -Can't use the parking on left of entry drive during school day used for bus traffic - Looking to replace East Side to be taken by Construction 1/22/19 – Looking for 20+ Total on at West side Extg -West Side – Loading Area -Custodian - Karlene — Kitchen - Misc staff park here - not so much teachers -Can't block the docks -Dumpster / Compactor - need to be accommodated -Temp Lighting on left side of building (and Rear ?) -Use of left side of bldg need entry other than Dock / Cafeteria (Add sidewalk to FRONT of Bldg) -Loss of spaces when snow - piles at light poles – 1/22/19 – Recent Snow – piled along West property line 1/22/19 – Determined want to keep the NEW Added parking on West side of Extg building – Don't want spaces at Entry Road from Crescent -1/22/19 – Discussed possible to Add striping at the Parent Drop Off area for use for parent parking at after hour Events – Review with Karlene R. -2/6/19 – After review with team – decided NOT to add striping at Parent Drop Off Lot - |
| 1.2 | Playgrounds | | FBI / DWA | <ul style="list-style-type: none"> -Don't use the Rear green space - Wet -Add Green space from Extg to the outfield adjacent - Fence in area -Gate at fence from Playground to new grassed area and another facing road for E Egress -1/22/19 – Want added playground space to be GRASS – FBI may alter shape slightly to allow keeping more space at South for construction and build extended playground to the West |
| 1.3 | Egress | | ALL | <ul style="list-style-type: none"> -Rear Right (East) Closest to New building is existing HP Egress – Add HP Egress at opposite other end of rear (West) -When exit from E. classrooms Go to either the Drop Off parking area or the REAR – -Muster point at Rear in the far corner – Surfacing? 1/22/19 – Drainage is concern in rear – gravel / stone is Ok with BES – need consideration of water coming off hill and where it will go -Lights / Cameras at Side / Rear -1/22/19 Reuse lights / New Cameras -Between New and Existing- fence off from building - xx' ? Need to maintain egress 1/22/19 – probably 5-6' path for egress – confirm with AHJ. - 2/6/19 – Per Tom H. this will be reviewed in future meeting with Town Departments to determine required egress / access. -N Grid - easement - paths are overgrown- can we clear ? - N Grid will they do it ? - (Fire Exit)- 1/22/19 – Town to approach N Grid -Coordination with Fire Department – - 2/6/19 – Karlene asked that the North Exit Door at West Corridor be set up with Electronic Lock / Fob – similar to Main Entry Door – will allow access by Staff parking in the new lot on West side of building |

Balmer Elem School

Construction Logistics / Safety Meeting

| | | | | |
|-----|--------------------------|--|-----------|---|
| 1.5 | Access . Fencing to Site | | FBI | <p>-Trucks enter off Crescent opposite Lake</p> <p>-Fabric on all fencing</p> <p>-Upper floors - they will draw the shades to avoid distraction -</p> <p>Concerns (valid) about noise / Dust- these are also concerns that FBI deals with -</p> <p>-Possible need to Add AC where next to the new building - noise / dust don't want open windows (Sept mainly)</p> <p>-1/22/19 – Discussed Blackout times for deliveries – Approx. 7:45 – 8:45 and 2:15 – 2:45 – to be Confirmed.</p> <p>2/6/19 – Adjust start of afternoon blackout to 2:00 – others are Ok</p> |
| 2.1 | Site Signage | | FBI / DWA | <p>Discussion of ADDED site signing –</p> <ul style="list-style-type: none"> • STAFF PARKING ONLY - at entry to West Parking • ADD Lot striping for after hours parent parking at the drop off area • Traffic Direction arrows on the parking log • Confirm Crosswalks will be striped at Crescent Street • Is there a Flashing School Zone sign in project on Crescent? <p>2/6/19 –Flashing Sign Not Part of Contract per Tom H.</p> <ul style="list-style-type: none"> • 2/6/19 – Signage / Striping Notes: • Designate the 2nd Row from building as Visitor —. Painting on Paving - No signs on posts • Buses don't stop in proper location at the drop off area. - add some line change / signage here - • Add sign approx 20' from road on entry for Buses only in Right lane - Blackout hours • Add Arrows on paving to direct cars in / out by row • Possible to ADD some marked spaces at West End - closest to building - 2 rows • Add stop line in drop off area- with STOP • Decided Not to add parking stripes at Parent Drop off area for after hours park - works ok as is • RESTRIPE existing lots • Allowance for minor patching - potholes there now unlikely to be repaired • STAFF ONLY sign for West Side Parking |
| 2.2 | Ext Entry-Widen? | | DWA | <p>BES asked if possible to Widen the existing radius of driveway at Exit to Crescent on East side of entry - DWA will need to review.</p> <p>2/6/19 – Tom H. suggested that we widen the West Side of Entry drive to create a 3rd traffic lane – leave East radius as is- acceptable to everyone.</p> |
| 3.1 | Meetings | | All | <p>Suggested that some informational meetings be scheduled prior to start of new school year – especially for New parents. Another meeting for neighbors prior to start of school. BES to begin assembly of FAQ's to post and use in the meetings.</p> |
| 3.2 | Storage Shed | | All | <p>Noted that there is Existing Storage shed in the East Parking area. This can be removed when we demo that parking lot and no need to replace. BES to confirm there is nothing in shed that they want to keep.</p> |
| 3.3 | Helicopter Evac | | NPS | <p>Discussion about the use of Parent Drop off area as “ Evacuation Helicopter Landing Zone” – There is possible impact to this use by construction. Cathy S. to review and advise.</p> |

Balmer Elem School

Construction Logistics / Safety Meeting

| | | | | |
|-----|----------------|--|-----------|--|
| 3.4 | Summer Daycare | | BES / FBI | Noted by Karlene use of school for Summer Daycare. Full Days – Tues thru Friday – begins approx. July 5 th – Karlene to distribute details on use / dates / times - |
|-----|----------------|--|-----------|--|

These minutes reflect Fontaine Bros., Inc. interpretation of the discussions that took place. Any discrepancies or omissions should be brought to the author's attention immediately. These minutes shall be included as part of the Project record.

Prepared By: JimMauer

Date: February 21, 2019

February 13, 2019

Mr. Mark Kuras
Superintendent, Department of Public Works
644 Providence Road
Whitinsville, MA 01588



Project: W. Edward Balmer Elementary School, 21 Crescent Street, Whitinsville

Subject: Sanitary Sewer Protections

Dear Mark,

On January 23, 2019 we discussed the proposed Balmer Elementary School project in a Technical Review meeting. This letter is to follow up on a few points where further clarification was desired on planned sewer protection devices designed as part of the plumbing system.

Kitchen: The kitchen will have two grease interceptors: a 35-gallon interior unit within the floor with a recommended weekly cleaning schedule; and a 5,000 gallon exterior unit with a more periodic cleaning schedule (O&M to be determined). According to school staff, the kitchen does not now, and does not plan do a lot of grease-intensive cooking in the new building; mostly what they are doing is re-heating prepared foods. It is our opinion that given these factors, the sanitary sewer will be well protected from undue grease pollution.

Art Rooms: Art room deep sinks are protected with a clay trap under each sink with a periodic cleaning schedule (O&M to be determined).

Science Labs: As this is an elementary school, there are no science labs, and thus no chemical discharges into the sewer are expected.

Please contact me if you should have any further questions.

Sincerely,

DORE & WHITTIER ARCHITECTS, INC.

Architects • Project Managers

Thomas E. Hengelsberg, AIA, NCARB, LEED-AP, MCPPO
Project Manager

cc. Technical Review committee attendees
Project Team distribution
file

ARCHITECTS
PROJECT MANAGERS

260 Merrimac Street Bldg 7
Newburyport, MA 01950
978.499.2999 ph
978.499.2944 fax

212 Battery Street
Burlington, VT 05401
802.863.1428 ph
802.863.6955

www.doreandwhittier.com

February 12, 2019

Mr. Thomas Hengelsberg, AIA, LEED AP, MCARB, MCPPO
 Project Manager
 Dore & Whittier
 212 Battery Street
 Burlington, VT 05401

RE: Nitsch Proposal #12260.3P
 Balmer Elementary School
 Civil Engineering Services
 Sanitary Flows
 Northbridge, MA

Dear Tom,

Nitsch Engineering has reviewed the existing and proposed occupancy for the Balmer School and has developed sanitary sewer design flows for the existing and proposed conditions as indicated in Table 1 based on Title 5 flow rates (Massachusetts State Environmental Code 310 CMR 15.203).

Table 1: Estimated Design Flows

| Existing School | Occupants | Design Flows per Occupant Gallons per Day per Person | Total Flow (Gallons per Day) |
|--|-----------|---|---------------------------------|
| Students | 505 | 10 | 5050 |
| Teachers/Admin/Staff | 80 | 10 | 800 |
| Volunteers – Visitors Allowance (FTE) | 13 | 10 | 130 |
| <u>Existing School Totals</u> | | | 5,980 |
| Proposed School | Occupants | Design Flows per Occupant | Total Flow |
| Students | 1214 | 10 | 12,140 |
| Teachers/Admin/Staff | 133 | 10 | 1,330 |
| Volunteers – Visitors Allowance (FTE) | 3 | 10 | 240 |
| <u>Proposed School Totals</u> | | | 13,710 |
| Change | | | <u>+7,730</u> |

Source: Occupancy from Balmer Elementary School

The proposed sanitary sewer service is being designed based on the Title 5 flows rates. See Attachment A for additional design information.

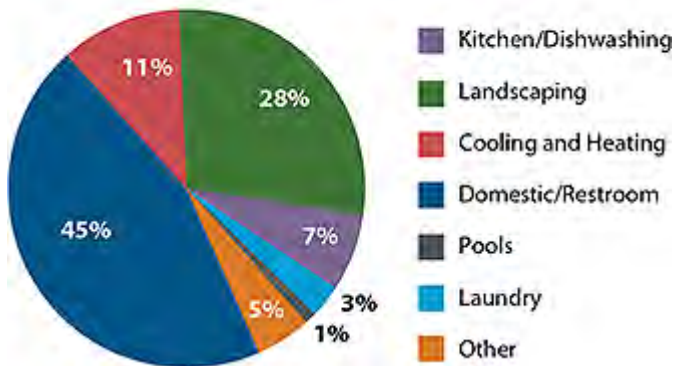
It should be noted that Title 5 flows are based on flows from the 1970s, the same time period that the school was constructed. Title 5 flow rates does not take into account the use of low flow fixtures.

The new Balmer Elementary School will be USGBC LEED certified and low flow fixtures will be used for toilets, faucets, kitchen fixtures and dishwashers, etc. Low flow fixtures are not reflected in Title 5 flow rates.

Mr. Thomas Hengelsberg, AIA, LEED AP, MCARB, MCPPO: Nitsch Proposal #12260.3P
 February 12, 2019
 Page 2 of 2

Toilets from the 1970s had flush volumes of 3.5 to 7.0 gallons per flush. Current low flow fixtures have flush volume of 1.28 gallons per flush (gpf) (EPA WaterSense Label). Reducing flush volume (3.5 to 1.28 gpf) by 63 percent for each flush.

End Uses of Water in Schools



If toilet flushing is approximately 62 percent of sanitary flows at schools without landscape uses (irrigation), then a school with just low flow toilets will result in a 39% reduction of water usage over schools with fixture that are pre-1980s. The amount of water usage approximates the amount of sanitary sewer flows.

The estimated sanitary design flow of 13,710 gallons per day is a more realistically 7,730 gallons per day (or an increase of 2,330 over the existing design flow of 5,980 gallons per day) even with the occupancy more than doubling.

Source: EPA WaterSense

As previously stated, the sanitary infrastructure (pipes sizes, slopes, velocities, peaking factor, etc.) is being design based on the Title 5 flow rates, TR-16 and current engineering standards.

The analysis for the more realistic average daily flow prediction is based on the use of low flow toilets that is not included in the current Title 5 flow rates and provides a more realistic impact from the new school even with the increase in occupancy on the municipal sanitary sewer lines.

If you have any questions, please call.

Very truly yours,

Nitsch Engineering, Inc.

Sandra A. Brock, PE, CFM, LEED AP BD+C
 Vice President, Chief Engineer

SAB/mma



MAXIMUM¹ DAILY SANITARY SEWER FLOWS SUMMARY TABLE

Flow Calculations based on staffing received from School

Calculation based on MAXIMUM OCCUPANTS - GALLONS PER DAY (GPD)

| OCCUPANT | Existing Occupants | Design Flows | Totals | Proposed Occupants | DESIGN FLOW ¹ | ESTIMATED SEWER FLOWS |
|---------------------------------------|--------------------|----------------------------|--------------|--------------------|----------------------------|-----------------------|
| Students | 505 | 10 GPD/person ¹ | 5050 | 1214 | 10 GPD/person ¹ | 12,140 |
| Teachers and Assistants (full time) | 80 | 10 GPD/person ¹ | 800 | 133 | 10 GPD/person ¹ | 1,330 |
| Volunteers (FTE) - Visitors Allowance | 13 | 10 GPD/person ² | 130 | 24 | 5 GPD/person ² | 240 |
| TOTAL | | EXISTING | 5,980 | | PROPOSED | 13,710 |

USE 13,710

NOTES:

1. Project's sewage generation rates were estimated using the Massachusetts State Environmental Code ((Title 5) 310 CMR 15.203) and TR-16.
2. The School anticipates volunteers and visitors that will be on site from a short visit to the entire school day (this is an allowance for these occupants).
3. Peak Rates based on TR-16 and xxxx to determine peaking factor.

MAXIMUM³ DAILY PEAK RATE OF SANITARY SEWER FLOW

| Discription | Gallons Per Day (GPD) | Cubic Feet Per Second (cfs) | Peaking Factor | Peak Flow | Pipe size and Slope (most restrictive run) | Capacity |
|---------------------------|-----------------------|-----------------------------|----------------|-----------|--|----------|
| Total Sanitary Sewer Flow | 13,710 | 0.021 | 5 | 0.106 | | |

FLOW IN PIPE VARIABLES FOR SANITARY SEWER FLOW

| Discription | Flow - Cubic Feet Per Second (cfs) | Pipe size and Slope (most restrictive run) | Mannings roughness | velocity | Note |
|-------------------------------|------------------------------------|--|--------------------|----------|--------------|
| Pipe Flowing Full - Main Line | 1.55 | 8" PVC S=0.16 | 0.013 | 4.45 | Flowing Full |
| Peak Rate of Flow - Main Line | 0.11 | 8" PVC S=0.16 | 0.013 | 2.14 | Peak Rate |

(min velocity 2 ft/s)

TABLE 1 - STAFF COUNT Verified with C. Stickney 1/31/19

| SPACE | QUAN | ADULTS IN EACH | FTE | STUDENTS IN EACH ¹ | TOTAL STUDENTS | Remarks |
|-------------------------|------|----------------------|-----|----------------------------------|-------------------|--|
| PK CRS | 4 | 2 | 8 | 18 | 72 | |
| PK-K SPED | 1 | 3 | 3 | 12 | 12 | |
| K CRS | 9 | 2 | 18 | 18 | 162 | |
| GRADE 1-5 CRS | 40 | 1 | 40 | 23 | 920 | |
| 1-2 SPED | 2 | 2 | 4 | 12 | 24 | |
| 3-5 SPED | 2 | 2 | 4 | 12 | 24 | |
| RESOURCE ROOM | 3 | 1 | 3 | | | STUDENTS COUNTED ABOVE |
| STUDENT SERVICES | 2 | 9 | 18 | | | PROFESSIONALS WORK IN CLASSROOMS ABOVE |
| ART | 2 | 1 | 2 | | | STUDENTS COUNTED ABOVE |
| MUSIC | 2 | 1 | 2 | | | STUDENTS COUNTED ABOVE |
| GYMNASIUM | 1 | 2 | 2 | | | STUDENTS COUNTED ABOVE |
| LIBRARY | 1 | 2 | 2 | | | STUDENTS COUNTED ABOVE |
| MAKER | 1 | 1 | 1 | | | STUDENTS COUNTED ABOVE |
| OT/PT | 1 | 2 | 2 | | | STUDENTS COUNTED ABOVE |
| ADMIN + NURSE | | | 16 | | | INCL PRINCIPAL OFFICES ON LEVEL 2+3 |
| TITLE 1 OFFICE | | | 1 | | | |
| KITCHEN | | | 5 | | | |
| MAINTENANCE STAFF | | | 2 | | | |
| SUBTOTAL - FTE | | | 133 | | 1214 | |
| | | | | | | |
| VISITORS | | | | | | |
| ITINERANT PROFESSIONALS | | | 2 | | | Not full time - in building for no more than 2 hours |
| VOLUNTEERS | | | 4 | | | Sporadic, usually present for most of the school day |
| VISITORS | | | 18 | | | 3 meetings a day x 6 people, could be concurrent |
| SUBTOTAL | | | 24 | | | |
| | | | | | | |
| TOTALS | | | 157 | | 1214 | |

¹ Reflects maximum enrollment, not actual present enrollment.

TABLE 2 – PARKING AND EVENT ANALYSIS - Proposed Parking Spaces: 246 + Overflow Spaces 54 = 300 Total Spaces Onsite Maximum

| TIME OF DAY | EVENT/ CONDITION | FREQUENCY | PARKING (LONG TERM) | PARKING (S/T VISITOR <2 hours) | QUEUE SPACE | LOADING SPACE (Semi Truck) | REMARKS |
|-------------------|--------------------------------------|-----------------|---------------------------|---|----------------|-------------------------------------|--|
| SCHOOL DAY | | | | | | | |
| 6:00 AM – 7:45 AM | Supply Deliveries | Daily M-F | | | | 2 | Various deliveries throughout week, rarely more than one truck at a time. |
| 6:00 AM – 2:00 PM | Kitchen & Maint. staff in building | | 7 | | | | |
| 6:30 AM – 4:00 PM | Teachers and Staff in Building | Daily M-F | 126 | 24 | | | |
| 6:45 AM – 7:55 AM | Early Care Drop-off | Daily M-F | | 10 | | | Indicates expected max cars at any one time. |
| 7:45 AM – 8:00 AM | Pre-K Parent Park & Drop-Off Arrival | Daily M-F | | 16 | | | Park & Drop Lot assumes 16 live spaces with 2-3 minute use; additional vehicles can use signed north row of west parking lot |
| 8:00 AM – 8:15 AM | Parent Drop-Off & Arrival | Daily M-F | | | 74 | | Assume live spaces in a moving line; 74 vehicles at any one time |
| 8:00 AM – 2:30 PM | Parent Volunteers | Daily M-F | 4 | | | | |
| 8:00 AM – 4:00 PM | Itinerant Staff in Building | Daily M-F | | 2 | | | |
| 8:00 AM – 4:00 PM | Long Term Visitors | Daily M-F | | 18 | | | |
| 2:45 PM – 3:15 PM | Dismissal and Parent Pick-up | Daily M-F | | | 74 | | Some parents may queue earlier than this; 74 vehicles at any one time, additional early cars may park in ~89 vacant site spaces. Dismissals will be staged to even out the peak flow of traffic. |
| AFTERNOON | | | | | | | |
| 3:00 PM – 5:00 PM | Student Game – Soccer Fields | Spring/Fall M-F | 168 | | | | (32 players [assume 50% car factor] + 6 adults + 6 additional spectators) X 6 soccer fields = 168 cars |
| 3:00 PM – 5:00 PM | Student Game – Gymnasium | Winter M-F | 47 | | | | Assumes basketball game: 20 players, 6 adults, 40 parents, 1 custd. |
| 3:00 PM – 5:00 PM | School Meetings – Faculty/Staff | Daily M-TH | 127 | | | | Assume all-staff meeting (peak count), 1 custodian |
| 3:00 PM – 5:00 PM | School Club Meeting - Staff | 2x per week | 5 | | | | Assume 20 student members, 4 adults, 1 custodian |
| EVENING | | | | | | | |
| 4:30 PM – 5:30 PM | Night 1 Parent Open House PK-K | 1x per semester | 260 | | | | 246 students; assume one car per household; 14 staff |
| 5:30 PM – 6:30 PM | Night 1 Parent Open House Gr 1 | 1x per semester | 216 | | | | 196 students; assume one car per household; 20 staff |
| 6:30 PM – 7:30 PM | Night 1 Parent Open House Gr 2 | 1x per semester | 216 | | | | 196 students; assume one car per household; 20 staff |
| 4:30 PM – 5:30 PM | Night 2 Parent Open House Gr 3 | 1x per semester | 216 | | | | 196 students; assume one car per household; 20 staff |
| 5:30 PM – 6:30 PM | Night 2 Parent Open House Gr 4 | 1x per semester | 216 | | | | 196 students; assume one car per household; 20 staff |

| | | | | | | | |
|--------------------|--|-------------------------------|------------------|--|--|--|--|
| 6:30 PM – 7:30 PM | Night 2 Parent Open House Gr 5 | 1x per semester | 216 | | | | 196 students; assume one car per household; 20 staff |
| 5:30 PM – 9:00 PM | Community Meeting – Small (Media Center or Quiet Lunch L) | Daily T-W-TH | 51 | | | | 50 adult participants; assume one car per each, 1 custodian |
| 5:30 PM – 9:00 PM | Community Meeting – Medium (Café 1 or Café 2) | 1x per 2 weeks | 206 | | | | 195 seats, 10 participants; 1 custodian |
| 5:30 PM – 9:00 PM | Community Meeting – Large (Gymnasium) | 1x per year | 275 | | | | 508 seats, assume 50% car factor (254), 20 participants; 1 custodian |
| 6:30 PM – 8:30 PM | Perform. Art Event - Concert, Play (Café 1) | 2 x per semester | 154 | | | | 190 seats, assume 75% car factor (143), 10 adults; 1 custodian |
| 5:30 PM –7:00 PM | Community Sport –Early Game (Gymnasium) | Winter/ Daily M-F | 122 ² | | | | 148 bleacher seats, assume 75% car factor (111), 10 adults; 1 custodian |
| 7:00 PM – 8:30 PM | Community Sport –Middle Game (Gymnasium) | Winter/ Daily M-F | 122 ² | | | | 148 bleacher seats, assume 75% car factor (111), 10 adults; 1 custodian |
| 8:30 PM – 10:00 PM | Community Sport –Late Game (Gymnasium) | Winter/ Daily M-F | 122 ² | | | | 148 bleacher seats, assume 75% car factor (111), 10 adults; 1 custodian |
| WEEKEND USE | | | | | | | |
| 8:00 AM – 3:00 PM | Youth Soccer “Jamboree” tournament event (worst case) (Fields) | Fall/ Saturdays | 360 | | | | (44 players [1 parent car per each] + 6 adults + 10 additional spectators) X 6 soccer fields = 360 cars |
| 8:00 AM – 3:00 PM | Youth Soccer practices (Fields) | Fall/ Saturdays | 264 | | | | (32 players [1 parent car per each] + 6 adults + 6 additional spectators) X 6 soccer fields = 264 cars |
| 8:00 AM – 5:00 PM | Youth Softball/ Baseball (Diamonds) | Spring/ Saturdays | 68 | | | | (18 players [1 parent car per each] + 6 adults + 10 additional spectators) X 2 baseball diamonds = 68 cars |
| 3:00 PM – 6:30 PM | Community Adult Soccer (Fields) | Fall/ Saturdays, Sundays | 40 | | | | (30 players [1 car per each] + 10 additional spectators) X 1 soccer fields = 40 cars |
| 3:00 PM – 7:00 PM | Community Babe Ruth Baseball (Large Diamond) | Spring/ Saturdays, Sundays | 64 | | | | (18 players [1 parent car per each] + 6 adults + 40 additional spectators) X 1 baseball diamonds = 64 cars |

² This number assumes a competition event with full bleachers. Most community sporting events in the gym will be much more sparsely attended.

Existing Parking Spaces - striped, paved, legitimate spaces: 96

TESTIMONIALS:

"SecurShade is cutting edge technology that can instantaneously cover the windows and make our school safer. The test was instant – it is awesome."

Shari Carr, Safety Coordinator
Allen Brook School

"SecurShade with its rapid, non-threatening ability to improve cover in a security event, and its enhanced notification to all school personnel, as well as first responders, makes this product highly desirable. We would advocate for its inclusion in our school designs."

Lee Dore, Principal
Dore & Whittier Architects, Inc.

"SecurShades replace worn out and broken shades with very high-quality energy efficient shades that will save us money over the long run, communicate a lockdown when students and staff cannot hear the PA, and form safer spaces to hide by eliminating sight lines. For such a small increase in cost I strongly recommend schools consider this innovative school safety product."

Lyall Smith
CSSU Director of Buildings & Grounds
and former VSBIT Physical Plant Consultant

"I love SecurShade for its simplicity and sustainability. Any authorized person throughout the building, who recognizes a threat can immediately close all the school's shades removing sight lines and alerting everyone to a lockdown while simultaneously sending a message to authorities where the threat is located. This technology is compelling and should be installed into schools."

Michael Kerwin, Principal
Vanderweil Consulting, Boston MA

SecurShades are available from the following distributors:

| | | |
|---|---|---|
| 3 Blind Mice Window Coverings Inc. Scot Dietz scot@3blindmiceusa.com 858-452-6100 6150 Lusk Blvd Suite B103, San Diego, CA 92121 | Caldwell's Windowware Inc. Terry Gensler terry@caldwellsw.com 412-922-1132 166 Wabash Street, Pittsburgh, PA 15220 | Porter Preston Inc. Steve Gilmore steve@porterpreston.com 203-753-1113 x 101 61 Mattatuck Heights Road, Waterbury, CT 06705 |
| ABC Blind & Drapery LLC Ken McWilliams ken@abcblind.com 512-459-6561 6221 N. Lamar Blvd., Austin, TX 78752 | Creative Windows Carl Sly csly@creativewindows.com 734-769-5100 2216 S Industrial Highway, Ann Arbor, MI 48104 | Royal Crest Inc. Mark Jeross markj@detroit-blinds-shades-shutters.com 248-399-2476 14851 W. Eleven Mile Road, Oak Park, MI 48237 |
| Abda Window Fashions Pat Rebb pat@abdawindowfashions.com 317-273-8343 1159 Country Club Road, Indianapolis, IN 46234 | Gordon's Window Décor Inc. Kelly Clements kellyc@gordonswd.com 802-338-9344 8 Leroy Rd., Williston, VT 05495 | Window Modes, Ltd Neal Gary ngary@windowmodes.com 914-665-4545 59 Kensico Dr., Mount Kisco, NY 10549 |
| All About Blinds and Shutters Robert Walker rsw@allaboutblinds.net 904-296-1356 7501 Philips Highway, Jacksonville, FL 32256 | Lu-Tek Chris James cjames@lu-tek.com 303-650-6000 5315 Xenon St., Arvada, CO 80005 | Window-ology John McElroy info@window-ology.com 925-462-1207 4225 Stanley Blvd., Pleasanton, CA 94566 |

No one in your area? Call **802-338-0305**, or email securshade@gmail.com, for more information or the distributor nearest you.





The Inspiration Behind SecurShade



"My name is Gordon Clements, Founder and inventor of SecurShade. There is a frightening trend in school shootings. My mission is to see, as quickly as possible, schools across the country benefiting from the added safety and peace of mind SecurShade delivers upon threat of an active shooter situation."

"While in the process of retiring and transitioning my successful 30 year window covering manufacturing business to my daughter, a horrific community tragedy occurred. A friend and local elementary school teacher lost her life in a school shooting. This inspired me to continue working and apply my window covering experience to meaningful use."

"A teacher's highest and best use should be directed to providing an optimum learning experience. Not worrying about how they will provide cover for the kids in the event of an active shooter. This is the inspiration behind SecurShade."

Protecting Students... the Highest Priority a School Administration has in an Emergency

Sadly every school in America is planning for a possible active shooter event. On paper, the typical emergency protocol includes the necessary steps. In reality the success of engaging each step, swiftly and sequentially, is subject to synchronizing an entire aware, but unsuspecting, community – on demand. The ability to atune and effectively communicate a lockdown will always be the weakest link in any well-designed plan.

SecurShade window shades eliminate the communication and reaction gaps in a lockdown scenario and offer a safer way to protect our children. With a single push of a button, ALL shades in the school will drop instantly while simultaneously sending a message to selected authorities (principal, security officer, police, DHS, etc.) signaling a lock down event with the location of the threat.

When all the SecurShade shades drop in unison, the shooter's line of sight is blocked and their actions interrupted. This provides a powerful alert to everyone in the school or yard, and valuable seconds to deter the threat, protect the students and staff, and engage emergency personnel.



Teacher sees someone approach the classroom with a gun.



Teacher can see out. Shooter cannot see in.



5 Reasons Why SecurShades are a Smart Choice

- 1 **SecurShades make schools safer...** what could be more important.
- 2 **SecurShades improve peace of mind and the learning environment...** providing teachers added control over their windows allows them to better focus on the learning experience.
- 3 **SecurShades are Affordable...** for a small increase in cost over traditional shades, you have a superior shade that's a long-term investment in both function and safety.
- 4 **SecurShades are functional and energy efficient...** can be manually operated for daily use to maximize natural light while controlling winter heat loss and summer heat gain.
- 5 **SecurShades are a smart choice...** by investing in added safety when replacing old worn out shades, administration is demonstrating they are doing everything possible to protect their schools.



VISIT: gordonswindowdecor.com/securshade



THE NEW W. EDWARD BALMER SCHOOL

NORTHBRIDGE, MASSACHUSETTS



SCHOOL BUILDING COMMITTEE MEETING

FEBRUARY 27, 2019



Massachusetts School Building Authority
Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities



AGENDA

DD Progress Report

Development of Site and Building Design:

- Parking Plan/ Zoning Analysis
- Floor Plan developments
- Preliminary Instructional FF&E and Technology
- Elevation developments

Interior Building Design and Color Scheme:

- Interior Design Images
- Color Scheme discussion

LEED Scorecard, Energy Model, Daylighting Studies

“SecureShade” **Product for emergency shade deployment**



DD PROGRESS REPORT

2/8 DD pricing drawings & specs due from consultants

2/11 – 2/21

- Review, comments, and coordination for DD Pricing Set
- Review of Minutes items to ensure inclusion in project
- Continue to incorporate User Group comments in pricing documents
- Geo-Enviro Consultant performed additional soil sampling
- Environmental consultant performed additional building materials testing
- Ongoing phasing and ERP Package planning & scoping

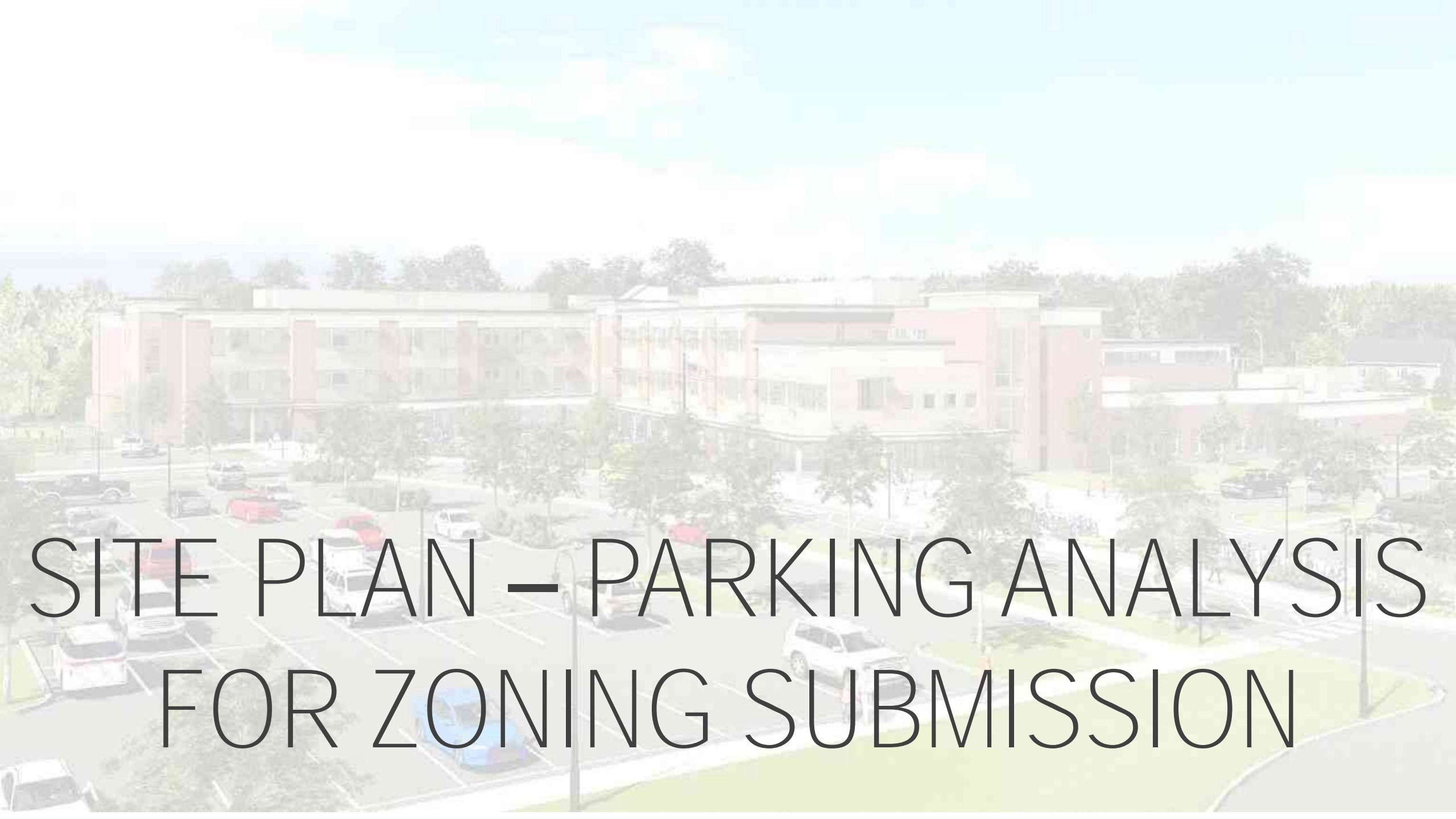
2/22 Issued DD Pricing Set to Estimator, CM



DD UPCOMING SCHEDULE

- 3/12 DD Draft Estimate Due
- 3/13-14 Team reviews Draft Estimate
- 3/15 DD Draft Estimate Reconciliation
Consider VE as necessary
- 3/18 DD Final Estimate Due
- 3/19 SBC reviews Final DD Estimate
Vote to approve, amend, etc.
- 3/27 Finalized DD documents from Consultants
- 4/2 Review final DD documents
Vote to submit to MSBA
- 4/5 Submit DD document package to MSBA

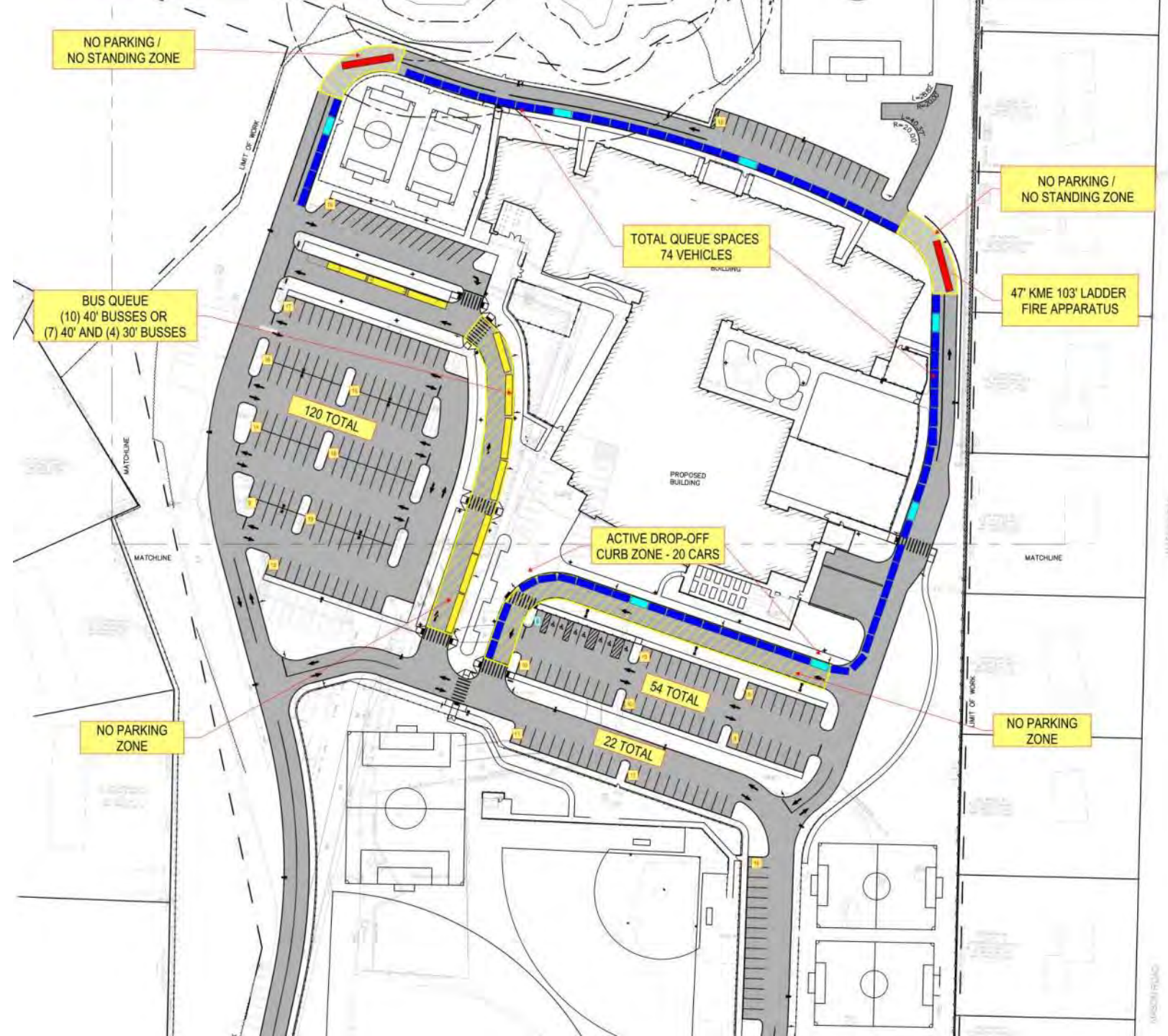




SITE PLAN – PARKING ANALYSIS FOR ZONING SUBMISSION

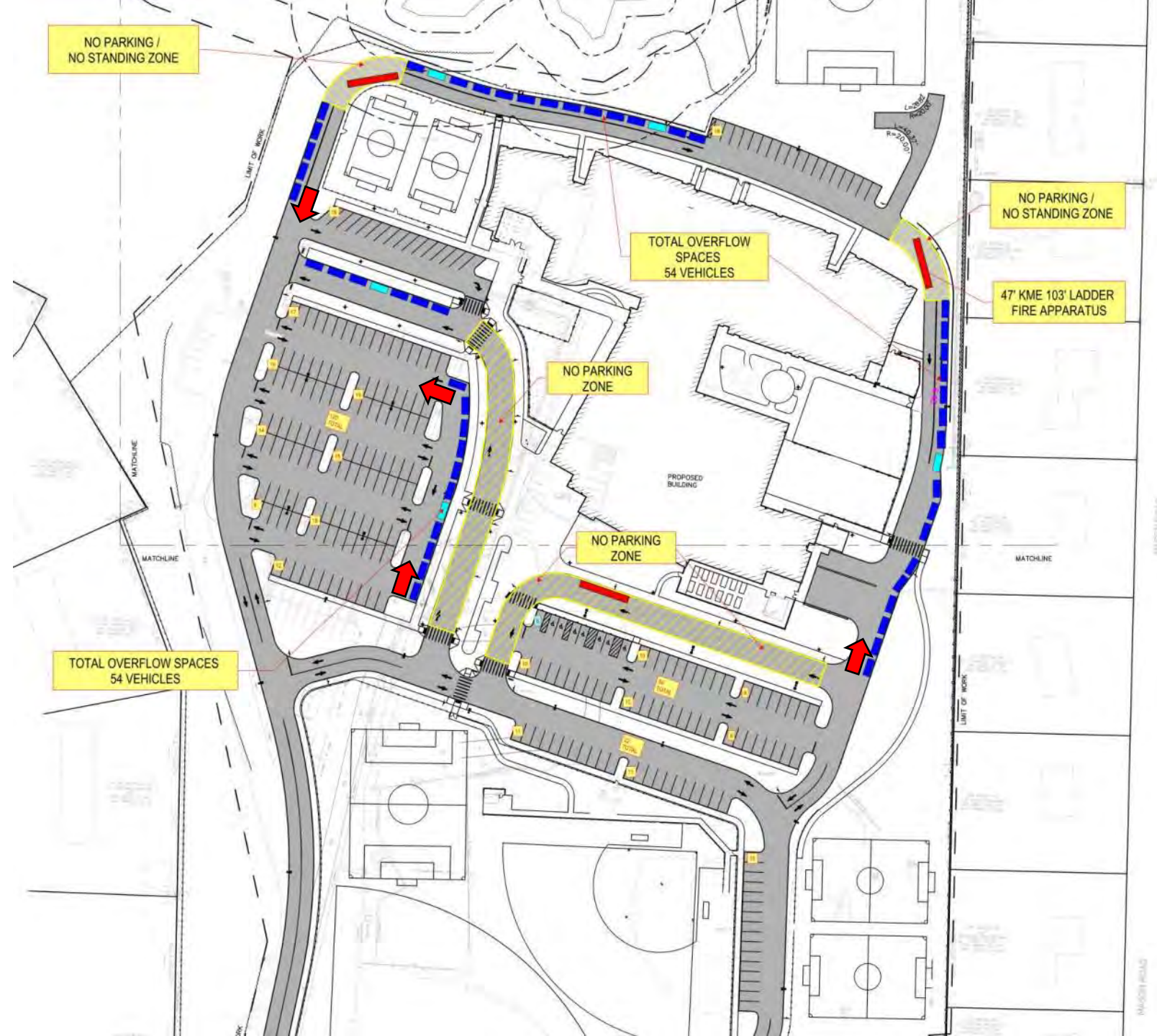
UPDATED PARKING/ CIRCULATION PLAN

- 246 parking spaces
- 74 queue spaces
- Rear drive one-way clockwise during drop-off, pick-up
- No parking or standing on rear drive corners
- No parking in bus lane or drop off lane



EVENT OVERFLOW PARKING PLAN

- 246 parking spaces
- 54 overflow spaces
- 300 total spaces onsite max.
- Rear drive becomes one-way, parallel park, inner fire lane
- Circulation lane in west parking becomes one-way, parallel park
- No parking or standing on corners
- No parking in bus lane or drop off lane – fire lanes



PARKING ANALYSIS – REFER TO HANDOUT

- 157 staff + visitor parking spaces required for normal school days
- 246 parking spaces provided
- 74 queue spaces provided, plus 89 open spaces in lots to handle early pick-up
- Large-draw events that will utilize the Overflow Plan (up to 300 spaces) are:
 - Parent Night – split into two nights, and three sessions each night – 260 spaces needed
 - Large Meeting in Gym – 275 spaces needed
 - Youth Soccer Practices/ Games – 264 spaces needed
 - Sport tournaments using fields – 360 spaces needed: if this is ever done, offsite parking may be required (Armory/ Whitinsville Water Co?)

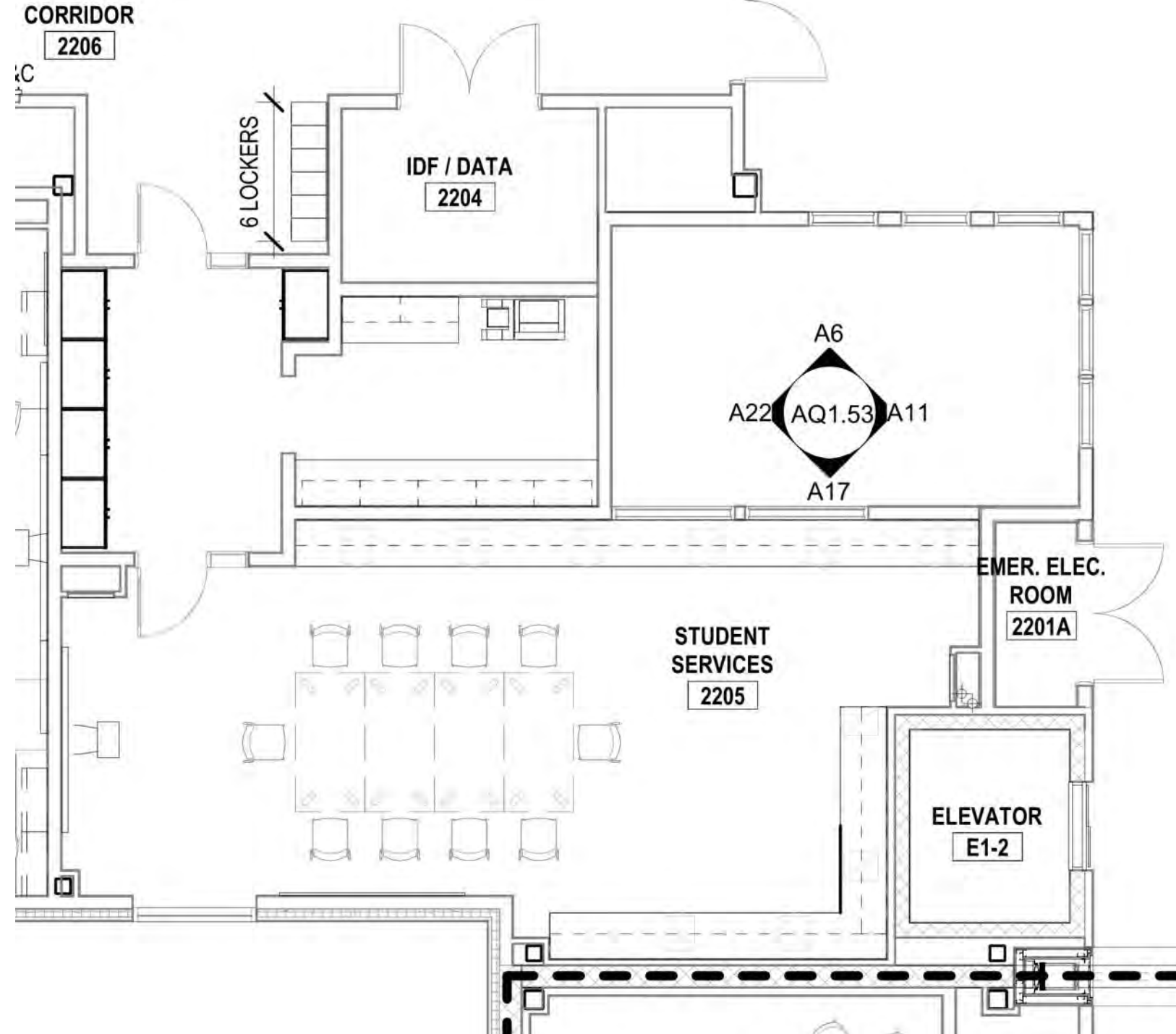


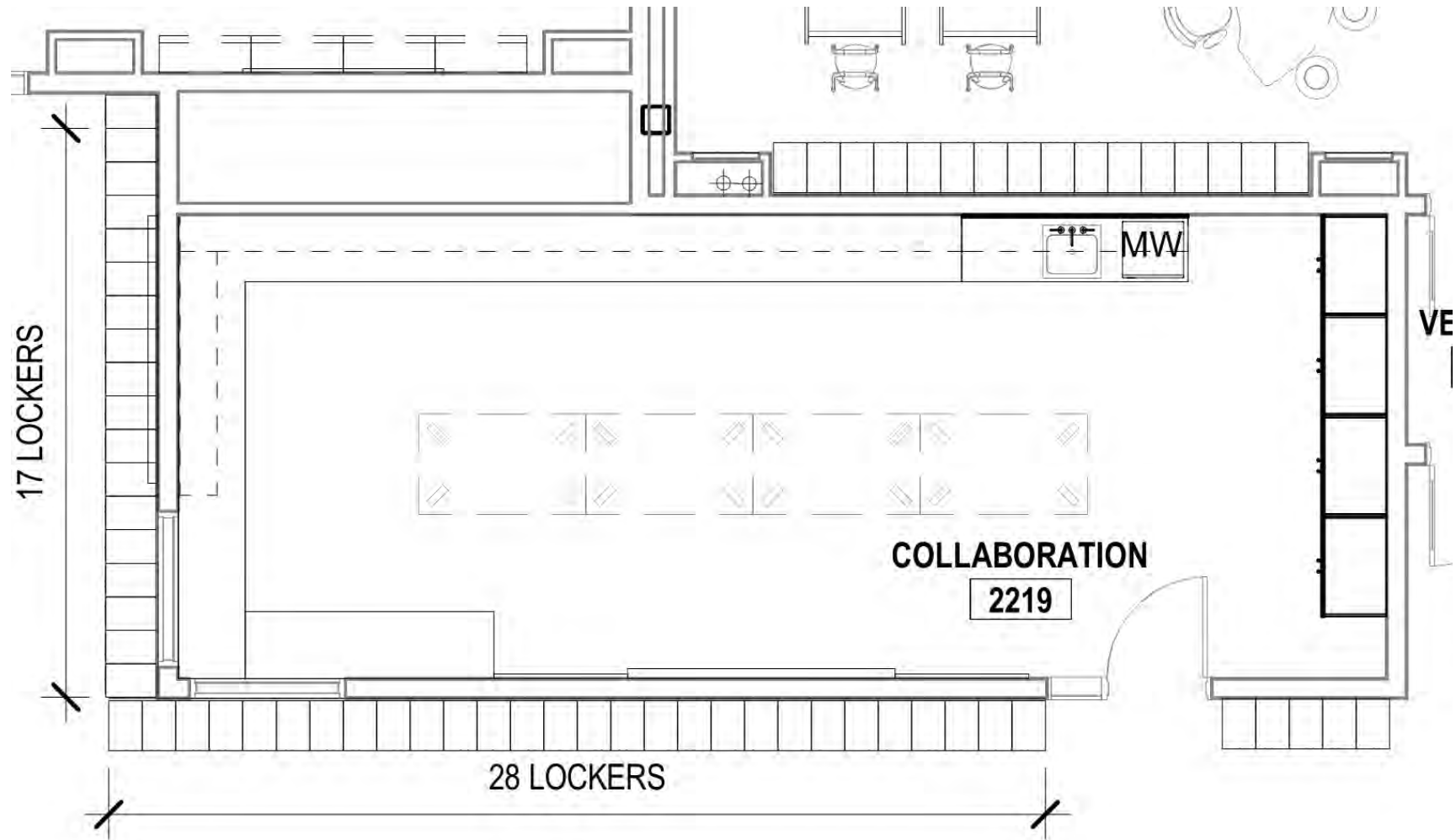
An architectural rendering of a modern school building with a large parking lot. The building is a long, two-story structure with a mix of red brick and light-colored panels. It has several large windows and a central entrance. In front of the building is a large parking lot with many cars parked. There are trees and landscaping around the building and parking lot. The sky is blue with some clouds. The text "PLAN DEVELOPMENTS" is overlaid in the center of the image.

PLAN DEVELOPMENTS

[illegible]

REVISED STUDENT SERVICES SUITE

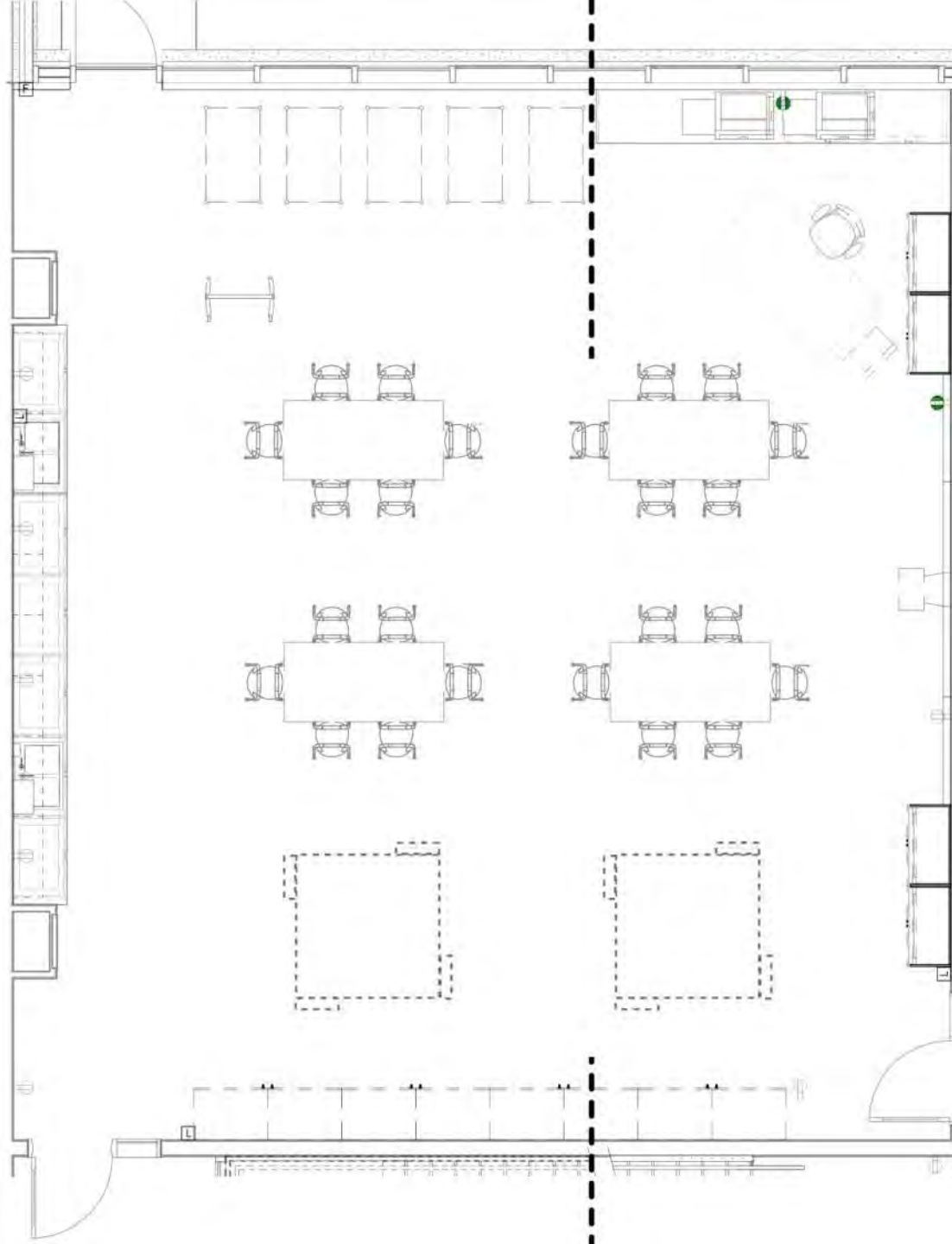




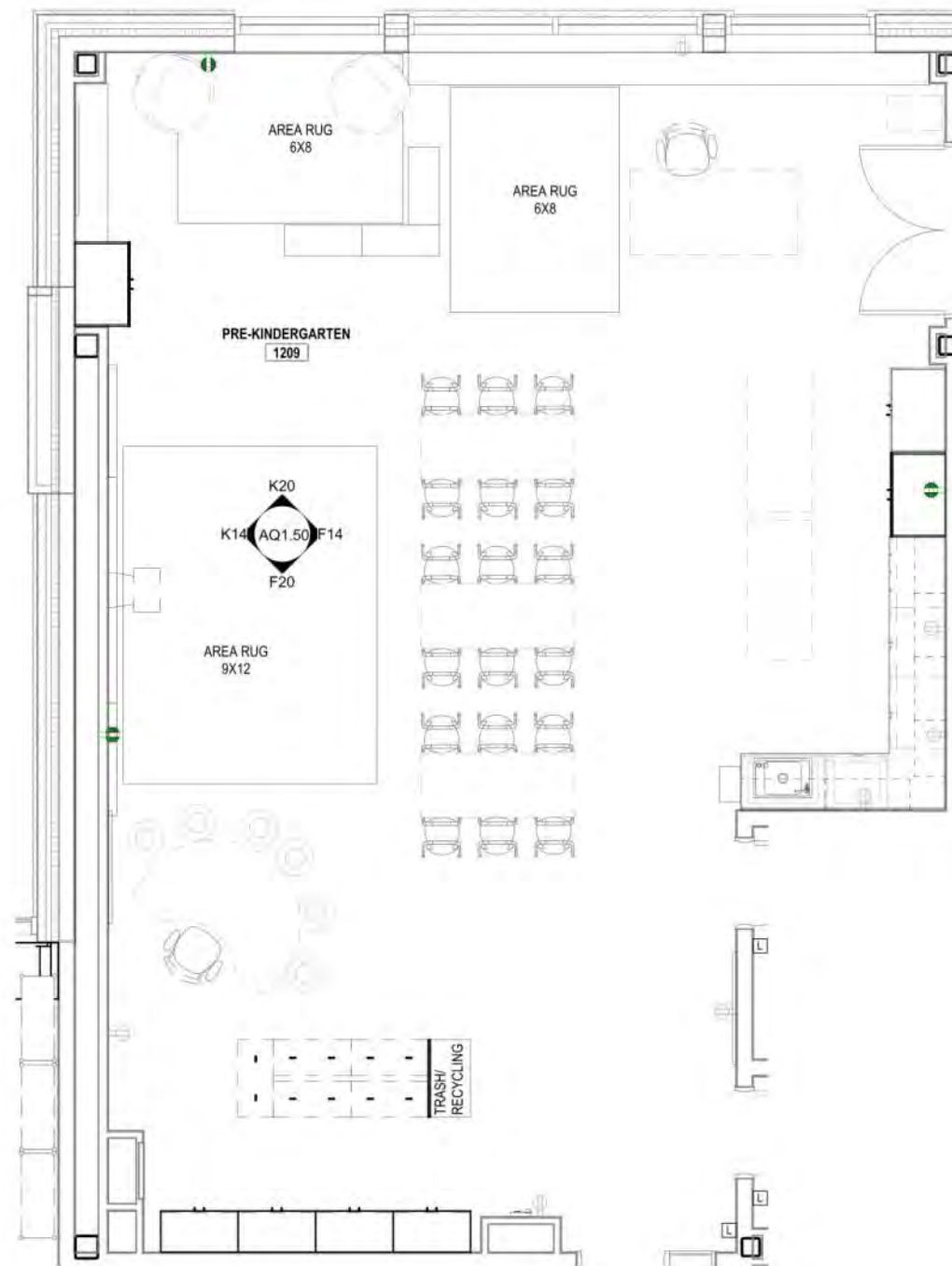
REVISED COLLABORATION ROOM



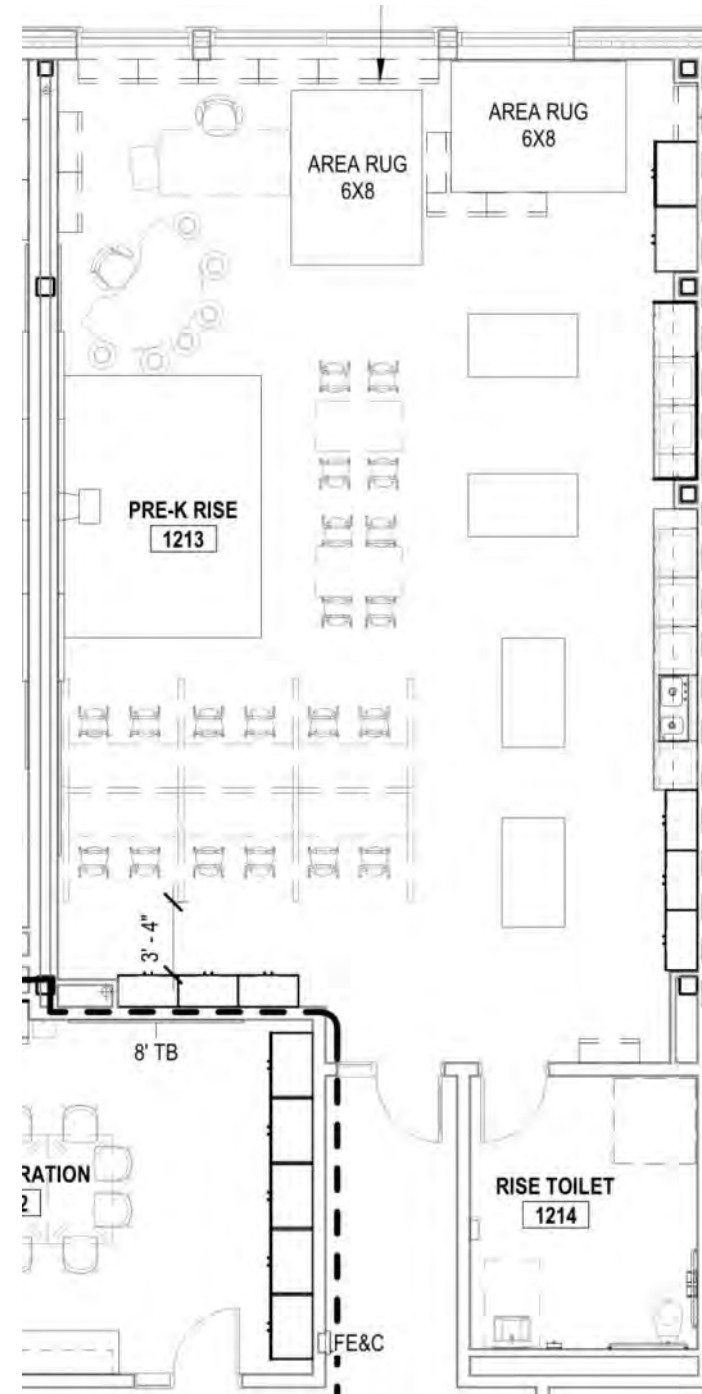
REVISED MAKER SPACE



REVISED PRE-K CLASSROOM



REVISED PRE-K RISE CLASSROOM



ELEVATION DEVELOPMENTS:

- To reduce framing, split large classroom windows.
- Light gage metal framing rather than structural steel.
- Window spacing uniform, configuration more uniform.





INTERIOR DESIGN IMAGES



THEME:
SKY



COMMUNITY
THEME:
EARTH



THEME:
RIVER



THEME:
FOREST

COLOR INTENSITY SCHEME

Level 1
River

Level 2
Path

Level 3
Sky

White
Throughout



Long length of stay in space:
Classroom, Group Room, and
Specialist Room

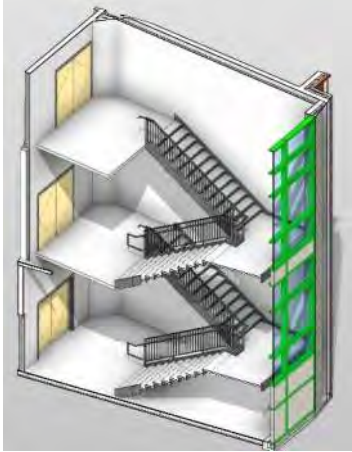
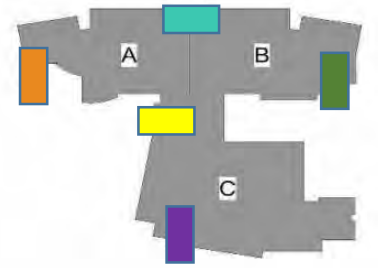


Medium length of stay space:
Cafeteria, Media/Library, Extended
Learning Areas

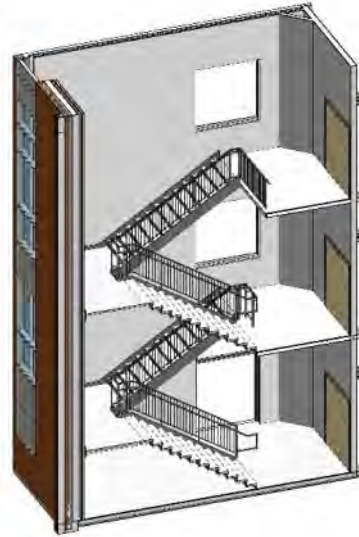


Short length of stay in space:
Staircase, Hallway, Entries, Bathrooms

ACCENT COLORS IN STAIRS HELP WAYFINDING



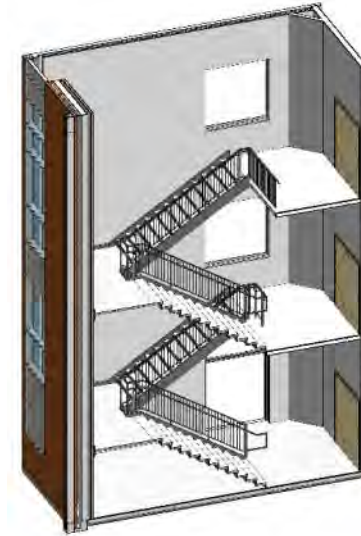
Stair 1



Stair 2



Stair 3



Stair 4

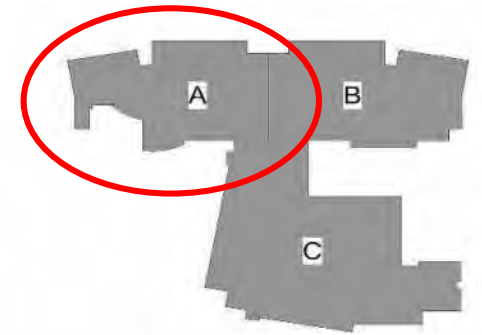


Stair 5



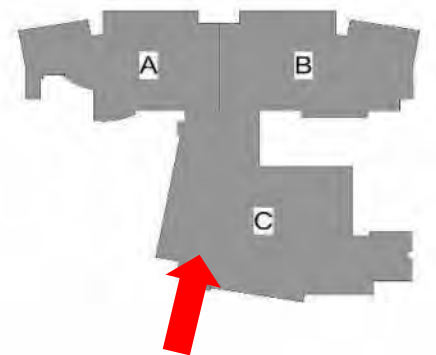
ACCENT COLORS BY LEVEL

HELP WAYFINDING



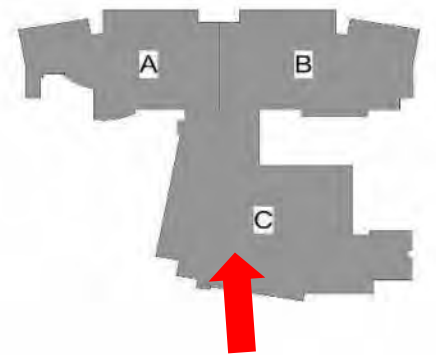


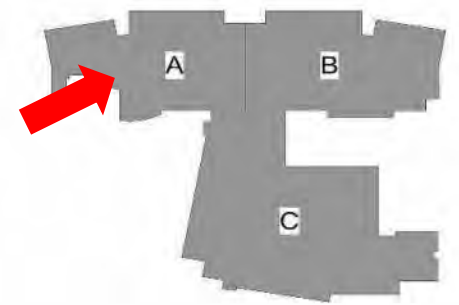
VIEW OF MAIN LOBBY



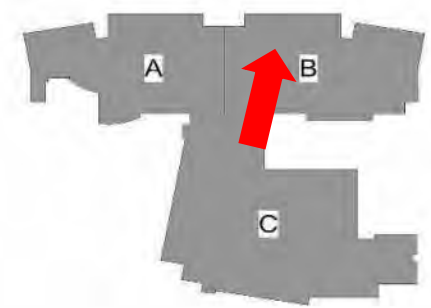


VIEW OF NORTH CAFETERIA

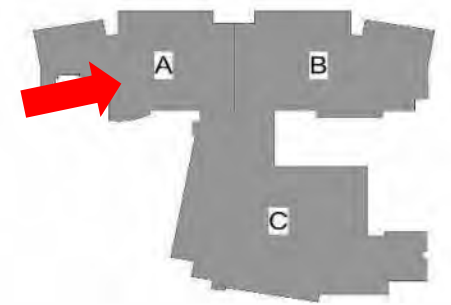




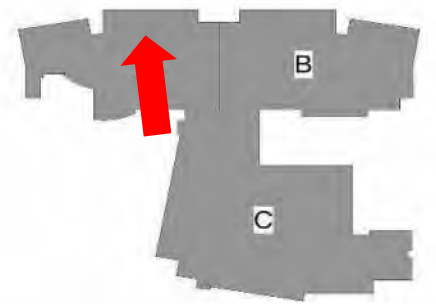
VIEW OF TYPICAL EXTENDED LEARNING AREA (PRE-K)



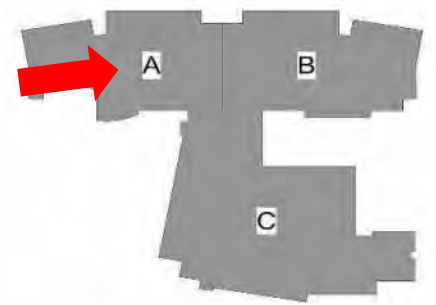
VIEW OF TYPICAL KINDERGARTEN CLASSROOM



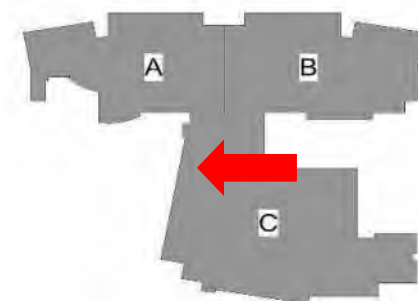
VIEW OF TYPICAL EXTENDED LEARNING AREA (GRADE 1)



VIEW OF TYPICAL GRADE 1-2 CLASSROOM



VIEW OF TYPICAL EXTENDED LEARNING AREA (GRADE 3)



VIEW OF TYPICAL GRADE 3-5 CLASSROOM



UPDATED LEED SCORECARD

| Yes Maybe No | | | | |
|--------------------|---|---|---|------------------------------|
| D/C | 1 | 0 | 0 | Integrative Process 1 |
| D | 1 | | | IPc1 Integrative Process 1 |

| Yes Maybe No | | | | |
|--------------------|---|---|----|--|
| | 0 | 2 | 13 | Location & Transportation 15 |
| D | | | N | LTc1 LEED for Neighborhood Development Location 15 |
| D | | | 1 | LTc2 Sensitive Land Protection 1 |
| D | | | 2 | LTc3 High Priority Site 2 |
| D | | | 5 | LTc4 Surrounding Density and Diverse Uses 5 |
| D | | | 4 | LTc5 Access to Quality Transit 4 |
| D | | | 1 | LTc6 Bicycle Facilities 1 |
| D | | 1 | | LTc7 Reduced Parking Footprint 1 |
| D | | 1 | | LTc8 Green Vehicles 1 |

| Yes Maybe No | | | | |
|--------------------|---|---|---|---|
| | 3 | 5 | 4 | Sustainable Sites 12 |
| C | Y | | | SSpr1 Construction Activity Pollution Prevention Required |
| D | Y | | | SSpr2 Environmental Site Assessment Required |
| D | 1 | | | SSc1 Site Assessment 1 |
| D | | 2 | | SSc2 Site Development - Protect or Restore Habitat 2 |
| D | | 1 | | SSc3 Open Space 1 |
| D | | | 3 | SSc4 Rainwater Management 3 |
| D | | 2 | | SSc5 Heat Island Reduction 2 |
| D | 1 | | | SSc6 Light Pollution Reduction 1 |
| D | | | 1 | SSc7 Site Master Plan 1 |
| D | 1 | | | SSc8 Joint Use of Facilities 1 |





Yes Maybe No

| | 5 | 4 | 3 | | Water Efficiency | 12 |
|---|---|---|---|-------|-------------------------------|----------|
| D | Y | | | WEpr1 | Outdoor Water Use Reduction | Required |
| D | Y | | | WEpr2 | Indoor Water Use Reduction | Required |
| D | Y | | | WEpr3 | Building-level Water Metering | Required |
| D | 2 | | | WEc1 | Outdoor Water Use Reduction | 2 |
| D | 2 | 2 | 3 | WEc2 | Indoor Water Use Reduction | 7 |
| D | | 2 | | WEc3 | Cooling Tower Water Use | 2 |
| D | 1 | | | WEc4 | Water Metering | 1 |

Yes Maybe No

| | 16 | 7 | 8 | | Energy & Atmosphere | 31 |
|---|----|---|---|-------|--|----------|
| C | Y | | | EApr1 | Fundamental Commissioning and Verification | Required |
| D | Y | | | EApr2 | Minimum Energy Performance | Required |
| D | Y | | | EApr3 | Building-level Energy Metering | Required |
| D | Y | | | EApr4 | Fundamental Refrigerant Management | Required |
| D | 5 | 1 | | EAc1 | Enhanced Commissioning | 6 |
| D | 11 | 2 | 3 | EAc2 | Optimize Energy Performance | 16 |
| D | | 1 | | EAc3 | Advanced Energy Metering | 1 |
| C | | | 2 | EA4 | Demand Response | 2 |
| D | | | 3 | EAc5 | Renewable Energy Production (1%/5%/10%) | 3 |
| D | | 1 | | EAc6 | Enhanced Refrigerant Management | 1 |
| C | | 2 | | EAc7 | Green Power and Carbon Offsets (50%/100%) | 2 |

Yes Maybe No

| | 4 | 1 | 8 | | Materials & Resources | 13 |
|---|---|---|---|-------|---|----------|
| D | Y | | | MRpr1 | Storage & Collection of Recyclables | Required |
| C | Y | | | MRpr2 | Construction and Demolition Waste Management Planning | Required |
| C | | | 5 | MRc1 | Building Life-cycle Impact Reduction | 5 |
| C | 1 | | 1 | MRc2 | Building Product Disclosure and Optimization-Environmental Product | 2 |
| C | | 1 | 1 | MRc3 | Building Product Disclosure and Optimization-Sourcing of Raw Matls. | 2 |
| C | 1 | | 1 | MRc4 | Building Product Disclosure and Optimization-Material Ingredients | 2 |
| C | 2 | | | MRc5 | Construction and Demolition Waste Management | 2 |

Yes Maybe No

| | 6 | 5 | 5 | | Indoor Environmental Quality | 16 |
|---|---|---|---|-------|---|----------|
| D | Y | | | EQpr1 | Minimum IAQ Performance | Required |
| D | Y | | | EQpr2 | Environmental Tobacco Smoke (ETS) Control | Required |
| D | Y | | | EQpr3 | Minimum Acoustical Performance | Required |
| D | 2 | | | EQc1 | Enhanced IAQ Strategies | 2 |
| C | 1 | 1 | 1 | EQc2 | Low-Emitting Materials (3/5/6) | 3 |
| C | 1 | | | EQc3 | Construction IAQ Management Plan | 1 |
| C | | 2 | | EQc4 | IAQ Assessment | 2 |
| D | | 1 | | EQc5 | Thermal Comfort | 1 |
| D | 1 | 1 | | EQc6 | Interior Lighting | 2 |
| D | | | 3 | EQc7 | Daylight | 3 |
| D | 1 | | | EQc8 | Quality Views | 1 |
| D | | | 1 | EQc9 | Acoustic Performance | 1 |



| | Yes | Maybe | No | | | |
|---|-----|-------|----|--------|---|----------|
| | 4 | 2 | 0 | | Innovation | 6 |
| D | 1 | | | INc1.1 | Innovation: Low-Mercury Lighting | 1 |
| D | 1 | | | INc1.2 | Innovation: O+M Starter Kit | 1 |
| D | | 1 | | INc1.3 | Innovation: Pending | 1 |
| C | | 1 | | INc1.4 | Innovation: Pending | 1 |
| C | 1 | | | INc1.5 | Pilot Credit: Integrative Analysis of Building Materials | 1 |
| C | 1 | | | INc2 | LEED Accredited Professional | 1 |

| | Yes | Maybe | No | | | |
|---|-----|-------|----|------|--|----------|
| | 2 | 0 | 2 | | Regional Priority Credits - earn up to 4 points | 4 |
| D | 1 | | | RPc1 | Regional Priority: WEc1 (@2pts) | 1 |
| D | 1 | | | RPc2 | Regional Priority: EAc2 (@8pts) | 1 |
| C | | | 1 | RPc3 | Regional Priority | 1 |
| D | | | 1 | RPc4 | Regional Priority | 1 |

| | Yes | Maybe | No | | |
|--|-----|-------|----|---|------------|
| | 41 | 26 | 43 | Project Totals (Certification Estimates) | 110 |

Certified: 40-49 points, **Silver:** 50-59 points, **Gold:** 60-79 points, **Platinum:** 80+ points

MINIMUM: **"CERTIFIED"** STRETCH GOAL: **"SILVER"**





UPDATED ENERGY MODEL

DD - UPDATED ENERGY MODEL

THINGS THAT CHANGED:

- MORE FLOOR AREA UNDER A/C; LESS UNDER DISPLACEMENT VENTILATION
- SLIGHTLY LESS GLAZED AREA, DUE TO EDIT IN CLASSROOM WINDOW DESIGN

THINGS THAT STAYED THE SAME:

- BUILDING AREA, VOLUME, LOCATION, ORIENTATION, AND EXPOSURE
- SUNSHADE DESIGN
- ENVELOPE DESIGN: R-VALUE OF WALLS (R-21) & ROOF (R-34)
- WINDOW GLAZING SYSTEMS: CURTAIN WALL (U-0.38), STOREFRONT & WINDOWS (U-0.40); NEARLY SAME PERCENTAGES OF EACH
- LIGHTING POWER DENSITY TARGET – 0.40 WATTS/ SF





DD MODEL: 32.9% SAVINGS → 13 LEED ENERGY POINTS

Balmer Elementary School - LEED Energy Savings Summary (Design Development Update)

| Baseline | System | Annual Elec. Cons. (kWh) | Annual Gas Cons. (MBTU) | Annual Electric Cost | Annual Gas Cost | Combined Utility Cost | Annual Utility \$/s.f. | Annual kBTU/s.f. (EUI) | Combined Expense Savings* | Energy Cost Savings Percentage |
|---------------|---|--------------------------|-------------------------|----------------------|-----------------|-----------------------|------------------------|------------------------|---------------------------|--------------------------------|
| LEED Baseline | 1. ASHRAE Standard 90.1-2010 Envelope (Wall Insulation R-13 + R-7.5 c.i., Roof Insulation R-20 c.i., Windows 0.55 U-Value/0.40 SHGC, Curtainwall 0.45 U-Value/0.40 SHGC) 2. ASHRAE Standard 90.1-2010 Mechanical Systems (System 5 - Packaged VAV w/ Reheat and 82% Eff. Hot-Water Boilers) 3. ASHRAE Standard 90.1-2010 Lighting Systems (0.99 w/s.f.) 4. ASHRAE Standard 90.1-2010 Domestic Hot Water Systems (80% Eff. Hot Water Heaters) | 1,088,800 | 4,804.1 | \$191,737 | \$35,978 | \$227,715 | \$1.36 | 51.01 | - | - |

| Option | System | Annual Elec. Cons. (kWh) | Annual Gas Cons. (MBTU) | Annual Electric Cost | Annual Gas Cost | Combined Utility Cost | Annual Utility \$/s.f. | Annual kBTU/s.f. (EUI) | Combined Expense Savings* | Energy Cost Savings Percentage |
|-----------------|---|--------------------------|-------------------------|----------------------|-----------------|-----------------------|------------------------|------------------------|---------------------------|--------------------------------|
| Design Building | 1. Design Envelope (Wall Insulation R-21 c.i., Roof Insulation R-34 c.i., Windows 0.40 U-Value/0.40 SHGC, Curtainwall 0.38 U-Value/0.40 SHGC) 2. Design Mechanical Systems (VAV Dehumidification Displacement Ventilation Systems for Classroom Full AC for Admin., Media Center, Cafe/Stage, and Gym with High-Efficiency Condensing Boilers) 3. Design High-Efficiency Lighting Systems (0.4 w/s.f.) 4. Design High-Efficiency Domestic Hot Water Systems (94% Eff. Hot Water Heaters) | 703,700 | 3,870.3 | \$123,922 | \$28,985 | \$152,907 | \$0.92 | 37.6 | \$74,808 | 32.9% |

SD MODEL WAS 33.2% SAVINGS →

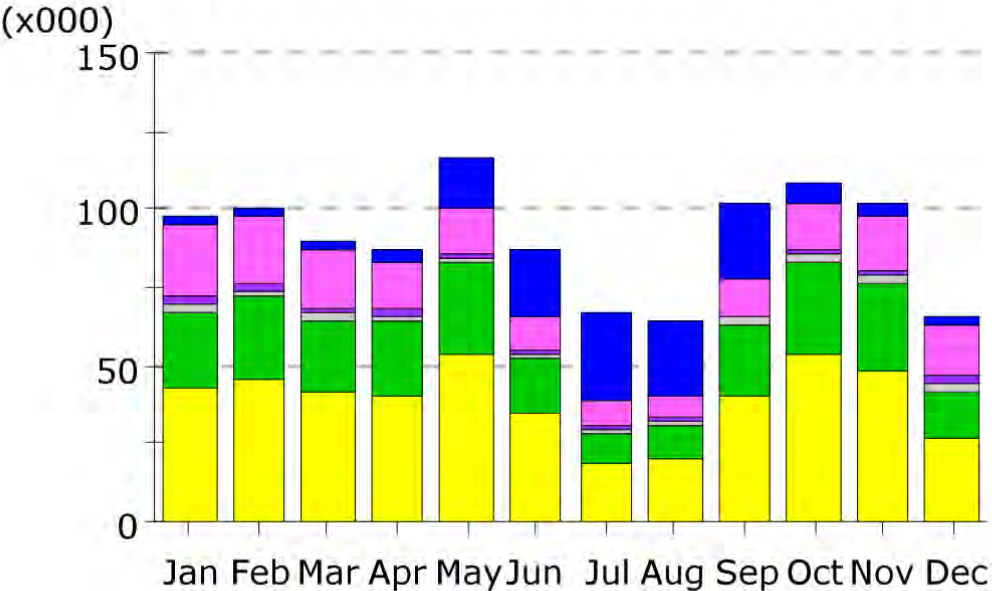
*Combined expense savings is the difference between the combined annual expense of the baseline and building in comparison.

13 LEED ENERGY POINTS

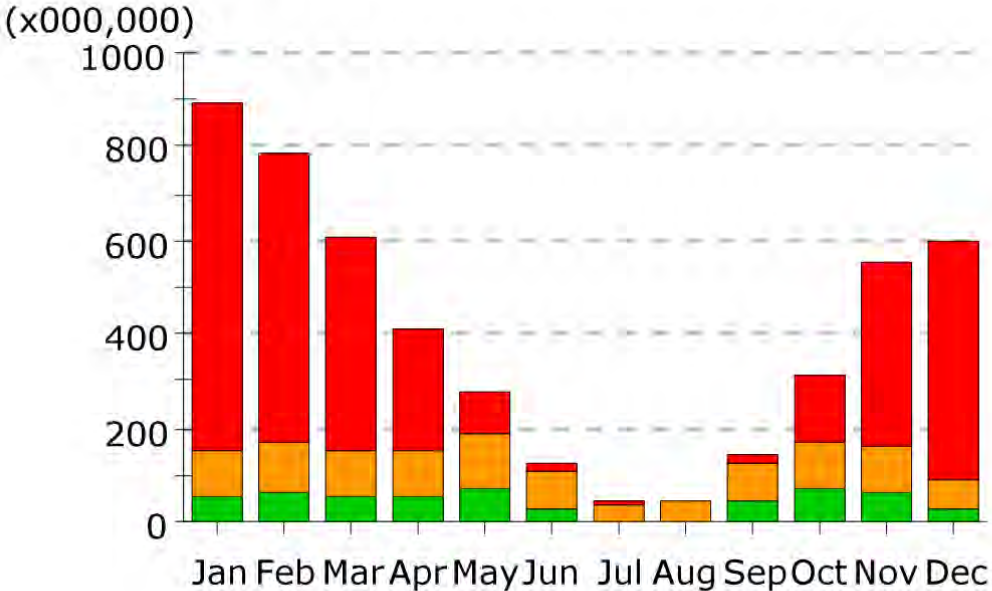
UPDATED ENERGY MODEL



Electric Consumption (kWh)



Gas Consumption (Btu)



- Area Lighting

Task Lighting

Misc. Equipment
- Exterior Usage

Pumps & Aux.

Ventilation Fans
- Water Heating

Ht Pump Supp.

Space Heating
- Refrigeration

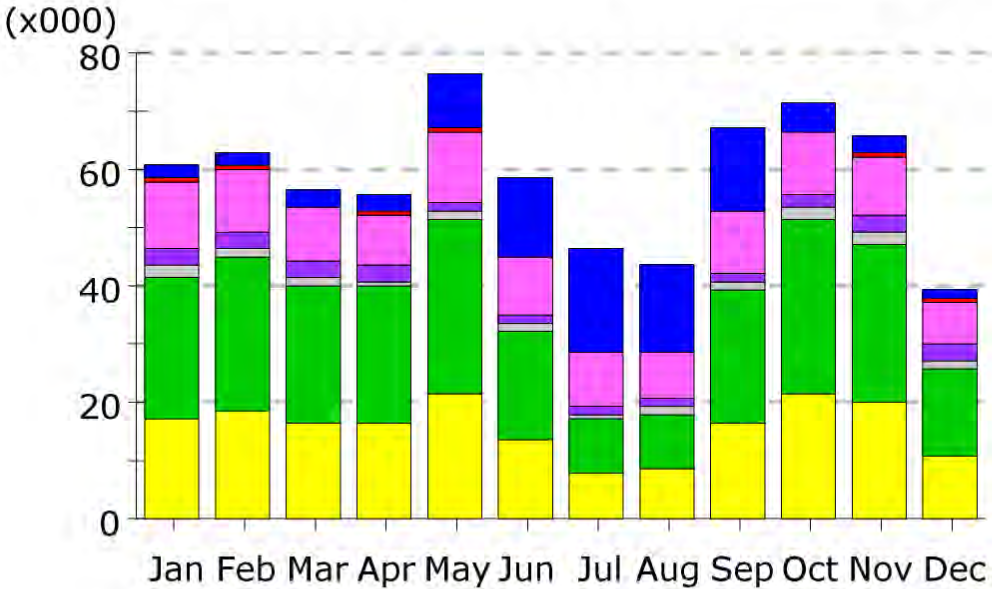
Heat Rejection

Space Cooling

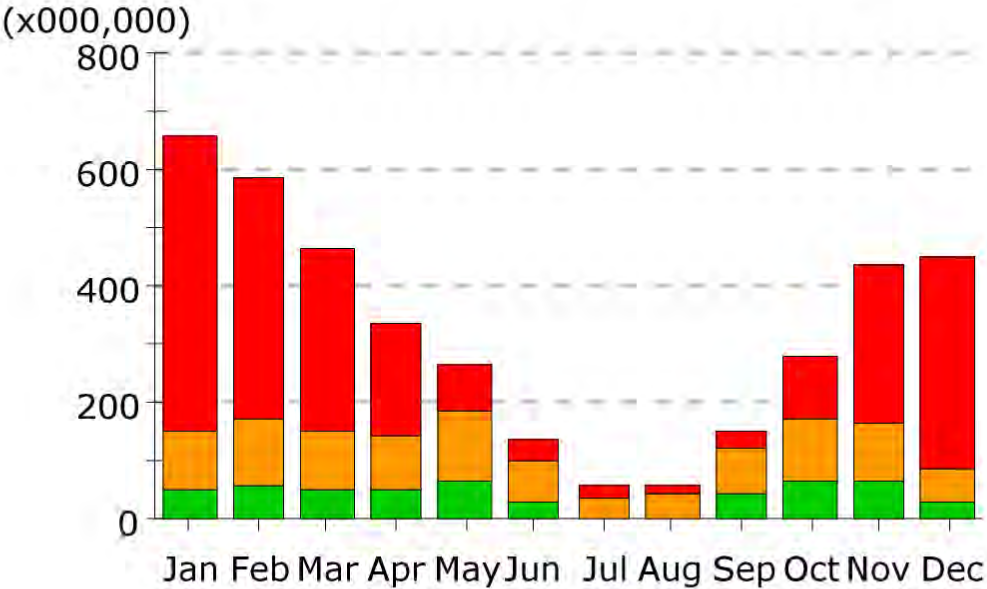
ENERGY CONSUMPTION – LEED BASE CASE



Electric Consumption (kWh)



Gas Consumption (Btu)



Area Lighting
Task Lighting
Misc. Equipment

Exterior Usage
Pumps & Aux.
Ventilation Fans

Water Heating
Ht Pump Supp.
Space Heating

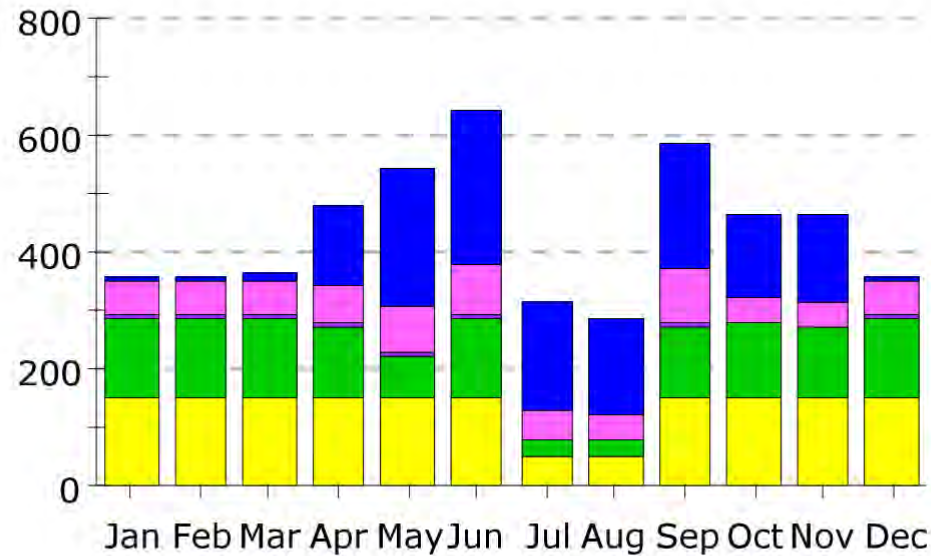
Refrigeration
Heat Rejection
Space Cooling

ENERGY CONSUMPTION – DESIGN CASE

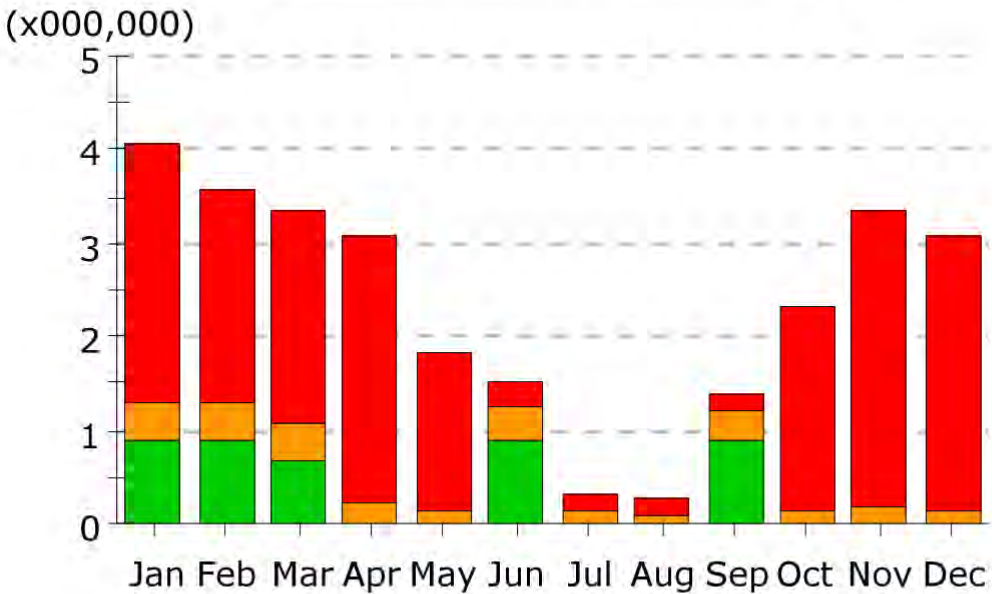


NOTE VERTICAL SCALE!!

Electric Demand (kW)



Gas Demand (Btu/h)



Area Lighting
Task Lighting
Misc. Equipment

Exterior Usage
Pumps & Aux.
Ventilation Fans

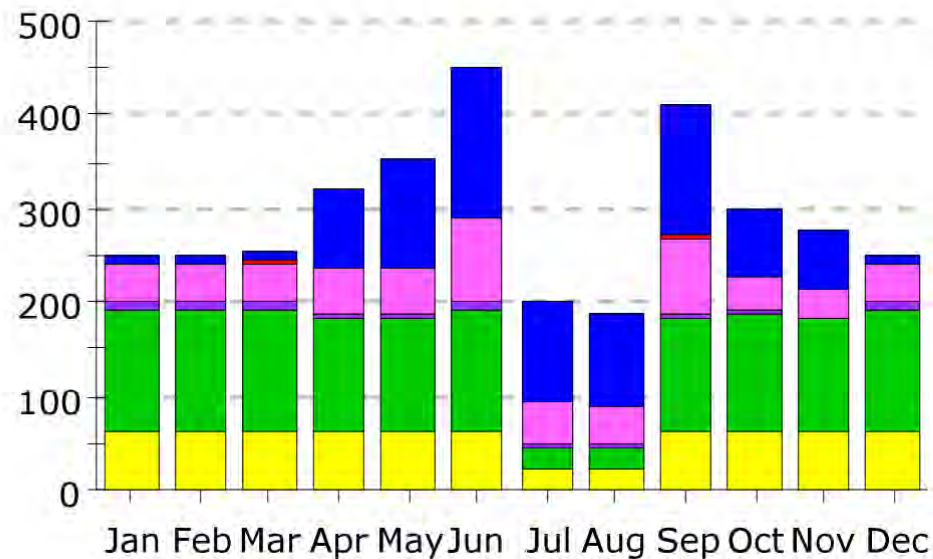
Water Heating
Ht Pump Supp.
Space Heating

Refrigeration
Heat Rejection
Space Cooling

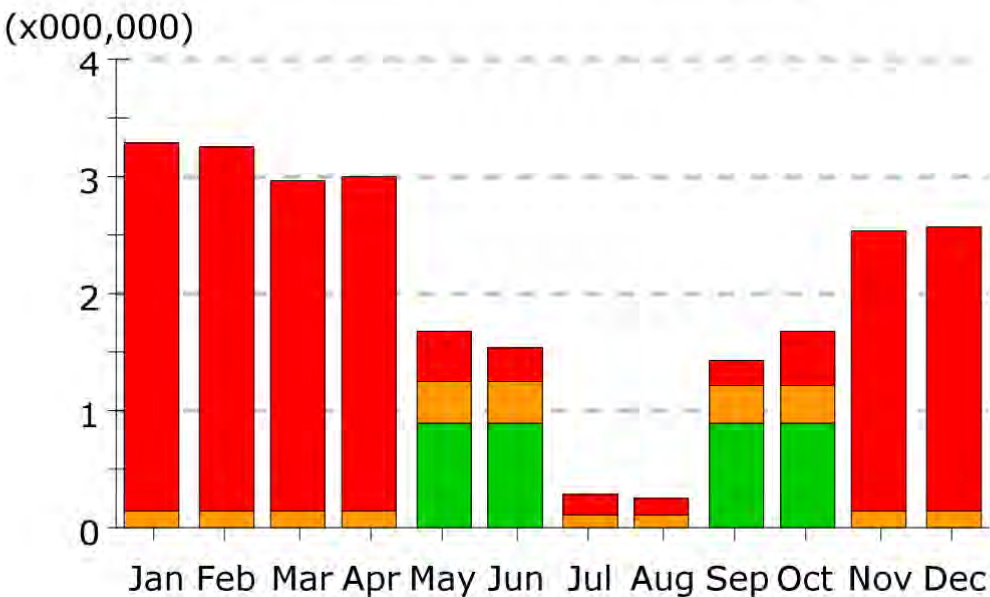
ENERGY DEMAND (MAX.) – LEED BASE CASE



Electric Demand (kW)



Gas Demand (Btu/h)



- Area Lighting
- Task Lighting
- Misc. Equipment
- Exterior Usage
- Pumps & Aux.
- Ventilation Fans

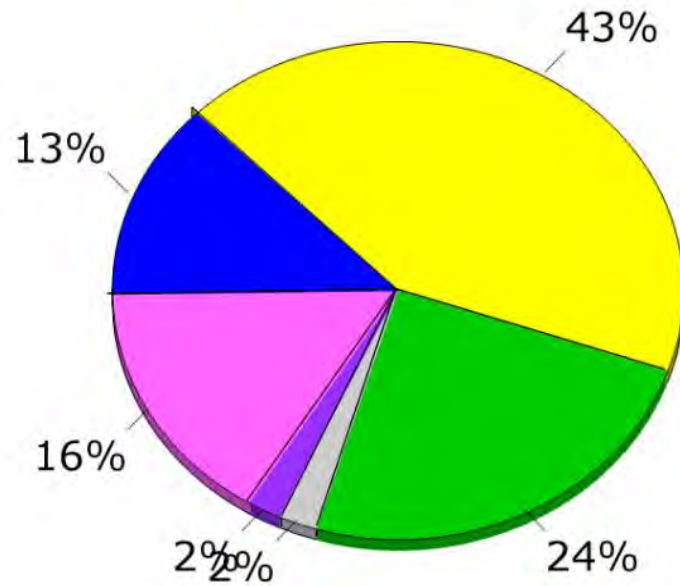
- Refrigeration
- Heat Rejection
- Space Cooling

ENERGY DEMAND (MAX.) – DESIGN CASE

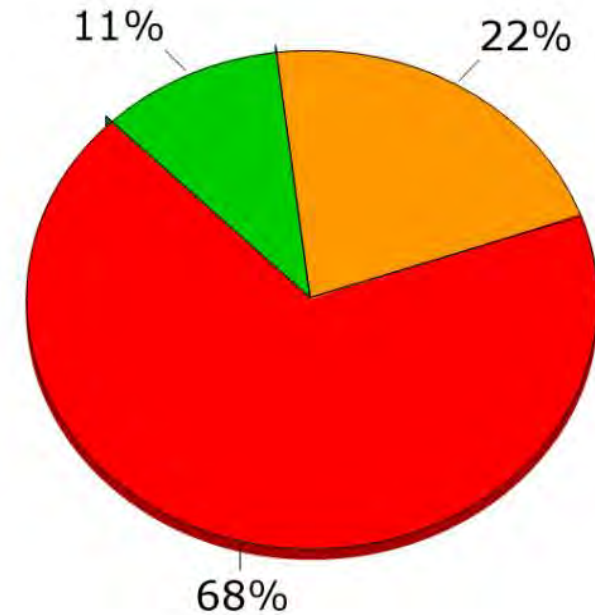


NOTE VERTICAL SCALE!!

ANNUAL ENERGY CONSUMPTION BY END USE



Electricity

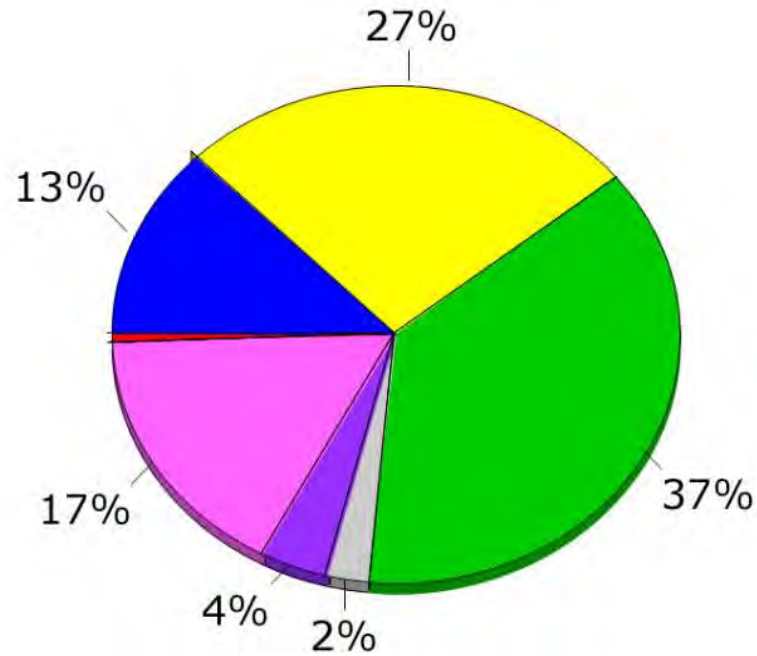


Natural Gas

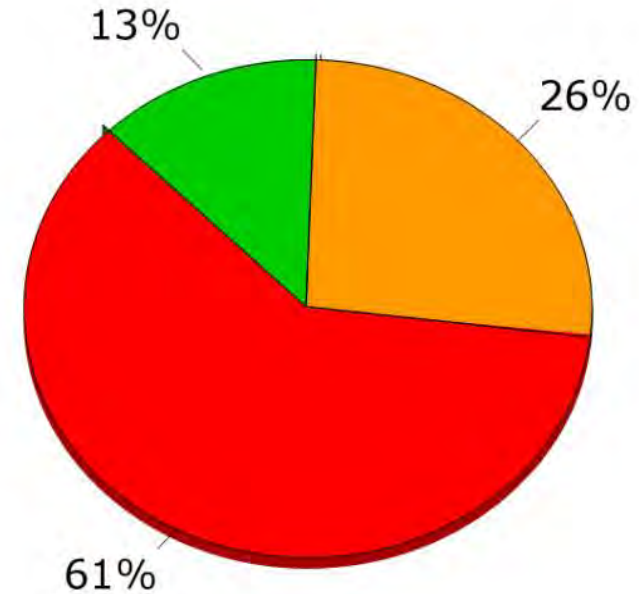
UPDATED ENERGY MODEL – LEED BASE CASE



ANNUAL ENERGY CONSUMPTION BY END USE



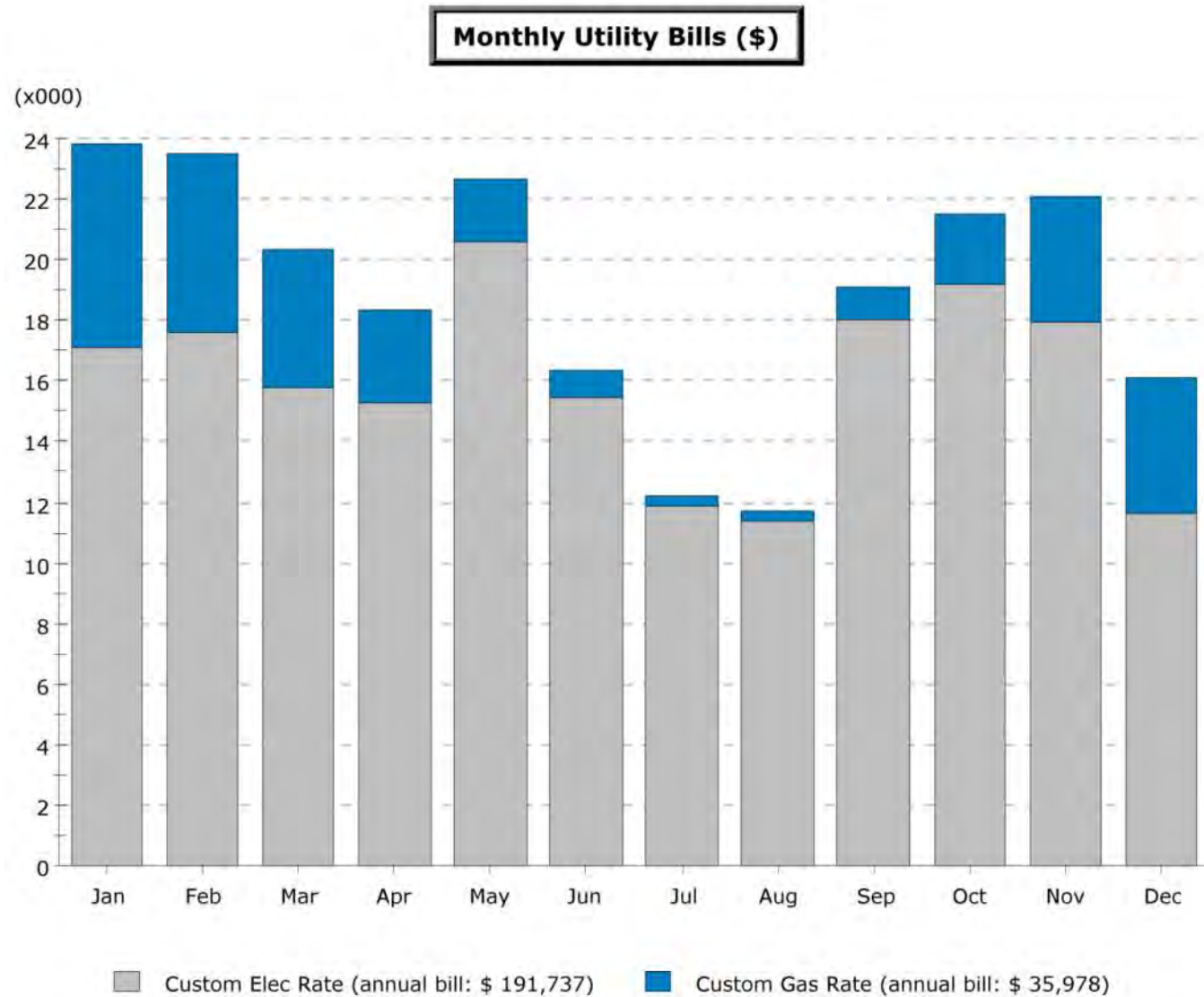
Electricity



Natural Gas

UPDATED ENERGY MODEL – DESIGN CASE



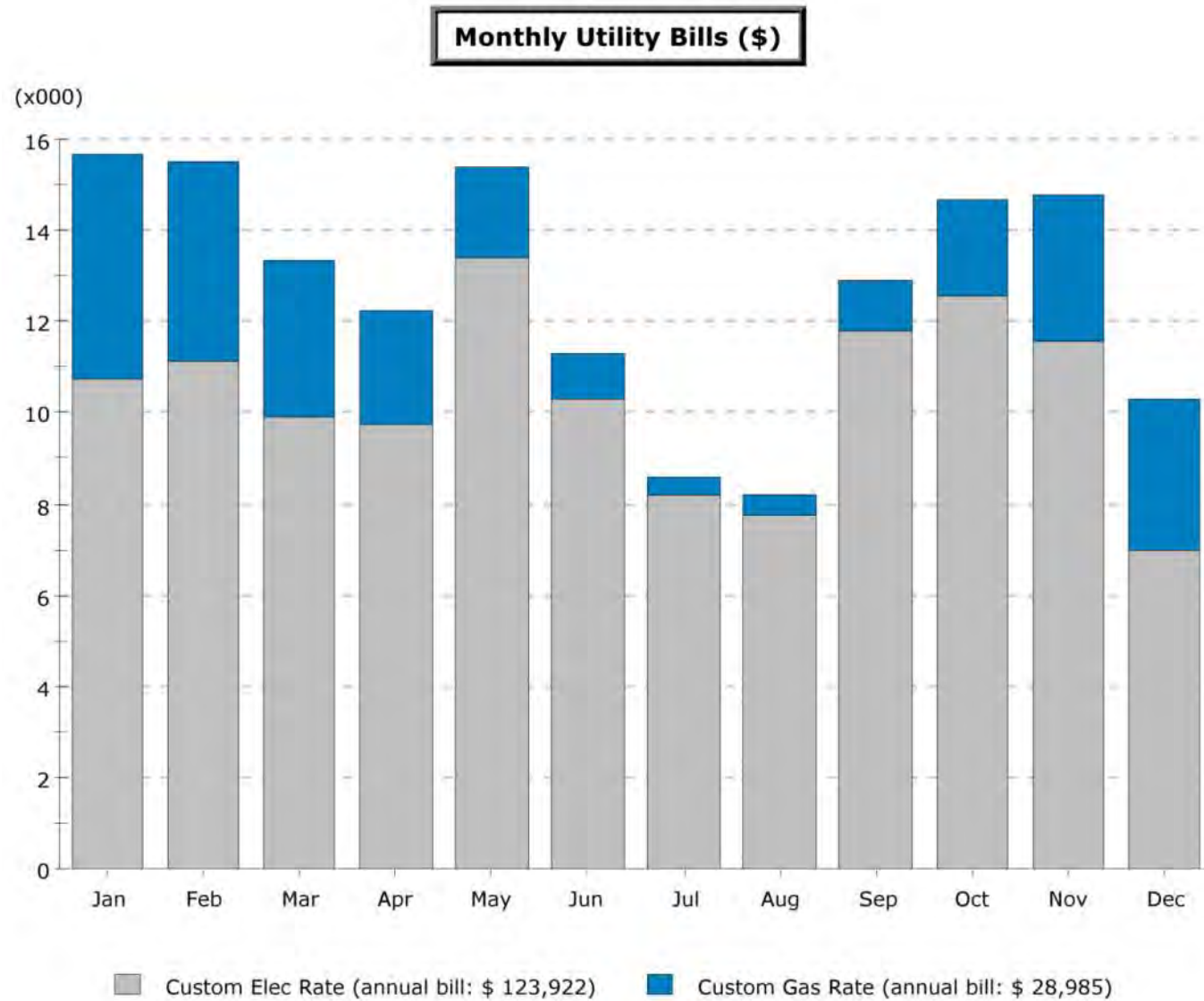


Total Annual Bill Across All Rates: \$ 227,715

MONTHLY UTILITY COST – LEED BASE CASE



NOTE VERTICAL SCALE!!



Total Annual Bill Across All Rates: \$ 152,907

MONTHLY UTILITY COST – DESIGN CASE



EXISTING VERSUS NEW BUILDING:

ESTIMATED ANNUAL OPERATING COST COMPARISON

| BUILDING | AREA (GSF) | COMBINED UTILITY COST (GAS + ELECTRIC) | ESTIMATED EXPENSE INCREASE (Delta) | ESTIMATED ANNUAL MAINT. COST |
|----------------------------------|-------------|---|---|------------------------------------|
| EXISTING BALMER + NES | 128,431 GSF | \$130,870 | - | \$31,100 |
| PROPOSED (DESIGN) BUILDING | 167,352 GSF | \$197,323 \$152,907 | \$66,453 \$22,037 | \$37,000 |

¹ SD ESTIMATED COSTS

DD MODEL RUN UPDATED 2/19/2019





SHADING AND DAYLIGHT STUDIES

We evaluated vertical sunshades on the west elevation, compared to horizontal shades as originally designed.

Horizontal sunshade projection:
4'-8"

Vertical sunshade projection:
1'-6"



Horizontal shades, 2 PM,
September



Vertical shades, 2 PM,
September



Horizontal shades, 3 PM,
September



Vertical shades, 3 PM,
September



Horizontal shades, 4 PM,
September



Vertical shades, 4 PM,
September



An aerial photograph of a modern school building with a multi-story design, featuring large windows and brick accents. The building is surrounded by a parking lot with several cars, including a blue car in the foreground. There are trees and greenery around the building. The sky is blue with some clouds.

“SECURESHADE” PRODUCT FOR WINDOW SHADES

The background image is a faded, high-angle photograph of a modern, multi-story building with a mix of red and light-colored facades. In the foreground, there is a large parking lot with several cars parked, including a white SUV and a blue car. A few people are visible walking on a path near the parking lot. The overall scene is bright and clear, suggesting a sunny day.

Video for “SecureShade”
window shade control system:

<https://vimeo.com/301682186>



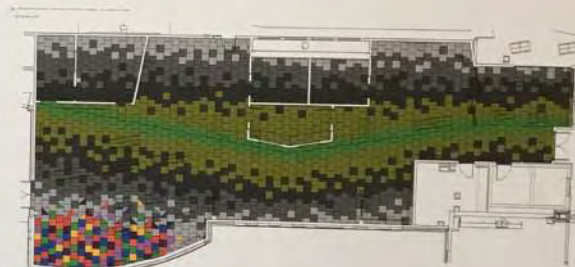
Thank You!



Color range for carpet tile at reading nook



Rendered installation pattern



Carpet tile installation 'map'



Level 1 - accent carpet



Level 2 - accent carpet



Level 3 - accent carpet



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February 27, 2019





Laminate and veneer color throughout



Countertops: Solid Surface



Proposed platform curtain fabric



OT/PT and DeEsc flooring



Stain: Option A



Acoustical wall panel fabric



Acoustical wall panel fabric



Acoustical wall panel fabric



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Wood ceiling in Main Corridor



White - Throughout



Doorframes



Gym and gypseum ceiling color



Proposed Pendant Lightfixture: Cafeteria and Library



Acoustical Tile - Throughout



Level 1 Main Corridor



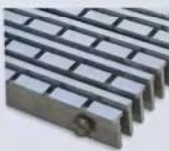
Image: recessed linear LED light fixture



Door Color



Rubber Base



Vestibules: Recessed entry system - Aluminum



Discium Flooring



Stair 1



Stair 2



Stair 3



Stair 4



Stair 5



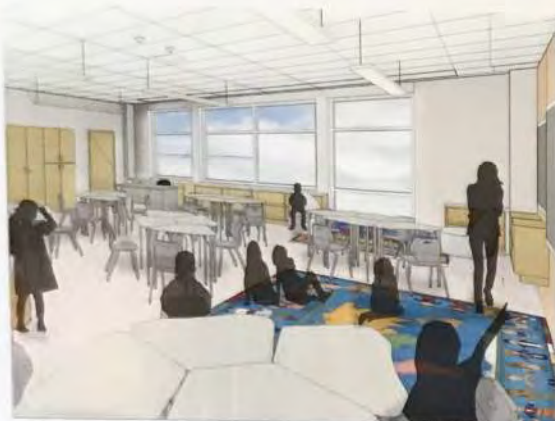
Railing color



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February, 27 2019





Classroom: Grades 3-4-5



Grades 3-4-5 classroom accent



Grades 3-4-5 ELA accent color



ELA: Grades 3-4-5



Toilet partition color



Toilet room tiles



Epoxy flooring



Direct/Indirect light fixture: Admin offices and Class rooms



Classroom: Grades 1-2



Grades 1-2 classroom accent



Grades 1-2 ELA accent color



ELA: Grades 1-2



Toilet room tiles



Epoxy flooring



Classroom: Grades PreK-K



PreK - K classroom accent



ELA accent color



ELA: Grades PreK-K



Epoxy flooring



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