ADDENDUM

February 11, 2019

ADDENDUM # 3
Bid 19C4, Urbana Elementary School Replacement – Construction Stage II

REVISED DUE DATE & TIME: FCPS Main Lobby, Tuesday, February 26, 2019, prior to and time stamped no later than 1:00 P.M.

This addendum is being issued to provide additions, corrections, clarifications and answers to certain questions raised referencing the original bid packages and any resultant contracts for the above bid.

1. Please be advised of the following date and time changes:

   **Revised Due Date and Time:**
   Bids for Construction Stage II - Phase A: 2A Site Work and Geo Thermal; 3A Concrete; 4A Masonry; 5A Steel; 6A General Carpentry; 7A Roofing; 8A Windows and Storefronts; 9A Drywall and Acoustical; 15A Mechanical and 16A Electrical will be received and time stamped in the main lobby of Frederick County Public Schools (FCPS) at 191 South East Street, Frederick, MD 21701, prior to and time stamped no later than 10:00 a.m. local time, February 20, 2019 to 1:00 p.m. local time, Tuesday, February 26, 2019

   Bids for Construction Stage II - Phase B: 9B Tile; 9C Fluid Applied & Terrazzo Flooring (Terrazzo as an Alternate); 9D Resilient Flooring and Rubber Athletic Surfacing; 9E Painting; 11A Food Service; 11B Athletic Equipment; will be received and time stamped in the main lobby of Frederick County Public Schools (FCPS) at 191 South East Street, Frederick, MD 21701, prior to and time stamped no later than 1:30 p.m. local time, February 20, 2019 to 1:00 p.m. local time, Tuesday, February 26, 2019

   Bids received after this time will be returned unopened. All bids will be opened and read aloud in the Central Office Board Room.

2. Recent security upgrades at the FCPS Central Office Building will require visitors to request entry utilizing the phone buzzer/button system. Please allow enough time to ensure access to the building prior to the bid due time.

3. This Addendum includes the following attachment(s):
   a. Oak Contracting, LLC - Addendum No. 3 (116 pages)
   b. Grimm and Parker – Addendum No. 3 (176 pages)

Thank you for your interest in bidding with Frederick County Public Schools and we apologize for any inconvenience this may have caused.

Sincerely,

**Kim Miskell**

Kim Miskell, CSBO,
Assistant Purchasing Manager

pc: Bradley Ahalt, Senior Project Manager, Construction Management
Dave Toth PM, Oak Contracting
Don Porter, Grimm & Parker
ADDENDUM NO. 3

February 11, 2019

TO: ALL PLANHOLDERS AND PROSPECTIVE BIDDERS

RE: URBANA ELEMENTARY SCHOOL REPLACEMENT

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated January 10, 2019. Acknowledge receipt of this Addendum in the space provided on the Form of Proposal.

General:

See attached Oak Contracting Pre-Bid RFI’s numbered PB-005, 013, 016, 024, 029, 031 through 053R, 055 through 057, and 059 for response to questions related to the Bid Documents (102 pages).

Changes to the Specifications:

Section 00 24 16 Contract Packages

Contract Package 2A Sitework & Geothermal:

Add Item 2.85:

2.85 2A Contractor is responsible for the demolition and disposal of the existing septic fields. Demolition includes removal and disposal of all piping, structures, baffles, cleanouts, as well as any unsuitable soils encountered within the septic fields. 2A Contractor is responsible for all corresponding fill required where the septic fields were removed in order to grade the area to the design elevations. All fill material is to meet the requirements of the specifications and must be placed in the presence of the Owners Testing and Inspection Agency. 2A Contractor is responsible to contact the Frederick County Health Department to determine if any inspections are required for this work.

Contract Package 5A Steel:

Delete Item 2.37 in its entirety and replace with the following:

2.37 This project will utilize 3D Building Information Model (BIM), which will be managed by a 3rd party coordinator hired by the Owner. A base model will be provided by the Design Team and shall be used to develop a more-detailed model for construction purposes. The 5A, 6A, 9A, 15A and 16A Contractors are responsible for the development of a 3D model for all components of work installed under their respective Contract Packages. This model will be used as the basis to produce shop drawings and as-builts, as well as for coordination, fabrication, and installation. All models are required to be developed utilizing software that is compatible with both Navisworks and Revit. 3D models provided by the Contractors, will be integrated into and coordinated with the base model, by the Owner’s BIM coordinator. All Contractors will be required to attend weekly meetings either on site or online via “GoTo Meetings,” for the purpose of coordination and conflict resolution. All Contractors are responsible for the timely submission of hard copies of shop drawings for work installed under their Contract Package. Failure, by a Contractor, to submit a 3D model in a timely manner will result in that Contractor being responsible for any and all delays and associated costs incurred by others for necessary modifications. Failure to properly coordinate work will be corrected in the field at no additional cost by the responsible Contractor.
**Contract Package 6A General Carpentry:**
Delete Item 2.71 in its entirety and replace with the following:

2.71 The 6A Contractor shall furnish and install the Card Access System complete per specification section 08 71 00 (Door Hardware). Owner will provide all of the cards and program the card access system only. The 6A Contractor shall coordinate with the 8A and 16A Contractors for raceways and rough-in requirements. All low voltage cabling will be furnished and installed by the 6A Contractor. 16A Contractor is responsible to provide power to the power supplies only. The 6A Contractor shall coordinate with the 8A Contractor to ensure all 8A provided hardware, installed on 8A doors, is in accordance with the specifications of the card access system. 16A Contractor is responsible for the rough-in of the required raceways and any required boxes as shown and/or as coordinated by the 6A Contractor. The 6A Contractor shall also coordinate with Frederick County Public Schools for programming and testing of the system. The 6A Contractor is responsible for the complete installation of the Card Access System regardless of any other reference in the Contract Documents.

Delete Item 2.72 in its entirety and replace with the following:

2.72 This project will utilize 3D Building Information Model (BIM), which will be managed by a 3rd party coordinator hired by the Owner. A base model will be provided by the Design Team and shall be used to develop a more-detailed model for construction purposes. The 5A, 6A, 9A, 15A and 16A Contractors are responsible for the development of a 3D model for all components of work installed under their respective Contract Packages. This model will be used as the basis to produce shop drawings and as-buилts, as well as for coordination, fabrication, and installation. All models are required to be developed utilizing software that is compatible with both Navisworks and Revit. 3D models provided by the Contractors, will be integrated into and coordinated with the base model, by the Owner’s BIM coordinator. All Contractors will be required to attend weekly meetings either on site or online via “GoTo Meetings,” for the purpose of coordination and conflict resolution. All Contractors are responsible for the timely submission of hard copies of shop drawings for work installed under their Contract Package. Failure, by a Contractor, to submit a 3D model in a timely manner will result in that Contractor being responsible for any and all delays and associated costs incurred by others for necessary modifications. Failure to properly coordinate work will be corrected in the field at no additional cost by the responsible Contractor.

Add Item 2.74

2.74 6A Contractor shall furnish and install time capsule per Specification Section 11 00 05 added in Addendum #3. Location for installation to be determined by the Owner and Architect.

**Contract Package 8A Windows and Storefronts:**
Delete Item 2.19 in its entirety and replace with the following:

2.19 The 6A Contractor shall furnish and install the Card Access System complete per specification section 08 71 00 (Door Hardware). Owner will provide all of the cards and program the card access system only. The 6A Contractor shall coordinate with the 8A and 16A Contractors for raceways and rough-in requirements. All low voltage cabling will be furnished and installed by the 6A Contractor. 16A Contractor is responsible to provide power to the power supplies only. The 6A Contractor shall coordinate with the 8A Contractor to ensure all 8A provided hardware, installed on 8A doors, is in accordance with the specifications of the card access system. 16A Contractor is responsible for the rough-in of the required raceways and any required boxes as shown and/or as coordinated by the 6A Contractor. The 6A Contractor shall also coordinate with Frederick County Public Schools for programming and testing of the system. The 6A Contractor is responsible for the complete installation of the Card Access System regardless of any other reference in the Contract Documents.
Contract Package 9A Drywall and Acoustics:
Delete Item 2.30 in its entirety and replace with the following:

2.30 This project will utilize 3D Building Information Model (BIM), which will be managed by a 3rd party coordinator hired by the Owner. A base model will be provided by the Design Team and shall be used to develop a more-detailed model for construction purposes. The 5A, 6A, 9A, 15A and 16A Contractors are responsible for the development of a 3D model for all components of work installed under their respective Contract Packages. This model will be used as the basis to produce shop drawings and as-builts, as well as for coordination, fabrication, and installation. All models are required to be developed utilizing software that is compatible with both Navisworks and Revit. 3D models provided by the Contractors, will be integrated into and coordinated with the base model, by the Owner’s BIM coordinator. All Contractors will be required to attend weekly meetings either on site or online via “GoTo Meetings,” for the purpose of coordination and conflict resolution. All Contractors are responsible for the timely submission of hard copies of shop drawings for work installed under their Contract Package. Failure, by a Contractor, to submit a 3D model in a timely manner will result in that Contractor being responsible for any and all delays and associated costs incurred by others for necessary modifications. Failure to properly coordinate work will be corrected in the field at no additional cost by the responsible Contractor.

Add Item 2.40:

2.40 9A Contractors shall furnish and install column covers for the exposed columns in Rooms A116, A120, and B101E. Column covers for these three rooms are to match column covers being provided in the Media Center.

Contract Package 15A Mechanical:
Delete Item 2.47 in its entirety and replace with the following:

2.47 This project will utilize 3D Building Information Model (BIM), which will be managed by a 3rd party coordinator hired by the Owner. A base model will be provided by the Design Team and shall be used to develop a more-detailed model for construction purposes. The 5A, 6A, 9A, 15A and 16A Contractors are responsible for the development of a 3D model for all components of work installed under their respective Contract Packages. This model will be used as the basis to produce shop drawings and as-builts, as well as for coordination, fabrication, and installation. All models are required to be developed utilizing software that is compatible with both Navisworks and Revit. 3D models provided by the Contractors, will be integrated into and coordinated with the base model, by the Owner’s BIM coordinator. All Contractors will be required to attend weekly meetings either on site or online via “GoTo Meetings,” for the purpose of coordination and conflict resolution. All Contractors are responsible for the timely submission of hard copies of shop drawings for work installed under their Contract Package. Failure, by a Contractor, to submit a 3D model in a timely manner will result in that Contractor being responsible for any and all delays and associated costs incurred by others for necessary modifications. Failure to properly coordinate work will be corrected in the field at no additional cost by the responsible Contractor.

Contract Package 16A Electrical:
Delete Item 2.34 in its entirety and replace with the following:

2.34 This project will utilize 3D Building Information Model (BIM), which will be managed by a 3rd party coordinator hired by the Owner. A base model will be provided by the Design Team and shall be used to develop a more-detailed model for construction purposes. The 5A, 6A, 9A, 15A and 16A Contractors are responsible for the development of a 3D model for all components of work installed under their respective Contract Packages. This model will be used as the basis to produce shop drawings and as-builts, as well as for coordination, fabrication, and installation. All models are required to be developed utilizing software that is compatible with both Navisworks and Revit. 3D models provided by the Contractors, will be integrated into and coordinated with the base model, by the Owner’s BIM coordinator. All Contractors will be required to attend weekly meetings either on site or online via “GoTo Meetings,” for the purpose of coordination and conflict resolution. All Contractors are
responsible for the timely submission of hard copies of shop drawings for work installed under their Contract Package. Failure, by a Contractor, to submit a 3D model in a timely manner will result in that Contractor being responsible for any and all delays and associated costs incurred by others for necessary modifications. Failure to properly coordinate work will be corrected in the field at no additional cost by the responsible Contractor.

Add Item 2.54:

2.54 The 6A Contractor shall furnish and install the Card Access System complete per specification section 08 71 00 (Door Hardware). Owner will provide all of the cards and program the card access system only. The 6A Contractor shall coordinate with the 8A and 16A Contractors for raceways and rough-in requirements. All low voltage cabling will be furnished and installed by the 6A Contractor. 16A Contractor is responsible to provide power to the power supplies only. The 6A Contractor shall coordinate with the 8A Contractor to ensure all 8A provided hardware, installed on 8A doors, is in accordance with the specifications of the card access system. 16A Contractor is responsible for the rough-in of the required raceways and any required boxes as shown and/or as coordinated by the 6A Contractor. The 6A Contractor shall also coordinate with Frederick County Public Schools for programming and testing of the system. The 6A Contractor is responsible for the complete installation of the Card Access System regardless of any other reference in the Contract Documents.

Add Item 2.55:

2.55 16A Contractor shall furnish and install 12” Battery Powered Analog Clocks, Uline Model #H-1436, in lieu of the Secondary Wireless Analog Clocks Specified in Section 27 51 23. Uline Model #H-1436 12” Clocks are to be installed at locations where analog clocks are shown on the TE Drawings. This direction supersedes any other reference in the Contract Documents.

**Section 00 31 13 Preliminary Construction Schedule**
Delete Preliminary Timeline dated January 10, 2019 in its entirety and replace with Revised

**Section 00 42 00 Form of Proposal**
Delete Form of Proposal in its entirety and replace with attached ADDENDUM 3 REVISED FORM OF PROPOSAL.
Urbana Elementary School Replacement
3554 Urbana Pike
Frederick, Maryland 21704

Project # 1707

RFI #: ST2 PB-005  Date Created: 1/24/2019

Answer Company | Answered By | Author Company | Authored By
--- | --- | --- | ---
Grimm + Parker Architects
11720 Beltsville Drive
Suite 600
Calverton, MD 20705 | Don Porter
Phone: 240-965-0713
Fax: 301-595-0089 | Oak Contracting, LLC
1000 Cromwell Bridge Road
Towson, MD 21286 | Kerrigan Toth
Phone: 410-828-1000
Fax: 410-828-7488

Co-Respondent: Answer Company

Subject | Discipline | Category
--- | --- | ---
Substitution request for canopies | Architectural | Contractor Suggestion / Upgrade

Cc: Company Name | Contact Name | Copies | Notes
--- | --- | --- | ---

Question

See attached substitution request from Solutions in Polycarbonate recommending their products to be accepted for monolithic polycarbonate standing seam panel for Canopies in Section 084513. Please review and advise.

Suggestion

Answer

This product will be accepted subject to strict compliance with the technical specifications. Product will not be added to list of acceptable manufacturers and may be subject to rejection if compliance is not satisfied.
January 23, 2019

Mr. Dave Toth
Oak Contracting
1000 Cromwell Bridge Road
Towson, MD 21286

Re: Urbana Elementary School

Dear Mr. Toth,

I would like to request approval of our monolithic polycarbonate standing seam translucent canopy system for Specification Section 084513 – Structured Polycarbonate Panel Assemblies, on the above referenced project. We use a 4mm standing seam panel with an aluminum batten connection for our system and it has 2’ 0” on center spacing. The basis of design, CPI Daylighting, uses a 4mm standing seam panel also.

Our standing seam panel fully engages the aluminum rafter and batten which increases the strength of the panel engagement. The CPI system only has a 90° upstand leg which is captured by a loose fitting “U” batten that does not engage the upstand leg at all. The engagement on our panel helps to eliminate any “wind chatter” from the panel as it is solidly anchored to the aluminum framing.

Included in the Pre-Bid Substitution Request are notes on how we differ in the margins of the project specifications, WeatherShade specifications, Substitution Request Form, product data sheet, and details of our Canopy System. Please feel free to call with any questions you may have about our product.

Sincerely,

Bruce Gold
President
SUBSTITUTION REQUEST
(During the Bidding/Negotiating Stage)

Project: Urbana Elementary School
Fredrick, Maryland

To: Oak Contracting
Dave Toth

Re: Polycarbonate Canopies

Specification Title: Structured Polycarbonate Panel Assemblies
Description: Standing Seam Monolithic Polycarbonate Panels

Section: 084513 Page: 3 Article/Paragraph: 2.2 A (1)

Substitution Request Number: __________________________________________
From: Bruce Gold - Solutions in Polycarbonate, LLC
Date: January 23, 2019
A/E Project Number: 21740.00
Contract For: Glass and Glazing

Proposed Substitution: 4mm standing seam panel as is the Basis of Design
Manufacturer: Solutions in Polycarbonate
Address: 6353 Norwalk Road, Medina, OH 44256
Phone: 330-572-2860
Trade Name: WeatherShade Mono Canopy System
Model No.: 4mm

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:
- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Bruce Gold
Signed by: ___________________________

Firm: Solutions in Polycarbonate, LLC
Address: 6353 Norwalk Road
Medina, Ohio 44256
Telephone: 330-572-2860

A/E’s REVIEW AND ACTION
☐ Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: ___________________________
Date: ___________________________

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ Specs
SECTION 08 45 13 - STRUCTURED-POLYCARBONATE-PANEL ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes aluminum-framed assemblies glazed with translucent polycarbonate panels as follows:
   1. Canopy assemblies.

B. Design, manufacture and installation of Standing Seam Monolithic Polycarbonate system. An assembly of extruded polycarbonate glazing panels incorporated into a complete aluminum framed system that has been tested and warranted by the manufacturer as a single source system.

C. All anchors, brackets, and hardware attachments necessary to complete the specified structural assembly, weatherability and water-tightness performance requirements. All flashing up to but not penetrating adjoining work are also required as part of the system and shall be included.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at project site.

1.3 SUBMITTALS

A. Product Data: For each type of product.
   1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for aluminum components of panel assemblies.

B. LEED Submittals:
   1. Product Data: For sealants, indicating VOC content.
   2. Laboratory Test Reports: For sealants, indicating compliance with requirements for low-emitting materials.
   3. Product Certificates: For regional materials, indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include distance to Project and cost for each regional material.

C. Shop Drawings: For panel assemblies.
   1. Include plans, elevations, sections, details, and attachments to other work.
   2. Include details of provisions for assembly expansion and contraction and for draining moisture within the assembly to the exterior.

D. Samples: In manufacturer's standard size.
   1. For each type of structured-polycarbonate panel.
   2. For each type of exposed finish for framing members.

E. Delegated Design Submittal: For panel assemblies indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

F. Qualification Data: For qualified installer.

G. Product Test Reports: For each translucent polycarbonate-panel assembly, for tests performed by a qualified testing agency.

H. Evaluation Reports: For translucent polycarbonate-panel assemblies from ICC-ES.

I. Field quality-control reports.

J. Sample Warranties: For special warranties.
1.4 CLOSEOUT SUBMITTALS
A. Maintenance Data: For panel assemblies to include in maintenance manuals.

1.5 QUALITY ASSURANCE
A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

B. Field Measurements: Where translucent canopy panels are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.6 WARRANTY
A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components of panel assemblies that fail in materials or fabrication workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Structural failures including, but not limited to, excessive deflection.
      b. Deterioration of metals and other materials beyond normal weathering.
      c. Water leakage.
      d. Warranty Period: Five years from date of Substantial Completion.

B. Manufacturer's Special Warranty: Manufacturer agrees to repair or replace translucent polycarbonate panels that exhibit defects in materials or workmanship within specified warranty period.
   1. Defects include, but are not limited to, the following:
      a. Delamination.
      b. Color changes exceeding requirements.
      c. Losses in light transmission beyond 6 percent from original when measured after 10 years according to ASTM D 1003.
      d. Warranty Period: 10 years from date of Substantial Completion.
      e. Warranty Period for Hail Damage: Five years from date of Substantial Completion for hail stone penetration exceeding requirements.

C. Special Aluminum-Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components on which finishes fail within specified warranty period. Warranty does not include normal weathering.
   1. Failures include, but are not limited to, checking, crazing, peeling, chalking, and fading of finishes.
   2. Warranty Period: 20 years from date of Substantial Completion.

D. Installer's Warranty: Installer agrees to repair or replace components of panel assemblies that fail in installation workmanship within specified warranty period.
   1. Failures include, but are not limited to, installation defects and water leakage.
   2. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS
A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design translucent polycarbonate-panel assemblies.

B. Structural Loads: As indicated on Drawings.
C. Deflection Limits:
   Overhead Panel Assemblies: Limited to 1/60 of clear span for each assembly component of aluminum framing and panel joint in accordance with IBC Table 1604.3, footnote h.

D. Structural-Test Performance: Panel assemblies tested according to ASTM E 330, as follows:
   1. When tested at positive and negative wind-load design pressures, assemblies do not show evidence of deflection exceeding specified deflection limits.
   2. When tested at 150 percent of positive and negative wind-load design pressures, assemblies, including anchorage, do not show evidence of material failures, structural distress, and permanent deformation of main framing members exceeding 0.2 percent of span.
   3. Test Durations: As required by design wind velocity, but not less than 10 seconds.

E. Hail Stone Impact Resistance: Panel assemblies that resist penetration by hail stone smaller than 1-3/16 inch (30 mm) diameter, impacting panel surface at a final velocity up to 44 ft/sec (13.4 m/s) per ASTM E 822.

F. Panel Clip Performance: Corrosion-resistant clips tested to meet a minimum 90 lb/sq. ft. (4.3 kPa) wind uplift when tested according to ASTM E 330.

G. Panel Performance:
   1. Smoke-Developed Index: 450 or less according to ASTM E 84, or 75 or less according to ASTM D 2843.
   2. Flame Spread: 25 or less when tested according to ASTM E 84.
   3. Combustibility Classification: Class CC1 based on testing according to ASTM D 635.
   4. Thermal Aging: When exposed to 300 deg F (149 deg C) for 25 minutes, exterior panels tested in accordance with ASTM D 2244.
      a. Color Retention: 0.75 (Hunter) units ?E maximum fade.
      b. Color Darkening: 0.3 (Hunter) units ?L maximum.
      c. Cracking or Crazing: None when exposed to 300 deg F (149 deg C) for 25 minutes.
      d. Delamination: None when exposed to 300 deg F (149 deg C) and 0 deg F (-17.8 deg C) for 25 minutes.
      e. Concentrated Loading: No damage while applying a load of 600 lb (813.5 Nm) over 1 sq. ft. when tested according to OSHA, 29 CFR Section 1910.23(c)(8); and no damage while applying a load of 400 lb (542.3 Nm) over 3 inches (152 mm) in diameter according to ASTM E 661.

H. Water Penetration under Static Pressure: Provide panel assemblies that do not evidence water penetration through fixed glazing and framing areas when tested according to ASTM E 331 at a minimum static-air-pressure difference of 20 percent of positive wind-load design pressure, but not less than 6.24 lb/sq. ft. (300 Pa).

I. Thermal Movements: Allow for thermal movements from ambient- and surface-temperature changes. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 TRANSLUCENT POLYCARBONATE-PANEL ASSEMBLIES

A. Translucent Polycarbonate-Panel Assemblies: Translucent assemblies that are supported by aluminum framing and glazed with translucent polycarbonate panels.
   1. Basis-of-Design Product: Subject to compliance with requirements, provide CPI Daylighting, Inc.; BriteWay-U-Lite or a comparable product by one of the following:
2.3 TRANSLUCENT POLYCARBONATE CANOPY PANELS

A. Translucent, Monolithic Solid Polycarbonate Panel Assembly: Consisting of monolithic, solid cross-section polycarbonate standing seam glazing panels with batten panel connectors, providing coextruded UV protection. Incorporate glazing panel system into a complete aluminum framed assembly.

B. Monolithic Polycarbonate Panels: Extruded polycarbonate sheet (not cellular) that is coextruded with a UV-protective layer.

C. Panel Thickness: Overall minimum 0.158 inch (4 mm).

D. UV Resistance: Coextruded on exposed surfaces during glazing panel manufacture.

E. Color:
   1. Monolithic, Solid Glazing Panel Color: As selected by Architect from manufacturer's full range.

2.4 ALUMINUM FRAMING SYSTEMS

A. Components: Manufacturer's standard extruded-aluminum members of thickness required and reinforced as required to support imposed loads.

B. Aluminum: Alloy and temper recommended in writing by manufacturer for type of use and finish indicated.
   2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221 (ASTM B 221M).

C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning skylight components.

D. Fasteners and Accessories: Manufacturer's standard, corrosion-resistant, nonstaining, and nonbleeding fasteners and accessories; compatible with adjacent materials.
   1. At closures, retaining caps, or battens, use ASTM A 193 (/A 193M), 300 series stainless-steel screws.
   2. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
   3. At movement joints, use slip-joint linings, spacers, and sleeves of material and type recommended in writing by manufacturer.

E. Concealed Flashing: Corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.

F. Exposed Flashing and Closures: Aluminum sheet not less than 0.040-inch (1.02-mm) thick, finished to match framing.

G. Framing Gaskets: Manufacturer's standard gasket system with low-friction surface treatment designed specifically for retaining translucent polycarbonate panels.

H. Frame-System Sealants: As recommended in writing by manufacturer.
   1. Sealant shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of
Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers.

I. Corrosion-Resistant Coating: Cold-applied asphalt mastic, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.5 FABRICATION
A. Fabricate aluminum components that, when assembled, have the following characteristics:
   1. Profiles that are sharp, straight, and free of defects or deformations.
   2. Accurately fitted joints with ends coped or mitered.
   3. Internal guttering systems or other means to drain water passing through joints and moisture migrating within assembly to exterior.
B. Fabricate aluminum sill closures with weep holes and for installation as continuous component.
C. Reinforce aluminum components as required to receive fastener threads.

2.6 ALUMINUM FINISHES
A. High-Performance Organic Finish: Two-coat AAMA 2605, polyester finish. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
   1. Color and Gloss: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION
A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION
A. General: Comply with manufacturer's written instructions.
   1. Do not install damaged components.
   2. Fit joints between aluminum components to produce hairline joints free of burrs and distortion.
   3. Rigidly secure nonmovement joints.
   4. Install anchors with separators and isolators to prevent metal corrosion, electrolytic deterioration, and immobilization of moving joints.
   5. Seal joints watertight unless otherwise indicated.
B. Metal Protection: Where aluminum components will contact dissimilar materials, protect against galvanic action by painting contact surfaces with corrosion-resistant coating or by installing nonconductive spacers as recommended in writing by manufacturer for this purpose.
C. Install components plumb and true in alignment with established lines and elevations.
D. Erection Tolerances: Install panel assemblies to comply with the following maximum tolerances:
   1. Alignment: Limit offset from true alignment to 1/32 inch (0.8 mm) where surfaces abut in-line, edge-to-edge, at corners, or where a reveal or protruding element separates
aligned surfaces by less than 3 inches (76 mm); otherwise, limit offset to 1/8 inch (3.2 mm).

2. Location and Plane: Limit variation from true location and plane to 1/8 inch in 12 feet (3.2 mm in 3.7 m), but no greater than 1/2 inch (12 mm) over total length.

3.3 FIELD QUALITY CONTROL
   A. Repair or remove work where inspections indicate that it does not comply with specified requirements.
   B. Prepare inspection reports.

3.4 CLEANING
   A. Follow manufacturer’s instructions when washing down exposed panel surfaces using a solution of mild detergent in warm water that is applied with soft, clean wiping cloths. Always test a small area before applying to the entire area.
   B. Follow strict panel manufacturer guidelines when removing foreign substances from panel surfaces requiring mineral spirits or any solvents that are acceptable for use.
   C. Installers shall leave panel system clean at completion of installation. Final cleaning is by others upon completion of project, following manufacturer’s cleaning instructions.

END OF SECTION
SECTION 10 73 16 – POLYCARBONATE CANOPY SYSTEMS

PART 1 General Specifications

1.1 Summary

A. This section includes the Translucent Canopies and Covered Walkways as shown and specified of which the work consists of the following:
   1. Design, engineering, and manufacture of a polycarbonate canopy system.
   2. Installation of said system to include all applicable fasteners, anchors, mounting hardware, and brackets required to complete the installation of a watertight glazing system.
   3. Related flashing as specified in the drawings and specifications to be included.

1.2 Related Documents

A. The General Conditions of the Contract, including Supplementary Conditions and Division 1 General Requirements, apply to the work of this Section.

1. Related work specified in other Specification Sections includes:
   a. Structural Steel/Rough Carpentry/Concrete Section ________
   b. Flashing and Sheet Metal Section ________
   c. Roofing and Weatherproofing Section ________
   d. Curbs and Supporting Members Section ________
   e. Sealants Section ________

1.3 Submittals

A. Submit related shop drawings showing all applicable details including connections to adjacent work.

B. Submit color samples for the proposed aluminum finishes in 6” long profiles. If the aluminum is to have an anodized finish, include both the light and dark variations of the finished piece to show the range of colors to be expected.

C. Submit 10” x 12” samples of the glazing product to be used in conjunction with the project.

D. Submit certified test reports from an independent testing agency not affiliated in any way with the manufacturer of the system. Reports must show that the materials or system meets or exceeds all specifications required in this Section. Previously completed reports are acceptable if the test reports are for the same system and products being used on the current project. The required test reports are as follows:
   1. Self-Ignition Temperature of Plastics (ASTM D1929)
   2. Burn Extent (ASTM D635)
3. Smoke Density (ASTM D2843)
4. Water Penetration (ASTM E-331)
5. Structural Performance (ASTM E-330)

1.4 Quality Assurance

A. Manufacturer
1. The manufacturer of the system must regularly be in the business of producing multiwall polycarbonate systems and those systems must be designed for the specific purpose of utilizing multiwall polycarbonate sheets for the glazing infill. Manufacturers using systems designed for other types of glazing (i.e. glass or fiberglass) are not acceptable.
2. The manufacturer is responsible for the design, engineering, and manufacture of the completed system.

B. Installer
1. The installer must be certified by the manufacturer as an approved contractor for the erection of its products.
2. The installer must submit evidence of erecting five (5) previous projects of similar scope and size.

1.5 Warranty

A. The manufacturer is to provide a single source warranty against defect for the entire system including the glazing system and metal framing.

B. The ten (10) year warranty shall include:
1. Warranty against leakage due to improper design or substandard materials.
2. Warranty against collapse or catastrophic failure within the architect’s established project design conditions.
3. Warranty against color change of the glazing or the aluminum finish by more than 8.0 Delta Units as per ASTM 1003.

C. The warranty covers the replacement of the defective materials only.

PART 2 Components

2.1 Product Manufacturers

A. Solutions in Polycarbonate, LLC
6353 Norwalk Road
Medina, OH 44256
(330) 572-2860 phone
(330) 572-2861 fax
Info@solutionsinpc.com
www.solutionsinpc.com
WeatherShade™ is a Trademark of Solutions in Polycarbonate, LLC

B. Requests to use equivalent products of other manufacturers shall be submitted in accordance with Section 01 63 00 - Product Substitution Procedures.
2.2 Framing Structure

A. Metal Framing shall consist of aluminum extrusions in 6061-T5, 6063-T5, or 6063-T.

B. Sheet Metal Flashing shall consist of ten (10) foot lengths and pre-formed in a shop. The minimum thickness shall be no less than 0.040”. All sheet metal flashing shall be overlapped a minimum of 1 ½” but not to exceed 3” per SMACNA recommendations.

C. Fasteners shall be stainless steel with stainless steel backed neoprene washers where required.

D. Design Loads:
   1. Wind Load = __________ mph
   2. Snow Load = __________ psf
   3. Live Load    = __________ psf
   4. Deflection  = L/ __________

E. Design system to allow for thermal expansion and contraction of the polycarbonate glazing due to a temperature variance of 130 degrees Fahrenheit.

F. Weepage System
   1. Design an interior condensate/water infiltration control system to channel water that penetrates the system to the lowest point of the glazing system and expels the water to the exterior by means of gravity.
   2. Sloped Glazing Systems must incorporate a condensate control system to prevent uncontrolled leakage to the interior.

G. The capture system of the adjoining panels shall be an aluminum rafter system utilizing a gasketed pressure seal secured with mechanical fasteners at a pre-determined on center spacing to insure the prevention of uplift.

2.3 Glazing

A. Glazing panel shall be polycarbonate monolithic sheets in a single panel configuration, and shall be 4mm in thickness with an upstand leg that engages the aluminum framing batten. The color of the Panel shall be {SELECT ONE} Clear, White, Opal, Bronze, Custom Color.

B. Flammability of the Glazing Sheet:
   1. The glazing sheet shall not support its own combustion but must be self-extinguishing upon removal of the heat source.
   2. The Burn Extent as tested by ASTM D635 shall qualify for a CC1 rating and the Smoke Density as tested by ASTM D2843 shall be less than 75

C. The Light Transmission shall be _____% or greater.

D. Glazing panels shall have an on-center spacing of 24” inches.

2.4 Gaskets
A. Gasket to be of 55 Durometer EPDM to allow thermal expansion/contraction movement of the multiwall polycarbonate.

2.5 Aluminum Finishes

A. Provide the following finish to the exposed aluminum: {SELECT ONE}

1. Clear Anodic Coating, Class 1: MM1 OC22A41 clear anodized coating complying with AAMA 611-98, 0.7 mil thick minimum.
2. Color Anodic Coating, Class 1: AAM1 OC22A44 [medium bronze] [dark bronze] [black] coating electrolytically deposited complying with AAMA 606.1, 0.7 mil thick minimum.
3. Powder Coating: AMMA 2604 [standard] [custom] [paint manufacturer's color number] as selected by the architect.
4. Fluoropolymer Coating [2 coat] [3 coat] [4 coat]: 70% Kynar 500 resin base fluoropolymer finish complying with AAMA 2604-98 [standard] [custom] [non-exotic] [paint manufacturer's color code number] as selected by the architect.

2.6 Sealant

A. Type: One-component, neutral-cure, RTV (room temperature vulcanizing) silicone rubber sealant for structural and non-structural glazing, structural attachment of panel systems, and above-grade weather sealing joints with most common construction materials; Dow Corning® Contractors Weatherproofing Sealant, as manufactured by Dow Corning Corporation.

B. Compliance: Sealant shall meet or exceed requirements of these standards.

1. ASTM C920, Type S, Grade NS, Class 50, Use NT, G, A, and O.
2. ASTM C1184, Type S, Use G, A, and O.
4. GSA CID A-A-1556 -Sealing Compound Elastomeric Type, Single Component

B. Color: To match Aluminum Framing Finish

C. Volatile organic compound (VOC) content: 28 grams/liter.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
3.3 INSTALLATION

   A. Install in accordance with manufacturer's instructions.

END OF SECTION
WeatherShade™ Canopy System
Translucent or Transparent Canopy Panel System

Designed for application flexibility

What is a WeatherShade Canopy System...

- A protective exterior covering designed to:
  - Compliment the look of the building or surroundings
  - Provide functional shading during the day
  - Provide a functional covering from rain, snow, hail 24/7

- Canopy system is built from polycarbonate panels in a standing seam configuration. Adjacent panels are secured together by a batten over the standing seam edges.
- This standing seam/batten configuration provides highly water tight and wind resistant glazing panel system.
- The entire glazing panel system is secured to the canopy purlin system by the use of stainless steel brackets that connect to the panel standing seam legs and the purlin immediately below.
- The proper purlin spacing and connection to the supporting structure provide the design opportunity for a wide range of snow and wind load application designs.
- Lightweight, high strength canopy system

What is its value...

- Designed and fabricated as an easy to install system, low transportation and installation costs
- Perfect system for new and retrofit construction
- LEED credits available for various LEED credit categories
- Building occupants and visitors will welcome the transitional covering provided by the canopy
- Lower cost and more durable than glass canopy systems
- Easier to design unique building configurations

WeatherShade Canopy System Product Specifications

<table>
<thead>
<tr>
<th>System designs &amp; widths</th>
<th>Canopy system configurations</th>
<th>Curved Arched</th>
<th>Flat Slope Curved Slope</th>
<th>Low Slope applications with Mono Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems widths</td>
<td>Systems widths can be width of application</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| System lengths          | Canopy system length design range | • Canopy panels are produced in lengths up to 39’
|                         |                             | • Overlapping designs are available for applications greater than 39’ |
| System models           | Model(s)                    | WeatherShade Multiwall Translucent
|                         |                             | WeatherShade Mono Translucent
|                         |                             | WeatherShade Mono Transparent |
| Framing finish options  | Anodized, Painted or Mill Finishes | Consult factory for various finish options and colors |
| Standard Colors         | Multiwall sheets Solid sheets (Mono) |
| Light Transmission values |                           | Multi & Solid Colors |
|                        |                            | MW Color | LT% | Mono Color | LT% |
| Clear 20mm              | 74                          | Clear 4mm | 90 |
| Opal 20mm               | 52                          | Opal 4mm | 50 |
| Bronze 20mm             | 40                          | Bronze 4mm | 48 |
| Clear 6mm               | 88                          | Clear 6mm | 88 |
| Opal 6mm                | 38                          | Opal 6mm | 38 |
| Bronze 6mm              | 50                          | Bronze 6mm | 50 |

WeatherShade™ is a Trademark of Solutions in Polycarbonate, LLC
The WeatherShade Canopy system is an innovative adaptation of existing materials, glazing and framing systems, designed to provide a high levels of both shade and light during the day and protection from other weather elements both day and night.

The WeatherShade system can be integrated into a variety of building designs for both environmental protective functions and to add certain accents to the building’s overall look.

### Testing and Standards Compliance

<table>
<thead>
<tr>
<th>Test</th>
<th>Compliance Standard</th>
<th>Glazing Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Transmittance</td>
<td>ASTM 1003</td>
<td>(Values subject to glazing color selection)</td>
</tr>
<tr>
<td>Fire Ignition</td>
<td>ASTM D1929</td>
<td>Flash 779°F Spontaneous 1054°F</td>
</tr>
<tr>
<td>Fire Burn Rate</td>
<td>ASTM D635</td>
<td>CC1</td>
</tr>
<tr>
<td>Interior Flame Spread</td>
<td>ASTM E84</td>
<td>Class A</td>
</tr>
</tbody>
</table>

The above tests were performed and verified by certified independent third parties. If you have questions on a specific test or product, please contact a Solutions In Polycarbonate Representative. Solutions In Polycarbonate, LLC does not assure compliance with any plans or specifications and it remains the responsibility of the customer to confirm compliance of the product with applicable local, state, and national codes and other laws or regulations.
Extruded Aluminum Cap Profile

Extruded Aluminum Base Profile

Santoprene Gasket

1/4-14 Stainless Steel Screw with Sealed Washer

2.7700

3.1780

1.1777

Support Structure (By Others)

Polycarbonate Glazing Panel

#12 S.D.S.T. Tek Screws. Spaced as Required

Solutions in Polycarbonate
6553 Norwalk Road, Medina, Ohio 44256
Phone 330-572-2860, Fax 330-572-2861
1/4-14 Stainless Steel Screw with Sealed Washer

End Cap

#10 PH Screw

Polycarbonate Glazing Panel

Support Structure (By Others)
1/4-14 Stainless Steel Screw with Sealed Washer

Extruded Aluminum Cap Profile

Support Structure (By Others)

#12 S.D.S.T. Tek Screws. Spaced as Required

Solutions in Polycarbonate
6553 Norwalk Road, Medina, Ohio 44256
Phone 330-572-2860, Fax 330-572-2861

WeatherShade Mono-Canopy
Scale: N.T.S.

WS-3
Pop Rivet at 24" O.C

.040 Aluminum Wall Flashing Set in Bead Of Silicone Sealant

Extruded Aluminum Cap Profile

Support Structure (By Others)

Extruded Aluminum Base Profile

Counter Flashing (By Others)
See questions below from Playground Specialties:

1) Are all the structures to have ramps as shown on the drawings? If so, can you please provide the drawings that show the elevations for the sidewalks and where the contractor is providing a 24” berm for the connection of our ramped playground structures to the sidewalks?

2) If the contractor is providing the 24” berm, we will need to know exactly where this is provided in order to design the playground properly?

3) Where is the drawing showing the drainage detail? Slope? Depth of drainage stone? Geo-textile fabric and sub-grade?

4) One of the playground areas is shown as a circle on the drawings yet there are 6x6 wooden timbers specified? We can not achieve a circle using straight 6x6 wooden timbers as a border. A better option for this would be a concrete border for this soft play area?

5) There are three different designs shown and three separate soft play areas. Which design is to go in which area?

Please provide responses accordingly.

Suggestion

Answer

1. All structures are to be accessible. The playground supplier is responsible for providing the layout and determining locations of any necessary berms.
2. The playground supplier is responsible for providing the layout and determining locations of any necessary berms.
3. This area has been revise by Addendum 2 to rubber surfacing. Concrete sidewalk will provide edging.
4. Playground has been revised by Addendum 2.
5. See Addendum 2 for revise playground requirements. Playground equipment design is by equipment supplier.
Note: can be 2 single ramps at different locations

To meet up with a berm not to exceed 24"
See questions below from Waynesboro Construction:

1. Plan C-38: Is ant handicap signage required at the (2) HC parking spaces at the Hard Play Area?

2. Provide a tie-in detail where the milled portions of the paving tie into the new curb.

3. Plan C-3A: The existing sidewalk to be demo’d at the left corner of the plan does not match the area to remain.

4. The profile for SWM-8 is not shown except as very generic on plan C-4L. Provide the detailed version.

5. Plan C-2G: A retaining wall profile showing the top and bottom of wall is required for the Basin A retaining wall (W-1) that is shown in section B-B. Clarify if this is to be a segmental retaining wall or concrete retaining wall. If it is concrete, provide the structural design required.

6. Provide a retaining wall profile showing the top and bottom of wall for Wall 2 which ties into the Dumpster Enclosure. Clarify if this is to be a segmental retaining wall or concrete wall. If concrete, provide details.

7A. Clarify which package (2A or 3A) the landing, stair and ramp which are identified with the sidewalk symbol at the north corner the building on plan C-3A. The fact that they are attached to the main school building and shown on the structural and architectural would lead you to believe it is part of the 3A package.

7B. In addition, plan C-3A shows an extra landing ramp that do not show up on the other plans.

7C. Structural plan S-1.3 shows section 5/S-4.1 which does not show the stairs as shown on the other plans. Please clarify what is correct.

8. The out buildings, transformer/generator & dumpster enclosures are shown on S-1.14, but no sections or details are shown. The sections on A-0.6 show the walls as CMU with brick veneer on wall footings. Please provide the required makeup information on the structural plans. 9. The profiles of the SWM facilities only show 3” mulch for the top layer. The
landscape plan (L-2.1) refers to a proposed seed mix at these areas. Please clarify.

10. What is the height of the chain-link fence around the perimeter of SWM4 at the south corner of the building as shown on plan C-3A?

11. Clarify the extent of chain-link fence required at the top of the 371’ long retaining wall by the bus loop. It appears to be only 222’ linear feet and it will not need to run the full length of the wall. Please clarify.

12. Should the (2) sidewalks at the north entrance crosswalk and (1) at the east entrance crosswalk along Urbana Pike be Handicap ramps or be a 6” step as shown on plan C-3A?

13. Should the sidewalk at each end of the crosswalk near the 25 bike racks on plan C-3A have handicap ramps in lieu of a 6” step as shown on the Table Crosswalk detail 11/C-3E?

14. Clarify the mow strip condition at the southside of the basketball court hard play area. The outside paving areas appear to match the centerline of the 8’ high fence. Is the fence to push 6” to the south to allow for the 8/C-3D detail to work or are we to shorten up the asphalt by 6”?

15. The typical placement detail 7/C-3E refers to “Wall, see section A/C-3D. This section does not exist in the plans. Please clarify.

16. How are we to do the mow strip at the fencing around the soft play areas? The header curb on 10/C3-D is only 6” wide & is not wide enough to accept a fence post. The fencing around the soft play areas are shown to be centered on the header curb. Please clarify.

17. Sequence of Construction on C-2E: Line Item # 7: We are to block off the incoming pipes from HM-8. MH-8 does not exist. Should it be plug off MH-42 from I-50?

18. Sequence of Construction on C-2E: Line Item # 8: MH-48 & I-47 do not exist. Except for the main run thru MH-40A, there are no branch offs from MH-40A. Please clarify.

19. Sequence of Construction on C-2E: Line Item # 123: Should I-25 be MH-26?

20. Plan C-2A: Plug per sequence # 8 @ MH-6 should be Sequence # 9
    Plug per sequence # 8 @ MH-10 should be Sequence # 9
    Plug per sequence # 7 @ MH-42 is not in the Sequence of Construction
    Plug per sequence # 10 @ I-34 should be Sequence # 11
    Plug per sequence # 10 @ MH-32 should be Sequence # 11
    Unblock per sequence # 11 @ I-24 should be Sequence # 12
    Unblock per sequence # 11 @ I-22 should be Sequence # 12
    Plug per sequence # 19 @ I-12 should be Sequence # 20

***I stopped at this point. All Sequences need to be checked***

21. Plan C-2G: The side vertical elevations provided at the Basin A Section A-A does not match the internal elevations within the section.

22. Plan C-2G: Both Basin Sections refer to “2’ undercut reference per Seq # ??”. Please clarify.

23. Clarify if the screen wall by the loading dock identified on the structural as section 9/S4.1 on plan S4.1 is in the 3A package and not the 2A.

24. 11/C-3E: The cross-section B-B shows a 6” step at the curb. Shouldn’t this be a handicap ramp condition and the asphalt hump tapers at each side to the curb-line, so it does not create a tripping hazard?
25. 5/C-3E shows a section 6/C-3E that does not exist on the plan. Should the reference be 11/C-3C?

26. The 4/C-3D Maintenance Vehicle Access Gates Detail refers to specification section 02800 which does not exist in the specification documents. Is this strictly at the 4’ high chain-link double gates or is it also for the Transformer/Generator Enclosure Gates that are 18’-8” wide to the center of the support posts by 6’-0” high. If they are for the Transformer/Generator Enclosure Gates, are they to provide in the 5A Package or the 2A Package?

27A. Clarify if the double wide 24’ wide pipe gate on plan C-3A is not in the 2A Package.

27B. No detail has been provided.

28. Provide a detail for the site mailbox referenced on plan C-3A and in the 2A Package narrative item 2.74.

29. There is a lot of existing curb & gutter at the existing parking areas that does not call to be removed but shows as getting new at the same locations. Please clarify.

30. Provide a detailed layout of the Softball Field. Does it get infield mix and if so, clarify the depth & extent of area.

31A. Clarify the intent of the 2A Package, Line Items # 2.40 and # 2.42. They call for screened topsoil at the ballfields, grading within +/- .10 of a foot and removing all stones greater than ¾” in diameter to a depth of 18”. The existing baseball field only gets a new backstop and about half of the updated softball and multi-use field stay at the existing grades, which are not a consistent flow.

31B. Are we to disturb the other half of these fields and reestablish them back to the existing grades as shown on plan C-3B? Please clarify.

32. The Segmental Wall specification states that we have the third-party compaction inspection for this portion of work. The 2A Package Line Item # 2.46 states that the owner has the geotechnical testing. Please clarify.

Please provide responses accordingly.

**Suggestion**

<table>
<thead>
<tr>
<th>Answer</th>
<th>Date Answered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Yes. This was clarified in Addendum 2.</td>
<td></td>
</tr>
<tr>
<td>2. This is a means and methods. Contractor to provide a no settlement finished product.</td>
<td></td>
</tr>
<tr>
<td>3. Sidewalk demolition has been revised in Addendum 2.</td>
<td></td>
</tr>
<tr>
<td>4. Profile added on Sheet C-4P by Addendum 2.</td>
<td></td>
</tr>
<tr>
<td>5. Walls are Concrete and the designs are included in Addendum 3.</td>
<td></td>
</tr>
<tr>
<td>6. Walls are Cast in Place Concrete and included in Addendum 3.</td>
<td></td>
</tr>
<tr>
<td>7A. Per Oak: Landing, steps, and ramp to be provided by 3A Contractor.</td>
<td></td>
</tr>
<tr>
<td>7B. Per Oak: G&amp;P to verify if additional landing and ramp is required.</td>
<td></td>
</tr>
</tbody>
</table>

**Civil plan has been revised in Addendum 2 to match Architectural.**
7C. Reference has been revised in Addendum 3.

8. Details have been provided in Addendum 2.

9. All SWM areas have a seed mixture, in Addendum 2.

10. 4’ high chain link fencing. This clarification was included in Addendum 3.

11. Provide fence on the entire length of the wall.

12. ADA accessible ramps as shown in Addendum 2.

13. See revised detail included in Addendum 2, paving goes over gutter pan.

14. The mow strip should follow the outside edge of the areas and extend into to paved areas.

15. Wall details have been included in Addendum 3.

16. Use the mow strip detail in place of the header curb.

17. See revised sequence included in Addendum 2.

18. See revised sequence included in Addendum 2.

19. See revised sequence included in Addendum 2.

20. See revised sequence included in Addendum 2.

21. Profile was revised in Addendum 2.

22. After ponds are drained and cleaned out, obtain direction from Geotech prior to beginning backfill of pond areas.

23. Per Oak: 3A is responsible for the footing of the screen wall.

24. See revised detail in Addendum 2, paving goes over gutter pan.

25. Revised detail to point to section 12 in Addendum 2.


27A. Per Oak: See Scope Item 2.55 for clarification. 2A Contractor is responsible to furnish and install 24’ wide pipe gate.

27B. Contractor to provide shop drawings. This is an industry standard item. Any contractor not able to provide will not meet Quality Standard Requirements.

28. Details have been provided in Addendum 3.

29. Remove existing C&G where new C&G is shown.

30. Field is existing. No special mix is required.

31A. Per Oak: Requirements identified in these scope items are required where applicable.

31B. It is the intent to provide positive drainage on both playing fields with smooth transitions between new and existing grades.

32. Per Oak: Third party testing and inspection will be provided as described in Scope Item 2.46.
See questions below from Waynesboro Construction:

1. Clarify that the 6A package has the educational casework. Paragraph 2.69 references record copies of shop drawings, but it is not addressed elsewhere.

2. The Card Access System scopes need to be clarified. The 6A package line item #2.71 states that we are required to furnish and install the complete Card Access System. There is no separate Card Access System specification. The 08 71 00 Summary states that this specification includes the Electronic Access Control devices. The individual hardware sets say the credential readers are by others and no other information is provided. On plan TE0.1, the note next to the card reader symbol (under the security symbols) states that the card reader is furnished by FCPS and installed by the contractor. It also refers you to 1/TE4.5 for the detail of how they are to be roughed in. The TE plans do not show any card reader locations. The electrical floor plans show a junction box with different note numbers for the card reader locations. Please confirm that the 6A package is not providing or installing the card reader system and that all raceways, cabling and rough-in are by the 16A package. It appears that FCPS should have the furnish and install and the 6A package should only have coordination for the rough-in to the hollow metal frames. We should have nothing to do with programming or testing of the system. Please clarify.

3. The 6A package paragraph 2.70 states that the 6A package is to provide hardwood flooring on the Platform Stage room 210. The finish schedule calls for VCT on stage 210. Addendum # 1 – RFI STT2 PB-003 says the stage is wood strip flooring, which is incorrect per the section and specification. Only the stairs are wood. Please clarify what material is to be used.

4. Toilet Room C206 on sheet A9.8 shows a 10'-0" MB. Will toilet room C206 be receiving a marker board?

5. Item S1 listed in the Sensory Room Equipment schedule could be found on the plans. Are there any S1- Mirror
Sculpture Mazes in this project?

6. Miscellaneous Equipment spec. section 11 00 05-2 paragraph 2.6 A Calming Room Equipment Rooms states there is an equipment schedule. No equipment schedule or items are shown for the Calming Rooms on drawings. Is there any equipment in the Calming Rooms on this project?

7. Miscellaneous Equipment spec. section 11 00 05-2 paragraph 2.7 Cleaning Room Equipment says there is an equipment schedule. Are these items the washer and dryer shown on the equipment schedule on drawing A9.4? Are there any other Cleaning Room Equipment Items in the project?

8. There are Numerous conflicts between the 08 71 00 Finish Hardware Spec. hardware sets and the Door Schedule on plan A-3.2:
   a. Specs call B202 to have HDW Set # 14 – Door Schedule calls for HDW Set # 12
   b. Specs call for B020 to have HDW Set # 26 – Door Schedule does not show a Door B020
   c. Specs call for C103A to have HDW Set # 27 – Door Schedule does not show a door C103A
   d. Specs call for C103 to have HDW Set # 27 – Door Schedule call for HDW Set # 28
   e. Specs call for B101G to have HDW Set # 33 – Door Schedule does not show a door B101G
   f. Add Door C118 to the Spec HDW Set # 34
   g. Specs call for XC16 to have HDW Set # 43 – Door Schedule does not show a door XC16
   h. Specs call for XC-08 to have HDW Set # 44 – Door Schedule called for HDW # 47
   i. Add Door C012A to the Spec HDW Set # 27
   j. Specs Call for A109A at HDW Set # 12 – Door Schedule does not show a door A109A
   k. Add Door C106 to the Spec HDW Set # 08
   l. Specs call for B108 to have HDW Set # 08 – Door Schedule does not show door B108
   m. Add Door S3.1A to the Spec HDW Sets # 33
   n. Add XP01 to Door HDW Set # 39
   o. Add XP04 to Door HDW Set # 42

9. Plan A9.6: Confirm that the unlabeled educational casework at Room B210 is a G-1.

10. Plan A9.1: Room A116: (2) upper cabinets are marked as G-6, which are base cabinets. Confirm they should be G-26.

11. Plan A9.3: Confirm that the D4 symbol (recessed display case) is missing on the right-hand wall upon entry to Room C102.

12. The LED site sign on plan A-0.5 is shown as 4’ x 8’. The signage specification says it is 2’9” x 8’0”. Please clarify.

Suggestion

<table>
<thead>
<tr>
<th>Answer</th>
<th>Date Answered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Per Oak, 6A shall be responsible to furnish and install educational casework. This was clarified in Addendum 2.</td>
<td></td>
</tr>
<tr>
<td>2. Scope clarification will be provided in Addendum 3. Spec information included in Addendum 3.</td>
<td></td>
</tr>
</tbody>
</table>
3. Extent of wood is as detailed on section A6/A-4.14.

4. Refer to Addendum 2.

5. Clarified by Addendum 2.


7. Specification modified by Addendum 3.

8. Hardware spec revised by Addendum 3.

9. See Addendum 2.

10. See Addendum 2.

11. See Addendum 2.

Urbana Elementary School Replacement
3554 Urbana Pike
Frederick, Maryland  21704

Project #  1707

Tel:       Fax:

RFI #:  ST2 PB-029 Date Created:  2/1/2019

<table>
<thead>
<tr>
<th>Answer Company</th>
<th>Answered By</th>
<th>Author Company</th>
<th>Authored By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grimm + Parker Architects</td>
<td>Don Porter</td>
<td>Oak Contracting, LLC</td>
<td>Kerrigan Toth</td>
</tr>
<tr>
<td>11720 Beltsville Drive</td>
<td>Phone:  240-965-0713</td>
<td>1000 Cromwell Bridge Road</td>
<td>Phone:  410-828-1000</td>
</tr>
<tr>
<td>Suite 600</td>
<td>Fax:    301-595-0089</td>
<td>Towson, MD   21286</td>
<td>Fax:  410-828-7488</td>
</tr>
<tr>
<td>Calverton, MD   20705</td>
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<th>Author RFI Number</th>
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<th>Subject</th>
<th>Discipline</th>
<th>Category</th>
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<tbody>
<tr>
<td>Louver substitution request</td>
<td>Architectural</td>
<td>Contractor Suggestion / Upgrade</td>
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</table>

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<tr>
<th>Cc: Company Name</th>
<th>Contact Name</th>
<th>Copies</th>
<th>Notes</th>
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<table>
<thead>
<tr>
<th>Question</th>
<th>Date Required:  2/8/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>See attached substitution request from Waynesboro Construction recommending their products be accepted for louvers. Please review and advise.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Date Answered:</th>
</tr>
</thead>
</table>

The design team takes no exceptions to this product. Product will not be added to the specifications but will be accepted.
Substitution Request Form

IDENTIFICATION:
Contractor/CM: 
Project Name: Urbana Elementary School
Date: 1/31/19

REFERENCE:
Specification Title: Louvers Airline Model AS7D99HS
Specification No.: 089100 Page: 600 Article/Paragraph: 2.1

DESCRIPTION:
Proposed Substitution: Representative of Airline Louvers
Manufacturer: Airline Louvers
History: ☑ More than 10 years old
Reason for requesting substitution: ☑ Convenience
Explain: Representative of Airline Louvers

Differences between proposed substitution and specified item:
Our 7" WDR Wind Driven Rain meets Specs for pressure drop & performance, comes up short on free area.

(Use attachment for additional space, if required.)

Proposed substitution affects other parts of Work or applicable Code requirements as follows:

(Use attachment for additional space, if required.)

Post-Bid Savings to Owner for accepting substitution: (N/A Pre-Bid) N/A
Change to Contract Time due to accepting substitution: N/A
LEED Contribution (if applicable to Project) - Explain effects to LEED Action Plan: We will provide the LEED info

(Use attachment for additional space, if required.)
Will undersigned pay any costs caused by the substitution necessitating changes to the building design, construction, engineering and detailing, including additional Architect, inspection and testing fees?  ☑ Yes  ☐ No

Does the undersigned waive rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results?  ☐ Yes  ☑ No

Submitted by:  
(Contractor or CM Only)  
Dawn Whitney Coons (Waynesboro Construction Co.)

Signed by:  
(Cheri Thompson)

Firm:  
Acorn Supply & Distributing, Inc.

Address:  
11167 Pulaski Highway  
White Marsh, MD 21162

Telephone:  
410-335-0547 X2

SUPPORTING DATA ATTACHED:

☑ Point-by-Point Comparative Data Attached (Required)

☐ Completed Section 01 61 16.01, Accessory Material VOC Content Certification Form Attached (Required)

☐ Drawings  ☑ Product Data  ☐ Samples  ☐ Tests  ☐ Reports  ☐

CERTIFICATION:

The Undersigned certifies:

- Proposed substitution has been investigated and determined that it meets or exceeds the quality level of the specified product.
- Same warranty will be furnished for proposed substitution as for specified product; provide attachment if different.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances; provide attachment if otherwise.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.
- Neither the Owner and Architect will be liable for license fees or royalties.
A/E's REVIEW AND ACTION:

☐ Substitution approved - Make submittals in accordance with Specification Section 01 60 00.

☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 60 00.

☐ Substitution rejected - Use specified materials.

☐ Substitution Request received too late - Use specified materials.

Signed by: ___________________________ Date: ____________

ADDITIONAL COMMENTS:

Contractor:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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________________________________________________________________________

Architect:

Approvals are based upon the opinion, knowledge, information, and belief of Architect at time of decision and reliance upon data submitted. Approvals are therefore interim and subject to reconsideration as additional data, materials, workmanship and coordination with other Work are observed and reviewed. In proposing items, Contractor assumes risks, costs and responsibilities for items integration into Work and performance.

________________________________________________________________________

________________________________________________________________________

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________________________________________________________________________
FRAMES:
Extruded aluminum 7" deep channel frame in .080" thk. (nominal), 6063-T6/T52 alloy.

BLADES:
Stationary Blades are chevron design, extruded aluminum .080" thk. (nominal) of 6063-T6/T52 alloy, approximate 2 1/4" centers.

Face of Louver:
Full width sill with head and blades contained within jambs.

Drain Sill Pan:
.060" Thick formed aluminum

SCREENS:
(When indicated, in a removable frame)
Bird Screen - 1/2" Flattened Aluminum, .051" thk.
or - 1/2" sq. mesh intermediate double crimped aluminum wire, .063" dia.
OR - 18/16 mesh, .011" dia. aluminum wire insect screen.

Finish: Mill

Louver Sizes: 12" x 12" Minimum Panel.
30 sq. ft. is the maximum section size. Louver larger than the maximum factory assembled size will require field assembly of smaller louver sections.

LOUVER PERFORMANCE STATEMENT
The Airline Model AS7D99HS shall be fabricated to provide a minimum of (45.1%), 7.22 square feet of free area for a 48" x 48" size louver and bear the AMCA Certified Rating Seal for Air Performance, Water Penetration and Wind Driven Rain. The rating shall show a beginning point of water penetration at .01 ounces per square foot of free area at 1187 fpm (8,570 cfm) with .33 inches water gauge pressure drop at 1000 fpm air intake.
In addition, this louver is tested to Wind Driven Rain Test Standard AMCA 500-L-99. Where the louver is subjected to simulated Wind Driven Rain. The result of this test for a size 48" x 48" louver, shall show a Class "A" rating having at 3 inches of rainfall at an intake velocity of 1,338 fpm (7,076 cfm) at a wind speed of 29 mph, and a Class "A" rating at 8" rainfall at an intake velocity of 1,177 fpm (6,227 cfm) at a wind speed of 50 mph.

For AMCA certified ratings authorized by AMCA - See reverse side

Nominal Deductions will be made to the opening size given

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>OPENING SIZE</th>
<th>LOUVER SIZE</th>
<th>OPTIONAL ACCESSORIES</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>&quot;A&quot; WIDTH</td>
<td>&quot;B&quot; HEIGHT</td>
<td>&quot;A&quot; WIDTH</td>
</tr>
</tbody>
</table>

PROJECT: LOCATION:
ARCH/ENGR: CONTRACTOR:
REPRESENTATIVE: DATE:

1020 Prince Frederick Blvd, Suite 305, Prince Frederick, MD 20687 Phone: (570) 420-7079 • Fax: (570)420-7078
Performance Date
Test of a 48" x 48" according to AMCA Standard 500-L shows the beginning point of water penetration is above 1250 fpm through the free area of the louver, with less than .38 inches water gauge pressure drop at 1000 fpm (intake).
Ratings Do Not Include Effects Of Birdscreen.

Pressure Drop

Water Penetration

Velocity (FPM) Thru Free Area
The beginning point of water penetration is above 1250 fpm through the free area of the louver.

FREE AREA (SQ. FT.)

<table>
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<tr>
<th>WIDTH</th>
<th>12&quot;</th>
<th>24&quot;</th>
<th>36&quot;</th>
<th>48&quot;</th>
<th>60&quot;</th>
<th>72&quot;</th>
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<th>120&quot;</th>
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<td>39.80</td>
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</table>

In the interest of product development, Airline reserves the right to make changes without notice.
Airline Louvers

AS7D99HS

Wind Driven Rainwater Penetration Test
Conducted To AMCA Standard 500-L

Test Size 1M x 1M (39.37" x 39.37") Core Area, 41.87" x 42.77" Nominal Louver Free Area 5.29 Square Feet

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<th>Core Ventilation (M/S)</th>
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<th>0.5</th>
<th>1.0</th>
<th>1.5</th>
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<th>3.0</th>
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<th>4.0</th>
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<th>5.0</th>
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<tbody>
<tr>
<td>FPM</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>482</td>
<td>569</td>
<td>657</td>
<td>751</td>
<td>864</td>
<td>977</td>
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<td>Free Area Ventilation</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>5195</td>
<td>6126</td>
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<td>10729</td>
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<td>-</td>
<td>-</td>
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<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>C</td>
<td>C</td>
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<tr>
<td>Effectiveness Ratio %</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>99.8</td>
<td>99.3</td>
<td>94.8</td>
<td>90.0</td>
<td>83.1</td>
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| FPM                    | 0   | 0   | 0   | 0   | 0   | 482 | 578 | 659 | 763 | 847 | 974 |
| Free Area Ventilation  | -   | -   | -   | -   | -   | 5189| 6227| 7096| 8210| 9115| 10483|
| Free Area Velocity (FPM)| -  | -   | -   | -   | -   | 981 | 1177| 1341| 1552| 1723| 1982|
| Effective Rating Class | A  | A   | A   | A   | A   | A   | A   | B   | C   | C   | C   |
| Effectiveness Ratio %  | -  | -   | -   | -   | -   | 100 | 99.0| 96.5| 92.9| 88.6| 80.8|

**DISCHARGE COEFFICIENT**

Intake Cd = .025 (Class 3)

**Wind Driven Rain Penetration Classifications**

<table>
<thead>
<tr>
<th>Class</th>
<th>Effectiveness %</th>
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<tbody>
<tr>
<td>A</td>
<td>1 To 0.99%</td>
</tr>
<tr>
<td>B</td>
<td>0.989 To 0.95%</td>
</tr>
<tr>
<td>C</td>
<td>0.949 To 0.80%</td>
</tr>
<tr>
<td>D</td>
<td>Below 0.80%</td>
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</table>

**Discharge Loss Coefficient Classifications**

<table>
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<th>Class</th>
<th>Discharge Loss Coefficient</th>
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<tbody>
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<td>1</td>
<td>0.4 And Above</td>
</tr>
<tr>
<td>2</td>
<td>0.3 To 0.399</td>
</tr>
<tr>
<td>3</td>
<td>0.2 To 0.299</td>
</tr>
<tr>
<td>4</td>
<td>0.199 And Below</td>
</tr>
</tbody>
</table>

Class 1 Loss Coefficient Has The Least Resistance To Airflow

1. Core area is the front opening of a louver assembly with the blades remover.

2. Core area velocity is the airflow rate through the louver divided by the core area (39.37" x 39.37").

3. Free area is the minimum area through which air can pass. It is determined by multiplying the sum of the minimum distance between intermediate blades, top blade and head, bottom blade and sill. By the minimum distance between jambs.

4. Discharge loss coefficient is calculated by dividing a louver actual airflow rate vs. a theoretical airflow for the opening. Providing an indication of the louver airflow characteristics.

AMCA accredited laboratory is a laboratory equipped and staffed to conduct tests according to the appropriate AMCA test method and which has been licensed as a AMCA accredited laboratory.

Airline certifies that the Model AS7D99HS shown herein is licensed to bear the AMCA Seal. The rating shown are based on tests and procedures performed in accordance with the AMCA publication 511 and comply with the requirements of the AMCA Certified ratings program. The AMCA Certified ratings seal applies to Air Performance, Water Penetration and Wind Driven Rain ratings only.
PART 2 PRODUCTS

2.01 Manufacturers
A. The louvers and related materials herein specified and indicated on the drawings shall be as manufactured by:

Construction Specialties, Inc.
49 Meeker Avenue
Cranford, New Jersey 07016
Telephone: 800-631-7379

Construction Specialties (UK) LTD
1010 Westcott Venture Park, Westcott,
Aylesbury,
Bucks HP18 0XB, United Kingdom.
Telephone: +44 (0) 1296 662800

Construction Specialties, LLC
1705 World Trade Centre
PO Box 9260
Dubai, U.A.E.
Telephone: +971-4-3312167

CS Group Construction Specialties Ltd.
Room 616-617
No.899 Cross Region Plaza, Lingling Road
Xuhui District, Shanghai, China 200030
Telephone: +86-21-64329257

B. Products equal to the CS materials may be offered providing that the manufacturer and materials are pre-approved at least 10 working days before the bid date.

2.02 Materials
A. Aluminum Extrusions: ASTM B211, Alloy 6063-T5, 6063-T6 or 6061-T6.
B. Aluminum Sheet: ASTM B3209, Alloy 1100, 3003 or 5005.

2.03 Fabrication, General
A. Provide CS louver models, bird screens, blank-off panels, structural supports and accessories as specified and/or shown on the drawings. Materials, sizes, depths, arrangements and material thickness to be as indicated or as required for optimal performance with respect to strength, durability, and uniform appearance.
B. Louvers to be mechanically assembled using stainless steel or aluminum fasteners.
C. Include supports, anchorage, and accessories required for complete assembly.

2.04 Louver Models
A. CS 7" (177.8mm) Deep Storm Resistant Fixed Horizontal Louver Model RS-7315
1. Material: Heads, sills, jams and mullions to be one-piece structural aluminum members with integral caulking slot and retaining heads. Architectural Line Drainable Sightproof Storm Resistant Fixed-Blade designed to collect and drain water to exterior at sill by means of multiple gutters in blades and channels in jams and mullions Louvers to be supplied with 4" (101.6mm) high by full depth sill flashings formed from minimum 0.050" (1.27mm) thick aluminum. Sill flashings to have welded side panels. Louvers and sill flashings to be installed in accordance with the manufacturer’s recommended procedures to ensure complete water integrity performance of the louver system.
2. AMCA Performance: A 4" x 4" unit shall conform to the following:
   Free Area 8.09 sq. ft. (0.75 sq. m.)
   Intake Pressure drop at 900 fpm free area velocity (274 m/min) 0.312 in. H2O (7.93 mm)
   Exhaust pressure drop at 900 fpm free area velocity (274 m/min) 0.394 in. H2O (10.00 mm)
3. Wind Driven Rain Performance: AMCA certified and licensed to bear the AMCA seal. The louver test was based on a 39.370" (1.00m) x 39.370" (1.00 m) core area. Unit tested at a rainfall rate of 3.0 inches per hour (75 mm/hr) and with a wind directed to the face of the louver at a velocity 29.1-mph (13 m/s). The test data shall show the water penetration effectiveness rating at each corresponding ventilation rate.

Revised 09/2016
2.05 Finishes

A. General: Fluoropolymer finish complying with AAMA-2605-5 standards. Protect finishes on exposed surfaces prior to shipment. Remove scratches and blemishes from exposed surfaces, which will be visible after completing finishing process.

Provide Color as indicated or, if not otherwise indicated, as selected by architect from standard CS Powder Coat colors.

B. 100% Fluoropolymer Resin Powder Coat System: Finish thickness to be 1.5 to 3.0 mils.
1. Finish to allow zero VOCs to be emitted into facility of application or at job site.
2. Finish to adhere to a 4H Hardness rating.
3. Furnish manufacturer's twenty (20) year warranty for finish.
4. Finish shall be applied in a wholly owned plant by manufacturer. All supports, blade braces and blades to be painted in the same color.
5. Polyester powder or solvent based fluoropolymer finishes not acceptable.

OR

A. General: Comply with NAAMM "Metal Finishes Manual" for finish designations and application recommendations, except as otherwise indicated. Apply finishes in factory. Protect finishes on exposed surfaces prior to shipment. Remove scratches and blemishes from exposed surfaces that will be visible after completing finishing process. Provide color as indicated or, if not otherwise indicated, as selected by architect.

B. Fluorocarbon Coating
1. Louvers to be finished with an inhibitive thermo-cured primer, 0.2 mil minimum dry film thickness, and a thermo-cured fluorocarbon coating containing "Kynar 500" resin, 1.0 mil minimum dry film thickness.
2. All aluminum shall be thoroughly cleaned, etched and given a chromated conversion pre-treatment before application of the Kynar/Hylar coating. The coating shall receive a bake cycle of 17 minutes at 450°F. All finishing procedures shall be one continuous operation in the plant of the manufacturer.
3. Manufacturer to furnish an extended 20 limited warranty for the Kynar/Hylar coating. This limited warranty shall begin on the date of material shipment.

OR

B. Three Coat Fluorocarbon Coating
1. Louvers to be finished with a minimum 1.4 mil (0.035mm) thick full strength 70% resin, 3 coat Fluoropolymer system.
2. All aluminum shall be thoroughly cleaned, etched and given a chromated conversion pre-treatment before application of the Kynar/Hylar coating. The coating shall consist of a primer, a high metallic color coat and a clear PVF2 topcoat. It shall receive a bake cycle of 17 minutes at 450°F. All finishing procedures shall be one continuous operation in the plant of the manufacturer.
3. Manufacturer to furnish an extended 20 limited warranty for the Kynar/Hylar coating. This limited warranty shall begin on the date of material shipment.

Revised 09/2016
2.06 Bird Screens
   A. Unless otherwise indicated, all louvers to be furnished with mill finish bird or insect screens.
   B. Screens to be 5/8" (15.9mm) mesh, 0.050" (1.27mm) thick expanded and flattened aluminum bird screen secured within 0.055" (1.40mm) thick extruded aluminum frames. Frames to have mitered corners and corner locks.

2.07 Blank Offs
   A. Furnish where indicated on the drawings blank-off panels fabricated by the louver manufacturer.
   B. Blank-off panels to be 0.050" (1.27mm) thick aluminum sheet. Panels to be finished with Kynar 500 minimum 1 mil (0.025mm) thick full strength 70% resin Fluoropolymer coating. Color to be selected by the architect.

   OR

B. Blank-off panels to be 1" (25.4mm) thick and to be faced on both sides with 0.032" (0.81 mm) thick aluminum sheet. Panels to be fabricated with an expanded polystyrene (EPS) core having an R-value of 4 (0°*h²/Btu). Panel perimeter frame to be 0.050" (1.27mm) thick-formed aluminum channels. Panel frame to be mitered at the corners. Panels to be finished to match louvers.

   OR

B. Blank-off panels to be 2" (50.8mm) thick and to be faced on both sides with 0.032" (0.81 mm) thick aluminum sheet. Panels to be fabricated with an expanded polystyrene (EPS) core having an R-value of 8 (0°*h²/Btu). Panel perimeter frame to be 0.050" (1.27mm) thick-formed aluminum channels. Panel frame to be mitered at the corners. Panels to be finished to match louvers.

Revised 09/2016
STORM RESISTANT LOUVER MODEL RS-7315

PLAN VIEW

VERTICAL SECTION (NTS)

SCREENS
- SCREEN NOT REQUIRED
- SCREEN REQUIRED
- INTERIOR MOUNTED
- EXTERIOR MOUNTED
- BIRDSCREEN: 1/2" MESH .063 DIA. ALUM. WIRE
  (MILL FINISH)
- INSECT SCREEN: 18x16 ALUM. MESH (MILL FINISH)

FINISHES
- STANDARD MILL
- FLUROPOLYMER POWDER COAT
  (NOT AVAILABLE IN 600XL OR 700)
- KYNAR (500),(600XL)OR(700)
- (1) OF C/S STD. COLORS
- CUSTOM COLOR, C/S REQUIRES
  A COLOR CHIP FOR MATCHING
- BRONZE ANODIC (DARK OR MEDIUM)
- CLEAR ANODIZE
- OTHER

C/S EXTRUDED ALUMINUM STORM RESISTANT LOUVER MODEL
RS-7315. FRAMES AND BLADES TO BE FABRICATED FROM
6063-T6 ALLOY. ALL FASTENERS TO BE STAINLESS STEEL.

VERTICAL SECTION (NTS)

MARK | QTY. | "A" DIM. | "B" DIM. | NUMBER OF MULLIONS | LOUVER LOCATION | REMARKS
--- | --- | --- | --- | --- | --- | ---

Construction Specialties, Inc.
49 Meeker Avenue
Cranford, New Jersey 07016
(908) 272-5200
Fax (908) 272-6038

PROJECT:

CUSTOMER:

ARCH'T:

AGENT:

CED:

DRAWN BY:

DATE:

DWG.

NO:

SHEET OF
Request For Information  ST2 PB-031

Urbana Elementary School Replacement  Project # 1707
3554 Urbana Pike  Tel:       Fax:
Frederick, Maryland    21704

RFI #:  ST2 PB-031  Date Created: 2/1/2019

Answer Company: Grimm + Parker Architects
Answered By: Don Porter
11720 Beltsville Drive
Suite 600
Calverton, MD  20705

Author Company: Oak Contracting, LLC
Author RFI Number

Kerrigan Toth
1000 Cromwell Bridge Road
Towson, MD   21286

Co-Respondent
Author RFI Number

Discipline: Architectural
Category: Other

Question  Date Required: 2/8/2019

See questions below from Steel Products and respond accordingly.

1. Please provide details of the screen at Platform C110. It’s labeled on A7.3 but not shown. Please also show it on detail A6/A-4.14 and provide a mounting height.

2. The specs call for ceiling trim flange and tab-tensioning, but the called out screen models do not have these options. Please advise on what is required.

3. Also, the specs only list the screen at the “stage” with a size of 200” diagonal, but the gymnasium is not listed. Should the screen in the gymnasium be the same size as the screen at Platform C110?

*****Please note the specs list the Boardroom Electrol by Da-Lite, but this model was just discontinued on 12/31/2018.*****

Suggestion

Answer  Date Answered:

1. Details have been provided in Addendum 3.
2. Specification has been revised in Addendum 3.
3. Specification has been revised in Addendum 3.
Request For Information  ST2 PB-032

Urbana Elementary School Replacement  Project # 1707
3554 Urbana Pike  Tel:  Fax:
Frederick, Maryland  21704

RFI #: ST2 PB-032  Date Created: 2/1/2019

<table>
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<th>Answered By</th>
<th>Author Company</th>
<th>Authored By</th>
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<tbody>
<tr>
<td>Grimm + Parker Architects</td>
<td>Don Porter</td>
<td>Oak Contracting, LLC</td>
<td>Kerrigan Toth</td>
</tr>
<tr>
<td>11720 Beltsville Drive</td>
<td>Phone: 240-965-0713</td>
<td>1000 Cromwell Bridge Road</td>
<td>Phone: 410-828-1000</td>
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<tr>
<td>Suite 600</td>
<td>Fax: 301-595-0089</td>
<td>Towson, MD  21286</td>
<td>Fax: 410-828-7488</td>
</tr>
<tr>
<td>Calverton, MD  20705</td>
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</tbody>
</table>

Co-Respondent          Author RFI Number

Subject  Discipline  Category
6A misc  Architectural  Other

Cc:  Company Name  Contact Name  Copies  Notes

Question  Date Required: 2/8/2019
See attached PDF document for questions from Waynesboro Construction.

Suggestion

Answer  Date Answered:
1. Media Center Circulation Desk details have been included in Addendum 3.
2. Media Center elevations have been revised by Addendum 2.
3. Media Center model numbers have been revised in Addendum 3.
4. This detail has been deleted in Addendum 3.
5. Maple chair rail has been deleted in Addendum 3.
6. Elevations have been revised in Addendum 2.
7. Elevations have been revised in Addendum 2.
8. Elevations have been revised in Addendum 2.
9. Elevations have been revised in Addendum 2.
10. Elevations have been revised in Addendum 2.
11. Elevations have been revised in Addendum 2. Room Number has been revised in Addendum 3.
12. Room number reference has been revised to Art C102 in Addendum 3.
13. Elevations have been revised in Addendum 2.
14. Elevations have been revised in Addendum 2.
15. Revised to HM Frame in Addendum 3.
16. This has been clarified by the elevation revisions included in Addendum 2.
17. Details have been revised in Addendum 3.
18. Elevations have been revised in Addendum 2.
21. Structural detail has been included in Addendum 3.
22. This is incorrect and has been corrected in Addendum 3.
23. Projection Screen specification has been revised in Addendum 3. Projection screen details are shown in Addendum 3.
Below are a few questions related to the 6A Package – General Carpentry portion of the Urbana Elementary School Replacement project:

1. Media Center Circulation Desk: The desk that is shown on floorplan A9.2 and elevation E13/A6.2 (which is not shown at the right location on A9.2) does not match the A9.9 circulation desk in size or shape. The K13/A9.9 detail does not show sections to tie you into L8/A9.9 or K8/A9.9 and elevation K4/A9.9. We also need additional sections showing what the other areas thru the desk look like that have no details shown.

2. The Media Center elevations shown on A9.2 do not reflect the locations you would be looking from on A6.2. Please correct.

3. The Media Center Furnishings Chart on A9.2: Items L3 & L4 are shown to be 12” deep x 63” tall (which matches the elevations) but the manufacturer numbers are for 82” high units. Which is correct? The elevations shown on A6.2 lead you to believe that there should not be any L4’s (which are add-ons, not complete units) and that all L4’s should really be L3’s. The 11 51 23 spec calls for maple units, but the manufacturer number should have a “M” behind them if this is true. Confirm that the L7’s or L8’s identified in the chart are not to be included in the project. None appear to be shown on the floorplan.

4. A14/A9.10: How or were does this apply to the project?

5. Maple Chair Rail L4/A9.10: The elevations on A6.1 state that the maple chair rail is to be installed at 9’-4” AFF above the ceramic tile in the Cafeteria. The TE plans make it look like it goes all the way around the room, but the A6.1 elevation’s show it with breaks at areas. The bulkhead above the stage is at 10’-0” AFF and will not allow it to run continuous at 9’-4” AFF. Please clarify all.

6. The elevations of the corridors with lockers on Plan A6.4 conflict as far as the locker tops. They show both detail L4/A9.9 (Corridor Wing Wall Cap) and D16/A9.9 (Section
Thru Locker) at the same locations. One is millwork and one shows sloped metal. Please clarify.

7. Plan A6.1: Interior Elevations:
   a. H6: These elevations do not show up on the A1 floor plans or the A9 equipment plans. There is a note referencing a Display Case to the left of Door B101A that is really lockers. There are corridor wing wall notes pointing to lockers, doors & walls.
   b. G10, G12, G18 & G15: These elevations do not show up on the A1 floor plans or the A9 equipment plans. There are identified to be elevations of Platform C111. Room C111 is Table Storage and C110 is the Platform per the floor plans. The elevation as shown do not match the educational millwork or markerboards shown on plan A9.3. Acoustical Panels notes do not tie into anything. References Vertical sloping bulkheads that don’t exist. G12 also shows two random stage curtains.
   c. F6 overlaps with G10 and is illegible.
   d. D6 overlaps with F6 and is illegible.
   e. C4 overlaps itself and is illegible.
   f. F6 & D6: Are there to be acoustical panels on D6? What does the 3’-6 wide x 3’-0” high blank box on F6 and the 4’-0” wide x 3’-0” high blank box on D6 represent? No maple chair rail is shown to cover the TE conduit.
   g. D6 appears to refer you to L14/A6.1 for the typical ceramic tile pattern. This detail does not exist.
   h. Why is “School Motto” note at top/center of page that ties into nothing on this page?
8. G6/A6.2: Reference to Display Case C10/A9.10 appears to be incorrect. This detail does not exist on A9.10 and the floor plans do not show or have room for.
9. G13 & E13 on A6.2: Had would these murals work as drawn? It would wrap around corner on G13 & cover the borrowed lite on both.
10. E13/A6.2: This detail has interactive boards in wrong location, display that does not exist, missing 8’ MB & 4’ TB as well as missing L3 & L4 (which should likely all be L3’s) Library Stack Systems.
11. A9.3: Art Rooms C101 & C102: What is the item on the wall next to the 6’ MB? It is also shown on elevation A7/A6.2, which has the Art Room mislabeled as Room C105.
12. Plan A6.2: Elevations A7, A11, C7 & C11 are all mislabeled as Art Room C105. These are of Art Room C102 and Art Room C101 would be opposite hand & similar depending on the elevation.
13. C7/A6.2: What is the item to the left of the millwork shown on C7/A6.2? It appears to be a visual display, but nothing is identified but it is drawn in on Plan A9.3.
14. C18/A6.3: The 4’ TB, 8’ MB, base & upper cabinets are missing from the elevation.
15. Plan A9.2: What is the item identified as “DX” outside of Maker Space B101E?
16. Plan A9.8: Confirm that there are to be a 6’ long & 10’ 2” wide tack strip at 7’-0” AFF in Corridor B020 outside of the Maker Space C207. They are not identified.
17. Clarify the width of the Type D2 Display Case. The Display Case Schedule all show 48” wide, but the referenced F1/A9.10 detail shows it to be 5’-0” wide. Please clarify.
18. F12/A6.4: A display case identification is pointing to the lockers. This is also not shown on the floor plans.
19. C12/A6.4 should be the South Elevation in lieu of the North Elevation.
20. A12/A6.4 should be the North Elevation in lieu of the South Elevation.
21. Sensory Room B211 (A9.6) & Sensory Room B104 (A9.2) reference above ceiling support hooks for a swing that is to be detailed on the structural plans. The structural do not address this.
22. **This is not a 6A question:** Confirm that only five Type P5 Basketball Backstops are required at Gymnasium C133. The west cross court only shows a P5 at the northern end of the court. Just seems odd.
23. Projection Screen 11 52 13: The spec only addresses the screen at the stage. Is the projection screen at the gymnasium to be the same as the stage screen? A size of screen is not provided at the gym. Also, plan A7.3 calls for a 16’ long projection screen at the stage that is shown in the same plane as the stage curtain and not centered on the stage. It may interfere with the track lights if they are installed per section A6/A1.14. A typical 200-inch diagonal viewing area would generally be 120” x 160” which is only 13’-4” long. Please clarify these issues. A true model number for each would be helpful.

Thank you,

Danny VanGosen
Estimator
717-729-2506 (cell)
301-662-1150 (ext. 110)
Urbana Elementary School Replacement  
3554 Urbana Pike  
Frederick, Maryland  21704

Project #  1707  
Tel:   Fax:

RFI #:  ST2 PB-033  
Date Created:  2/2/2019

<table>
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Co-Respondent  
Author RFI Number

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<tr>
<th>Subject</th>
<th>Discipline</th>
<th>Category</th>
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<tbody>
<tr>
<td>Metal storage shelving</td>
<td>Architectural</td>
<td>Specification Clarification</td>
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</tbody>
</table>

Cc: Company Name  
Contact Name  
Copies  
Notes

Question  
Date Required:  2/9/2019

See questions below from Steel Products, Inc:

105613 – Metal Storage Shelving:

This spec contradicts itself because it lists post and beam shelving, but calls for both sway bracing and metal shelves, which are not available on post and beam shelving. Post and beam shelving has horizontal beams that hold the shelving material (typically wood). Schools always use clip shelving, which does have sway bracing and metal shelves mounted on clips. Please clarify.

Also, the spec calls for 16ga. shelves, which are not available. The heaviest gauge available as an industry standard is 18ga. The specified capacity of 1,200 lbs. per shelf (for a 36x18 shelf) is achieved with an 18ga. 36x18 shelf. Please advise if this is acceptable.

Suggestion

Answer  
Date Answered:

Specification has been revised by Addendum 3.  Some statements noted above are not entirely correct.  Sway bracing is required for metal shelving.
1. The structural drawing S-1.6 shows a light-gauge shear wall about 8 feet west of column line 5, but there is no drywall partition there, per floor plan A-1.2. There is a partition on column line 5. Please advise if the shear wall will be moved to column line # 5.

2. Utility Room B106C, Utility C114, and A204B Storage show 2 x 4 APC on the reflected ceiling plans, but the finished schedule calls for "EXP", exposed. Please advise which is correct.

3. APC5 is called for in the Vocal and Instrumental Music rooms, but there is no APC5 in the spec. On Fionish Plan A-3.1, APC is described as an "INTERACTIVE CEILING PANEL", 2 X 4 FOR 20% OF THE CEILING AREA (APC FOR REMAINDER). From past experience, we believe that the APC5 is meant to be a high-nrc. tile with an NRC. of at least 0.95. going in 20% of the ceiling, in addition to the 4 x 4 pyramidal ceiling diffusers. Please confirm if this is correct.

4. Vocal Music C104 shows 2 x 4 ceiling, but the finish schedule calls for “APC2/APC5”. Should the ceiling be 2 x 2 in this room, as it is in the Instrumental Music C107?

5. The APC4 is “ACOUSTIC METAL PAN CLG-2 X 2” per the ceiling legend on A-3.1, and ceiling spec. 095100, 2.2. We have several questions about APC4:
   a. It is listed as the ceiling in Vestibule A010, but we see no ceiling shown in this vestibule, and sections A13 and A18/A-4.12 show exposed structure in this vestibule. Please confirm there is no APC4 in this vestibule.
   b. Cafeteria C116 is to receive both 2 x 2 APC2 and APC4 per the finish schedule, but there are no shaded areas in the Cafeteria, so we assume that the entire Cafeteria is APC2. Please confirm, or otherwise indicate where the metal ceiling APC4 might go in the Cafeteria.
   c. 2nd floor Area B shows the shaded 2 x 2 ceiling in the high area of the Media Center (A9/A-4.6). Please confirm that this is metal ceiling APC4.
   d. The Gordon GreenWood Wood Grain Film comes in both Series 1 and Series 2 wood grains, but Series 2 is a somewhat higher cost. For bidding purposes, should we figure the Series 2 finishes, just to be safe?
   e. APC4 is called out on the finish schedule for the Elevator. Doesn’t the elevator get its own integral ceiling?
   f. 12 cartons of attic stock ceiling materials are called out under 095100, 1.7. Please confirm that the metal ceilings will require less attic stock, maybe 1 or 2 cartons, or else 2% of the total square footage.
g. The suspension system for APC4 metal panels is called out as an Armstrong ES7901 clean room gasketed ceiling grid. USG has a similar CE gasketed grid, but neither of these is available in the specified “custom color”, so the grid will have to be field painted, or ordered in and then sent out to a paint shop to be painted a custom color, which we will have to figure in our bids, whether done by 9A or 9E. Please advise on how the custom color will be achieved.

6. Three “Basis-of-Design” high-NRC ceiling tiles are listed for the typical APC1 and APC2. A light reflectance of 0.84 is specified and the tiles by Armstrong and USG have a 0.84 LR, but the Certainteed Fine Fissured HHF-457/497 HNRC tiles have an LR of 0.83, a single point less. Will that tile be acceptable as well?

**Suggestion**

**Answer**

1. Correct. This is included in Addendum 3.
2. Ceilings have been clarified in Addendum 3.
3. Ceiling has been revised to APC/SATC-1 in Addendum 3. SATC-1 is specified in section 09 52 50.
4. Ceiling has been revised to APC/SATC-1 in Addendum 3. SATC-1 is specified in section 09 52 50.
5a. A010 has been revised to EXP in Addendum 3.
5b. APC4 reference has been removed in Addendum 3.
5c. Confirmed.
5d. Color choice has been included in Addendum 3.
5e. Elevator ceiling will be metal by Elevator Manufacturer.
5f. Attic stock will remain as specified for APC1, APC2 & APC3. Metal ceiling may be reduced to 2 cartons.
5g. Color choice has been included in Addendum 3.
6. Certainteed product will be acceptable.
See questions below from Hayward Baker, Inc:

1. When do you need a proposal by?

2. The structural notes specify the aggregate piers as having a minimum length of 15’.
2A. Is that truly required if we’re the ones providing a stamped design for the piers? Rock is shallower than 15’ in places.
2B. Is this length measured from the project datum or bottom of footing?

3. We’re having trouble with the Addendum 1 pdf. It appears partially corrupted, with a large portion of the pages blank. I’ve had a few different people here try to open it.

4. The structural notes and specifications both state the design bearing capacity is 5000 psf. The geotech report states aggregate piers are to provide 6000 psf. Please confirm 5000 psf is the design bearing capacity.

5. The specifications note bottom-stabilization testing. This testing isn’t applicable to aggregate piers installed using a vibrator, it is intended for piers installed with a tamper.

6. The specifications note a minimum area coverage of 30% and a design bearing capacity of 5000 psf. It’s possible to provide a 5 ksf bearing capacity with the aggregate piers using an area-replacement ratio less than 30%. Would it be acceptable to design for a lower area-replacement if the PE-stamped design still provided for the project performance requirements? From our experience, it becomes difficult to install piers near 30% A/R as the side walls of pre-drilled holes will collapse neighboring installed piers.

7. Are structural foundation loads available to use for aggregate pier settlement analysis? Typically the dead and live load are provided in kips for columns and klf along walls.

Suggestion
<table>
<thead>
<tr>
<th>Answer</th>
<th>Date Answered:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Per ECS: This work is included in the 3A scope and should be provided to prospective 3A bidders for the Feb 20, 2019 bid date.</td>
<td></td>
</tr>
<tr>
<td>2A. Per ECS: Specialty contractor is ultimately responsible for stamped design and performance. Minimum lengths to achieve required bearing and settlement control should be determined by specialty contractor in their design.</td>
<td></td>
</tr>
<tr>
<td>2B. Per ECS: Bottom of footing</td>
<td></td>
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<tr>
<td>3. Oak verified the Addendum file was non-corrup and able to be viewed, and there were no issues noted.</td>
<td></td>
</tr>
<tr>
<td>4. Per ECS: Structural notes and specs dictate.</td>
<td></td>
</tr>
<tr>
<td>5. Per ECS: Bottom stabilization testing is not required for vibratory method</td>
<td></td>
</tr>
<tr>
<td>6. Per ECS: Specialty contractor is ultimately responsible for stamped design and performance. Minimum replacement ratio to achieve required bearing and settlement control should be determined by specialty contractor in their design.</td>
<td></td>
</tr>
<tr>
<td>7. Per Oak: Refer to Note 12 on 1st Floor &amp; Foundation Plan Notes located on S1.1 through S1.4 for loading requirements of wall footings and columns/piers.</td>
<td></td>
</tr>
</tbody>
</table>
# Request For Information  ST2 PB-036

**Urbana Elementary School Replacement**  
3554 Urbana Pike  
Frederick, Maryland  21704

**Project # 1707**  
Tel:  Fax:

**RFI #:  ST2 PB-036**  
Date Created:  2/4/2019

<table>
<thead>
<tr>
<th>Answer Company</th>
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</tr>
</thead>
</table>
| Grimm + Parker Architects  
11720 Beltsville Drive  
Suite 600  
Calverton, MD  20705 | Don Porter  
Phone: 240-965-0713  
Fax: 301-595-0089 | Oak Contracting, LLC  
3400 Stone Barn Drive  
Frederick, MD  21704 | Anthony Kukowski  
Phone: 410-828-1000  
Fax: 410-828-7488 |

## Co-Respondent

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<thead>
<tr>
<th>Subject</th>
<th>Discipline</th>
<th>Category</th>
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<td>Request for Pipe Sizes</td>
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<tr>
<th>Cc: Company Name</th>
<th>Contact Name</th>
<th>Copies</th>
<th>Notes</th>
</tr>
</thead>
</table>

## Question  
Date Required:  2/11/2019

Please review the following received from Towson Mechanical and confirm all pipe sizes were included in Addendum 2:

Please provide plumbing pipe sizes on the plan view drawings for the following systems. Currently, some systems only show portions of piping with sizes, and other systems don't show any sizes.

- Underground Sanitary
- Underground Storm
- Above ground Domestic Water
- Above ground Sanitary/Vent
- Above ground Storm

## Suggestion

## Answer  
Date Answered:

Pipe sizes were included in Addendum 2. This does not relieve the Contractor from responsibility to review all information included in the documents. In the event of any conflicts, the Contractor will be responsible to provide the higher quality/value requirement.
Request For Information  ST2 PB-037

Urbana Elementary School Replacement  
3554 Urbana Pike  
Frederick, Maryland  21704  

Project #  1707  

3554 Urbana Pike  
Frederick, Maryland  21704  

Tel:       Fax:

RFI #:  ST2 PB-037 Date Created:  2/5/2019

Author Company Answered By
Oak Contracting, LLC Dave Toth
1000 Cromwell Bridge Road  Phone:  410-828-1000
Towson, MD   21286  Fax:  410-828-7488

Co-Respondent

Discipline Subject Category
Civil drawings Civil Drawing Discrepancies

Cc: Company Name Contact Name Copies Notes

Question Date Required:  2/12/2019

See question below from David H. Martin:

On page 188/240 of Addendum #2, in the center of C-0 the entire plan sheet list is clouded for civil plans as to indicated that an entire set of civil plans was to be issued in Add#2. However several sheets of the civil set are not included in the addendum #2.

The following sheets are not included in addendum #2 from my review this morning, please advise if only a partial set of civils was issued and that the plans sheet clouding is incorrect on sheet C-0

C-1  
C-2  
C-2C  
C-2D  
C-2F  
C-3  
C-3C  
C-3D  
C-3L  
C-3P  
C-3Q  
C-3R  
C-4  
C-4E  
C-4F  
C-4G  
C-4H  
C-4J  
C-5A  
C-2.2  
C-2.4
<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Answer</td>
</tr>
<tr>
<td>The cloud on C-0 is to indicate that it is a new table of contents which was issued to clear up the L drawings and to add C-4P. Please review the description provided by G&amp;P in the addendum for additional clarification on what sheets are replaced/added.</td>
</tr>
</tbody>
</table>

| Prolog Converge | Printed on: 2/5/2019 | OakContractingLLC_ComProjects | Page 2 |
Urbana Elementary School Replacement
3554 Urbana Pike
Frederick, Maryland  21704

Project #  1707

Request For Information  ST2 PB-038

RFI #:  ST2 PB-038 Date Created:  2/5/2019

Author Company Author Company
Grimm + Parker Architects Oak Contracting, LLC
11720 Beltsville Drive 1000 Cromwell Bridge Road
Suite 600 Towson, MD  21286
Calverton, MD  20705

Answer Company Answered By
Grimm + Parker Architects Don Porter
11720 Beltsville Drive Phone:  240-965-0713
Suite 600 Fax:  301-595-0089
Calverton, MD  20705

Co-Respondent

Subject
Substitution request crystalline waterproofing

Answered By
Don Porter

Discipline
Architectural

Date Created:  2/5/2019

Subject Category
Contractor Suggestion / Upgrade

CC:

Company Name Contact Name Copies Notes

Question Date Required:  2/12/2019

See attached substitution request from Best Group recommending their products be accepted for Crystalline Waterproofing. Please review and advise.

Suggestion

Answer

Not accepted for this project.

Answer Date Answered:

Project: Urbana Elem School Replacement -
Construction Stage 2 Phase B
To: Oak Builders Contracting LLC
Re: Product Substitution

Specification Title: CRISTALLINE WATERPROOFING
Section: 2.3 Page: 1-2

Proposed Substitution: AQUAFIN-IC
Manufacturer: AQUAFIN Phone: (866) 278-2346
Address: 505 Blue Ball Rd #160, Elkton, MD 21921
Trade Name: AQUAFIN Model No.: 
Installer: Phone: 
Address: 

History: New product 1-4 years old 5-10 years old More than 10 years old

Differences between proposed substitution and specified product: See attached product data sheets. No data sheet
available for Hydro Cap, compared data with Conprco's Super Seal.

Point-by-point comparative data attached — REQUIRED BY A/E

Reason for not providing specified item: 

Similar Installation:
Project: St. James Sports & Wellness Complex 6805 Industrial Rd
Address: Springfield, VA 22009
Architect: HKS Architects Inc Owner: St. James Group

Proposed substitution affects other parts of Work: No Yes; explain

Savings to Owner for accepting substitution: ($

Proposed substitution changes Contract Time: No Yes [Add] [Deduct] days.

Supporting Data Attached: Drawings Product Data Samples Tests Reports

© Copyright 2007, Construction Specifications Institute, 99 Canal Center Plaza, Suite 300, Alexandria, VA 22314 Page 5 of 5 Form Version: June 2004 CSI Form 13.1A
SUBSTITUTION REQUEST

The Undersigned certifies:
• Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
• Same warranty will be furnished for proposed substitution as for specified product.
• Same maintenance service and source of replacement parts, as applicable, is available.
• Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
• Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
• Proposed substitution does not affect dimensions and functional clearances.
• Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
• Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Scott Harrison, Sales Representative

Signed by: Scott Harrison

Firm: BEST Group

Address: 231 W Hampton Pl, Capitol Heights, MD 20743

Telephone: (571) 263-0522

Attachments: X

A/E’s REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: ____________________________ Date: ________________

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E

☐ Other:
**Physical Properties**
Crystalline Waterproofing

<table>
<thead>
<tr>
<th>Physical &amp; Technical Data</th>
<th>Aquafin</th>
<th>Conproco</th>
<th>Super Seal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Typical Values</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggregate State</td>
<td>Powder</td>
<td>Powder</td>
<td></td>
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<tr>
<td>Color</td>
<td>Cement gray or white</td>
<td>Grey or white</td>
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<tr>
<td>Bulk Density</td>
<td>68 lbs/ft³ (1.09 kg/dm³) gray</td>
<td>Wet - 93 lbs/ft³ Hardened</td>
<td>100 lbs/ft³</td>
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<td>VOC</td>
<td>0 g/L</td>
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<td></td>
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<tr>
<td>Pot Life</td>
<td>30 minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting Time</td>
<td>~45 mins (gray); ~60 mins (white)</td>
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<tr>
<td>Potable water certified (<a href="http://www.wqa.org">www.wqa.org</a>)</td>
<td>NSF/ANSI 61 (gray + white)</td>
<td>No measurable leakage up to 460 feet (140 m) head pressure or 200 psi (14 bar), positive or negative water pressure side.</td>
<td></td>
</tr>
<tr>
<td>Permeability (CRD-C 48-92)</td>
<td></td>
<td></td>
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</tbody>
</table>
Crystalline Waterproofing Properties:

• Cost effective
• Contains no chlorides
• Seals and post seals shrinkage cracks, up to 1/64" (0.4 mm)
• Applied to positive or negative side water pressure
• Resists strong hydrostatic pressure
• Protects concrete against fresh water, salt water, waste water & aggressive ground water
• Resist strong hydrostatic pressure
• Applied to positive or negative side water pressure
• Seals and post seals shrinkage cracks, up to 1/64" (0.4 mm)
• Contains no chlorides
• Cost effective

Crystalline Waterproofing Properties:

AQUAFIN-IC contains active waterproofing chemicals which react with moisture and free lime in the concrete, creating insoluble crystalline complexes which seal the capillaries and minor shrinkage cracks. They penetrate even against strong hydrostatic pressure, becoming an integral part of the concrete. The waterproofing chemicals remain active for the life of the structure, permanently sealing it from water penetration. Unlike a membrane, AQUAFIN-IC may require up to one month to reach its maximum waterproofing capability. Environmental factors such as ambient temperature, density of concrete, moisture present and weather conditions all can affect the timing of the sealing process. Under dry conditions the AQUAFIN-IC chemicals lie dormant, however they reactivate whenever re-exposed to moisture. AQUAFIN-IC post seals static shrinkage cracks up to 1/64" (0.4 mm), which occur after the product has been applied and cured.

Substrate Preparation:
The substrate must be sound, clean, and have an “open” capillary system (“tooth and suction”), and feel like fine sand paper (ICRI CSP 3 - 4 profile) to insure mechanical bond (surface adhesion) and allow AQUAFIN-IC chemicals to penetrate. Horizontal surfaces should have a rough wood float or broom finish. Smooth formed walls, or smooth troweled slabs; (ICRI CSP 3 - 4 profile) must be roughened, otherwise AQUAFIN-IC application may not achieve sufficient bond.

• Remove all dirt, cement laitance, form release agents, curing compounds, loose particles, paints, etc. by means of wet or dry sandblasting, high pressure water blasting (i.e. 4,000 psi [275 bar] adjusting higher or lower depending on 28 day concrete strength) or other suitable mechanical means. Do not apply to smooth slabs.
• Remove all protrusions, work back to sound concrete, chiseling out any honeycombed or damaged areas. Faulty construction joints and visible cracks not subject to movement, exceeding 0.02" [0.4 mm] should be routed out to a U-shaped configuration approx. 3/4" (20 mm) wide and a minimum depth of 1" (25 mm). Formtie holes should be roughened.
• Stop active water leakages using PLUG-IC or FIX 10-S or Aquafin-InjectPro chemical grouts for severe infiltration.

Typical Applications:

• Exterior (positive side) or interior (negative side) waterproofing of below grade foundations, basements, retaining walls, utility vaults, elevator pits.
• Water tanks, wastewater tanks, water catchment basins, manholes, parking garages, tunnels, slurry walls.

Advantages:

• Advanced crystalline technology that penetrates deep into concrete
• Potable water approved - NSF/ANSI 61
• Applied to moist (damp) substrate
• Environmentally friendly, norganic - non toxic, zero VOC’s
• Permanently active
• Easy to use - needs only water for mixing
• Can be applied to green concrete as soon as forms are stripped
• Protects concrete against fresh water, salt water, waste water & aggressive ground water
• Resist strong hydrostatic pressure
• Applied to positive or negative side water pressure
• Seals and post seals shrinkage cracks, up to 1/64" (0.4 mm)
• Contains no chlorides
• Cost effective

AQUAFIN-IC is a state-of the art one component, penetrating cementitious Crystalline Waterproofing Slurry. AQUAFIN-IC is powered by Aquafin’s advanced crystalline technology which chemically reacts with moisture and free lime to reduce the water absorption of the resultant cement matrix within the concrete. This is a result of the formation of nano-scale crystals by the active catalysts present in the capillary system. This sustains a durable waterproof effect in the concrete, thereby blocking the passage of water. This reaction will continue to take place anytime water is present for the life of the concrete structure where by making the AQUAFIN-IC a truly permanent and integral waterproofing solution. The AQUAFIN-IC nano-crystals will also grow in and along static hairline crack sealing them and preventing further incoming water.

CSI Div. 7
07 16 16 Crystalline Waterproofing

LEED Points
MR Credit 5.1, Regional Materials............Up to 2 Points
IEQ Credit 4.2, Low-Emitting Materials Paints and Coatings... 1 Point
Using this AQUAFIN product can help contribute to LEED certification of projects in the categories shown above.

Product Description:
AQUAFIN-IC is a state-of the art one component, penetrating cementitious material which waterproofs and protects new or old structurally sound concrete. It resists strong hydrostatic pressure and is not a vapor barrier (allows concrete to “breathe”).
B. Spray Application:
• Apply two coats of AQUAFIN-IC, in the specified quantity, in a slurry.

A. Brush application:
VERTICAL SURFACES & CONSTRUCTION JOINTS
• Apply AQUAFIN-IC in slurry consistency in the specified quantity, in one
Note: Slab surfaces must have a rough wood float or broom finish.
C. Brush or spray application:
• Apply AQUAFIN-IC in slurry or dry powder consistency to pre-

Mixing:
Approximate mixing ratio is:
• by volume: 3 parts powder to 1 parts water
• 50 lb powder to 1.6 - 1.9 gallons water
(22.7 kg powder to 6.1 - 7.3 liters water)
Add the AQUAFIN-IC powder to water and mix thoroughly until the mixture is completely free of lumps. Mix only as much material as can be used within 30 minutes. AQUAFIN-IC should be mechanically mixed with clean water to a consistency of thick oil paint. Separate containers (equal volume), should be used for measuring the powder and water. If “false setting” occurs after mixing, do not add water; restir to restore workability.

Application
• Do not apply AQUAFIN-IC at temperatures below 40° F (5°C) or to a frozen substrate. For temperatures of 90° F (32°C) and above consult our office.
• Do not apply to a dry substrate.
• Use AQUAFIN-1K for brick or stone substrates.

HORIZONTAL SURFACES & CONSTRUCTION JOINTS
A. Dry-sprinkle and power-trowel or wooden float application:
A trial dry-shake application is highly recommended prior to the actual application.
• Standard application for concrete with design strength up to 4000 psi (27.6 MPa): When the concrete to be treated starts to reach initial set, the specified amount of AQUAFIN-IC is dry distributed, by hand, using a sieve, or similar device, onto the concrete surface. It is then troweled in until coverage is uniform and the specified finish is achieved (smooth or brushed). Consult Technical Guideline G001.
B. Mud Slabs / Split Slabs / Construction Joints:
• Apply AQUAFINIC in slurry or dry powder consistency to pre-watered concrete substrate, “mud slabs”, split slabs or construction joints immediately prior to casting the structural slab or wall. Consult Technical Guideline G002.
C. Brush or spray application:
Note: Slab surfaces must have a rough wood float or broom finish.
• Apply AQUAFINIC in slurry consistency in the specified quantity, in one coat.

VERTICAL SURFACES & CONSTRUCTION JOINTS
A. Brush application:
• Apply two coats of AQUAFIN-IC, in the specified quantity, in a slurry consistency with a masonry brush. Brush on the material evenly and work it well into the surface. Apply second coat while the first coat is still tacky (“green”).
B. Spray Application:
• AQUAFINIC may be applied using appropriate compressed-air spray equipment. Spray on one or two coats, according to the specification, in circular movements. Apply second coat while first coat is still tacky (“green”).

Curing and Protection:
Outdoor, or exposed treated areas:
• Keep damp (moist) for a period of 2 - 3 days for standard waterproofing applications, 7 days for potable water tanks. Start curing as soon as AQUAFIN-IC has hardened sufficiently so as not to be damaged by a fine water spray. Alternatively a dissipating resin curing agent in elevator pits, wastewater tanks, etc. can be used. Call our office for guidance.
• Protect exposed surfaces against direct sun, wind and frost by covering with plastic sheeting, burlap, or similar. Do not lay plastic sheeting directly on AQUAFIN-IC as air contact is required for proper curing.
• The freshly treated surfaces should be protected from rain for a minimum period of 24 hrs.
• Back filling can be carried out 36 hrs after completion of the AQUAFIN-IC treatment. Protection boards are generally not required. Backfill material shall be moist and not contain rocks or larger aggregate.

Indoor treated areas:
• Self curing in cool areas with high humidity.
• Keep moist for 2 - 3 days in areas with low humidity and 7 days for potable water tanks.
• Provide air circulation for minimum 24 hrs. following the AQUAFIN-IC treatment in poorly ventilated areas and deep pits.

Water Tanks:
• Can be carefully filled after 3 days. Do not fill large tanks faster than 6½ feet per 24 hrs (2 m/24 hrs).
• After complete curing of AQUAFINIC, potable water reservoirs should be thoroughly rinsed with potable water prior to being placed in service.

Decoration, Coating and Tiling:
• All surfaces treated with AQUAFINIC which are to be coated or painted must be left to cure for at least 4 weeks. At the end of the curing period, the surfaces should be saturated with water and neutralized with a 1.8 solution of muriatic acid. Following this, the areas must be thoroughly rinsed with water.
• When a plaster or render finish is required on top of AQUAFINIC treatments, it is essential to apply a thin rough cast of sand and cement on the final AQUAFINIC layer when it has reached initial set. If this is not practical, carefully clean the hardened AQUAFINIC surface and apply an appropriate bonding agent prior to rendering.
• Do not use for waterproofing applications under thin set tile mortar (i.e. swimming pools, balconies, etc.).
• Slabs on or below grade to be covered with vinyl tiles or other non-breathable products (i.e. epoxy, some carpets, resilient flooring, etc.) must be checked for moisture vapor emission as per ASTM F 1869-98 before installation of tiles, etc. since AQUAFINIC is not a vapor barrier. Use AQUAFIN VAPORTIGHT COAT-SG if vapor emission is an issue. Contact our Technical Department.

Packaging:
50 lb. (22.7 kg) bags or pails.

Storage & Shelf Life:
AQUAFINIC must be stored in a dry enclosed area off the ground. Shelf life in unopened, dry undamaged bags or pails is 12 months.

Note:
Installer is responsible for proper product application. Site visits by Aquafin personnel or representatives are solely for the purpose of making technical recommendations, not for providing supervision or quality control.
Safety:
Refer to Safety Data Sheet (SDS). The use of a dust mask, safety goggles and gloves is recommended. This document does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use. Dispose of water and materials in accordance with Federal, State and Local regulations. Keep out of the reach of children.

LIMITED WARRANTY: AQUAFIN, INC. warrants this product for a period of one year from the date of installation to be manufactured free of defects and to be consistent with its technical properties as stated in our current Technical Data Sheet. This product must be used as directed and within its stated shelf life. AQUAFIN INC. will replace or at our discretion refund the purchase price of any product, excluding cost of labor, which is proven to be defective. Our product recommendations are based on industry standards and testing procedures. It is the buyer’s obligation to test the suitability of the product for an intended use prior to using it. We assume no warranties written, expressed or implied as to any specific methods of application or use of the product. AQUAFIN INC. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. AQUAFIN, INC. shall not be liable for damages of any sort including remote or consequential damages, down time, or delay. Any claim for a defective product must be filed within 30 days of discovery of a problem, and must be submitted with written proof of purchase.

For Professional Use Only.

Consumption & Yield

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<th>Structure</th>
<th>No. of coats</th>
<th>Rate/Coat</th>
<th>Yield/Coat</th>
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<tbody>
<tr>
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<td>lb/yd² (kg/m²)</td>
<td>ft² /50 lb.</td>
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<tr>
<td>Dampproofing:</td>
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<tr>
<td>Normal surface applications</td>
<td>1</td>
<td>1.40 (0.75)</td>
<td>320 (30.3)</td>
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<tr>
<td>Hydrostatic pressure:</td>
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<tr>
<td>Walls, internal / external</td>
<td>2 total</td>
<td>1.25 - 1.4 (0.75)</td>
<td>320 - 360 (30.3)</td>
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<tr>
<td></td>
<td></td>
<td>2.50 - 2.8 (1.50)</td>
<td>160 - 180 (15.1)</td>
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<tr>
<td>Concrete slabs</td>
<td>1</td>
<td>2.00 (1.00)</td>
<td>225 (22.7)</td>
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<tr>
<td>Top of mud slabs + split slabs</td>
<td>1</td>
<td>2.25 (1.20)</td>
<td>200 (18.9)</td>
</tr>
<tr>
<td>Construction joints</td>
<td>1</td>
<td>2.00 (1.00)</td>
<td>225 (22.7)</td>
</tr>
</tbody>
</table>

Note: For salt & waste water environments, apply 2.8 lb/y² (1.5 kg/m²) total. All above values theoretical. Coating thickness, approximately 1/32” (0.8 mm).
Conpro Super Seal

Spray or brush applied, capillary/crystalline slurry, for positive and negative side waterproofing of concrete structures.

**WHERE TO USE**

Waterproof concrete tunnels, storage tanks, foundations, wastewater storage and other demanding applications.

**Performance Characteristics**

**Waterproofing**
- 2 coat application will withstand 57 ft. hydrostatic pressure.

**Permanent**
- Non-reversible chemical reaction develops crystalline structure in capillaries that block liquid phase water.

**Durable**
- Excellent freeze/thaw stability and abrasion resistance.

**Very low permeability**
- Resistant to deicing salts, chloride, and chemical attack, and environmental pollution.

**Radon barrier**
- Stops radon infiltration.

**Breathability**
- Will not cause damage to structure by restricting moisture vapor flow.

**Two colors**
- Available in white and gray – use in alternate coats to ensure proper coverage.

**Surface Preparation**
- Remove loose and deteriorated material, laitance, dirt, dust, oil and any surface contaminants that will inhibit proper bond.
- Grind or abrasive blast (CSP 3) concrete to achieve an open-pored surface. This is essential to allow the crystalline structure to grow into the cement capillaries. Refer to ICRI Surface Preparation Guide 03732 for information about Concrete Surface Profile (CSP).
- Stop active leaks with ProMasonry Hydraulic Plug.
- Saturate substrate with clean water, (saturated surface dry/SSD). Wall should be wet when Conpro Super Seal is applied.

**Application**

**Walls**
- At the time of application, surfaces should be saturated surface dry (SSD) but hold no standing water.
- Clean and pre-stripe non-structural cracks (up to 1/16 inch) with one 4 inch wide, 50 mils. application of material.
- Dynamic cracks, joints and transitions (wall-to-slab) must be properly detailed with a closed cell backer rod and polyurethane sealant. Refer to SWRI Sealants, The Professionals’ Guide.
- Apply 4 - 6 inch wide stripe of material over cured sealant. Embed mesh fabric while material is plastic.

**Mixing**
- Mechanically mix using a low speed drill (400 - 600 rpm) and mixing paddle or mortar mixer.
- Pour 5 quarts of potable water and 1 container of Conpro Super Seal Admix into a clean mixing vessel and slowly add all of the powder.
- Mix continuously for 3 minutes to a uniform, lump-free, slurry-like consistency.
- Add up to 2 pints of additional water if needed.
- Allow to “breathe” for 1 minute and remix for 1 minute. This will improve workability and open time.
- Do not over mix, as this will entrain excess air.
- Do not re-temper.

**Curing**

**Walls**
- Mist cure 3 - 4 times per day for 3 days or moist cure with wet burlap and polyethylene for 3 days.
- Protect repair from direct sunlight, wind, rain and frost during curing period.

**New concrete slabs**
- Dampen with a fine mist of water for 24 hours or moist cure with wet burlap and polyethylene for 3 days.
- Protect from direct sunlight, wind, rain and frost during curing period.

**Clean Up**
- Clean tools and equipment with water immediately after use.
- Cured material must be removed mechanically.
Conpro Super Seal

**Coverage/Yield**
- 150 ft²/50 lbs. @ 50 mils.

**Product Handling**

**Packaging**
- 50 lb paper bag and 22 oz. plastic container of Conpro Super Seal Admix.

**Shelf Life**
- Bag - 12 months when properly stored.
- Admix - 18 months when properly stored.

**Storage**
- Transport and store in cool, clean, dry conditions in unopened containers.
- High temperature or high humidity will reduce shelf life.
- Protect Admix from freezing.

**Limitations**
- Do not apply unless substrate and ambient temperature can be maintained at a minimum of 45°F for 24 hours. Refer to ACI Cold Weather Application Guidelines.
- Cold mixing water and low temperature will retard set. Hot water and high temperature will accelerate set.
- Protect application from precipitation and high wind for at least 8 hours.
- Do not add more water than specified.
- Do not apply over active leaks. Treat leaks first with ProMasonry Hydraulic Plug.

**Health and Safety**
- Product is alkaline.
- Do not ingest.
- Avoid breathing dust.
- Avoid contact with skin and eyes.
- Refer to Safety Data Sheet (SDS) for additional information.

**First Aid**
- In case of skin contact, wash thoroughly with soap and water.
- For eye contact, flush immediately with a high volume of water for at least 15 minutes and contact a medical professional.
- For respiratory problems, remove person to fresh air.

**Disposal**
- Dispose of material in accordance with local, state and federal regulations.

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**Technical Data**

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<th>Physical state and appearance</th>
<th>Fine, gray or white powder and admixture.</th>
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<tbody>
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<td>Base</td>
<td>Portland cement</td>
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<tr>
<td>Powder</td>
<td>Milky, viscous liquid</td>
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<tr>
<td>Liquid</td>
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<td>pH</td>
<td>Wet mix</td>
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<tr>
<td>Liquid/cement ratio</td>
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<td>Density</td>
<td>Wet mix</td>
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<td>Resistance to hydrostatic pressure</td>
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<tr>
<td>Concrete block</td>
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<td>ASTM C109</td>
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<td>7 Days</td>
<td>5775</td>
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<td>14 Days</td>
<td>6125</td>
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<td>28 Days</td>
<td>6350</td>
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<tr>
<td>57 ft. – 2 coats</td>
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<tr>
<td>103 ft. – 3 coats</td>
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FOR PROFESSIONAL USE ONLY

Conproco warrants this product for one year from the date of manufacture to be free from manufacturing defects and to meet the technical properties on the current technical data sheet if used as directed within shelf life. User determines suitability of product for use and assumes all risks. Buyer’s sole remedy shall be limited to the purchase price or replacement of product, exclusive of labor or cost of labor. November 3, 2016.

NO OTHER WARRANTIES EXPRESSED OR IMPLIED SHALL APPLY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. CONPROCO CORP SHALL NOT BE LIABLE UPON ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES.

17 PRODUCTION DRIVE, DOVER, NH 03820
TELEPHONE 800.258.3500 • FAX 603.743.5744 • WEB ADDRESS www.conproco.com
**Request For Information  ST2 PB-039**

**Urbana Elementary School Replacement**  
3554 Urbana Pike  
Frederick, Maryland  21704

**RFI #: ST2 PB-039**  
Date Created:  2/5/2019

<table>
<thead>
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<th>Answer Company</th>
<th>Answered By</th>
<th>Author Company</th>
<th>Authored By</th>
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<tbody>
<tr>
<td>Grimm + Parker Architects</td>
<td>Don Porter</td>
<td>Oak Contracting, LLC</td>
<td>Kerrigan Toth</td>
</tr>
<tr>
<td>11720 Beltsville Drive</td>
<td>Phone: 240-965-0713</td>
<td>1000 Cromwell Bridge Road</td>
<td>Phone: 410-828-1000</td>
</tr>
<tr>
<td>Suite 600</td>
<td>Fax: 301-595-0089</td>
<td>Towson, MD  21286</td>
<td>Phone: 410-828-7488</td>
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<tr>
<td>Calverton, MD  20705</td>
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**Co-Respondent**  
**Author RFI Number**

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<td>Drawing Discrepancies</td>
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<th>Contact Name</th>
<th>Copies</th>
<th>Notes</th>
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**Question**  
Date Required:  2/12/2019

See questions below from David H. Martin:

On pages C-1A and C1-B the scales seem to be wrong,

Sheet C-1A  
Using the 40 scale bar  
Along the south side the 40' gas easement along the property line the easement scales 44'  
Along the north side the 10' Frederick gas easement scales 12'.

Sheet C-1B  
Using the 40 scale bar  
Along the south west side the 50' reservation for transportation easement along the property line the easement scales 57'.

Can this be verified and corrected plans be issued?

**Suggestion**

**Answer**  
Date Answered:

Plans have been corrected in Addendum 3.
**Request For Information  ST2 PB-040**

**Urbana Elementary School Replacement**  
Project # 1707  
3554 Urbana Pike  
Frederick, Maryland  21704

**RFI #: ST2 PB-040**  
Date Created: 2/6/2019

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<td>Don Porter</td>
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<td>Anthony Kukowski</td>
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<tr>
<td>11720 Beltsville Drive</td>
<td>Phone: 240-965-0713</td>
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<tr>
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**Co-Respondent**  
Author RFI Number

**Subject**  
Discipline: Civil

**Cc:**

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<tr>
<th>Company Name</th>
<th>Contact Name</th>
<th>Copies</th>
<th>Notes</th>
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**Question**  
Date Required: 2/13/2019

Please review the following question received from Kinsley Construction and provide response:

For Wall 1, with the sequence of construction being what it is and for where this wall is to be installed, we believe this needs to be a Cast in Place Concrete Wall but we do not have any details on. Can we get some clarity if this is not the case? If this wall wasn't done so early in the sequence and was done while the parking lot fill is completed then we could see this being segmental.

**Suggestion**

**Answer**  
Date Answered:

All retaining walls will be CIP Concrete. Details for the walls will be included in Addendum 3.
Please review the following questions received from Kinsley Construction and provide response:

1. In regards to sheets C-3A and C-3B. Hatching coding on side of plan sheets shows asphalt paving area closest to ball field to be regular duty paving per coloring / hatching. However, there is a note in this area that is stating hard play area which would make this light duty paving correct?

2. The shading / detail at near outdoor educational classroom on sheet C-3A is not listed on sheet and architectural site plan lists what was a soft play area now as K Play area with rubber tile playground surfacing and references civil drawings. Can we get some clarify on what is required here?

Suggestion

Answer

1. The hatching code is correct (regular duty paving) as this is overflow parking as well as hard play.
2. Rubber tile surfacing is specified in section 32 30 10, as modified in Addendum 2. Subbase information will be included in Addendum 3.
Urbana Elementary School Replacement
3554 Urbana Pike
Frederick, Maryland  21704

Project #  1707
Tel:       Fax:

RFI #:  ST2 PB-042 Date Created: 2/6/2019

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<tr>
<td>Playground Clarifications</td>
<td>Civil</td>
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</table>

Question

Please review the following questions received from Playground Specialists, Inc. and provide response:

1) In spec section 32 30 10-6 , Sq ft sizes of each soft play area are given yet when doing a drawing take off using the scale provided the playground areas are much smaller. We need clarification given to each playground area size because what is being stated in the spec is not matching up to what is shown on the drawings.

2) Are we to assume that we are to use the same spec for drainage in each of the playground areas we have used in the past? Filter fabric, 56 stone, filter fabric. If so, please provide the spec.

3) The pre-k/k area specifies tile safety surface yet there is no mention to what the sub surface is to be? For tile surface it is only recommended it be installed over a solid surface such concrete or asphalt. Please clarify what sub-surface is used.

Suggestion

Answer

1. Soft play area sizes are as shown on the drawings. The additional information in the specification is for reference to the playground equipment supplier for delegated design requirements. Area sizes are for guidance only.
2. Drainage for mulch area surfacing is detailed on sheet C-3C.
3. Additional information for rubber tile subsurface will be included in Addendum 3.
Request For Information  ST2 PB-043

Urbana Elementary School Replacement
3554 Urbana Pike
Frederick, Maryland  21704

Project #  1707
Tel:       Fax:

RFI #:  ST2 PB-043 Date Created:  2/6/2019
Author Company Authored By

Grimm + Parker Architects Don Porter Oak Contracting, LLC Anthony Kukowski
11720 Beltsville Drive Phone: 240-965-0713 3400 Stone Barn Drive Phone: 410-828-1000
Suite 600 Fax: 301-595-0089 Frederick, MD   21704 Fax: 410-828-7488
Calverton, MD   20705

Co-Respondent Author RFI Number

Subject Discipline Category
Acoustic Panel Clarification Architectural

Cc: Company Name Contact Name Copies Notes

Question Date Required:  2/13/2019
Please review the following questions received from CanAm Contractors and provide response:

1. What is the thickness of the AP-3 fabric-wrapped absorber panels in the Vocal Music room? Spec. 095250, 2.2A describes the panel, but does not give the thickness.

2. Addendum 2, page A-6.4, added "Interactive Acoustical Panels" elevations on all four walls of the Instrumental Music room, but does not define which of the 16 panels are absorbers, and which are diffusers. Please clarify.

Suggestion

Answer Date Answered:

1. Thickness of panels has been included in Addendum 3.
2. Panel types have been identified in Addendum 3.
Request For Information  ST2 PB-044

Request For Information  ST2 PB-044

Urbana Elementary School Replacement  Project # 1707
3554 Urbana Pike
Frederick, Maryland  21704
Tel:       Fax:

RFI #:  ST2 PB-044 Date Created:  2/6/2019
Answer Company            Answered By            Author Company            Authored By
Grimm + Parker Architects  Don Porter            Oak Contracting, LLC      Anthony Kukowski
11720 Beltville Drive      Phone:  240-965-0713          3400 Stone Barn Drive    Phone:  410-828-1000
Suite 600                  Fax:    301-595-0089          Frederick, MD   21704       Fax:   410-828-7488
Calverton, MD   20705

Co-Respondent            Author RFI Number

Subject            Discipline            Category
Aluminum Door Clarification  Architectural

Cc:  Company Name            Contact Name            Copies            Notes

Question            Date Required:  2/13/2019
Please review the following question received from ECP and provide response:

Per spec section 084313 under 2.3 Components line item B. Door thickness is asking for 1-3/4". On the architectural
drawings, sheet A3.2 the door schedule requires aluminum doors to be 2" thick. All aluminum door types are listed as FG2,
the door type shows 6" vertical rails, as per the listed manufacturers in order to achieve a 6" vertical stile you must utilize
the heavy wall doors, which are 2" thick. Please confirm we are to price  2" thick, heavy wall doors with 6" vertical stiles.

Suggestion

Answer            Date Answered:
2" heavy wall doors are correct. Specification has been updated in Addendum 3.
Urbana Elementary School Replacement
3554 Urbana Pike
Frederick, Maryland 21704

Project # 1707
Tel: Fax:

RFI #: ST2 PB-045 Date Created: 2/6/2019

Author Company Authored By
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Calverton, MD 20705

Co-Respondent Author RFI Number

Subject Discipline Category
Roof Clarifications Architectural

Cc: Company Name Contact Name Copies Notes

Question Date Required: 2/13/2019

Please review the following questions received from Cole Roofing and provide response:

We have several questions concerning the above referenced project. The architectural roof plan, A1.9 and the structural roof framing plan for Area C1, S1.11 are attached for reference. The attachments are highlighted and contain comments referenced in the below.

1. There are 2 roof areas, highlighted on the attached architectural roof plan, that we need clarification as far as drainage. The areas are Area B, west of column line 7.1 and Roof A, west of column line 15. The 2 areas referenced are bound on all sides by expansion joints or parapet walls, however there are no drains in the roof areas. Please advise.

2. At roof area C1 on the architectural roof plan, A1.9, west of Column line 5', the arrow indication deck slope is facing away from the drains located at 5' line. We have also clouded this area on structural roof framing plan S1.11. Please clarify deck slope in this area.

3. There is a roof area that spans across Area C1 on the east end of the area. We have highlighted the area in question on structural framing drawing S1.11. There is a drain at the south end of this roof area at Column line E. Looking at the structural framing elevations, it appears there are multiple high and low elevations in the roof area. Can you confirm or clarify the elevations and slopes in this roof area.

Suggestion

Answer Date Answered:

1. See Addendum 3.
2. See Addendum 3. Based on the structural slope, the revised configuration should drain properly.
3. See Addendum 3. Based on the structural slope, the revised configuration should drain properly.
Request For Information  ST2 PB-046

Urbana Elementary School Replacement Project #  1707
3554 Urbana Pike
Frederick, Maryland  21704
Tel:       Fax:

RFI #:  ST2 PB-046 Date Created:  2/6/2019

Answer Company Answered By  Author Company Authored By
Grimm + Parker Architects Don Porter Oak Contracting, LLC Anthony Kukowski
11720 Beltsville Drive  Phone:  240-965-0713 3400 Stone Barn Drive  Phone:  410-828-1000
Suite 600 Fax:  301-595-0089 Frederick, MD   21704 Fax:  410-828-7488
Calverton, MD   20705

Co-Respondent Author RFI Number

Co-Respondent

Discipline Subject Category
Architectural 6A Clarifications

Cc: Company Name Contact Name Copies Notes

Question Date Required:  2/13/2019

Please review the following questions received from W F Klingensmith and provide response:

1. Specification Section 123550 Educational Casework paragraph 2.1.A - Acceptable Manufacture's does not list Stevens Industries, however the 9 series drawings indicate Stevens as the manufacture and model numbers, please clarify that Stevens is an acceptable manufacture.

2. Drawing #A-9.1, Room # A106 - Principal Office shows (2) units but do not have a tag.

3. Drawing #A-9.8, Room #C207 - Maker Space - The rooms call for Epoxy Tops, are the sinks epoxy and drop-in stainless steel?

4. Drawing #A-9.9, Details #A5, A9, & A12, Mailbox unit, is this custom millwork or as specified by Stevens?

5. Drawing #A-9.9, Detail #D5 - Shows a typical countertop detail which appears to be a "T" mold edging, the specification #123600 - Paragraph #2.1.A.2 = Calls for a 3MM edging, please clarify.

6. Drawing #A-9.9, Detail #G1 - Countertop detail @ windows show the Plastic Laminate Tops aligning with the Solid Surface Tops, creating a 3" high edge, PVC Edging is not available in that size. Please clarify - ( previous projects did not have this condition)

7. Drawing #A-9.9, Detail #G5, Closet Rod and Shelf. Does this go in Closet #A101A? Also, a side note calls for Adjustable Shelving in Rooms #128, 130, & 153, does that apply to this job?

8. Drawing #A-9.9, Details #K13, #K4, #K8, and #L8 does not match "L-13" unit on room # B101D. Please clarify.

9. Drawing #A-9.9, Detail # L4 - Maple cap on Locker wing walls. It appears the wing walls are full height to ceiling and the corridor elevations seem to be mislabeled, please clarify.

10. Drawing #A-9.2, Main Corridor and Room #B101E, There is a tag "DX", please clarify.
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<thead>
<tr>
<th>Suggestion</th>
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<th>Date Answered</th>
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<tbody>
<tr>
<td>1. Stevens is Basis of Design. This is clarified in Addendum 3.</td>
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<tr>
<td>2. See Addendum 2.</td>
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<tr>
<td>3. Sinks are per Plumbing Drawings.</td>
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<tr>
<td>5. Detail is revised in Addendum 3.</td>
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<tr>
<td>6. Detail is revised in Addendum 3.</td>
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<tr>
<td>7. Location is clarified in Addendum 3.</td>
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<tr>
<td>8. Media desk is revised in Addendum 3.</td>
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<tr>
<td>9. Detail is deleted in Addendum 3.</td>
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<tr>
<td>10. Revised to HM Frame in Addendum 3.</td>
<td></td>
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</tbody>
</table>
Please review the following question received from Homewood General Contractors and provide response:

Please advise what doors are intended on the 123551 casework. Wood, laminate or grille?

**Suggestion**

**Answer**

Grille doors are to be provided. This will be clarified in Addendum 3.
Please review the following question received from Glass Industries, LLC and provide response:

1. What is the required thickness of the aluminum doors. Specification section 084313 2.3.B.1 notes 1-3/4" but the door schedule notes 2".

2. Some details, E6/A-3.8 for example note that the steel angle in the wall cavity is by the storefront manufacturer. Please confirm that no steel angles are to be provided by the 8A bidder.

3. Section 084313 2.3.C references operable vents but none of the storefront openings appear to denote operable vents. Please confirm they are not required for this project.

4. Section 084313 2.2.A.3 references cap extensions but they do not appear to be referenced in the drawings. Please confirm that cap extensions are not required for this project.

Suggestion

1. Refer to RFI ST2 PB-044 for response.

2. Per Oak: Sill and jamb angles are provided by the 5A contractor to be installed by the 4A and 9A contractors. Reference 8A scope item 2.23:

2.23 5A Contractor shall furnish all steel relieving, sill, jamb, parapet angles, as shown on the contract documents. 5A Contractor shall furnish all required fasteners for all relieving, steel sill, jamb, and parapet angles. Relieving, sill, jamb and parapet angles fastened to CMU or concrete will be installed by the 4A Contractor. Relieving, sill, jamb and parapet angles fastened to metal framing or steel shall be installed by the 9A Contractor. Any welding, if required by the Contract Documents, of relieving, sill, jamb or parapet angles
shall be completed by the 5A Contractor.

3. Vents have been removed by Addendum 3.

4. No extensions are required for this project.
Urbana Elementary School Replacement
3554 Urbana Pike
Frederick, Maryland 21704

Request For Information  ST2 PB-049

Project #  1707
3554 Urbana Pike
Frederick, Maryland  21704
Tel:       Fax:

RFI #:  ST2 PB-049 Date Created: 2/7/2019

Answer Company  Answered By  Author Company  Authored By
Grimm + Parker Architects  Don Porter  Oak Contracting, LLC  Anthony Kukowski
11720 Beltsville Drive  Phone: 240-965-0713  3400 Stone Barn Drive  Phone: 410-828-1000
Suite 600  Fax: 301-595-0089  Frederick, MD  21704  Fax: 410-828-7488
Calverton, MD  20705

Co-Respondent  Author RFI Number

Subject  Discipline  Category
Gym Equipment Clarifications  Architectural

Cc:  Company Name  Contact Name  Copies  Notes

Question  Date Required:  2/13/2019
Please review the following questions received from TJ Distributors and provide response:

1. The HVAC running along the northeast wall will require the (2) side court basketball hoops to have a connection point +/- 3'-0" lower than the bottom of the truss. This will not allow for maximum clearance when this basketball hoop is stored in the folded position. Is it possible to shift the (2) side court basketball hoops nearest the northeast wall towards the southwest wall to miss this HVAC?

2. Section 116623, paragraph 2.6.A. specifies volleyball and badminton sleeves but the drawings only indicate volleyball sleeves. Will badminton sleeves be required on this project?

3. Section 116643, paragraph 1.B.1. references Basketball Shot Timer Scoreboard. Can it be confirmed that there are no basketball shot timer scoreboards required on this project?

4. Drawing A-9.4 indicates a wall to wall divider curtain. Can you confirm that no egress space should be provided on either side of the curtain and only operational clearance of +/- 12" per side?

5. Drawing A-9.4, PE Equipment Schedule item P3 references a fold-up divider curtain but Section 116653 specifies a belt drive divider curtain. Which should be provided a fold-up (cable lifted) or belt drive divider curtain?

Suggestion

Answer  Date Answered:
1. This can be reviewed at a later date. At this time, the layout will remain as shown.
2. Badminton sleeves are deleted in Addendum 3.
3. Shot timer reference has been deleted in Addendum 3.
4. Sufficient egress has been provided on both sides of the curtain. Operational distance is acceptable.
5. Provide belt-drive curtain as specified.
**Request For Information  ST2 PB-050**

Urbana Elementary School Replacement
3554 Urbana Pike
Frederick, Maryland 21704

**Project # 1707**
Tel: Fax:

**RFI #: ST2 PB-050**  **Date Created: 2/7/2019**

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<td>Oak Contracting, LLC 3400 Stone Barn Drive Frederick, MD 21704</td>
<td>Anthony Kukowski Phone: 410-828-1000 Fax: 410-828-7488</td>
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**Co-Respondent**

**Author RFI Number**

**Subject**
Lighting Control Substitution Request

**Discipline**
Electrical

**Category**

**Cc:**

**Company Name**

**Contact Name**

**Copies**

**Notes**

**Question**
Please review the attached substitution request for lighting controls received from AKT3 and provide response.

**Date Required: 2/13/2019**

**Suggestion**

**Answer**
Substitution is not accepted. See attached from Gipe Associates.

**Date Answered:**
Please review the attached substitution request for lighting controls received from AKT3 and provide response.

RESPONSE:

The proposed ETC system utilizes proprietary Unison EchoConnect cables (2 per device) plus an additional ground wire and terminations with WAGO connectors (3 per device) as opposed to a single Cat5 cable and RJ-45 connector per the basis of design. The proposed system would require the contractor to provide additional wiring and terminations. The substitution request is not approved. One of the three named systems specified shall be provided.

Substitution Request Form

IDENTIFICATION:
Contractor/CM: Oak Contracting
Project Name: Urbana Elementary School Replacement
Date: 2/6/2019

REFERENCE:
Specification Title: Lighting Control Device 260923 & Network Lighting Controls 260943
Specification No.: Entire sections

DESCRIPTION:
Proposed Substitution: ETC Paradigm and Echo Architectural systems
Manufacturer: ETC Inc

History: ☑ 5-10 years old
Reason for requesting substitution: ☑ Cause

Explain: ETC provides both distributed and centralized control
Similar products currently being used by the Smithsonian African American Museum
Differences between proposed substitution and specified item: 5 year warranty

Proposed substitution affects other parts of Work or applicable Code requirements as follows: None

Post-Bid Savings to Owner for accepting substitution: (N/A Pre-Bid) Competitively Priced
Change to Contract Time due to accepting substitution: None
LEED Contribution (if applicable to Project) - Explain effects to LEED Action Plan:

(Use attachment for additional space, if required.)
Will undersigned pay any costs caused by the substitution necessitating changes to the building design, construction, engineering and detailing, including additional Architect, inspection and testing fees?  □ Yes  ❌ No

Does the undersigned waive rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results?  □ Yes  ❌ No

Submitted by:  William Price  
(Contractor or CM Only)

Signed by: 

Firm:  AKT3 Company 

Address:  9720 Capital Court  
            Manassas, VA 20110 

Telephone:  866-275-5782 

SUPPORTING DATA ATTACHED:

□ Point-by-Point Comparative Data Attached (Required) 

□ Completed Section 01 61 16.01, Accessory Material VOC Content Certification Form Attached (Required) 

□ Drawings  ❌ Product Data  □ Samples  □ Tests  □ Reports  □ _________

CERTIFICATION:

The Undersigned certifies:

• Proposed substitution has been investigated and determined that it meets or exceeds the quality level of the specified product.
• Same warranty will be furnished for proposed substitution as for specified product; provide attachment if different.
• Same maintenance service and source of replacement parts, as applicable, is available.
• Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
• Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
• Proposed substitution does not affect dimensions and functional clearances; provide attachment if otherwise.
• Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
• Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.
• Neither the Owner and Architect will be liable for license fees or royalties.
# Request For Information  ST2 PB-051

## Urbana Elementary School Replacement
3554 Urbana Pike  
Frederick, Maryland  21704

## Project # 1707

### RFI #: ST2 PB-051  Date Created: 2/7/2019

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### Co-Respondent

### Answer Company

- **Discipline**: Civil

### Subject

- **Category**: 2A Clarifications

### Date Required: 2/13/2019

Please review the following questions received from AccuBid and provide response:

1. Will the Wall Profiles and Details Be provided for this project?

2. The DEMOLITION PLANs C-1A and C-1B indicate a scale of 1"=40'; however, the plan its self is not scaling at that. Will that plans be reissued with a true working scale?

3. When will the details and wall sections be provided for the out building that houses the pump station, shed, dumpster enclosure, transformer and generator be issued?

4. Scope indicates 2A contractor is responsible for the Mailbox footer but there is no detail for this, will it be provided or shall an allowance be carried for this item?

### Suggestion

### Answer

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<th>Date Answered:</th>
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1. Wall profiles have been included in Addendum 3.
2. Sheets have been reissued in Addendum 3.
3. Details were included in Addendum 2.
4. Mailbox details were included in Addendum 3.
# Request For Information  ST2 PB-052

## Urbana Elementary School Replacement Project # 1707
3554 Urbana Pike
Frederick, Maryland 21704
Tel: Fax:

## RFI #: ST2 PB-052
Date Created: 2/7/2019

### Answer Company
Grimm + Parker Architects
11720 Beltsville Drive
Suite 600
Calverton, MD 20705

### Answered By
Don Porter
Phone: 240-965-0713
Fax: 301-595-0089

### Author Company
Oak Contracting, LLC
3400 Stone Barn Drive
Frederick, MD 21704

### Authored By
Anthony Kukowski
Phone: 410-828-1000
Fax: 410-828-7488

### Co-Respondent
Grimm + Parker Architects
Don Porter

### Subject
Flooring/Ceramic Tile Clarifications

### Discipline
Architectural

## Question
Date Required: 2/13/2019

Please review the following questions received from L&R Flooring and provide response:

1. 096566 2.2D: Could the design logo be provided since the size and detail can greatly impact the cost or could an allowance be given for this?
2. 096510: Just to verify, any of the three carpet types listed can be used?
3. 096510: if manufacture doesn’t recommend/offer a Maintenance Package should it still be included?
4. A5.5 Elevations L18, J18 and L16; Is this the typical elevation for all Restrooms?
5. Room A112 Storage; Should the ceramic wall tile in this room the same pattern as the toilets?
6. Room C114 Utility; Should the ceramic wall tile in this room the same pattern as the toilets?
7. A015 Corridor; Please provide ceramic wall tile elevations?
8. C116 Cafeteria; Please provide ceramic wall tile elevations?
9. Kitchen Area; Please provide ceramic wall tile elevations?
10) Please confirm that the Cement Backer Board is in the 9B Bid Package and not the 9A Bid Package.
11) A010 Vestibule; is the area around the Walkoff Mat VCT?

## Suggestion

**Answer**

1. Per FCPS, logo in the athletic surface has been deleted from the project.

2. **Provide one of the specified products.**

3. **All specified requirements will be Contractual requirements.**

4. **Yes, this is the typical restroom elevations.**
5. G+P to provide response.

6. Single color tile will be used. Color selections are included in Addendum 3.

7. No ceramic tile will be in corridors. See revised elevations in Addendum2/3.

8. No ceramic tile will be in corridors. See revised elevations in Addendum2/3.

9. Single color tile will be used. Color selections are included in Addendum 3.

10. Per Oak, cement backer board will be furnished and installed by the 9A Contractor.

11. Base bid is VCT. Alternate floor as specified.
Please review the following questions received from Waynesboro Construction and provide response:

a. Items L2, L3, L4 and L6 are marked on Drawing A 9.2 as starter, adder, single face and double face units where starter/adder and single face/double face configurations need clarification.

b. There are 3 Item L4 units drawn as starter units but their model number on the schedule is for an adder unit. This is on North Elevation L13. These should be marked as L3 units.

c. There are 2 L2 units shown together where one needs to be an adder unit. This is on West Elevation G13. The model number for the adder unit is W-3012-A.

d. There are 2 L3 units shown together where one needs to be an L4 unit. This is on South Elevation E13 on the West end.

e. There is a range along the East end of South Elevation E13 with 7 L6 units and there should be one L6 starter unit and 6 adder units. The adder units model number W-3016-P-A. There is a note on the schedule that indicates that these units are to be with casters. The manufacturers will not provide these narrow units on casters and they appear to be intended to be attached to the wall under the windows.

f. There are 4 sets of L6 units drawn as back to back in the floor plan. Should these be double face units on casters? The model number would be W-3032-P. The manufacturers will not provide these units as single face on casters as they will be too narrow and could tip over easily when moved. Should these units also be 42"H to be the same height as the L1 double face units on casters?

g. Items L7 & L8 do not appear to be marked on Drawing A 9.2. Please advise the location of these units.

2. Addendum #2: Contract Package 6A Item 2.71 states the 6A contractor has to furnish and install the Card Access System complete per spec sections 08 71 00 (Door Hardware) and 28 10 00 (Access and Intrusion Systems). The 28 10 00 spec did not previously exist in the contract documents and was not provided with Addendum #2. This paragraph also states that the 6A contractors is responsible for the complete installation of the Card Access System regardless of any other reference in the contract documents. Do you want a "request to exit sensor" on the doors with card readers and or door contacts? The sensor momentarily shunts out the door contact so staff of student can exit without activation door contact. If no further information is provided, we cannot provide this system or install this system. Also related, about half of the openings that receive card readers are storefront. Please confirm that all hardware on the storefront openings (except the card readers, intercom remote/release and cores) are to be provided and installed by the 8A package contractor.

3. Confirm that the MBE goal for the 6A package is 5%.

4. Metal Shelving: The A-9 plans show the sizes of the two units types - The specs refer you to the plans for the quantity of shelves required in each type. No elevations are shown. Please clarify how many shelves are we to provide for each size.
of metal shelving?
5. Addendum # 2 Plan A-6.1 removed the maple chair rail to cover the conduit, but the L4/A-9.10 detail still exists. Does this detail get installed elsewhere in the project?
6. Addendum # 2 Plan A-6.4 removed the notes for the L4/A-9.9 wall cap, however the detail still remains on the A-9.9 Plan. Does wall cap get installed at any other location on the project?
7. Numerous Hallway elevations on the A-6 plans do not show up on the A-1 or A-9 floorplans. Please provide this information.
8. Plan A-9.3: Add the 8’ MB to the Art Room C1010 & C102 to match the A7/A6.2 elevation.

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<thead>
<tr>
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<th>Date Answered:</th>
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<tbody>
<tr>
<td>1. Provide media shelving as noted. Flexibility in movement of casework is part of the design intent. Refer to Addendum 3 for modifications.</td>
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<tr>
<td>2. Per Oak, 6A scope of work regarding Specification Section 28 10 00 will be clarified in Addendum 3. Refer to revised Hardware specification included in Addendum 3.</td>
<td></td>
</tr>
<tr>
<td>3. Per Oak, MBE requirements are included in the bid documents.</td>
<td></td>
</tr>
<tr>
<td>4. Shelving units shall be provided as specified.</td>
<td></td>
</tr>
<tr>
<td>5. See Addendum 3. Detail has been deleted.</td>
<td></td>
</tr>
<tr>
<td>6. See Addendum 3. Detail has been deleted.</td>
<td></td>
</tr>
<tr>
<td>7. See Addendum 2/3.</td>
<td></td>
</tr>
<tr>
<td>8. Provide 8’ tackboard as noted on elevation in both rooms, typical.</td>
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4.
Request For Information  ST2 PB-055

Urbana Elementary School Replacement
3554 Urbana Pike
Frederick, Maryland  21704

Project #  1707
Tel:       Fax:

RFI #:  ST2 PB-055 Date Created:  2/7/2019

Author Company Authored By
Oak Contracting, LLC Dave Toth Oak Contracting, LLC
1000 Cromwell Bridge Road 3400 Stone Barn Drive
Towson, MD   21286 Frederick, MD   21704
410-828-1000 410-828-1000 Phone: Phone:
Fax: 410-828-7488 410-828-7488

Co-Respondent Author RFI Number

Subject Discipline Category
Septic Field Clarification Civil

Cc: Company Name Contact Name Copies Notes

Question Date Required:  2/13/2019
Please review the following question received from Ross Contracting and provide response:

Was the Existing septic system and field was removed under Phase 1 - Building Demolition.  Or is this part of the Phase 2 Bidding scope ?

Suggestion

Answer Date Answered:  2/7/2019
Per Oak, removal of septic fields is identified on the demo plans.  Scope of work will be clarified in Addendum 3.
Request For Information  ST2 PB-056

Urbana Elementary School Replacement  Project # 1707
3554 Urbana Pike  Tel:  Fax:
Frederick, Maryland  21704

<table>
<thead>
<tr>
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<th>Answered By</th>
<th>Author Company</th>
<th>Authored By</th>
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<tr>
<td>Grimm + Parker Architects</td>
<td>Don Porter</td>
<td>Oak Contracting, LLC</td>
<td>Anthony Kukowski</td>
<td></td>
</tr>
<tr>
<td>11720 Beltsville Drive</td>
<td>Phone: 240-965-0713</td>
<td>3400 Stone Barn Drive</td>
<td>Phone: 410-828-1000</td>
<td></td>
</tr>
<tr>
<td>Suite 600</td>
<td>Fax: 301-595-0089</td>
<td>Frederick, MD  21704</td>
<td>Fax: 410-828-7488</td>
<td></td>
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<tr>
<td>Calverton, MD  20705</td>
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<td>Acoustic Panel Clarification</td>
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<tr>
<th>Question</th>
<th>Date Required: 2/13/2019</th>
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<tbody>
<tr>
<td>Please review the following question received from Barnes and Associates and provide response:</td>
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<tr>
<td>Reference 098400-Acoustical panels, 2.3 &quot;Back Mounted, Acoustical Wall panels with wood fiber core and Graphic Film - AP-1&quot;. Please identify the locations where these panels are to be installed.</td>
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<table>
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<tr>
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<tr>
<th>Answer</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Locations have been identified in Addendum 2.</td>
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</table>
# Request For Information  ST2 PB-057

**Urbana Elementary School Replacement**  
3554 Urbana Pike  
Frederick, Maryland  21704

**Project # 1707**  
Tel:       Fax:

**RFI #: ST2 PB-057**  
**Date Created:** 2/7/2019

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</table>

**Co-Respondent**

**Author RFI Number**

**Subject**  
Athletic Flooring Products

**Discipline**  
Architectural

**Category**

**Cc: Company Name**  
Contact Name  
Copies  
Notes

**Question**  
**Date Required:** 2/13/2019

Please review the attached RFI received from Miller Flooring and provide response.

**Suggestion**

**Answer**  
**Date Answered:**

1. Painted lines are acceptable per Addendum 3.
2. Waterjet cut requirement has been removed by Addendum 3. No logo will be required.
3. All products are subject to specified requirements.
4. All products are subject to specified requirements.
5. Colors are from full range of available colors.
Frederick County Public Schools
Kim Miskell, Assistant Purchasing Manager
Cc: Bradley Ahalt, Senior Project Manager
191 South East St.
Frederick, Maryland 21701

Re: Urbana Replacement Elementary School

Pre Bid RFI’s regarding Section 09 65 66 Resilient Athletic Flooring

1. Section 09 65 66-3, 2.3 Accessories, D states “Logo, Gamelines, and Markers: Inlaid to top layer of dual-layer flooring product”. Logos are typically waterjet cut from the flooring material but it is not typical to use the flooring material to inlay the lines of the game courts. The game lines are typically painted on. Inlaying the lines will be very costly and is not typically done. Will painted game lines be acceptable?

2. Section 09 65 66 indicated a custom logo to be water jet cut from the flooring. We need a graphic, the amount of colors, and the size of the logo to be able to price this up. Can this information be provided? Are the letters around the center circle to be water jet cut and this is considered the logo?

3. Section 09 65 66 Basis of Design Mondo Advance Vulcanized three Layer flooring product is warranted against excessive wear under normal usage for a period of ten (10) years, do other manufactures listed need to meet Mondo’s warranty?

4. Section 09 65 66 Basis of Design Mondo 8mm Advance is specified as a three layer system. This product shows three distinctive layers (performance layer, load distribution layer, and comfort layer). The literature on the Connor Control XT system appears to indicate that the texture on the wear surface is a layer. This product is more comparable to Mondo’s 8mm Advance NG two layer system. We have provided the product sheets for comparison. If the Connor Control XT system is acceptable can the Mondo Advance NG two layer system be used as it is cost comparable to the Connor system?

5. Section 09 65 66- Are colors to be selected from Manufacturers standard colors?
ADVANCE

Most durable and high performance gymnasium and multipurpose resilient surface in the industry.
VULCANIZED ADVANTAGE
Mondo’s vulcanization process permanently amalgamates individual layers, using high heat and pressure; the product will never separate, and its biomechanical and physical properties will be consistent. Each vulcanized layer offers individual characteristics and benefits.

- **3-layer Advance Vulcanized (8 mm and 10 mm)** is designed for greater shock absorption, ideal for high impact sports like basketball
- **2-layer Advance New Generation (6 mm and 8 mm)** is ideal for schools, churches and multipurpose rooms

PERFORMANCE LAYER
- Exceeds coefficient of friction standards for improved athletic performance; perfect for basketball and volleyball
- 2 mm homogeneous wear layer requires no finishes or coating

COMFORT LAYER
- Provides optimal shock absorption and energy return

KEY BENEFITS
- Dual or triple durometer vulcanized construction
- Will not compress or break down over time
- Withstands static and rolling loads
- 20+ year life expectancy

HEALTH AND SAFETY
- **GREENGUARD Gold certified, the most stringent indoor air quality requirement testing**
- 100% recyclable
- Fire resistant
- Free of halogens, isocyanates, formaldehyde, asbestos, bisphenol (BPA), halogenated flame retardant-free, heavy metals, phthalates, polychlorinated biphenyls (PCBS), perfluorinated compounds (PFCS)
- Excellent fungal, bacterial and microbial resistance throughout

COLORS**

- **Emerald** L 35
- **Dark Green** L 14
- **Burgundy** L 25
- **Red** L 41
- **Orange** L 40
- **Gold** L 54
- **Light Grey** L 70
- **Royal Blue** L 73
- **Marine Blue** L 86
- **Black** L 08
- **Sand** L 62
- **Dark Grey** L 06
- **Dark Maple** L 92

* Average length from production
**Custom colors available; minimum quantity required. The degree and type of marbling will vary.
CONTROLXT™
MULTI SPORT ATHLETIC SURFACE
Non-porous, anti-microbial design resists bacteria and odors.

Acknowledging your team with custom logos and mascots.

Suitable for multi-sports, including volleyball, basketball & aerobics.

Optional recycled rubber base layer qualifies for LEED® credits.

**BASE LAYER**

Dual Durometer Construction Provides Outstanding Force Reduction and Safety.

**CORE LAYER**

Core Layer Disperses Impact, Virtually Eliminating “Bottoming Out.”

**TEXTURE LAYER**

Designed for Heavy Indoor Competition. Available in Orange Peel or Marble Textures.

**THICKNESS**

Control XT Orange Peel and Marble Athletic Surfaces are Available in 6, 8 & 10mm Thickness.
Please review the following questions received from Callas Contractors, Inc. and provide response:

1. Is the 6A Contractor to provide final cleaning to all interior areas including all floors, walls, cabinets, glass etc.?
2. Is exterior final cleaning required for this package?
3. Per 6A Package Scope Description Paragraph 2.23: Please provide a detailed scope for both the winter concrete and masonry protection. 3A and 4A Contractors are better suited for their own protection; please consider providing an allowance for this item since it is too vague making it difficult to quantify.
4. Per 6A Package Scope Description Paragraph 2.29: This item is duplicated and is not clear whether it is the responsibility of the 6A or 7A Contractor. If 6A Contractors responsible, please clarify if this is the entire roof or only the areas the 6A contractor will be working.
5. Who is responsible for fall protection at all roofs?
6. Per 6A Package Scope Description Paragraph 2.35 & 2.73: Who is responsible for furnishing anchor bolts and/or thru-bolts embedded concrete, masonry and/or wood? Is it to be 3A Contractor for bolts embedded in concrete, 4A Contractor in masonry and 6A Contractor in wood blocking? Please clarify extent of anchorage devices.
7. Per 6A Package Scope Description Paragraph 2.51: Who is responsible for all casework, furniture and countertop steel supports?
8. Per 6A Package Scope Paragraph 2.01 F and Specification Section 110005 Misc. Equipment:
   A. What drawings will show items are under the "Calming Room Equipment" and "Cleaning Equipment"?
   B. Who is responsible for maker space equipment items F1-F12 shown on A-9 Furnishing Plans?
   C. Please provide manufacturers and model # for Maker Space Items F11 and F12.
   D. Who is responsible for Sensory Room Equipment items S1-S4 shown on A-9 Furnishing Plans?

Suggestion

Answer

1. Per Oak, final cleaning is by others. Refer to scope of work for contractual cleaning requirements.
2. Per Oak, final cleaning is by others. Refer to scope of work for contractual cleaning requirements.
3. Per Oak, scope of work defines responsibility. If concrete is placed under this package, any winter or summer...
protection will be defined by the specifications.

4. Per Oak, this scope item applies to the minimum protection required by any contractor working on a finished roof. This is not intended to cover the entire roof.

5. Per Oak, each contractor is responsible to be in compliance with MOSH and OSHA requirements for fall protection. The 6A contractor is required for railings as described in scope item 2.09.

6. Per Oak, 6A is to furnish anchor bolts or through-bolts under both of the referenced scope items.

7. Per Oak, the 6A contractor is responsible for any supports needed for work under the 6A Contract Package.

8A. Per G+P, items will be clarified in Addendum 3.

8B. Per Oak, reference scope item 2.01. The 6A contractor is responsible for Specification Section 11 00 05.

8C. Per G+P, Item F11 will be Campbell-Rhea. Item F12 is a C4 countertop as identified in the countertop schedule.

8D. Per Oak, reference scope item 2.01. The 6A contractor is responsible for Specification Section 11 00 05.
6 day work week - Adverse weather days, per the General Conditions, are excluded as workdays from this schedule.

### URBANA ELEMENTARY SCHOOL REPLACEMENT

#### Preliminary Timeline

**Oak Contracting, LLC**  
February 11, 2019  
Addendum # 3

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#### STAGE 2 - PHASE A

**AWARD & PROCUREMENT**

<table>
<thead>
<tr>
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<th>Activity Description</th>
<th>Early Start</th>
<th>Early Finish</th>
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<tbody>
<tr>
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<td>NOTICE OF AWARD - EARLY PKG'S STAGE 2 PHASE A</td>
<td>14MAR19</td>
<td>14MAR19</td>
</tr>
<tr>
<td>2</td>
<td>2A - SUB-APRV-FAB UTILITY MATERIALS &amp; STRUCTURES</td>
<td>14MAR19</td>
<td>24APR19</td>
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<tr>
<td>3</td>
<td>3A - SUB-APRV-FAB REBAR &amp; MATERIALS FOR CONCRETE</td>
<td>14MAR19</td>
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<td>4</td>
<td>4A SUB-APRV-FAB MATERIALS FOR MASONRY</td>
<td>14MAR19</td>
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<td>5</td>
<td>5A - SUB-APRV STEEL, JOIEST, DECK</td>
<td>14MAR19</td>
<td>24APR19</td>
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<td>6</td>
<td>6A - FAB H M FRAMES</td>
<td>25APR19</td>
<td>05JUN19</td>
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<td>7</td>
<td>7A SUB-APRV METAL PANELS, CANOPIES, ROOFING</td>
<td>14MAR19</td>
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<td>8</td>
<td>8A SUB-APRV METAL PANELS, STOREFRONTS, CURTAINWALL</td>
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<td>9</td>
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<td>11A SUB-APRV ROUGH IN DRAWINGS</td>
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<td>12A SUB-APRV TRFM'R'S, GEAR, PANEL, EM'G GEN, FIRE AL</td>
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<td>13A CONCRETE FOOTINGS C1, A, B</td>
<td>20MAR19</td>
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<td>LAYOUT L.O.D.</td>
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<td>54</td>
<td>SITE SECURITY FENCING</td>
<td>29MAR19</td>
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<td>2A SEQ. OF CONST. DRW C2E STEPS 1 THRU 19</td>
<td>06APR19</td>
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<td>BUILDING PAD TO GRADE</td>
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<td>GEO THERMAL WELL DRILLING</td>
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<td>19AUG19</td>
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<td>SITE ELECTRIC (NEW SERVICE WORK)</td>
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<td>3A - START GEO PIERS</td>
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#### Addendum # 3

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#### Timeline

- **NOTICE OF AWARD - EARLY PKG'S STAGE 2 PHASE A**: 14MAR19 - 14MAR19
- **2A - SUB-APRV-FAB UTILITY MATERIALS & STRUCTURES**: 14MAR19 - 24APR19
- **3A - SUB-APRV-FAB REBAR & MATERIALS FOR CONCRETE**: 14MAR19 - 24APR19
- **4A SUB-APRV-FAB MATERIALS FOR MASONRY**: 14MAR19 - 24APR19
- **5A - SUB-APRV STEEL, JOIEST, DECK**: 14MAR19 - 24APR19
- **5A - FAB STEEL, JOIST, DECK**: 25APR19 - 05JUN19
- **6A - SUB-APRV FRAMES, DOORS, HDWR, ELEVATOR**: 14MAR19 - 24APR19
- **6A - FAB H M FRAMES**: 25APR19 - 05JUN19
- **8A SUB-APRV METAL PANELS, STOREFRONTS, CURTAINWALL**: 14MAR19 - 24APR19
- **9A SUB-APRV CEILING DRW'S LT GA FRAMING**: 14MAR19 - 17APR19
- **10A - FAB STEEL, JOIST, DECK**: 25APR19 - 05JUN19
- **11A SUB-APRV ROUGH IN DRAWINGS**: 14MAR19 - 17APR19
- **12A SUB-APRV TRFM'R'S, GEAR, PANEL, EM'G GEN, FIRE AL**: 14MAR19 - 10JUN19
- **5A,6A,9A,11A,15A,16A SUB COORD INFO 3RD PARTY**: 29APR19* - 01JUN19
- **NOTICE TO PROCEED - STAGE 2 PHASE A PACKAGES**: 22MAR19* - 26JUN19*
- **NOTICE TO PROCEED - STAGE 2 PHASE A PACKAGES**: 26JUN19* - 01JUL19*
- **NOTICE TO PROCEED - STAGE 2 PHASE A PACKAGES**: 22MAR19* - 26JUN19*
- **NOTICE TO PROCEED - STAGE 2 PHASE A PACKAGES**: 26JUN19* - 01JUL19*
- **NOTICE TO PROCEED - STAGE 2 PHASE A PACKAGES**: 22MAR19* - 26JUN19*
- **NOTICE TO PROCEED - STAGE 2 PHASE A PACKAGES**: 26JUN19* - 01JUL19*

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#### 2019-2020 Timeline

<table>
<thead>
<tr>
<th>Year</th>
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<tr>
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<td>74</td>
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<td>2A - SITEWORK</td>
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<td>82</td>
<td>3A - CONCRETE</td>
<td>01JUL19*</td>
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<td>84</td>
<td>4A - MASONRY</td>
<td>01JUL19*</td>
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<td>86</td>
<td>15A - MECHANICAL &amp; PLUMBING</td>
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<td>16A - ELECTRICAL</td>
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<td>5A - STEEL</td>
<td>16SEP19*</td>
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<td>6A - CARPENTRY - CASEWORK &amp; MISC.</td>
<td>12AUG19*</td>
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<td>7A - ROOFING</td>
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<td>8A - STOREFRONT - CURTAINWALL - WINDOWS</td>
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<td>9A - DRYWALL &amp; ACOUSTICAL</td>
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<td>9B - TILE</td>
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<td>102</td>
<td>9C - FLUID APPLIED &amp; TERRAZZO FLOORING</td>
<td>02MAR20*</td>
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<td>104</td>
<td>9D - CARPET &amp; RESILIENT FLOORING</td>
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<td>9E - PAINTING</td>
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<td>11A - FOOD SERVICE EQUIP</td>
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<td>ROOF COMPLETE - AREA C2</td>
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<td>FINAL COMPLETION - NEW BUILDING</td>
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<td>136</td>
<td>OWNER MOVE IN</td>
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This Information is a general guideline as to when the Contractors will be on site performing a portion(s) of their work. With the exception of Substantial and Final Completion dates, the information shown is subject to revision by the Construction Manager.
PREVAILING WAGE

FREDERICK COUNTY PUBLIC SCHOOLS
PURCHASING DEPARTMENT
191 SOUTH EAST STREET
FREDERICK, MD 21701
Ph 301-644-5209 Fax 301-644-5213

ADDENDUM #3 REVISED
FORM OF PROPOSAL

URBANA ELEMENTARY SCHOOL REPLACEMENT
PSCP# 10.022.19
FCPS Bid # 19C4

Contract Package No: ________________

Bid Documents Dated: January 10, 2019

Contractor Name: __________________________

The undersigned, having visited and carefully examined the site and carefully examined the Bid Announcement and Bid Documents, proposes to furnish all labor, specified materials, and specified equipment necessary to construct and properly complete all of the work required in strict accordance with the aforesaid documents using only the specified manufacturers materials for the Lump Sum as follows:

Please include the cost of providing 100% performance and payment bonds in the base bid amount. Bids are to remain valid for 200 (two hundred) calendar days after the date of the bid opening.

The price for the base bid(s) and any alternate bid(s) must be submitted as a numeric value and must be written in words. If the numeric price does not represent the price as stated in words, the words will govern.
I. **Base Bid – Stage 2 Phase A Activities:**
Applies only to the following Contract Package:
2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, 11A, 15A and 16A
To perform all activities required to complete Stage 2 Phase A. These activities include but are not limited to: Shop drawings, submittals, permits, material orders, and construction activities as shown on the preliminary schedule as Stage 2 Phase A.

Base Bid – STAGE 2 Phase B Activities:
Applies to all Contract Packages in this Solicitation:
To perform all activities required after July 1, 2019.

**TOTAL BASE BID (Stage 2 Phase A + Stage 2 Phase B):**
II. Alternates:

Contractor shall be required to review all alternate proposals listed in specification section 01 23 00. You are required to bid each Alternate on this bid form. If acceptance of the alternate does not affect your work scope enter "no change" or "N/C" on the line. If acceptance of the Alternate impacts your work scope at no additional cost to the owner, enter "$0" (zero dollars) on the line. Blank lines, "N/A," "Not Applicable," and other similar notations, will be interpreted as “no change” if the work scope is unaffected or "$0" if work scope is impacted. Where an appropriate notation/blank line impacts the work and is interpreted at "$0," the bidder will be required to perform the work at no cost. **DO NOT LEAVE ANY OF THE ALTERNATE LINES BLANK.** Failure to follow these instructions may result in rejection of the bid or interpretation by the Purchasing Manager.

Prices for each alternate must include the cost of performance and payment bonds for said alternate. The cost of each Alternate shall be valid for 200 (two hundred) calendar days after the date of the bid opening (unless noted otherwise) and any or all of the Alternates may be added to the Contract within this time at the discretion of the Owner.

1. **Alternate 1 to the Base Bid: Solid Surfacing Counter Tops at Wet Areas.**

   The sum of ____________________________________ Dollars ($__________________)  
   Amount in Words                          Amount in Numbers

2. **Alternate 2 to the Base Bid: Decorative Display Panels.**

   The sum of ____________________________________ Dollars ($__________________)  
   Amount in Words                          Amount in Numbers

3. **Alternate 3 to the Base Bid: Media Center Stair.**

   The sum of ____________________________________ Dollars ($__________________)  
   Amount in Words                          Amount in Numbers

4. **Alternate 4 to the Base Bid: Energy Dashboard & Utility Meters as Required for LEED EAc5 (measurement & verification).**

   The sum of ____________________________________ Dollars ($__________________)  
   Amount in Words                          Amount in Numbers
5. Alternate 5 to the Base Bid: Main Street / Cafeteria Flooring.

5A. Alternate 5A to the Base Bid: Provide 2 mm quartz tile flooring at all locations noted on Sheet A-3.1. The cost associated with this alternate shall be the difference between the base bid material and this alternate material only.

The sum of ____________________________________________Dollars ($______________)

Amount in Words                        Amount in Numbers

5B. Alternate 5B to the Base Bid: Provide 3/8” poured epoxy terrazzo at locations noted on Sheet A-3.1. The cost or credit associated with this alternate shall be the difference between the base bid material and this alternate material only.

The sum of ____________________________________________Dollars ($______________)

Amount in Words                        Amount in Numbers

6. Alternate 6 to the Base Bid: Alternative Flooring at Remainder of the Building.

6A. Alternate 6A to the Base Bid: Provide 2mm quartz tile flooring at all locations located on Sheet A-3.1. The cost associated with this alternate shall be the difference between the base bid material and this alternate material only.

The sum of ____________________________________________Dollars ($______________)

Amount in Words                        Amount in Numbers

6B. Alternate 6B to the Base Bid: Provide 2.5mm Luxury Vinyl Tile flooring at all locations noted on Sheet A-3.1. The cost associated with this alternate shall be the difference between the base bid material and this alternate material only.

The sum of ____________________________________________Dollars ($______________)

Amount in Words                        Amount in Numbers

7. Alternate 7 to the Base Bid: Increased Security Glazing at Entrances.

The sum of ____________________________________________Dollars ($______________)

Amount in Words                        Amount in Numbers
V. Unit Prices:

Unit prices are for both extra Work and credits. Unit prices listed below are applicable to all Work in this project involving extra materials/services performed by the Contractor or his Subcontractors and/or credits to the Owner for materials/services deleted from the project. Unit prices include all overhead and profit for the Subcontractor and Contractor. Prices as stated shall remain in effect through the end of the Contract warranty period. The undersigned acknowledges the unit price values as part of this bid proposal and agrees to add or delete items for the unit prices identified when directed to do so by the Owner.

If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are so changed in a proposed Change Order or Construction Change Directive that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted. Unit prices may be subject to adjustment due to market conditions or error in establishment of unit price as well. Final decision-making authority on any such proposed adjustment is the Project Architect.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Unit</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Furnish and install riprap Class 1</td>
<td>Ton</td>
<td>$52.00</td>
</tr>
<tr>
<td>2.</td>
<td>Earth excavation-machine and disposal onsite</td>
<td>Cu. yd.</td>
<td>$5.00</td>
</tr>
<tr>
<td>3.</td>
<td>Earth excavation-machine and disposal offsite</td>
<td>Cu. yd.</td>
<td>$18.00</td>
</tr>
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<td>4.</td>
<td>Earth excavation-hand and disposal onsite</td>
<td>Cu. yd.</td>
<td>$90.00</td>
</tr>
<tr>
<td>5.</td>
<td>Earth excavation-hand and disposal offsite</td>
<td>Cu. yd.</td>
<td>$102.00</td>
</tr>
<tr>
<td>6.</td>
<td>Trench excavation and soil disposal onsite</td>
<td>Cu. yd.</td>
<td>$11.00</td>
</tr>
<tr>
<td>7.</td>
<td>Trench excavation and soil disposal offsite</td>
<td>Cu. yd.</td>
<td>$22.00</td>
</tr>
<tr>
<td>8.</td>
<td>Excavate and legally dispose offsite contaminated soil and replace with suitable fill</td>
<td>Cu. yd.</td>
<td>$200.00</td>
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<tr>
<td>9.</td>
<td>Undercut, dispose onsite, refill with MSHA #2 or #57 stone and compact per specified requirements at trench areas only</td>
<td>Cu. yd.</td>
<td>$38.00</td>
</tr>
<tr>
<td>10.</td>
<td>Undercut, dispose onsite, refill with CR-6, CR-1, or GAB and compact per specified requirements at trench areas only</td>
<td>Cu. yd.</td>
<td>$42.00</td>
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<tr>
<td>11.</td>
<td>Undercut, dispose offsite, refill with MSHA #2 or #57 stone and compact per specified requirements in open areas only</td>
<td>Cu. yd.</td>
<td>$48.00</td>
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<td>12.</td>
<td>Undercut, dispose offsite, refill with CR-6, CR-1, or GAB and compact per specified requirements in open areas only</td>
<td>Cu. yd.</td>
<td>$54.00</td>
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<tr>
<td>13.</td>
<td>Imported screened topsoil and fine graded in place - no material larger than 1/2&quot; in mix</td>
<td>Cu. yd.</td>
<td>$31.00</td>
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<tr>
<td>14.</td>
<td>Sodding</td>
<td>Sq. yd.</td>
<td>$6.00</td>
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<tr>
<td>15.</td>
<td>Permanent seeding and mulch</td>
<td>Sq. yd.</td>
<td>$0.90</td>
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<tr>
<td>16.</td>
<td>Temporary seeding and straw</td>
<td>Sq. yd.</td>
<td>$0.55</td>
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<tr>
<td>17.</td>
<td>Furnish and install Mirafi 500x or equal</td>
<td>Sq. yd.</td>
<td>$2.50</td>
</tr>
<tr>
<td>18.</td>
<td>Furnish and install stabilization fabric Mirafi 160n or equal</td>
<td>Sq. yd.</td>
<td>$2.60</td>
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<tr>
<td>19.</td>
<td>Furnish and install Mirafi 500x or equal stabilization fabric, MSHA #2 stone 2' deep, and Mirafi 160n or equal filter cloth.</td>
<td>Sq. yd.</td>
<td>$32.00</td>
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<td>20.</td>
<td>Furnish and install MSHA #2 stone.</td>
<td>Ton</td>
<td>$21.00</td>
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<tr>
<td>21.</td>
<td>Furnish, install, maintain, and remove super silt fence and grade/re-stabilize</td>
<td>Ln. ft.</td>
<td>$13.00</td>
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<tr>
<td>22.</td>
<td>Furnish, install, maintain, and remove silt fence and grade/re-stabilize</td>
<td>Ln. ft.</td>
<td>$6.00</td>
</tr>
<tr>
<td>23.</td>
<td>Furnish and install &quot;Leaf-gro&quot; or equal to amend topsoil to specified organic content.</td>
<td>Cu. yd.</td>
<td>$38.00</td>
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<td>24.</td>
<td>Furnish and install 9% soil cement 1' deep</td>
<td>Sq. yd.</td>
<td>$12.00</td>
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<tr>
<td>25.</td>
<td>Furnish and install 6% hydrated lime 1' deep</td>
<td>Sq. yd.</td>
<td>$10.00</td>
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<td>26.</td>
<td>Furnish and install erosion control matting</td>
<td>Sq. ft.</td>
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<td>Description</td>
<td>Unit</td>
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<td>27.</td>
<td>Remove trench rock haul and dispose of legally offsite</td>
<td>Cu. yd.</td>
<td>$225.00</td>
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<tr>
<td>28.</td>
<td>Remove open rock, haul and dispose of legally offsite</td>
<td>Cu. yd.</td>
<td>$125.00</td>
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<tr>
<td>29.</td>
<td>Removal of existing sidewalk and spoil as necessary, dispose of legally offsite, install new 5” sidewalk with W2.0 x 2.0 mesh</td>
<td>Sq. ft.</td>
<td>$10.50</td>
</tr>
<tr>
<td>30.</td>
<td>Furnish and install new 5” sidewalk with W2.0 x 2.0 mesh</td>
<td>Sq. ft.</td>
<td>$7.00</td>
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<td>31.</td>
<td>Saw cut and removal of existing curb and gutter and dispose of legally offsite, install new curb and gutter to match existing</td>
<td>Ln. ft.</td>
<td>$30.00</td>
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<tr>
<td>32.</td>
<td>Import CR-6, GAB, #2 stone, or #57 stone and compact in place to 98%</td>
<td>Ton</td>
<td>$24.00</td>
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<tr>
<td>33.</td>
<td>Saw, cut and remove damaged paving, dispose of legally offsite, replace with 4” base course and 2” surface course.</td>
<td>Sq. yd.</td>
<td>$55.00</td>
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<td>34.</td>
<td>Concrete curb and gutter</td>
<td>Ln. ft.</td>
<td>$19.00</td>
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<tr>
<td>35.</td>
<td>Labor, equipment, material to repair out of tolerance or defective concrete slab.</td>
<td>Sq. ft.</td>
<td>$0.80</td>
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<tr>
<td>36.</td>
<td>Labor, equipment, material to furnish, install (and remove after 18 months or when directed by Construction Manager) temporary 6’-0” high fence</td>
<td>Ln. ft.</td>
<td>$8.00</td>
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<td>37.</td>
<td>Furnish and install staging area -12” CR-6 on Mirafi 700 X fabric and removal/restoration of same</td>
<td>Sq. ft.</td>
<td>$3.00</td>
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<td>38.</td>
<td>Spoils (generated and stockpiled by others) dispose of legally offsite</td>
<td>Cu. yd.</td>
<td>$15.00</td>
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<tr>
<td>39.</td>
<td>Furnish and install typical paving section, 8” GAB, 4” base course, 2” surface course</td>
<td>Sq. yd.</td>
<td>$34.00</td>
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<tr>
<td>40.</td>
<td>Furnish and install steel well casing for closed-loop ground heat exchanger.</td>
<td>Ln. ft.</td>
<td>$13.50</td>
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<td>41.</td>
<td>Import miscellaneous stone fill (stone dust).</td>
<td>Cu. yd.</td>
<td>$7.00</td>
</tr>
<tr>
<td>42.</td>
<td>Undercut, dispose of site, refill with miscellaneous stone fill (stone dust) and compact per specified requirements.</td>
<td>Cu. yd.</td>
<td>$44.00</td>
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<td>43.</td>
<td>Undercut, dispose of site, refill with approved onsite material, and compact per specified requirements.</td>
<td>Cu. yd.</td>
<td>$40.50</td>
</tr>
<tr>
<td>44.</td>
<td>Import GAB</td>
<td>Cu. yd.</td>
<td>$30.00</td>
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<tr>
<td>45.</td>
<td>Additional Aggregate Piers if building foundation requirements change, increasing wall foundation lengths or the number of column footings, or if directed by the Architect.</td>
<td>Ln. ft.</td>
<td>$60.00</td>
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</table>

Unit Prices include overhead and profit (including bond), and shall be total compensation for the extra or credit. All materials and workmanship shall be equal in character as specified or as shown on the drawings and complete, installed and finished.
V. Capital Equipment Informational Unit Pricing:

Within twenty-four (24) hours of the bid opening, the three (3) lowest bidders in each package may be required to submit informational pricing for each item listed in section 00 42 43. These prices will not affect contract award, except that failure to provide pricing may disqualify a bidder.

VI. Affidavit:

I/We certify that this bid/proposal is made without previous understanding, agreement, or connection with any person, firm, or corporation submitting a bid/proposal for the same goods/services and is, in all respects fair and without collusion or fraud; that none of this company's officers, directors, partners or its employees have been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or federal government; and that no member of the Board of Education of Frederick County, Administrative or Supervisory Personnel or other employees of the Frederick County Public Schools, has any interest in the bidding company except as follows:

COMPANY: _________________________________________________________________________________

dba: ______________________________________________________________________________________

REGISTERED MARYLAND CONTRACTOR NUMBER: ________________________________________________

FEDERAL IDENTIFICATION: _________________________ DATE: _________________________

The undersigned has familiarized themselves with the conditions affecting the work, the specifications, and is legally authorized to make this proposal on behalf of the Contractor listed above.

NAME (please print): _______________________________________________________________________

SIGNATURE OF ABOVE: ____________________________________________________________________

TITLE: ____________________________________________________________________________________

ADDRESS: ________________________________________________________________________________

__________________________________________________________________________________________

TELEPHONE # _________________________ FAX # _________________________

E-MAIL ADDRESS (for correspondence): _______________________________________________________

E-MAIL ADDRESS (for receiving Purchase Orders): _____________________________________________

(DO NOT COMPLETE THIS AREA IF YOUR COMPANY IS UNABLE TO RECEIVE PURCHASE ORDERS ELECTRONICALLY)
ACKNOWLEDGEMENT OF ADDENDA (if applicable)

The above-signed company/firm acknowledges the receipt of the following addenda for the above-reference solicitation.

Date Received by Proposer/Bidder:

Addendum No. _____ Dated ___________  Addendum No. _____ Dated ___________
Addendum No. _____ Dated ___________  Addendum No. _____ Dated ___________
Addendum No. _____ Dated ___________  Addendum No. _____ Dated ___________
Addendum No. _____ Dated ___________  Addendum No. _____ Dated ___________
Addendum No. _____ Dated ___________  Addendum No. _____ Dated ___________

END OF SECTION
February 8, 2019

URBANA ELEMENTARY SCHOOL REPLACEMENT
BID PACKAGE
ADDENDUM NO. 3
21740.00

TO THE CONTRACT DRAWINGS AND SPECIFICATIONS FOR THE REFERENCED PROJECT, DATED JANUARY 10, 2019, AS PREPARED BY GRIMM AND PARKER ARCHITECTS, 11720 BELTSVILLE DRIVE, SUITE 600, CALVERTON, MARYLAND 20705.

This Addendum includes changes and clarifications to the Contract Documents. The information includes the following:

**SPECIFICATION ITEMS:**

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<th>ITEM NO.</th>
<th>SECTION</th>
<th>DESCRIPTION</th>
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<td>1</td>
<td>00 01 15</td>
<td>LIST OF DRAWINGS</td>
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<tr>
<td><strong>SUBSTITUTE</strong></td>
<td>This section in its entirety with section included in this Addendum.</td>
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</tr>
<tr>
<td>2</td>
<td>01 10 00</td>
<td>SUMMARY</td>
</tr>
<tr>
<td>001100-1</td>
<td>Paragraph 1.1.A</td>
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<td><strong>ADD</strong></td>
<td>INTERIOR COLOR FINISH SCHEDULE included in this Addendum.</td>
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<tr>
<td>3</td>
<td>04 20 00</td>
<td>UNIT MASONRY</td>
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<tr>
<td>042000-5</td>
<td>Paragraph 2.1</td>
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<td><strong>DELETE</strong></td>
<td>Paragraph B.</td>
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<td>042000-9</td>
<td>Paragraph 2.5.C.1.c</td>
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<td><strong>DELETE</strong></td>
<td>Paragraph 6).</td>
<td></td>
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<td>4</td>
<td>04 72 00</td>
<td>CAST STONE MASONRY</td>
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<tr>
<td>047200-3</td>
<td>Paragraph 2.2.A.4</td>
<td></td>
</tr>
<tr>
<td><strong>ADD</strong></td>
<td>a. If Shouldice Stone cladding is used, match RockCast Gray wisp GP-B.</td>
<td></td>
</tr>
<tr>
<td><strong>ADD</strong></td>
<td>b. If RockCast stone cladding is used, match RockCast Pewter GP-C</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>05 50 00</td>
<td>METAL FABRICATIONS</td>
</tr>
<tr>
<td>055000-3</td>
<td>Paragraph 2.3</td>
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<td><strong>DELETE</strong></td>
<td>Paragraph C in its entirety.</td>
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</tr>
<tr>
<td>6</td>
<td>08 43 13</td>
<td>ALUMINUM-FRAMED STOREFRONTS</td>
</tr>
<tr>
<td>084313-4</td>
<td>Paragraph 2.3</td>
<td></td>
</tr>
<tr>
<td><strong>SUBSTITUTE</strong></td>
<td>B. Doors: Glazed, Heavy-Wall Aluminum</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Thickness: 2 inches.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Glazing Stops: Square.</td>
<td></td>
</tr>
<tr>
<td><strong>DELETE</strong></td>
<td>Paragraph C in its entirety.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>08 71 00</td>
<td>DOOR HARDWARE</td>
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<tr>
<td><strong>SUBSTITUTE</strong></td>
<td>This section in its entirety with section included in this Addendum.</td>
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<tr>
<td>8</td>
<td>09 30 00</td>
<td>TILING</td>
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<tr>
<td>093000-3</td>
<td>Paragraph 2.1</td>
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<tr>
<td><strong>DELETE</strong></td>
<td>Paragraph B.</td>
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ITEM NO. 9: SECTION 09 52 50 INTERACTIVE ACOUSTICAL PANEL SYSTEM

095250-1 Paragraph 1.2
DELETE Paragraph G
095250-4 Paragraph 2.2.A
ADD
1. Absorber panels to be 3” thick.

ITEM NO. 10: SECTION 09 65 00 RESILIENT FLOORING

096500-3 Paragraph 2.1
ADD
E. Rubber Floor Covering: Homogeneous color and pattern throughout thickness, and:
   1. Location: As indicated in Finish Schedule (RBT).
   2. Minimum Requirements: Comply with ASTM F 1344, of Class corresponding to type specified.
   3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E 648 or NFPA 253.
      a. Design: Smooth.
      b. Size: 24 x 24 inch.
      c. Overall Thickness: 0.080 inch.
   5. Contractor Option: Random multi-color chip design; Product Noraplan Environcare by Nora Systems, Inc. or through color with random pattern of multi-color cork contributing 10 percent of material content; Product SafeTcork Fiesta by Roppe.
      a. Design: Smooth.

ITEM NO. 11: SECTION 09 65 66 RESILIENT ATHLETIC FLOORING

096566-3 Paragraph 2.2
DELETE Paragraph D
096566-3 Paragraph 2.3.D
SUBSTITUTE Game Lines, Markers and Lettering: Manufacturer acceptable paint applied.
CLARIFY Logo requirement has been deleted.

ITEM NO. 12: SECTION 10 14 00 SIGNAGE

10 14 00-5 Paragraph 2.5.A
ADD
B. Additional signs will be required to identify each stair location at the exterior or the stair.

ITEM NO. 13: SECTION 10 56 13 METAL STORAGE SHELVING

105613-1 Paragraph 2.1.A
ADD
5. Spacesave Corporation
105613-2 Part 2
SUBSTITUTE 2.3 FOUR POST SHELVING
   A. Design: Wedge-lock type consisting of uprights, shelves, and shelf supports, designed to be assembled without fasteners or clips. Shelves shall not have any holes on exposed surfaces. Front and back flanges shall be flush with outside faces of posts. Design shall permit individual shelf adjustment and/or removal anywhere along the entire height of uprights.
1. Materials and Workmanship: Fabricate units from Class 1, cold-rolled steel sheet with all bends sharp and true and no exposed “knife” edges.

2. All units shall be free of burrs, sharp edges and projecting hardware with smooth, non-abrasive surfaces and edges.

3. After fabrication, shelving shall exhibit no dents, “oil canning”, buckling or other surface irregularities.

B. Uprights: Formed from steel sheet to a hollow “tee” shape for intermediate supports and formed angles for end supports. Uprights shall have keyhole slots on inner wall only. Provide with sheet steel panels full height and depth of end uprights. Provide intermediate “tee” uprights between adjacent units.

C. Shelves: Form from sheet steel with flanges on all sides and return hem on front and back flanges. Ends shall be formed to clear inside of upright offset panels. Shelves shall be independently adjustable. Provide all shelves with slots for file dividers.

D. Canopy Tops: Same construction as shelf units.

E. Shelf Supports: Form from heavy gauge steel sheet with four solid steel shoulder rivets, two per ear, that interlock with inner wall of uprights.

F. Nominal Shelf Dimensions: Refer to Drawings.
   1. Shelf Edge Vertical Profile: 3/4 inch maximum.
   3. Width Of Intermediate Uprights: 2 inches.
   5. Levelness of Completed Shelf Units: Maximum 1/8” between bottom shelf and canopy top, measured along the edge of any upright in any direction.
   6. Number of Vertical Shelf Spaces: as per written description and elevation dwg.
   7. Vertical Shelf-To-Shelf Spacing: as per written description and elevation dwg.

G. Load Carrying Capabilities: Provide shelf units capable of supporting 40 pounds per lineal foot with maximum deflection of L/140. Shelves shall exhibit no permanent deflection under fully loaded conditions.

H. Powder Coat Paint Finish. Color to be selected from manufacturer’s standard finishes.

I. All shelving units to be furnished and installed with “rain gutter” tops that will protect stored materials from overhead water damage in the event of a sprinkler discharge or pipe leaks from above. The intent of the tops is to protect from water damage from above.

J. Rain gutter tops to be manufactured of 22 gauge powder coated steel to match shelving color.

K. Provide overlap of sheet metal material (6” min) at seams.

L. All seams to be caulked with GE RTV 102 caulking material or equal.

M. Fasten rain gutter top at 12” increments utilizing manufacturer provided TEK screws with neoprene washers.

N. All tops to be provided with a 2” bend of 22 gauge sheet metal that extends beyond the face of the adjacent shelving unit to prevent water from flowing down into the gap between shelving ranges. When installing protective tops on HD systems, a matching piece of sheet metal with a 2” flange to be installed on adjacent shelving units so that they mate when
movable shelving units are compacted together to eliminate loss of aisle opening space.
O. All seams to be visually inspected during installation and after completion to verify that the caulk has properly sealed all joints.

ITEM NO. 14: SECTION 10 75 00 FLAGPOLES
107500-1 Paragraph 1.3.C
ADD Engineer to be licensed in the State of Maryland.

ITEM NO. 15: SECTION 11 00 05 MISCELLANEOUS EQUIPMENT
110005-1 Paragraph 1.1.D
ADD 8. Time capsule.
110005-2 Paragraph 2.6
REVISE SENSORY ROOM EQUIPMENT
110005-2 Paragraph 2.7
SUBSTITUTE TIME CAPSULE
A. Description: Composite, closed-cell foam, seamless, cylinder-shaped capsule; 16 inches diameter by 16 inches tall; 1.9 cu. ft.
C. Opening Width: 12 inches diameter.
D. Wall Thickness: 1/4-inch.
E. Provide with Preservation Kit containing:
   1. Thirty permanent bond, letter-size paper, Buffered.
   2. Archival marking pencil.
   3. Four 4-1/2 inch by 6-1/2 inch polyester L-seal envelopes.
   4. Four 8 inch by 10 inch polyester L-seal envelopes.
   6. Five 8-1/2 inch by 10-1/2 inch Micro Chamber envelopes.
   7. Three 9 inch by 12 inch foam pouches.
   8. Four 6 inch by 8 inch resealable static pouch.
   9. Two 14 inch by 24 inch 6 mil reclosable bag.
  10. 14 inch by 44 inch 6 mil reclosable bag.
  11. Two desiccant pack.
F. Provide location medallion:
   1. Vermont grey stone.
   2. Dimensions: 24 inches x 12 inches x 4 inches.
   3. Identify the Project and date the time capsule is to be opened.
G. Location: Time capsule will be buried on site in a sidewalk area. Exact location to be determined by Architect.

ITEM NO. 16: SECTION 11 52 13 PROJECTION SCREENS
115213-2 Paragraph 2.2.B
SUBSTITUTE 1. At Stage and Gymnasium: Motorized, matte light diffusing fabric screen, ceiling recessed with automatic ceiling closure.
   a. Screen Viewing Area: HDTV (16:9) format with minimum 184 inch diagonal.
   b. Acceptable Product: Da-Lite – Tensioned Advantage Deluxe Electrol; Draper – Access V: or equal product by other listed manufacturer.

ITEM NO. 17: SECTION 11 66 23 GYMNASIUM EQUIPMENT
116623-5 Paragraph 2.6.A
DELETE . . . and KA45 (for Badminton). No Badminton sleeves are required.
ITEM NO. 18: SECTION 11 66 43  BASKETBALL SCOREBOARD
116643-1 Paragraph 1.1
DELETE Paragraph B.

ITEM NO. 19: SECTION 12 35 50  EDUCATIONAL CASEWORK
123550-3 Paragraph 2.1.A
ADD 7. Stevens Industries (Basis of Design).

ITEM NO. 20: SECTION 12 93 00  SITE FURNISHINGS
DELETE This section in its entirety. Site Furnishings are specified in Division 32.

ITEM NO. 21: SECTION 12 35 51  MUSICAL INSTRUMENT STORAGE CABINETS
123551-3 Paragraph 2.1.A
ADD 4. Stevens Industries (modified for performance requirements).
123551-4 Paragraph 2.3
DELETE Paragraph C.

ITEM NO. 22: SECTION 22 42 16.13  COMMERCIAL LAVATORIES
224216.13-2 Paragraph 1.6.A
ADD 3. Lavatory Deck Single Station: Provide two (2) additional single station lavatory fixtures.
ADD 4. Group Lavatory Wash Station: Provide two (2) additional group lavatory wash stations.

ITEM NO. 23: SECTION 23 31 13  METAL DUCTS
233113-18 Paragraph 3.11.G.
ADD 7. All lined ductwork shall have a perforated galvanized inner liner.
ADD 8. Provide acoustic duct lining for the first ten (10) feet of supply and return ducts connected to all air handling units and dedicated outside air systems.
ADD 9. Additionally, provide the following:
   a. Provide 1-inch acoustic duct lining for the first 40 feet of supply and return ductwork including any branch ducts within that distance for DOAS-1 and DOAS-2.
   b. Provide 1-inch acoustic duct lining for the first 20 ft of supply and return ductwork for AHU-1. Additionally, provide 2-inch acoustic duct lining in the 26x14 ducts connected to the return air grilles in the wall separating the Kitchen and the Cafeteria.
   c. Provide 1-inch acoustic duct lining for the first 3 ft of return ductwork from VRF 2.21 serving Sensory Room 211.
   d. Provide 2-inch acoustic duct lining for the first 7ft in the return air duct from DSS-5 serving Platform C110.
   e. Provide 2-inch acoustic duct lining for the first 20 ft from exhaust fans F-3 serving Art C101 and F-4 serving Art C102. If necessary, ductwork shall be extended to achieve 20 ft sound lining. Contractor shall maintain at least 2 elbows between exhaust grille and fan.
   f. Provide 1-inch acoustic duct lining for the first 3 ft following all volume dampers in between the damper and air device.
ITEM NO. 24: SECTION 23 72 00 ENERGY RECOVERY AIR HANDLING
UNITS/DEDICATED OUTDOOR AIR UNITS
237200-4 Paragraph 2.1.H

SUBSTITUTE

H. Unit shall contain a factory mounted and tested energy recovery wheel. The energy recovery wheel shall be mounted in a rigid frame containing the wheel drive motor, drive belt, wheel seals and bearings. Frame shall slide out for service and removal from the cabinet. Wheel shall be Semco, Thermotech TF/TC or DRI.

1. A purge section shall be provided to eliminate transfer of exhaust air into the supply air, and shall be field adjustable.
2. Wheel rims shall be made of aluminum.
3. Heat transfer media shall be made out of corrugated aluminum foil with a high surface area per volume and laminar flow to assure that no fouling occurs on the internal heat transfer surface. The media shall have a flame spread of 0 and a smoke developed of 5 or less when rated in accordance with ASTM E84-09. All edges shall have an anti-corrosion epoxy coating.
4. Wheels which do not use “V” Belts shall be provided with two (2) sets of spare Belts per wheel. These spare belts shall be provided by the wheel manufacturer and delivered turned over to the owner prior to substantial completion.
5. The speed control system shall be a variable frequency inverter operating a standard inverter rated AC motor, capable of operating the rotor from 1/4 rpm to 20 rpm or to whatever is required for the type of media used. It shall integrate with the temperature control system to provide the required supply air temperature.
6. Energy recovery wheel cassette shall carry a 5 year non-prorated warranty, from the date of original equipment shipment from the factory. The first 12 months from the date of equipment startup, or 18 months from the date of original equipment shipment from the factory.
7. Unit shall include energy recovery wheel defrost control which includes an adjustable temperature sensor and timer wired to periodically stop the wheel rotation, which allows the warm exhaust air to defrost the wheel.
8. Unit shall include energy recovery wheel rotation detection sensors and a set of normally open and normally closed contacts for field indication of wheel rotation.

237200-7 Paragraph 2.2.G

SUBSTITUTE

G. Unit shall contain a factory mounted and tested energy recovery wheel. The energy recovery wheel shall be mounted in a rigid frame containing the wheel drive motor, drive belt, wheel seals and bearings. Frame shall slide out for service and removal from the cabinet. Wheel shall be Semco, Thermotech TF/TC or DRI.

1. A purge section shall be provided to eliminate transfer of exhaust air into the supply air, and shall be field adjustable.
2. Wheel rims shall be made of aluminum.
3. Heat transfer media shall be made out of corrugated aluminum foil with a high surface area per volume and laminar flow to assure that no fouling occurs on the internal heat transfer surface. The media shall have a flame spread of 0 and a smoke developed of 5 or less when rated in accordance with ASTM E84-09. All edges shall have an anti-corrosion epoxy coating.
4. Wheels which do not use “V” Belts shall be provided with two (2) sets of spare Belts per wheel. These spare belts shall be provided by the wheel manufacturer and delivered turned over to the owner prior to substantial completion.
manufacturer and delivered turned over to the owner prior to substantial completion.

5. The speed control system shall be a variable frequency inverter operating a standard inverter rated AC motor, capable of operating the rotor from 1/4 rpm to 20 rpm or to whatever is required for the type of media used. It shall integrate with the temperature control system to provide the required supply air temperature.

6. Energy recovery wheel cassette shall carry a 5 year non-prorated warranty, from the date of original equipment shipment from the factory. The first 12 months from the date of equipment startup, or 18 months from the date of original equipment shipment from the factory.

7. Unit shall include energy recovery wheel defrost control which includes an adjustable temperature sensor and timer wired to periodically stop the wheel rotation, which allows the warm exhaust air to defrost the wheel.

8. Unit shall include energy recovery wheel rotation detection sensors and a set of normally open and normally closed contacts for field indication of wheel rotation.

ITEM NO. 25: SECTION 23 73 13 MODULAR INDOOR CENTRAL-STATION AIR HANDLING UNITS

237313-7 SUBSTITUTE

G. Unit shall contain a factory mounted and tested energy recovery wheel. The energy recovery wheel shall be mounted in a rigid frame containing the wheel drive motor, drive belt, wheel seals and bearings. Frame shall slide out for service and removal from the cabinet. Wheel shall be Semco, Thermotech TF/TC or DRI.

1. A purge section shall be provided to eliminate transfer of exhaust air into the supply air, and shall be field adjustable.

2. Wheel rims shall be made of aluminum.

3. Heat transfer media shall be made out of corrugated aluminum foil with a high surface area per volume and laminar flow to assure that no fouling occurs on the internal heat transfer surface. The media shall have a flame spread of 0 and a smoke developed of 5 or less when rated in accordance with ASTM E84-09. All edges shall have an anti-corrosion epoxy coating.

4. Wheels which do not use “V” Belts shall be provided with two (2) sets of spare Belts per wheel. These spare belts shall be provided by the wheel manufacturer and delivered turned over to the owner prior to substantial completion.

5. The speed control system shall be a variable frequency inverter operating a standard inverter rated AC motor, capable of operating the rotor from 1/4 rpm to 20 rpm or to whatever is required for the type of media used. It shall integrate with the temperature control system to provide the required supply air temperature.

6. Energy recovery wheel cassette shall carry a 5 year non-prorated warranty, from the date of original equipment shipment from the factory. The first 12 months from the date of equipment startup, or 18 months from the date of original equipment shipment from the factory.

7. Unit shall include energy recovery wheel defrost control which includes an adjustable temperature sensor and timer wired to periodically stop the wheel rotation, which allows the warm exhaust air to defrost the wheel.

8. Unit shall include energy recovery wheel rotation detection sensors and a set of normally open and normally closed contacts for field indication of wheel rotation.
ITEM NO. 26: SECTION 23 81 29 VARIABLE REFRIGERANT FLOW HVAC SYSTEM
238129-14 Paragraph 3.7
ADD 3.7 CEILING CASSETTE CONTROLS
A. Ceiling cassette units serving core learning spaces, such as classrooms, shall be provided with HH speed lockout during occupied mode using the iTouchManager. HH fan speed shall only be enabled during building warm up and pull down.
B. In core learning areas that contain two cassette units, only the low speed shall be enabled during occupied mode using the iTouchManager. The other fans speeds shall only be enabled during building warm and pull down.

ITEM NO. 27: SECTION 26 05 01 GENERAL ELECTRICAL REQUIREMENTS
260501-1 Paragraph 1.2.A
SUBSTITUTE The Contractor shall obtain and pay for all charges and fees, and deliver all permits, licenses, certificates of inspection, etc., required by the authorities having jurisdiction, including the Maryland Department of the Environment. Deliver inspection, approval, and other certificates to the Owner prior to final acceptance of the work.

ITEM NO. 28: SECTION 27 13 00 SOUND SYSTEMS
271300-8 Paragraph 2.1.L.1
ADD THE FOLLOWING: “PROVIDE MINIMUM IF 2 LARGE AREA INDUCTION LOOP AMPLIFIERS (WILLIAM Sound DL210 Sys 2 2.0, Listen Tech D7-2 or approved equal). Provide 2 induction loop body pack receivers, 2 mini ear buds, 1 battery drop in charger, loop warning tape, ADA wall plaques, induction loop status sign, power loop wire, provide cloth based protective loop warning tape (minimum 2” x 1000 ft), provide field strength meter. Install induction loop cabling in ½” conduit in concrete floor slab in gym.”
271300-11 Paragraph 2.2.I.3
ADD THE FOLLOWING: “PROVIDE MINIMUM IF 1 LARGE AREA INDUCTION LOOP AMPLIFIERS (WILLIAM Sound DL210 Sys 2 2.0, Listen Tech D7-2 or approved equal). Provide 2 induction loop body pack receivers, 2 mini ear buds, 1 battery drop in charger, loop warning tape, ADA wall plaques, induction loop status sign, power loop wire, provide #14 AWG wiring, provide field strength meter. Install induction loop cabling in ½” conduit in concrete floor slab in cafeteria floor slab.”

ITEM NO. 29: SECTION 27 15 00 VOICE OVER INTERNET PROTOCOL (VoIP) AND DATA SYSTEMS
271500-1 Paragraph 1.1.C
DELETE The computer network installer shall be on the list of pre-qualified cabling contractors and shall be approved by the Frederick County Board of Education.
123551-19 Paragraph 3.14
DELETE Paragraph A.

ITEM NO. 30: SECTION 27 51 23 INTEGRATED TELECOMMUNICATIONS SYSTEM
271500-1 Paragraph 1.2.A
SUBSTITUTE The owner, FCPS, will furnish and install the intercommunication / public address system head end equipment, cabinet and master clock digital system only and make all of the speaker cabling final terminations at the head end equipment and program the entire PA system and perform the testing of the PA system. The contractor shall provide all speakers, cabling, conduits, analog clocks, rough-in
boxes, labeling and all other accessory items specified to provide a complete and operational system."

**ITEM NO. 31:**

**SECTION 28 23 01 INTEGRATED INTRUSION DETECTION SYSTEM**

**ADD**

C. Provide dual path (IP & cellular) commercial security communicator. Provide Honeywell IPGSM-4G with remote external antenna (Honeywell GSM-ANT3DB), SNA to N adapter (Honeywell WA762-CA) and 50 feet of low loss antenna cable (Honeywell 7626-50HC). Provide programming for contact id for all points. Provide all testing for remote contact id verification with central station.

**DRAWING ITEMS: TITLE SHEET**

**ITEM NO. TS1:**

**SHEET TS-2 LIST OF DRAWINGS**

**ADD**

Drawing C-3S WALL PROFILES to Civil List of Drawings.

**ADD**

Drawing C-3T WALL DETAILS to Civil List of Drawings.

**ADD**

Drawing C-3U WALL DETAILS to Civil List of Drawings.

**ADD**

Drawing A-9.11 FIRST FLOOR PATTERN PLAN to Architectural List of Drawings.

**ADD**


**ADD**

Drawing TE-4.9 ENLARGED PLANS to the Technology List of Drawings.

**DRAWING ITEMS: CIVIL**

**ITEM NO. C1:**

**SHEET C-0 COVER SHEET**

**ADD**

Sheet C-3S WALL PROFILES to the List of Drawings

**ADD**

Drawing C-3T WALL DETAILS to the List of Drawings.

**ADD**

Drawing C-3U WALL DETAILS to the List of Drawings.

**REVISE**

PARKING COUNT TABULATION per attached sheet SKC-0.1.

**ITEM NO. C2:**

**SHEET C-1A DEMOLITION PLAN**

**SUBSTITUTE**

This sheet in its entirety with revised sheet included in this Addendum.

**ITEM NO. C3:**

**SHEET C-1B DEMOLITION PLAN**

**SUBSTITUTE**

This sheet in its entirety with revised sheet included in this Addendum.

**ITEM NO. C4:**

**SHEET C-3A SITE PLAN**

**SUBSTITUTE**

This sheet in its entirety with revised sheet included in this Addendum.

**REVISE**

Pump station layout and 4” force main stationing.

**REVISE**

Alignment from MH-6 to EW-8.

**REVISE**

Parking and add sidewalk at handicap parking.

**REVISE**

Updated legend for pre-k/kindergarden plan area.

**ADD**

Add frost free hydrant at outdoor storage building.

**REVISE**

Showed tees and valves on plan.

**CLARIFY**

Fencing around SWM 4 to be 4’ high chain link fencing.

**ITEM NO. C5:**

**SHEET C-3I SEWER PROFILE**

**SUBSTITUTE**

This sheet in its entirety with revised sheet included in this Addendum.

**REVISE**

Profile from S-4 to property line.

**ITEM NO. C6:**

**SHEET C-3K SEWER PROFILE**

**SUBSTITUTE**

This sheet in its entirety with revised sheet included in this Addendum.
REVISE
Profile from S-4 to property line

ITEM NO. C7: SHEET C-3M WATER PROFILE
ADD Max Cone Height per attached sketch SKC-3M.1.

ITEM NO. C8: SHEET C-3S WALL PROFILES
ADD This sheet in its entirety with sheet included in this Addendum.

ITEM NO. C9: SHEET C-3T WALL DETAILS
ADD This sheet in its entirety with sheet included in this Addendum.

ITEM NO. C10: SHEET C-3U WALL DETAILS
ADD This sheet in its entirety with sheet included in this Addendum.

ITEM NO. C11: SHEET C-4A GRADING PLAN
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
REVISE Alignment from MH-6 to EW-8.
REVISE Grading at EW-8.
ADD Roof leader tie in at front entrance canopy.

ITEM NO. C12: SHEET C-4C STORMDRAIN PROFILES
REVISE Profile at EW-44 per attached sketch SKC-4C.1.

ITEM NO. C13: SHEET C-4J STORMDRAIN PROFILES
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
ADD Detail 1 Endwall 44.

ITEM NO. C14: SHEET C-5 SIGNAGE & STRIPING PLAN
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
ADD Handicap parking space and signage at from of building.
REVISE Pavement markings.
CLARIFY Provide 12" wide thermoplastic stop bar at all internal stop signs on site as shown but not labeled, unless noted otherwise.

ITEM NO. C15: SHEET C-5A SIGNAGE & STRIPING DETAIL
CLARIFY All signage shown in Figure 7B-5 shall be provided in this project.

DRAWING ITEMS: ARCHITECTURAL

ITEM NO. A1: SHEET A-0.5 ARCHITECTURAL SITE PLAN
ADD Reference at Mailbox W/ Stone Post SEE DETAILS ON SHEET A-5.7.

ITEM NO. A2: SHEET A-0.6 SITE DETAILS
CLARIFY Gate heights at Generator Enclosure to be 6'-0".

ITEM NO. A3: SHEET A-1.2 PARTIAL FIRST FLOOR PLAN – AREA B
REVISE Plan per attached sketch SKA-1.2.1.

ITEM NO. A4: SHEET A-1.9 ROOF PLAN
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
ITEM NO. A5: SHEET A-1.10 SHEET TITLE
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
CLARIFY Continuous Air and Vapor Barrier noted in typical details is required under ALL Roofing systems.

ITEM NO. A6: SHEET A-2.1 EXTERIOR ELEVATIONS
REVISE Elevation A16 per attached sketch SKA-2.1.1.

ITEM NO. A7: SHEET A-2.3 EXTERIOR ELEVATIONS
REVISE Elevations A16 and D16 per attached sketch SKA-2.3.1.

ITEM NO. A8: SHEET A-3.1 FINISH SCHEDULE
REVISE APC5 to SATC-1. Description to remain the same.
REVISE Ceiling at A010 to be EXP.
REVISE Floor at Room A015 to VCT.
REVISE Ceiling at A204B to be APC.
REVISE Floor at Rooms B104 and B104A to RBT.
REVISE Ceiling at Rooms B106C, B202 and C114 to be APC3.
REVISE Floor at Rooms B211 and B211A to RBT.
REVISE Room C104 Ceiling to be APC/SATC-1.
REVISE Ceiling at C116 to be APC2.
CLARIFY SATC-1 is specified in Section 09 52 50.

ITEM NO. A9: SHEET A-3.5 FRAME ELEVATIONS
ADD Hollow Metal Frame Type 19. Refer to sketch SKA-3.5.1.

ITEM NO. A10: SHEET A-4.7 WALL SECTIONS
REVISE XSection A15 per attached sketch SKA-4.7.2.

ITEM NO. A11: SHEET A-4.10 WALL SECTIONS
REVISE Section A12 per attached sketch SKA-4.10.1.
REVISE Section A18 per attached sketch SKA-4.10.2.

ITEM NO. A12: SHEET A-4.11 WALL SECTIONS
REVISE Section A14 per attached sketch SKA-4.11.1.

ITEM NO. A13: SHEET A-4.14 WALL SECTIONS
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.

ITEM NO. A14: SHEET A-5.7 PLAN AND MISC. DETAILS
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.

ITEM NO. A15: SHEET A-6.1 INTERIOR ELEVATIONS
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.

ITEM NO. A16: SHEET A-6.2 INTERIOR ELEVATIONS
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.

ITEM NO. A17: SHEET A-6.3 INTERIOR ELEVATIONS
REVISE Elevation K9 per attached sketch SKA-6.3.1.
| ITEM NO. A18: | SHEET A-6.4 INTERIOR ELEVATIONS SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. A20: | SHEET A-7.3 REFLECTED CEILING PLAN – FIRST FLOOR – AREA C1 REVISE | Ceiling Plan per attached sketch SKA-7.3.1. |
| ITEM NO. A22: | SHEET A-8.1 BID ALTERNATES SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. A23: | SHEET A-9.1 PARTIAL FIRST FLOOR FURNISHING PLAN – AREA A SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. A24: | SHEET A-9.2 PARTIAL FIRST FLOOR FURNISHING PLAN – AREA B SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. A26: | SHEET A-9.4 PARTIAL FIRST FLOOR FURNISHING PLAN – AREA C2 SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. A27: | SHEET A-9.9 SHEET TITLE SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. A28: | SHEET A-9.10 SHEET TITLE SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. A29: | SHEET A-9.11 FIRST FLOOR PATTERN PLAN ADD | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. A30: | SHEET A-9.12 SECOND FLOOR PATTERN PLAN ADD | This sheet in its entirety with revised sheet included in this Addendum. |

**DRAWING ITEMS: STRUCTURAL**

<p>| ITEM NO. S1: | SHEET S-1.2 PARTIAL FIRST FLOOR PLAN – AREA b SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. S2: | SHEET S-1.3 PARTIAL FIRST FLOOR PLAN – AREA C1 SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. S3: | SHEET S-1.6 PARTIAL SECOND FLOOR PLAN – AREA B SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |
| ITEM NO. S4: | SHEET S-1.7 PARTIAL SECOND FLOOR PLAN – AREA C1 SUBSTITUTE | This sheet in its entirety with revised sheet included in this Addendum. |</p>
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>SHEET NO.</th>
<th>DESCRIPTION</th>
<th>REVISED ITEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>S5:</td>
<td>S-1.10</td>
<td>PARTIAL ROOF PLAN AREA B</td>
<td>SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.</td>
</tr>
<tr>
<td>S6:</td>
<td>S-1.11</td>
<td>PARTIAL ROOF PLAN AREA C1</td>
<td>SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.</td>
</tr>
<tr>
<td>S7:</td>
<td>S-1.14</td>
<td>OUT BUILDINGS and DETAILS</td>
<td>SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.</td>
</tr>
<tr>
<td>S8:</td>
<td>S-3.2</td>
<td>WIND BRACING DETAILS</td>
<td>SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.</td>
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<tr>
<td>S9:</td>
<td>S-4.4</td>
<td>SECTIONS</td>
<td>SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.</td>
</tr>
<tr>
<td>M1:</td>
<td>M-2.2</td>
<td>PARTIAL FIRST FLOOR PLAN – AREA B</td>
<td>SUBSTITUTE REVISE Airflows, diffusers, and supply duct sizes associated with VRF-3.01, 3.02, &amp; 3.03.</td>
</tr>
<tr>
<td>M2:</td>
<td>M-2.3</td>
<td>PARTIAL FIRST FLOOR PLAN – AREA C1</td>
<td>SUBSTITUTE REVISE REVISE Location of duct rise and associated taps to coordinate with new ceiling elevation. REVISE DSS-5 return air ductwork and elevation of associated return grille.</td>
</tr>
<tr>
<td>M3:</td>
<td>M-2.7</td>
<td>PARTIAL SECOND FLOOR PLAN – AREA C1</td>
<td>SUBSTITUTE REVISE REVISE Ductwork and diffuser type in Platform high ceiling. REVISE Ductwork in Cafeteria.</td>
</tr>
<tr>
<td>M4:</td>
<td>M-2.9</td>
<td>ROOF PLAN</td>
<td>REVISE Location of gravity relief air vents serving DOAS-1 and DOAS-2 per attached sketch SKM-2.9.1.</td>
</tr>
<tr>
<td>M5:</td>
<td>M-3.2</td>
<td>PART PLAN – MECHANICAL – C204</td>
<td>SUBSTITUTE REVISE Location of DOAS-1 and DOAS-2 and all associated ductwork.</td>
</tr>
<tr>
<td>M6:</td>
<td>M-8.5</td>
<td>MISCELLANEOUS CONTROL DIAGRAMS</td>
<td>SUBSTITUTE ADD Control verbiage for Variable Refrigerant Flow (VRF) Control Diagram/Sequence.</td>
</tr>
<tr>
<td>M7:</td>
<td>M-9.1</td>
<td>MECHANICAL EQUIPMENT SCHEDULES</td>
<td>SUBSTITUTE REVISE Flow Measuring Station to Flow Meter Schedule.</td>
</tr>
<tr>
<td>M8:</td>
<td>M-9.2</td>
<td>MECHANICAL EQUIPMENT SCHEDULES</td>
<td>SUBSTITUTE REVISE Sound Pressure Level and CFM of VRF-1.01-1.04, 1.15-1.19, 1.23-1.27, 2.02-2.08, 2.14-2.18, 2.22-2.26, 5.01, and 6.01-6.02.</td>
</tr>
</tbody>
</table>
REVISE CFM of VRF-1.06-1.08, 1.30-1.32, 3.01-3.03, 5.03-5.05, 5.09, & 5.14-5.15.

**DRAWING ITEMS: PLUMBING**

**ITEM NO. P1:** SHEET P-2.5  PARTIAL SECOND FLOOR PLAN – AREA A
- **SUBSTITUTE**
  This sheet in its entirety with revised sheet included in this Addendum.
- **ADD**
  Add roof and overflow drains and piping.

**ITEM NO. P2:** SHEET P-2.7  PARTIAL SECOND FLOOR PLAN – AREA C1
- **SUBSTITUTE**
  This sheet in its entirety with revised sheet included in this Addendum.
- **ADD**
  Add roof and overflow drains and piping with revisions to roof and overflow drains and piping.

**ITEM NO. P3:** SHEET P-2.9  ROOF PLAN
- **SUBSTITUTE**
  This sheet in its entirety with revised sheet included in this Addendum.
- **ADD**
  Add roof and overflow drains and piping with revisions to locations and drain capacities.

**ITEM NO. P4:** SHEET P-6.3  SANITARY/VENT FLOW DIAGRAMS
- **SUBSTITUTE**
  This sheet in its entirety with revised sheet included in this Addendum.
- **ADD**
  Add floor drain and cleanouts.

**DRAWING ITEMS: ELECTRICAL**

**ITEM NO. E1:** SHEET E-0.1  LEGEND, SCHEDULES AND ABBREVIATIONS
- **SUBSTITUTE**
  This sheet in its entirety with revised sheet included in this Addendum.
- **REVISE**
  Ceiling and corner mounted vacancy sensors. Refer to revised sheet for additional information.

**ITEM NO. E2:** SHEET E-0.3  SITE PLAN – POWER & LIGHTING
- **SUBSTITUTE**
  This sheet in its entirety with revised sheet included in this Addendum.
- **ADD**
  Drawing Note 15. Refer to revised sheet for additional information.
- **ADD**
  Disconnect with Drawing Note 15 at Well Pump Building. Refer to revised sheet for additional information.
- **REVISE**
  Location of Light Pole P3 outside of Well Pump Building. Refer to revised sheet for additional information.

**ITEM NO. E3:** SHEET E-1.2  PARTIAL FIRST FLOOR PLAN – AREA B - POWER
- **SUBSTITUTE**
  This sheet in its entirety with revised sheet included in this Addendum.
- **REVISE**
  Location of Panel C1B, Panel C2B, XFMR TCB and XFMR TCB Primary Disconnect in Electrical B102. Refer to revised sheet for additional information.

**ITEM NO. E4:** SHEET E-1.3  PARTIAL FIRST FLOOR PLAN – AREA C1 - POWER
- **SUBSTITUTE**
  This sheet in its entirety with revised sheet included in this Addendum.
- **REVISE**
  Location of Projection Screen at Platform C110 per architectural revisions. Refer to revised sheet for additional information.
- **REVISE**
  Location of Dimming Panel SLD in Electrical C106. Refer to revised sheet for additional information.
ITEM NO. E5: SHEET E-1.9  ROOF PLAN - POWER
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
REVISE Locations of receptacles. Refer to revised sheet for additional information.

ITEM NO. E6: SHEET E-2.1  PARTIAL FIRST FLOOR PLAN – AREA A - LIGHTING
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
REVISE Type of occupancy sensor in Health A102, Reception A101 and Vestibule A010. Refer to revised sheet for additional information.
ADD Exit sign in Corridor A015, and occupancy sensor in Corridor A101B. Refer to revised sheet for additional information.

ITEM NO. E7: SHEET E-2.2  PARTIAL FIRST FLOOR PLAN – AREA B - LIGHTING
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
ADD Exit sign in Corridor B010 and occupancy sensor in Vestibule B015. Refer to revised sheet for additional information.
REVISE Location of occupancy sensor in Corridor B010. Length of one (1) fixture Type AJ in Corridor A015. Length of one (1) fixture Type AJ in Lobby B010. Refer to revised sheet for additional information.
DELETE Two (2) fixtures Type J1 in Lobby B010. Refer to revised sheet for additional information.

ITEM NO. E8: SHEET E-2.3  PARTIAL FIRST FLOOR PLAN – AREA C1 - LIGHTING
REVISE Type of lighting fixture and wall switch in PE Office C135. Type of lighting fixtures in Maintenance C127. Refer to sketch SKE-2.4.1.
DELETE Ceiling mounted vacancy sensor in PE Office C135. Line voltage wall switch in Maintenance C127. Refer to sketch SKE-2.4.1.

ITEM NO. E9: SHEET E-2.4  PARTIAL FIRST FLOOR PLAN – AREA C2 - LIGHTING
REVISE Type of lighting fixture and wall switch in PE Office C135. Type of lighting fixtures in Maintenance C127. Refer to sketch SKE-2.4.1.
DELETE Ceiling mounted vacancy sensor in PE Office C135. Line voltage wall switch in Maintenance C127. Refer to sketch SKE-2.4.1.

ITEM NO. E10: SHEET E-2.5  PARTIAL FIRST FLOOR PLAN – AREA A - LIGHTING
REVISE Type of lighting fixture and wall switch in Utility A204. Refer to sketch SKE-2.5.1.

ITEM NO. E11: SHEET E-3.1  PARTIAL FIRST FLOOR PLAN – AREA A – FIRE ALARM
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
REVISE Wall mounted fire alarm devices in Corridor A014, Corridor A013 and Corridor A012 to ceiling mounted fire alarm devices. Refer to revised sheet for additional information.

ITEM NO. E12: SHEET E-3.2  PARTIAL FIRST FLOOR PLAN – AREA B – FIRE ALARM
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
REVISE Wall mounted fire alarm devices in Corridor B013, Corridor B012 and Corridor B011 to ceiling mounted fire alarm devices. Refer to revised sheet for additional information.
ITEM NO. E13: SHEET E-3.5 PARTIAL SECOND FLOOR PLAN – AREA A – FIRE ALARM
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
REVISE Wall mounted fire alarm devices in Corridor A023, Corridor A022 and Corridor A021 to ceiling mounted fire alarm devices. Refer to revised sheet for additional information.

ITEM NO. E14: SHEET E-3.6 PARTIAL SECOND FLOOR PLAN – AREA B – FIRE ALARM
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
REVISE Wall mounted fire alarm devices in Corridor B023, Corridor B022 and Corridor B020 to ceiling mounted fire alarm devices. Refer to revised sheet for additional information.

ITEM NO. E15: SHEET E-5.1 SCHEMATIC POWER RISER DIAGRAM
REVISE Dry Type Transformer Schedule XFMR TC1C secondary wiring from “5#3/0+#4GW-2 ½”C (AL)” to “5-250KCMIL+#4GW-2 ½”C (AL).”
REVISE Dry Type Transformer Schedule XFMR TCA primary CB from “225A” to “300A.”
REVISE Dry Type Transformer Schedule XFMR TCB secondary wiring from “2 SETS (5-250KCMIL+#1GW-2 ½”C (AL)” to “2 SETS (5-350KCMIL+#1/0GW-3”C (AL).”
REVISE Dry Type Transformer Schedule XFMR TE2C secondary wiring from “5-300KCMIL+#2GW-3”C (AL)” to “5-500KCMIL+#2GW-4”C (AL).”
REVISE Dry Type Transformer Schedule XFMR TC1D secondary wiring from “5-300KCMIL+#2GW-3”C (AL)” to “5-500KCMIL+#2GW-4”C (AL).”
REVISE Distribution Panel DPC FDR 1 circuit breaker frame size from “225 to 400” and trip from “225A” to “300A.”
ADD Step 4A to MEMA PORTABLE GENERATOR SEQUENCING to read: “Turn off feeder breakers in Panel L1 serving Panel L2 and Panel SLD.”

ITEM NO. E16: SHEET E-7.1 PANEL SCHEDULES
DELETE “SPLIT BUS PANEL WITH 3P-225A CONTACTOR” from PANEL L1.

DRAWING ITEMS:
TECHNOLOGY

ITEM NO. TE1: SHEET TE-0.1 SYMBOLS LEGENDS AND ABBREVIATIONS – TELECOM
DELETE SYMBOL FOR TELEPHONE OUTLET – ADMINISTRATIVE – NOT USED
DELETE SYMBOL FOR SECURITY SYSTEM SIREN – NOT USED
REVISE MASTER INTERCOM STATION – PROVIDE AIPHONE JP-4HD 7-INCH DESKTOP TOUCHSCREEN INTERCOM MASTER STATION..
REVISE INTERCOM STATION – PROVIDE AIPHONE JP-DVF DOOR ENTRY STATION
REVISE TELEVISION/CATV OUTLET MH to 72” UNO.
CLARIFY AIPhone and all its components to be provided by the Contractor.

ITEM NO. TE2: SHEET TE-1.1 PARTIAL FIRST FLOOR PLAN – AREA A TELECOM
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
ADD Reception A101 : add 2 data drop to floor box for a total of 4 data drops in floor box.
ADD Volume control stations.
ADD Exterior of reception A101 : add exterior WiFi data drop.
ADD DRAWING NOTE #14
REVISE DRAWING NOTE #8.
CLARIFY cable tray shall be ladder type cable tray.
ITEM NO. TE3: SHEET TE-1.2 PARTIAL FIRST FLOOR PLAN – AREA B TELECOM
REVISE DRAWING NOTE #11: CABLE TRAY SHALL BE LADDER TYPE CABLE TRAY

ITEM NO. TE5: SHEET TE-2.1 PARTIAL FIRST FLOOR PLAN – AREA A SECURITY
ADD AllPhone intercom master station and outlet. Refer to sketch SKTE-2.1.1.
ADD Card reader at MDF A110B. Refer to sketch SKTE-2.1.1.
DELETE Card reader in Corridor A014 near Stair 2.

ITEM NO. TE6: SHEET TE-2.2 PARTIAL FIRST FLOOR PLAN – AREA B SECURITY
ADD Card Reader in Room B102 adjacent to door to IDF B102A.
DELETE Exterior Intercom Door Entry Station near Vestibule B015.
DELETE Card reader in Corridor B011 near Stair 3.
DELETE Card reader in Corridor B013 near Stair 4.

ITEM NO. TE7: SHEET TE-3.1 RISERS - TELECOM
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
DELETE CABLE TV INCOMING SERVICE, AMP, TAPS AND ASSOCIATED RG-11 COAX CABLE. ALL VIDEO DROPS SHALL BE CAT6.

ITEM NO. TE8: SHEET TE-4.1 DETAILS - TELECOM
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
DELETE Detail #9: CABLE TV INCOMING SERVICE, AMP, TAPS AND ASSOCIATED RG-11 COAX CABLE. ALL VIDEO DROPS SHALL BE CAT6.
DELETE REFERENCE TO “UPS POWER ARRAY CABINET (APC SYMEMETRA)”

ITEM NO. TE9: SHEET TE-4.3 DETAILS - TELECOM
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
REVISE DETAIL #3: PUBLIC ADDRESS INTERCOM CABINET SHALL BE FURNISHED AND INSTALLED BY FCPS. CONTRACTOR SHALL TEST AND TERMINATE ALL PA/INTERCOM CABLE IN AT PA CABINET.
DELETE Details #5 & 6 in their entirety.
REVISE DETAIL #8: MOUNTING HEIGHT SHALL BE BETWEEN 8 FT TO 10 FT AFG.

ITEM NO. TE10: SHEET TE-4.4 DETAILS - TELECOM
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
DELETE Details #5 & 11 in their entirety.
REVISE DETAIL #4: CABLE TRAY SHALL BE LADDER TYPE CABLE TRAY

ITEM NO. TE11: SHEET TE-4.8 DETAILS - TELECOM
SUBSTITUTE This sheet in its entirety with revised sheet included in this Addendum.
DELETE Detail #3: COAXIAL CABLE AND JACK. PROVIDE CAT6 JACK AND CABLE TO EACH VIDEO DROP.
CLARIFY DETAIL #5: DELETE WORDS “TOUCH SCREEN”, ADD WORDS “FLOOR BOX”, CHANGE DETAIL NAME FROM “MESSAGE DISPLAY” TO “VIDEO DISPLAY”
REVISE DETAIL #11: MOUNTING HEIGHT FROM 84 INCHES TO 56 INCHES.

ITEM NO. TE12: SHEET TE-4.9 ENLARGED PLANS
ADD This sheet in its entirety with revised sheet included in this Addendum.
INTERIOR COLOR AND FINISH SCHEDULE

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C  COLOR SCHEMES
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    Scheme 3  Classrooms
    Scheme 4  Media Center/Admin
    Scheme 5  Cafetorium
    Scheme 6  Gymnasium
    Scheme 7  Single User Toilet Rooms
              Public Toilet Rooms
    Scheme 8  Stairs
    Scheme 9  Custodial/Utility/Storage
**INTERIOR COLOR AND FINISH SCHEDULE**

### SECTION A - GENERAL NOTES

1. Color selections, listed in section B, specify colors and finishes for each specification section. All rooms are designated a Color Scheme on the Finish Schedule.

2. The Finish Schedule, lists the Color Scheme number in the "COLOR SCHEME" column. Note that typical color schemes apply to multiple rooms; therefore, not all materials listed in the color scheme will be used in every room.

3. Items marked ( . ) have not been chosen at this date and may need to be submitted and approved before selection.

4. Refer to specification for type of paint required on each substrate.

5. Submit samples of paint or stain for approval of color for all colors noted to match a material or another paint manufacturer.

6. Unless otherwise indicated in this schedule all gypsum board ceilings, bulkheads and/or exposed ceiling construction shall be painted PAINT-1. Rooms / Spaces with gypsum board ceilings, bulkheads and/or exposed ceiling construction other than PAINT-1 are indicated in Section B - Color Schemes and shown on the Accent Wall Floor Plans (to be selected).

7. Unless noted otherwise on this schedule, exposed construction is to be painted - paint color TBS except structural columns. All columns are to be painted PAINT-3. All exposed canopy structure that does not come pre-finished to be painted PAINT-8.

8. Unless otherwise indicated in this schedule all interior walls shall be painted "PAINT-1. Rooms / Spaces with accent walls and / or wainscot (color different from typical wall color) other than PAINT-1 are indicated in Section B - Color Schemes and shown on Accent Wall Plans.

9. Rooms with an accent wall (color different from other walls) are keyed on attached Accent Wall Floor Plans with shaded dashed and solid lines.

10. Vinyl transition strips (i.e. V.C.T. to concrete, carpet, or tile) are to match vinyl base in the same room unless noted otherwise.

11. Exterior H.M. doors and frames to be painted to match Metal Panel Type 1 unless otherwise noted. Interior H.M. frames to be painted PAINT-3 unless otherwise noted.

12. Items marked ( * ), sample shall be subject to architect approval in field before final decision is made.

13. Rooms with bulkheads with a color other than PAINT-1 are designated on the Bulkhead Color Plans.
## SECTION B - SUMMARY OF MATERIALS

### DIVISION 4 - MASONRY

<table>
<thead>
<tr>
<th>Specification</th>
<th>Material/Manufacturer</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick</td>
<td>Color 1</td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td>Color 2</td>
<td>TBD</td>
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<tr>
<td>Mortar</td>
<td>Brick Color 1</td>
<td>TBD</td>
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<tr>
<td></td>
<td>Brick Color 2</td>
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<tr>
<td>4&quot; Building Stone</td>
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<td>TBD</td>
</tr>
<tr>
<td>&quot;Cast Stone&quot;</td>
<td></td>
<td>TBD</td>
</tr>
<tr>
<td>4&quot; Building Stone</td>
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<td>TBD</td>
</tr>
<tr>
<td>Cast Stone Masonry</td>
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### DIVISION 5 - METALS

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<tr>
<th>Specification</th>
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<tr>
<td>Metal Stairs</td>
<td>Stairs 1,2,3,4</td>
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<tr>
<td>Railings</td>
<td>Stairs 1,2,3,4</td>
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</tr>
<tr>
<td>Stringer</td>
<td>Stairs 1,2,3,4</td>
<td>TBD</td>
</tr>
<tr>
<td>Handrails</td>
<td>Stairs 1,2,3,4</td>
<td>Stainless Steel</td>
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<tr>
<td>Column Covers</td>
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### DIVISION 6 - WOOD, PLASTICS, AND COMPOSITES

<table>
<thead>
<tr>
<th>Specification</th>
<th>Material/Manufacturer</th>
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<tbody>
<tr>
<td>Maple Veneer Plywood</td>
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### DIVISION 7 - THERMAL + MOISTURE PROTECTION

<table>
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<tr>
<th>Specification</th>
<th>Material/Manufacturer</th>
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<tbody>
<tr>
<td>Traffic Coatings</td>
<td>Battleship Gray</td>
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<tr>
<td>Metal Wall Panels</td>
<td>Metal Panel Type 1 Valspar Champagne Gold Metallic</td>
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<tr>
<td></td>
<td>Metal Panel Type 2 Valspar Champagne Gold Metallic</td>
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<tr>
<td>Metal Soffit Panels</td>
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<tr>
<td>Sheet Metal and Flashing</td>
<td>To Match metal panels</td>
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<tr>
<td>Manufacturer Roof Specialties</td>
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</tr>
<tr>
<td>Downspouts</td>
<td>To Match metal panels</td>
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</tr>
<tr>
<td>Casework/Millwork Sealant</td>
<td>Clear</td>
<td></td>
</tr>
<tr>
<td>Misc. Sealants</td>
<td>Paintable</td>
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<tr>
<td>Sealant at bricks</td>
<td>Custom Color (Match Mortar Color)</td>
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### DIVISION 8 - OPENINGS

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<tr>
<th>Specification</th>
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<tbody>
<tr>
<td>Hollow Metal Doors and Frames</td>
<td>Exterior HM - Brick</td>
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<tr>
<td></td>
<td>Exterior HM - Metal Panel</td>
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<tr>
<td></td>
<td>Interior HM - Doors</td>
<td>PAINT-3</td>
</tr>
<tr>
<td></td>
<td>Interior HM - Frames</td>
<td>PAINT-3</td>
</tr>
<tr>
<td>Flush Wood Doors</td>
<td>Clear White Maple</td>
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<tr>
<td>Interior Coiling Counter Door</td>
<td>Interior</td>
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<tr>
<td>Overhead Coiling Doors</td>
<td>Exterior</td>
<td>TBD</td>
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<tr>
<td>Exterior Storefront System</td>
<td>Storefront Windows and Doors</td>
<td>match Valspar Chamagne Gold Metallic</td>
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<tr>
<td>Frame Mounted Sunshades</td>
<td>match storefront</td>
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<tr>
<td>Louvers - Ruskin</td>
<td>In Brick</td>
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<td>In Metal Panel</td>
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<td>In Hollow Metal Frame</td>
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### DIVISION 9 - FINISHES

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<td>Glazed Wall Tile</td>
<td>Color 1 - Field (Gloss) CT-1 Daltile K101 White</td>
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<td></td>
<td>Color 1 Grount Mapei 01 Frost</td>
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<td>Color 2 - Accent (Gloss) CT-2 Daltile X114 Desert Gray</td>
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<td>Color 2 - Grount Mapei 27 Silver</td>
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<td>Color 3 - Accent (Gloss) CT-4 Daltile Q194 Electric Blue</td>
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<td>Color 3 - Grount Mapei 27 Silver</td>
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<td>Color 4 - Accent (Gloss) CT-6 Daltile Q174 Sea Breeze</td>
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<td></td>
<td>Color 4 - Grount Mapei 27 Silver</td>
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<td>Color 5 - Accent (Gloss) CT-3 Daltile 0182 Suede Gray</td>
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<td>Color 5 - Grount Mapei 27 Silver</td>
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<td>Procelain Tile Base</td>
<td>Dal-Tile - Porecelato Grigio Scuro CD42</td>
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<td>Grout Mapei 09 Gray</td>
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<td>Lay In Metal Panels</td>
<td>Gordon Interior Specialties</td>
<td>Wood grain film &quot;Maple&quot;</td>
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<td>Grid for lay-in metal panels</td>
<td>Armstrong</td>
<td>Natural Aluminum</td>
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<td>Interactive Acoustical Panels</td>
<td>Fabric Color 1</td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td>Fabric Color 2</td>
<td>TBD</td>
</tr>
<tr>
<td>Vented Rubber Wall Base</td>
<td>Johnstoneite</td>
<td>Black</td>
</tr>
<tr>
<td>VCT</td>
<td>VCT-1 Armstrong, Cool White 51899</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VCT-3 Armstrong, Field Gray 51927</td>
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</tr>
<tr>
<td></td>
<td>VCT-2 Armstrong, Pewter 51908</td>
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<tr>
<td></td>
<td>VCT-4 Armstrong, Bikini Blue 57512</td>
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<td></td>
<td>VCT-5 Armstrong, Marina Blue 51920</td>
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<tr>
<td>LVT</td>
<td>LVT-1 Mannington Amatico Composite Calcium AR0SGN11</td>
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<td>LVT-2 Mannington Amatico Composite Pumice AR0SGN31</td>
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<td></td>
<td>LVT-3 Mannington Amatico Composite Flint AR0SGN32</td>
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<td>LVT-4 Mannington Helsinki ARGACF90</td>
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<td></td>
<td>LVT-5 Mannington Paris ARGACF92</td>
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<td>Rubber Flooring</td>
<td>Mondo</td>
<td>Harmoni HS119 Dary Grey</td>
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<tr>
<td>Material Type</td>
<td>Manufacturer/Design</td>
<td>Color/Model</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>---------------------</td>
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<tr>
<td>Rubber Wall Base</td>
<td>Johnsonite</td>
<td>TBD</td>
</tr>
<tr>
<td>Hybrid Resilient Tile Flooring</td>
<td>Mannington</td>
<td>Precision Geometry 32563</td>
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<tr>
<td>Resilient Athletic Flooring</td>
<td>Mondo - Advance</td>
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<tr>
<td>Vented Rubber Wall Base</td>
<td>Johnsonite</td>
<td>Black</td>
</tr>
<tr>
<td>Resinous Mix Terrazzo Flooring</td>
<td>TBD</td>
<td>TBD</td>
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<tr>
<td>Fluid Applied Resinous Flooring</td>
<td>Durex Colorflake</td>
<td>13 Horizon</td>
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<tr>
<td>Resilient Athletic Flooring</td>
<td>Sika Industrial Flooring - Quartzite 60</td>
<td>Cool Water</td>
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<td>Interior Paint</td>
<td>AP-2</td>
<td>PAINT-1</td>
</tr>
<tr>
<td>PAINT-2</td>
<td>TBD</td>
<td>TBD</td>
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<td>PAINT-3</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>PAINT-4</td>
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<tr>
<td>PAINT-5</td>
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</tr>
<tr>
<td>PAINT-6</td>
<td>TBD</td>
<td>TBD</td>
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<tr>
<td>Wood Stain</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>High Performance Coatings</td>
<td>Rails/Stairs (except stringers)</td>
<td>TBD</td>
</tr>
<tr>
<td>Toilet Rooms/Kitchen</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Canopy Structure (except columns)</td>
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<tr>
<td>Stringers @ Stairs 2,3,4</td>
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**DIVISION 10 - SPECIALTIES**

<table>
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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>101101</td>
<td>Visual Display Boards</td>
<td>Markerboard No 111 White</td>
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<tr>
<td>101125</td>
<td>Display Cases</td>
<td>Frames Salin anodized aluminum</td>
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<tr>
<td>101400</td>
<td>Interior Signage</td>
<td>Gemini - Room Signage, Plaque</td>
</tr>
<tr>
<td>102113</td>
<td>Cubicles</td>
<td>Fabric Mesh - Construction Specialties</td>
</tr>
<tr>
<td>102260</td>
<td>Accordian Folding Partitions</td>
<td>Won Door</td>
</tr>
<tr>
<td>105613</td>
<td>Metal Storage Shelving</td>
<td>Art Metal Products 725 Hallowell Gray</td>
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**DIVISION 11 - EQUIPMENT**

<table>
<thead>
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<tr>
<td>115123</td>
<td>Library Stack Systems</td>
<td>Tesco Maple - Fusion Maple</td>
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<td>122413</td>
<td>Roller Shades</td>
<td>Translucents</td>
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<tr>
<td>123550</td>
<td>Plastic Laminate (Educational Casework)</td>
<td>Wilson Art Fusion Maple 7909-60</td>
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<tr>
<td>123600</td>
<td>Plastic Laminate Countertop</td>
<td>Wilson Art 4486-38 Pearl Soapstone</td>
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**DIVISION 12 - FURNISHINGS**

<table>
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<tbody>
<tr>
<td>114000</td>
<td>Food Service Equipment</td>
<td>Astro Strandz</td>
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<tr>
<td>111433</td>
<td>Platform Curtain</td>
<td>KM Fabrics, Inc. TBD</td>
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<tr>
<td>110623</td>
<td>Basketball Structure</td>
<td>Black</td>
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<tr>
<td>116653</td>
<td>Dividers</td>
<td>Mesh TBD</td>
</tr>
<tr>
<td>116733</td>
<td>Climbing Wall Pads</td>
<td>TDB</td>
</tr>
<tr>
<td>Item Description</td>
<td>Material Type</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>-------</td>
</tr>
<tr>
<td>Solid Surface - Countertop</td>
<td>Corian</td>
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<tr>
<td>Metal Flake Acrylic Surface Material</td>
<td>Alkemi</td>
<td>Cuprum 905</td>
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<tr>
<td>Natural Quartz &amp; Resin Composite Sills</td>
<td>LG</td>
<td>Viatera Nimbus</td>
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<td>Entrance Floor Mats</td>
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**DIVISION 13 - SPECIAL CONSTRUCTION**

<table>
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<th>Item Description</th>
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<tbody>
<tr>
<td>142400 Elevator - Floor VCT</td>
<td>Armstrong</td>
<td>TBD</td>
</tr>
<tr>
<td>Wall: Plastic Laminate</td>
<td>Wilsonart</td>
<td>Fusion Maple</td>
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**DIVISION 14 - CONVEYING EQUIPMENT**

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Material Type</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>224278 Lavatory Decks, single</td>
<td>Bradley Terreon</td>
<td>Silver Mist</td>
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<tr>
<td>Group Lavatory Wash Stations</td>
<td>Bradley Terreon</td>
<td>Moon Dust</td>
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**DIVISION 22 - PLUMBING**

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Material Type</th>
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<tbody>
<tr>
<td>238233 Fin Tube Covers</td>
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<td>TBD</td>
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<td>238238 Cabinet Unit Heaters</td>
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**DIVISION 23 - HVAC**

<table>
<thead>
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<th>Item Description</th>
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<tr>
<td>255600 Exterior Lighting</td>
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<tr>
<td>Pole Fixtures</td>
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<td>TBD</td>
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**DIVISION 26 - ELECTRICAL**

<table>
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<tr>
<td>323000 Benches</td>
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<tr>
<td>Bike Racks</td>
<td></td>
<td>TBD</td>
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<tr>
<td>Trash Receptacles</td>
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### SECTION C - COLOR SCHEMES

#### SCHEME 1

<table>
<thead>
<tr>
<th>Area</th>
<th>Materials</th>
<th>Color</th>
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<tbody>
<tr>
<td>Floor</td>
<td>VCT</td>
<td>Armstrong, Cool White 51899</td>
</tr>
<tr>
<td></td>
<td>VCT-1 Field</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VCT-3 Border</td>
<td>Armstrong, Field Gray 51927</td>
</tr>
<tr>
<td></td>
<td>VCT-2 Border</td>
<td>Armstrong, Pewter 51908</td>
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<tr>
<td></td>
<td>VCT-4 Light Blue</td>
<td>Armstrong, Bikini Blue 57512</td>
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<tr>
<td></td>
<td>VCT-5 Blue</td>
<td>Armstrong, Marina Blue 51820</td>
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<tr>
<td>Alternates</td>
<td>LVT &amp; Terrazzo</td>
<td>Match VCT pattern</td>
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<tr>
<td>Base</td>
<td>Porcelain Tile</td>
<td>Dal-Tile - 4&quot;x8&quot;</td>
</tr>
<tr>
<td></td>
<td>Mapei</td>
<td>Grigio Scuro CD42</td>
</tr>
<tr>
<td>Walls</td>
<td>Painted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PAINT-1 Field</td>
<td>TBD</td>
</tr>
<tr>
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<td>PAINT-2 Accent</td>
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<td>PAINT-3 All Metals</td>
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<td>PAINT-4 Light Blue</td>
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<td>PAINT-5 Blue</td>
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<td>PAINT-7</td>
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<td>PAINT-1 Field</td>
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<td></td>
<td>PAINT-2 Accent</td>
<td>TBD</td>
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<tr>
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<td>PAINT-5 Blue</td>
<td>TBD</td>
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<tr>
<td></td>
<td>PAINT-6 Dark Blue</td>
<td>TBD</td>
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<tr>
<td>Acoustical</td>
<td>APC-1 2x4 Grid</td>
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<td>Panel Ceiling Refer to RCP's</td>
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<tr>
<td>Doors and Frames Doors</td>
<td>Exterior Hollow Metal</td>
<td>TBD</td>
</tr>
<tr>
<td>Frames</td>
<td>Interior Hollow Metal</td>
<td>TBD</td>
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<tr>
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<td>Misc. Materials Visual Display</td>
<td>Tackboards/Tackstrips</td>
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<td>Display Cases Wood</td>
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<td>Lockers</td>
<td>Art Metal Products</td>
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<tr>
<td>SCHEME 2</td>
<td>VESTIBULE</td>
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<tr>
<td>Area</td>
<td>Materials</td>
<td>Color</td>
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<td>Floor</td>
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<td>Walk-off Mat</td>
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<td>Dal-Tile - Porecelato Grigio Scuro CD42</td>
<td>Dal-Tile - Porecelato Grigio Scuro CD42</td>
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<td></td>
<td>Grout</td>
<td>Mapei 09 Gray</td>
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<td>Walls</td>
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<td>PAINT-1</td>
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<td>Field</td>
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<td>TBD</td>
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<td>Doors and Frames</td>
<td>Doors Exterior Hollow Metal TDB</td>
<td>Interior Hollow Metal PAINT-3</td>
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<td>Frames</td>
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# SECTION C - COLOR SCHEMES

## SCHEME 3A
### CLASSROOMS (LIGHT BLUE - SKY)
<table>
<thead>
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<th>Area</th>
<th>Materials</th>
<th>Color</th>
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<tbody>
<tr>
<td>Floor</td>
<td>VCT</td>
<td>VCT-1 Field Armstrong, Cool White 51899</td>
</tr>
<tr>
<td></td>
<td>VCT-3 Border</td>
<td>Armstrong, Field Gray 51927</td>
</tr>
<tr>
<td></td>
<td>VCT-4 Light Blue</td>
<td>Armstrong, Bikini Blue 57512</td>
</tr>
<tr>
<td>Base</td>
<td>Rubber (TS)</td>
<td>TBD</td>
</tr>
<tr>
<td>Walls</td>
<td>Painted</td>
<td>PAINT-1 Field Sherwin Williams SW7012 Creamy</td>
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<tr>
<td></td>
<td>PAINT-4 Light Blue</td>
<td>TBD</td>
</tr>
<tr>
<td>Interactive Acoustical Panels</td>
<td>AP-3, AP-4, AP-5 - Refer to Interior Elevations</td>
<td>Fabric Color 1 TBD</td>
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<tr>
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<td></td>
<td>Fabric Color 2 TBD</td>
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<td>Ceilings</td>
<td>Acoustical Panel Ceiling</td>
<td>APC-1 2x4 TBD</td>
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<tr>
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<td>Bulkheads</td>
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</tr>
<tr>
<td>Doors and Frames</td>
<td>Doors</td>
<td>Interior Hollow Metal PAINT-3</td>
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<tr>
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<td></td>
<td>Wood Plain Sliced Maple Clear</td>
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<td>Frames</td>
<td>Interior Hollow Metal PAINT-3</td>
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<tr>
<td>Misc. Items</td>
<td>Casework/Millwork</td>
<td>Plastic Laminate Countertops Wilsonart Pearl Soapstone 4086-38</td>
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<td>Plastic Laminate Cabinets Wilsonart Fusion Maple 7909-60</td>
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<td>Epoxy Resin Counter Black</td>
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<td>Solid Surface Countertop Corian Juniper</td>
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<td>Roller Shades</td>
<td>TBD</td>
</tr>
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<td>Blackout Shades</td>
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<tr>
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<td>Visual Display</td>
<td>Markerboards TBD</td>
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<tr>
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<td>Tackboard &amp; Tackstrips TBD</td>
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## SCHEME 3B
### CLASSROOMS (BLUE - WATER)
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<tbody>
<tr>
<td>Floor</td>
<td>VCT</td>
<td>VCT-1 Field Armstrong, Cool White 51899</td>
</tr>
<tr>
<td></td>
<td>VCT-3 Border</td>
<td>Armstrong, Field Gray 51927</td>
</tr>
<tr>
<td></td>
<td>VCT-4 Light Blue</td>
<td>Armstrong, Bikini Blue 57512</td>
</tr>
<tr>
<td>Base</td>
<td>Rubber (TS)</td>
<td>Johnsonite, 29 Moonrock</td>
</tr>
<tr>
<td>Walls</td>
<td>Painted</td>
<td>PAINT-1 Field Sherwin Williams SW7012 Creamy</td>
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<tr>
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<td>PAINT-6 Blue</td>
<td>Sherwin Williams SW6795 Major Blue</td>
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<td>Interactive Acoustical Panels</td>
<td>AP-3, AP-4, AP-5 - Refer to Interior Elevations</td>
<td>Fabric Color 1 TBD</td>
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<td></td>
<td>Fabric Color 2 TBD</td>
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<tr>
<td>Doors and Frames</td>
<td>Doors</td>
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<td></td>
<td>Wood Plain Sliced Maple Clear</td>
</tr>
<tr>
<td></td>
<td>Frames</td>
<td>Interior Hollow Metal Sherwin Williams SW7018 Dovetail</td>
</tr>
<tr>
<td>Misc. Items</td>
<td>Casework/Millwork</td>
<td>Plastic Laminate Countertops Wilsonart Pearl Soapstone 4086-38</td>
</tr>
<tr>
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## SECTION C - COLOR SCHEMES

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# SECTION C - COLOR SCHEMES

## SCHEME 5  CAFETERIA / KITCHEN

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### SECTION C - COLOR SCHEMES

#### SCHEME 7A - SINGLE FIXTURE TOILET ROOMS

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#### SCHEME 7B - PUBLIC TOILET ROOMS

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Ceilings: Vinyl Covered Gypsum Tile
Toilet Partitions: General Partitions TBD
Lavatories: Bradley - Terreon Solid Surface Moon Dust
### SECTION C - COLOR SCHEMES

#### SCHEME 8

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## SECTION 00 01 15 - LIST OF DRAWING SHEETS

### GENERAL
- **TS-1** TITLE SHEET
- **TS-2** LIST OF DRAWINGS

### CIVIL
- **C-0** COVER SHEET
- **C-1** OVERALL EXISTING CONDITIONS PLAN
- **C-1A** DEMOLITION PLAN
- **C-1B** DEMOLITION PLAN
- **C-2** OVERALL EROSION & SEDIMENT CONTROL PLAN
- **C-2A** EROSION & SEDIMENT CONTROL PLAN
- **C-2B** EROSION & SEDIMENT CONTROL PLAN
- **C-2C** EROSION & SEDIMENT CONTROL PLAN
- **C-2D** EROSION & SEDIMENT CONTROL PLAN
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END OF SECTION
SECTION 08 71 00

DOOR HARDWARE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary
   Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section includes:

   1. Mechanical and electrified door hardware for:

      a. Swinging doors.

   2. Electronic access control system components, including:

      a. Electronic access control devices.

   3. The intent of the hardware specification is to specify the hardware for interior and
      exterior doors, and to establish a type, continuity, and standard of quality. However, it is
      the door hardware supplier’s responsibility to thoroughly review existing conditions,
      schedules, specifications, drawings, and other Contract Documents to verify the
      suitability of the hardware specified.

B. Exclusions: Unless specifically listed in hardware sets, hardware is not specified in this
   section for:

   1. Windows
   2. Cabinets (casework), including locks in cabinets
   3. Signage
   4. Toilet accessories
   5. Overhead doors

C. Related Sections:

   1. Division 01 Section “Alternates” for alternates affecting this section.
   2. Division 07 Section “Joint Sealants” for sealant requirements applicable to threshold
      installation specified in this section.
   3. Division 26 sections for connections to electrical power system and for low-voltage
      wiring.
   4. Division 28 sections for coordination with other components of electronic access control
      system.
1.03 REFERENCES

A. UL - Underwriters Laboratories
   1. UL 10B - Fire Test of Door Assemblies
   2. UL 10C - Positive Pressure Test of Fire Door Assemblies
   3. UL 1784 - Air Leakage Tests of Door Assemblies
   4. UL 305 - Panic Hardware

B. DHI - Door and Hardware Institute
   1. Sequence and Format for the Hardware Schedule
   2. Recommended Locations for Builders Hardware
   3. Key Systems and Nomenclature

C. ANSI - American National Standards Institute
   1. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties

1.04 SUBMITTALS

A. General:
   1. Submit in accordance with Conditions of Contract and Division 01 requirements.
   2. Highlight, encircle, or otherwise specifically identify on submittals deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
   3. Prior to forwarding submittal, comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, “EXAMINATION” article, herein.

B. Action Submittals:
   1. Product Data: Technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
   2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:
      a. Wiring Diagrams: For power, signal, and control wiring and including:
         1) Details of interface of electrified door hardware and building safety and security systems.
         2) Schematic diagram of systems that interface with electrified door hardware.
         3) Point-to-point wiring.
         4) Risers.
   3. Samples for Verification: If requested by Architect, submit production sample or sample installations of each type of exposed hardware unit in finish indicated, and tagged with full description for coordination with schedule.
a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule: Submit schedule with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening, include:
   a. Door Index; include door number, heading number, and Architects hardware set number.
   b. Opening Lock Function Spreadsheet: List locking device and function for each opening.
   c. Quantity, type, style, function, size, and finish of each hardware item.
   d. Name and manufacturer of each item.
   e. Fastenings and other pertinent information.
   f. Location of each hardware set cross-referenced to indications on Drawings.
   g. Explanation of all abbreviations, symbols, and codes contained in schedule.
   h. Mounting locations for hardware.
   i. Door and frame sizes and materials.
   j. Name and phone number for local manufacturer's representative for each product.
   k. Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and access control components). Operational description should include operational descriptions for: egress, ingress (access), and fire/smoke alarm connections.
   1) Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work that is critical in Project construction schedule.

5. Key Schedule:
   a. After Keying Conference, provide keying schedule listing levels of keying as well as explanation of key system's function, key symbols used and door numbers controlled.
   b. Use ANSI/BHMA A156.28 “Recommended Practices for Keying Systems” as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
   c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
   d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
   e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion.
      1) Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
   f. Prepare key schedule by or under supervision of supplier, detailing Owner’s final keying instructions for locks.
6. Templates: After final approval of hardware schedule, provide templates for doors, frames and other work specified to be factory or shop prepared for door hardware installation.

C. Informational Submittals:

1. Qualification Data: For Supplier, Installer and Architectural Hardware Consultant.
2. Product data for electrified door hardware:
   a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.

3. Certificates of Compliance:
   a. UL listings for fire-rated hardware and installation instructions if requested by Architect or Authority Having Jurisdiction.
   b. Installer Training Meeting Certification: Letter of compliance, signed by Contractor, attesting to completion of installer training meeting specified in “QUALITY ASSURANCE” article, herein.
   c. Electrified Hardware Coordination Conference Certification: Letter of compliance, signed by Contractor, attesting to completion of electrified hardware coordination conference, specified in “QUALITY ASSURANCE” article, herein.

4. Warranty: Special warranty specified in this Section.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:
   a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
   b. Catalog pages for each product.
   c. Factory order acknowledgement numbers (for warranty and service)
   d. Name, address, and phone number of local representative for each manufacturer.
   e. Parts list for each product.
   f. Final approved hardware schedule, edited to reflect conditions as-installed.
   g. Final keying schedule
   h. Copies of floor plans with keying nomenclature
   i. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
   j. Copy of warranties including appropriate reference numbers for manufacturers to identify project.

1.05 QUALITY ASSURANCE

A. Supplier Qualifications and Responsibilities: Recognized architectural hardware supplier with record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that provides certified Architectural Hardware Consultant (AHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.

1. Warehousing Facilities: In Project's vicinity.
2. Scheduling Responsibility: Preparation of door hardware and keying schedules.

3. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

4. Coordination Responsibility: Assist in coordinating installation of electronic security hardware with Architect and electrical engineers and provide installation and technical data to Architect and other related sub subcontractors.

   a. Upon completion of electronic security hardware installation, inspect and verify that all components are working properly.

B. Architectural Hardware Consultant Qualifications: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:

   1. For door hardware, DHI-certified, Architectural Hardware Consultant (AHC).
   2. Can provide installation and technical data to Architect and other related subcontractors.
   3. Can inspect and verify components are in working order upon completion of installation.
   5. Capable of coordinating installation of electrified hardware with Architect and electrical engineers.

C. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

D. Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

E. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

F. Accessibility Requirements: For door hardware on doors in an accessible route, comply with governing accessibility regulations cited in “REFERENCES” article, herein.

G. Keying Conference

   1. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:

      a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
      b. Preliminary key system schematic diagram.
      c. Requirements for key control system.
      d. Requirements for access control.
      e. Address for delivery of keys.

H. Pre-installation Conference
1. Review and finalize construction schedule and verify availability of materials, Installer’s personnel, equipment, and facilities needed to make progress and avoid delays.
2. Inspect and discuss preparatory work performed by other trades.
3. Inspect and discuss electrical roughing-in for electrified door hardware.
4. Review sequence of operation for each type of electrified door hardware.
5. Review required testing, inspecting, and certifying procedures.

I. Coordination Conferences:

1. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.
2. Electrified Hardware Coordination Conference: Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.

B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

1. Deliver each article of hardware in manufacturer’s original packaging.

C. Project Conditions:

1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
2. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.

D. Protection and Damage:

1. Promptly replace products damaged during shipping.
2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work.
3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.

E. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

F. Deliver keys and permanent cores to Owner by registered mail or overnight package service.
1.07 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

1.08 WARRANTY

A. Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Beginning from date of Substantial Completion, for durations indicated.
   a. Closers:
      1) Mechanical: 30 years.
      2) Electrified: 2 years.
   b. Automatic Operators: 2 years.
   c. Exit Devices:
      1) Mechanical: 3 years.
      2) Electrified: 1 year.
   d. Locksets:
      1) Mechanical: 3 years.
      2) Electrified: 1 year.
   e. Continuous Hinges: Lifetime warranty.
   f. Key Blanks: Lifetime

2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

1.09 MAINTENANCE

A. Maintenance Tools: Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. The Owner requires use of certain products for their unique characteristics and project suitability to insure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: “No Substitute.”

1. Where “No Substitute” is noted, submittals and substitution requests for other products will not be considered.

B. Approval of manufacturers and/or products other than those listed as “Scheduled Manufacturer” or “Acceptable Manufacturers” in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.

C. Approval of products from manufacturers indicated in “Acceptable Manufacturers” is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer’s product.

D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

A. Fasteners

1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
3. Provide concealed fasteners for hardware units exposed when door is closed except when no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless thru-bolts are required to fasten hardware securely. Review door specification and advise Architect if thru-bolts are required.
4. Install hardware with fasteners provided by hardware manufacturer.

B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

2.03 HINGES

A. Manufacturers and Products:

B. Requirements:

1. Provide hinges conforming to ANSI/BHMA A156.1.
2. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:
   a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
   b. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high
3. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:
   a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
   b. Interior: Heavy weight, steel, 5 inches (127 mm) high
4. 2 inches or thicker doors:
   a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
   b. Interior: Heavy weight, steel, 5 inches (127 mm) high
5. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and
   one additional hinge for each 30 inches (762 mm) of additional door height.
6. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
   a. Steel Hinges: Steel pins
   b. Non-Ferrous Hinges: Stainless steel pins
   c. Out-Swinging Exterior Doors: Non-removable pins
   d. Out-Swinging Interior Lockable Doors: Non-removable pins
   e. Interior Non-lockable Doors: Non-rising pins
7. Width of hinges: 4-1/2 inches (114 mm) at 1-3/4 inch (44 mm) thick doors, and 5 inches
   (127 mm) at 2 inches (51 mm) or thicker doors. Adjust hinge width as required for door,
   frame, and wall conditions to allow proper degree of opening.

2.04 CONTINUOUS HINGES

A. Aluminum Geared

1. Manufacturers:
   a. Scheduled Manufacturer: Ives.

2. Requirements:
   a. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26,
      Grade 1.
   b. Provide aluminum geared continuous hinges, where specified in the hardware sets,
      fabricated from 6063-T6 aluminum.
   c. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating
      operation.
d. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.

e. On fire-rated doors, provide aluminum geared continuous hinges that are classified for use on rated doors by testing agency acceptable to authority having jurisdiction.

f. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with sufficient number and wire gage to accommodate electric function of specified hardware.

g. Install hinges with fasteners supplied by manufacturer.

h. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

2.05 ELECTRIC POWER TRANSFER

A. Manufacturers:
   a. Scheduled Manufacturer: Von Duprin EPT-10.

B. Provide power transfer with electrified options as scheduled in the hardware sets. Provide with number and gage of wires sufficient to accommodate electric function of specified hardware.

C. Locate electric power transfer per manufacturer’s template and UL requirements, unless interference with operation of door or other hardware items.

2.06 FLUSH BOLTS

A. Manufacturers:
   1. Scheduled Manufacturer: Ives.

B. Requirements:
   1. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless-steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch (305 mm) steel or brass rods at doors up to 90 inches (2286 mm) in height. For doors over 90 inches (2286 mm) in height increase top rods by 6 inches (152 mm) for each additional 6 inches (152 mm) of door height. Provide dust-proof strikes at each bottom flush bolt.

2.07 COORDINATORS

A. Manufacturers:
   1. Scheduled Manufacturer: Ives.
B. Requirements:

1. Where pairs of doors are equipped with automatic flush bolts, an astragal, or other hardware that requires synchronized closing of the doors, provide bar-type coordinating device, surface applied to underside of stop at frame head.

2. Provide filler bar of correct length for unit to span entire width of opening, and appropriate brackets for parallel arm door closers, surface vertical rod exit device strikes or other stop mounted hardware. Factory-prepared coordinators for vertical rod devices as specified.

2.08 MORTISE LOCKS

A. Manufacturers and Products:


B. Requirements:

1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1, and UL Listed for 3 hour fire doors.

2. Provide locks manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.

3. Provide lock case that is multi-function and field reversible for handing without opening case. Cylinders: Refer to “KEYING” article, herein.

4. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1 inch (25 mm) throw, constructed of stainless steel.

5. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.

6. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.

   a. Lever Design: Schlage 06A.

2.09 CYLINDRICAL LOCKS – GRADE 1

A. Manufacturers and Products:


B. Requirements:

1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3 hour fire doors.

2. Cylinders: Refer to “KEYING” article, herein.

3. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2 inch latch throw. Provide proper latch throw for UL listing at pairs.

4. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
5. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
7. Provide electrified options as scheduled in the hardware sets.
8. Lever Trim: Solid cast levers without plastic inserts, and wrought roses on both sides.
   a. Lever Design: Best 15 lever.

2.10 AUXILIARY LOCKS

A. Deadlocks:
   1. Manufacturers and Products:
      a. Scheduled Manufacturer and Product: Schlage L400 series.
      b. Acceptable Manufacturers and Products: No substitution.
   2. Requirements:
      a. Provide mortise deadlock series conforming to ANSI/BHMA A156 and function as specified.
      b. Cylinders: Refer to “KEYING” article, herein.
      c. Provide deadlocks with standard 2-3/4 inches (70 mm) backset. Provide deadbolt with full 1 inch (25 mm) throw, constructed of stainless steel.
      d. Provide manufacturer’s standard strike.

2.11 EXIT DEVICES

A. Manufacturers and Products:

B. Requirements:
   1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
   2. Cylinders: Refer to “KEYING” article, herein.
   3. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
   4. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
   5. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
   6. Provide flush end caps for exit devices.
   7. Provide exit devices with manufacturer’s approved strikes.
   8. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
   9. Mount mechanism case flush on face of doors, or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
10. Provide cylindrical or hex-key dogging as specified at non fire-rated openings.
11. Provide dogging indicators (CDSI) for visible indication of dogging status.
12. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
13. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
14. Provide electrified options as scheduled.
15. Top latch mounting: double or single tab mount for steel doors, face mount for aluminum doors eliminating requirement of tabs, and double tab mount for wood doors.
16. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

2.12 CYLINDERS

A. Manufacturers:

1. Scheduled Manufacturer: Best.

B. Requirements:

1. Provide interchangeable cylinders/cores to match Owner’s existing key system, compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer’s series as indicated. Refer to “KEYING” article, herein.

C. Construction Keying:

1. Replaceable Construction Cores.

   a. Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
      1) 3 construction control keys
      2) 12 construction change (day) keys.

   b. Owner or Owner’s Representative will replace temporary construction cores with permanent cores.

2.13 KEYING

A. Provide a factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

B. Provide cylinders/cores keyed into Owner’s existing factory registered keying system.

C. Comply with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

D. Requirements:

   1. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
a. Master Keying system as directed by the Owner.

2. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.

3. Provide keys with the following features:
   a. Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
   b. Patent Protection: Keys and blanks protected by one or more utility patent(s).

4. Identification:
   a. Mark permanent cylinders/cores and keys with applicable blind code per DHI publication “Keying Systems and Nomenclature” for identification. Do not provide blind code marks with actual key cuts.
   b. Identification stamping provisions must be approved by the Architect and Owner.
   c. Stamp cylinders/cores and keys with Owner’s unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with “DO NOT DUPLICATE” along with the “PATENTED” or patent number to enforce the patent protection.
   d. Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
   e. Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.

5. Quantity: Furnish in the following quantities.
   a. Change (Day) Keys: 3 per cylinder/core.
   b. Permanent Control Keys: 3.

2.14 KEY CONTROL SYSTEM

A. Manufacturers:
   1. Scheduled Manufacturer: Telkee.

B. Requirements:
   1. Provide key control system, including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150% of number of locks required for Project.
      a. Provide complete cross index system set up by hardware supplier, and place keys on markers and hooks in cabinet as determined by final key schedule.
      b. Provide hinged-panel type cabinet for wall mounting.
2.15 DOOR CLOSERS

A. Manufacturers and Products:

B. Requirements:
   1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
   2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
   3. Cylinder Body: 1-1/2 inch (38 mm) diameter with 3/4 inch (19 mm) diameter double heat-treated pinion journal.
   4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
   5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
   6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
   7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
   8. Pressure Relief Valve (PRV) Technology: Not permitted.
   9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
   10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.16 ELECTRO-MECHANICAL CLOSER/HOLDERS

A. Manufacturers and Products:

B. Requirements:
   1. Provide single-point or multi-point hold-open electro-mechanical closer/holders as specified. Coordinate voltage requirements and provide transformer if necessary.
   2. Provide multi-point electro-mechanical closer/holders with swing free arms.
   3. Provide closer/holders that function as full rack and pinion door closer when current is interrupted or continuous hold-open is not engaged.
   4. Provide door closers with fully hydraulic, full rack and pinion action with high strength cylinder and full complement bearings at shaft.
   5. Cylinder Body: 1-1/2 inch (38 mm) diameter with 5/8 inch (16 mm) diameter double heat-treated pinion journal.
6. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
7. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
8. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.17 DOOR TRIM

A. Manufacturers:
   1. Scheduled Manufacturer: Ives.

B. Requirements:
   1. Provide push plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick and beveled 4 edges. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
   2. Provide push bars of solid bar stock, diameter and length as scheduled. Provide push bars of sufficient length to span from center to center of each stile. Where required, mount back to back with pull.
   3. Provide offset pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
   4. Provide flush pulls as scheduled. Where required, provide back-to-back mounted model.
   5. Provide pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
   6. Provide pull plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick, beveled 4 edges, and prepped for pull. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
   7. Provide wire pulls of solid bar stock, diameter and length as scheduled.
   8. Provide decorative pulls as scheduled. Where required, mount back to back with pull.

2.18 PROTECTION PLATES

A. Manufacturers:
   1. Scheduled Manufacturer: Ives.

B. Requirements:
   1. Provide kick plates, mop plates, and armor plates minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
   2. Sizes of plates:
a. Kick Plates: 10 inches (254 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
b. Mop Plates: 4 inches (102 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
c. Armor Plates: 36 inches (914 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs

2.19 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers: Glynn-Johnson.
2. Acceptable Manufacturers: ABH.

B. Requirements:

1. Provide heavy duty concealed mounted overhead stop or holder as specified for exterior and interior vestibule single acting doors.
2. Provide heavy duty concealed mounted overhead stop or holder as specified for double acting doors.
3. Provide heavy or medium duty and concealed or surface mounted overhead stop or holder for interior doors as specified. Provide medium duty surface mounted overhead stop for interior doors and at any door that swings more than 140 degrees before striking wall, open against equipment, casework, sidelights, and where conditions do not allow wall stop or floor stop presents tripping hazard.
4. Where overhead holders are specified provide friction type at doors without closer and positive type at doors with closer.

2.20 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide convex type where mortise type locks are used and concave type where cylindrical type locks are used.
2. Where a wall stop cannot be used, provide universal floor stops for low or high rise options.
3. Where wall or floor stop cannot be used, provide medium duty surface mounted overhead stop.

2.21 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

B. Requirements:

1. Provide thresholds, weather-stripping (including door sweeps, seals, and astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items.
2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Size of thresholds:
   a. Saddle Thresholds: 1/2 inch (13 mm) high by jamb width by door width
   b. Bumper Seal Thresholds: 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width
4. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.

2.22 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.23 MAGNETIC HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer: LCN.

B. Requirements:

1. Provide wall or floor mounted electromagnetic door release as specified with minimum of 25 pounds of holding force. Coordinate projection of holder and armature with other hardware and wall conditions to ensure that door sits parallel to wall when fully open. Connect magnetic holders on fire-rated doors into the fire control panel for fail-safe operation.
2.24 DOOR POSITION SWITCHES

A. Manufacturers:
   1. Scheduled Manufacturer: Schlage.

B. Requirements:
   1. Provide recessed or surface mounted type door position switches as specified.
   2. Coordinate door and frame preparations with door and frame suppliers. If switches are being used with magnetic locking device, provide minimum of 4 inches (102 mm) between switch and magnetic locking device.

2.25 FINISHES

A. Finish: BHMA 626/652 (US26D); except:
   1. Hinges at Exterior Doors: BHMA 630 (US32D)
   2. Continuous Hinges: BHMA 628 (US28)
   4. Protection Plates: BHMA 630 (US32D)
   5. Overhead Stops and Holders: BHMA 630 (US32D)
   6. Door Closers: Powder Coat to Match
   7. Wall Stops: BHMA 630 (US32D)
   8. Weatherstripping: Clear Anodized Aluminum
   9. Thresholds: Mill Finish Aluminum

2.26 ELECTRONIC ACCESS CONTROL SYSTEM

A. Access Control System Equipment Requirements: Furnish the following equipment:
   1. One (1) Intelligent System Controller / Network Device / Communication Cable & Enclosure # BAS-2220 x LS-MSS100-1 x HOC-ETHLAN.
   2. HID Proximity Card Reader #910NNNNEK2037P (Black) as shown on security plans.
   3. Dual Reader Interface Module BAS-1320 as required.
   4. Minimum of one (1) “UL” listed Power Supplies & Enclosure BAS-AL600ULM x ABT-12 per School.
   5. Wiring requirements are 18 gauge, 4 paired, (8 wire) twisted, shield, plenum rated “UL” listed. Note: Wire shall be provided and installed by electrical contractor. The Electrical Contractor shall provide conduit as required, under Division 16.

Note: Equipment shall be configured and engineered to suit overall system requirements. Above quantities may vary.
3.01 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.

C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 ELECTRONIC ACCESS CONTROL SYSTEM REQUIREMENTS

A. Summary of Work: The hardware supplier shall obtain the services of Best Access Systems to furnish and install the hardwire Electronic Access Control System (EAC) under this Section. The EAC system shall be tied into Frederick County Public Schools (FCPS) existing BASIS Access Control Software System. Through the hardware supplier, electrical contractor shall furnish all labor, material and services necessary to install a complete EAC system. Note, regardless of door and frame material, the EAC system shall be included in the hardware supplier scope of work. No deviations will be allowed. Credential Readers shall be provided at the following doors...

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B. Hardware Requirements and Door Application:

1. Furnish hardware as specified in HW schedule. All electrified hardware shall be interfaced with the EAC system, and be connected to the emergency generator. Regardless of door and frame material, electrified hardware shall be included in the hardware supplier scope of work.

C. Power and Network Requirements:

1. As necessary, the Electrical Contractor responsible for Division 16 shall provide switched 120V power, conduit and junction boxes at each card reader location and in the Server/Telecom room for EAC equipment. General Contractor shall be responsible for providing a network drop at the Server/Telecom room. FCPS shall provide a dedicated IP address to BEST before EAC system start up. EAC system consisting of card reader system and electrified hardware controlled by card access shall be tied into the
emergency generator back up system. In addition, provide battery back up at Main Entrance door. Prior to installation, coordinate final location of card readers and access control equipment with FCPS.

D. Owner Provided:
   1. Proximity credentials shall be furnished and programmed by FCPS.

E. Submittals:
   1. In accordance with Division 1, submit shop drawings and catalog cuts for approval.

3.03 INSTALLATION

A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
   2. Custom Steel Doors and Frames: HMMA 831.

B. Install each hardware item in compliance with manufacturer’s instructions and recommendations, using only fasteners provided by manufacturer.

C. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.

D. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.

E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

F. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

G. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

H. Lock Cylinders: Install construction cores to secure building and areas during construction period.
   1. Replace construction cores with permanent cores as indicated in keying section.

I. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
J. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.

K. Closer/Holder: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.

L. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.

M. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

N. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.

O. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

P. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

Q. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.04 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

   1. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, Installer's Architectural Hardware Consultant must examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.05 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.
3.06 DOOR HARDWARE SCHEDULE

A. Hardware items are referenced in the following hardware. Refer to the above-specifications for special features, options, cylinders/keying, and other requirements.

B. Hardware Sets:

HARDWARE GROUP NO. 01

FOR USE ON MARK #(S):
A010  B010B

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DOOR NORMALLY CLOSED AND LOCKED
FREE EGRESS AT ALL TIMES
ENTRY WITH VALID CREDENTIAL OR ACCESS CONTROL TIME ZONE OR KEY OVERRIDE
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED
DOOR MONITORED.
HARDWARE GROUP NO. 02

FOR USE ON MARK #(S):
A010A   B010A

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**HARDWARE GROUP NO. 03A**

**FOR USE ON MARK #(S):**

XA01  
XC34

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**DOOR MONITORED**

**HARDWARE GROUP NO. 04**

**FOR USE ON MARK #(S):**

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XA08  
XB01  
XB02  
XC08  
XC09  
XC17

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**DOOR HARDWARE**

**DOOR NORMALLY CLOSED AND LOCKED**
FREE EGRESS AT ALL TIMES
ENTRY WITH VALID CREDENTIAL OR ACCESS CONTROL TIME ZONE
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED
DOOR MONITORED

HARDWARE GROUP NO. 04A

FOR USE ON MARK #(S):
XA02    XC36

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**DOOR NORMALLY CLOSED AND LOCKED**
FREE EGRESS AT ALL TIMES
ENTRY WITH VALID CREDENTIAL OR ACCESS CONTROL TIME ZONE OR KEY OVERRIDE
OR @X02 ONLY, BY REMOTE RELEASE
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED

DOOR MONITORED

HARDWARE GROUP NO. 05

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MAGNETIC HOLD OPENS TO BE TIED TO FIRE ALARM SYSTEM AND RELEASE UPON ACTIVATION OF FIRE ALARM.

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MAGNETIC HOLD OPENS TO BE TIED TO FIRE ALARM SYSTEM AND RELEASE UPON
ACTIVATION OF FIRE ALARM.

HARDWARE GROUP NO. 08

FOR USE ON MARK #(S):
A102D  A114A  A122  A128  A204B  B101BA
C106

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HARDWARE GROUP NO. 08A

FOR USE ON MARK #(S):
A101

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DURING OCCUPIED HOURS, DOORS (A101 & A101C) NORMALLY UNLOCKED BY ACCESS
CONTROL TIME ZONE OR PUSH BUTTON
DOORS LOCK WITH ACCESS CONTROL TIME ZONE OR DESK MOUNTED PUSH BUTTON OR
DURESS BUTTON
AFTER HOURS, DOORS NORMALLY CLOSED AND LOCKED
FREE EGRESS AT ALL TIMES
ENTRY WITH KEY OVERRIDE OR WHEN UNLOCKED WITH PUSH BUTTON OR ACCESS
CONTROL TIME ZONE
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED


### HARDWARE GROUP NO. 08B

**FOR USE ON MARK #(S):**

A110B  B102A

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**DOOR NORMALLY CLOSED AND LOCKED**

**FREE EGRESS AT ALL TIMES**

**ENTRY WITH VALID CREDENTIAL OR KEY OVERRIDE**

**UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED**

**DOOR MONITORED**

### HARDWARE GROUP NO. 09

**FOR USE ON MARK #(S):**

A102  A112  A113A  A130  A222  B101EB
B102  B104  B211  C105  C118  C119
C122  C123

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HARDWARE GROUP NO. 09A

FOR USE ON MARK #(S):
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DESK MOUNTED
PUSH BUTTON
REFERENCE HW08A
POWER SUPPLY
REFERENCE HW08A

DURING OCCUPIED HOURS, DOORS (A101 & A101C) NORMALLY UNLOCKED BY ACCESS CONTROL TIME ZONE OR PUSH BUTTON
DOORS LOCK WITH ACCESS CONTROL TIME ZONE OR DECK MOUNTED PUSH BUTTON OR DURESS BUTTON
AFTER HOURS, DOORS NORMALLY CLOSED AND LOCKED
FREE EGRESS AT ALL TIMES
ENTRY WITH KEY OVERRIDE OR DECK MOUNTED PUSH BUTTON OR ACCESS CONTROL TIME ZONE UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED

HARDWARE GROUP NO. 10

FOR USE ON MARK #(S):
A103  A105  A105A  A106  A107  A110
A113  A132  A201  A202  A204  A205
A208  A209  A210  A211  A220  A221
A227  B101AB  B101BB  B101EA  B106  B106C
B107  B109  B116  B118  B203  B206
B207  B208  B209  B210  B213  B219
B220  B221  B222  C101A  C102  C102A
C114  C121  C127A  C201  C203  C205

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FOR USE ON MARK #(S):
B211A

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DOOR NORMALLY CLOSED AND ELECTRIC STRIKE UNLOCKED
ENTRY WITH PASSAGE FUNCTION LEVER
WHEN IN USE, TOUCH SENSOR BUTTON @ B211A OR B211B LOCKS MAGNETIC LOCKS
RELEASING TOUCH SENSOR BUTTON UNLOCKS MAGNETIC LOCKS ON BOTH DOORS
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION, MAGNETIC LOCKS AND ELECTRIC
STRIKE UNLOCK
DOORS MONITORED

HARDWARE GROUP NO. 10B

FOR USE ON MARK #(S):
B104A   B211B

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DOOR NORMALLY CLOSED AND ELECTRIC STRIKE UNLOCKED
ENTRY WITH PASSAGE FUNCTION LEVER
WHEN IN USE, TOUCH SENSOR BUTTON @ B211A OR B211B LOCKS MAGNETIC LOCKS ON
BOTH DOORS
RELEASING TOUCH SENSOR BUTTON UNLOCKS MAGNETIC LOCKS ON BOTH DOORS
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION, MAGNETIC LOCKS AND ELECTRIC
STRIKE UNLOCK
DOORS MONITORED

HARDWARE GROUP NO. 11

FOR USE ON MARK #(#S):
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A223   B103   B110   B112   B214   B215
B216

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HARDWARE GROUP NO. 12

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A120   A123   A124   A125   B201   C101
C114A   C135   C207

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HARDWARE GROUP NO. 13

FOR USE ON MARK #(#S):
A204A

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**HARDWARE GROUP NO. 14**

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B202

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A214A  A215A  A216A  A217A  A220A  A221A
B103A  B107A  B110A  B112A  B116A  B118A
B207A  B209A  B210A  B213A  B214A  B215A
B216A  B219A  B220A  B222A  C201A  C205A
C207A

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HARDWARE GROUP NO. 23

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B201A

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HARDWARE GROUP NO. 30

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HARDWARE GROUP NO. 31A

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HARDWARE GROUP NO. 32A

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DURING OCCUPIED HOURS, DOOR NORMALLY UNLOCKED
AFTER HOURS, DOOR NORMALLY CLOSED AND LOCKED
FREE EGRESS AT ALL TIMES
ENTRY WITH ACCESS CONTROL TIME ZONE OR KEY OVERRIDE OR LOSS OF POWER OR
FIRE ALARM ACTIVATION
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR UNLOCKS
DOOR MONITORED

HARDWARE GROUP NO. 34

FOR USE ON MARK #(S):
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HARDWARE GROUP NO. 35A

FOR USE ON MARK #(S):
C120

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HARDWARE GROUP NO. 36

FOR USE ON MARK #(S):
C130

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**HARDWARE GROUP NO. 37**

For use on Mark #(S):

S1.1

Each to have:

**DURING OCCUPIED HOURS, DOORS NORMALLY HELD OPEN**

**AFTER HOURS, DOORS NORMALLY CLOSED AND LOCKED**

**FREE EGRESS AT ALL TIMES**

**ENTRY WITH VALID CREDENTIAL OR KEY OVERRIDE OR LOSS OF POWER OR FIRE ALARM ACTIVATION**

**UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOORS UNLOCK**

**DOORS MONITORED**
HARDWARE GROUP NO. 38

FOR USE ON MARK #(#S):
S2.2   S3.2   S4.2

EACH TO HAVE:

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DURING OCCUPIED HOURS, DOORS NORMALLY HELD OPEN
AFTER HOURS, DOORS NORMALLY CLOSED AND LOCKED
FREE EGRESS AT ALL TIMES
ENTRY WITH VALID CREDENTIAL OR KEY OVERRIDE OR LOSS OF POWER OR FIRE
ALARM ACTIVATION
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOORS UNLOCK
DOORS MONITORED

HARDWARE GROUP NO. 39

FOR USE ON MARK #(S):
XA05    XP01

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HARDWARE GROUP NO. 39A

FOR USE ON MARK #(S):

XC05

EACH TO HAVE:

DOOR NORMALLY CLOSED AND LOCKED
FREE EGRESS AT ALL TIMES
ENTRY WITH VALID CREDENTIAL KEY OVERRIDE
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED
DOOR MONITORED

HARDWARE GROUP NO. 40

FOR USE ON MARK #(S):

XB20            XC25            XC26
### DOOR HARDWARE

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**DOOR MONITORED**

**HARDWARE GROUP NO. 41**

FOR USE ON MARK #(#S):

| XC01A | XC02A |

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**DOOR MONITORED**

**HARDWARE GROUP NO. 42**

FOR USE ON MARK #(#S):

| C117 | XC04 | XP04 |

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HARDWARE GROUP NO. 42A

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GATE 7  GATE 8  GATE 9

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HARDWARE GROUP NO. 43

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XC03  XC13  XC15

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HARDWARE GROUP NO. 44

FOR USE ON MARK #(S):
XC06  XC14

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DOOR NORMALLY CLOSED AND LOCKED
FREE EGRESS AT ALL TIMES
ENTRY WITH VALID CREDENTIAL OR ACCESS CONTROL TIME ZONE OR KEY OVERRIDE
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED
DOOR MONITORED

HARDWARE GROUP NO. 44A

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DOOR NORMALLY CLOSED AND LOCKED
FREE EGRESS AT ALL TIMES
ENTRY WITH VALID CREDENTIAL OR ACCESS CONTROL TIME ZONE
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED
DOOR MONITORED

HARDWARE GROUP NO. 45

FOR USE ON MARK #(#S):

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DOOR NORMALLY CLOSED AND LOCKED
FREE EGRESS AT ALL TIMES
ENTRY WITH VALID CREDENTIAL OR ACCESS CONTROL TIME ZONE OR REMOTE RELEASE OR KEY OVERRIDE
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED
DOOR MONITORED

HARDWARE GROUP NO. 46

FOR USE ON MARK #(#S):
A101B

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DOOR NORMALLY CLOSED AND LOCKED
FREE EGRESS AT ALL TIMES
ENTRY WITH VALID CREDENTIAL OR ACCESS CONTROL TIME ZONE OR KEY OVERRIDE OR REMOTE RELEASE
UPON LOSS OF POWER OR FIRE ALARM ACTIVATION DOOR REMAINS LOCKED
DOOR MONITORED

HARDWARE GROUP NO. 49

FOR USE ON MARK #(#S):
C110

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HARDWARE GROUP NO. 50

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S1.2  S2.1  S3.1  S4.1

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</table>
1 EA MULLION SEAL 8780NBK PSA BK ZER

MAGNETIC HOLD OPENS TO BE TIED TO FIRE ALARM SYSTEM AND RELEASE UPON ACTIVATION OF FIRE ALARM.

END OF SECTION
PARKING TABULATION

PARKING REQUIRED

NUMBER OF CLASSROOMS ................................................................. 41
NUMBER OF CLASSROOMS IN PORTABLES ............................................ 6
NUMBER OF ASSEMBLY SEATS ............................................................ 575

PARKING REQUIRED

(2X NUMBER OF CLASSROOMS PLUS ONE PER 8 ASSEMBLY SEATS)
TOTAL REQUIRED ................................................................................. 166

PARKING PROVIDED:

VISITOR ............................................................................................... 68
FACULTY/STAFF .................................................................................. 70
AFTER HOURS ..................................................................................... 45
TOTAL .................................................................................................... 183

ACCESSIBLE PARKING REQUIRED ...................................................... 6
ACCESSIBLE PARKING PROVIDED ....................................................... 7
LOADING PROVIDED .............................................................................. 1 SPACE

FCPS STATES THAT DELIVERIES ARE BY STEP VANS ONLY. (NO TRACTOR TRAILERS)

BIKE RACK ............................................................................................ 41

(1 RACK FOR EACH CLASS ROOM)
8" DIP CL 54
STA 0+12
CONNECT
PROP 8" W
TO EX 8" W
441.71

ADD

24" MAX

STA 0+45
441.71
8" -1/8 UVB

STA 0+50
439.26
STA 0+93

STA 0+00
EX 8" W
FRED CO-
#333 A-W
441.71

440

EX 8" W

450

460

WATER METER EASEMENT

ROW

400

URBANA ELEMENTARY SCHOOL REPLACEMENT

REVISION TO SHEET C-3M

SCALE
N.T.S.

DATE
02/08/19

ADD 03
SKC-3M.1

11720 Beltsville Drive
Suite 600
Calverton, MD 20705

www.grimmandparker.com
ENDWALL SEE
DETAILED SHEET C-4

CLASS I RIP-RAP
6.5'x28'
DEPTH 19''
D_{50} = 9.5''

0.00% SLOPE

42" HDPE
0.50%
COURSE, COLOR #1, TYP
COLOR #1, TYP

- SEE MECH DWGS

METAL PANEL TYPE 1
STAIR IDENTIFICATION SIGNAGE
EMERGENCY RESPONSE SIGNAGE TYP. AT ALL EXTERIOR DOORS

SCALE 1/8"=1'-0"
DATE 02/08/19
ADD 03 SKA-2.1.1

URBANA ELEMENTARY SCHOOL REPLACEMENT
REVOLUTION TO SHEET A-2.1

11720 Beltsville Drive
Suite 600
Calverton, MD 20705

www.grimmandparker.com
JTH ELEVATION - CLASSROOM AREA

SECOND FLOOR
14' - 8"
BRICK SOLDIER COURSE COLOR 1
PRE-FIN METAL PANEL TYPE 1
LIGHT FIXTURE, TYP.

FIRST FLOOR
0' - 0"
STAIR IDENTIFICATION SIGNAGE

NORTH PARTIAL ELEVATION - CLASSROOM AREA B

1/8" = 1'-0"

URBANA ELEMENTARY SCHOOL REPLACEMENT
REVISION TO SHEET A-2.3

SCALE
1/8"=1'-0"

DATE
02/08/19

ADD 03
SKA-2.3.1

11720 Beltsville Drive
Suite 600
Calverton, MD 20705

www.grimmandparker.com
LE EAST ELEV

DATE STONE - SEE DETAIL A-9.9
4" BUILDING STONE
PRE-FIN ALUM STOREFRONT SYSTEM

URBANA ELEMENTARY SCHOOL REPLACEMENT
REVISION TO SHEET A-6.3

SCALE 1/4"=1'-0"
DATE 02/08/19
ADD 03 SKA-6.3.1
1. PROVIDE CONCRETE PROTECTION FOR REINFORCING AS FOLLOWS:

2. CONCRETE AIR CONTENT AND WATER/CEMENT RATIOS SHALL BE AS FOLLOWS:

3. MAXIMUM AGGREGATE SIZE FOR CONCRETE SHALL BE IN ACCORDANCE WITH THE MAXIMUM AGGREGATE SIZES IN ACI 318 AND AS FOLLOWS:

4. ALL FOUNDATION WORK AND SOIL COMPACTION SHALL BE IN STRICT ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THE PROJECT.

5. THE SILTS AND SOFT MATERIALS. ASSUME AN AVERAGE OF 1'-6" OVEREXCAVATION AND REPLACEMENT. ACTUAL MATERIAL REMOVAL WILL BE AFTER USE OF THE TEMPORARY BASIN IS COMPLETE AND PRIOR TO BACKFILLING FOR THE PARKING LOT, MUCK OUT TEMPORARY BASIN A:

6. IMPORT BACKFILL MATERIAL AS REQUIRED IF ON-SITE SOILS DO NOT MEET THESE REQUIREMENTS. QUANTITIES FOR IMPORTED MATERIAL ARE

7. THE ELEVATION AT THE TOP OF FOOTINGS SHALL NOT BE HIGHER THAN INDICATED ON THE FOUNDATION PLAN, NOTES AND SECTIONS. THE ELEVATION AT THE TOP OF FOOTINGS SHALL NOT BE HIGHER THAN INDICATED ON THE FOUNDATION PLAN, NOTES AND SECTIONS. THE

8. THE USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE PERMITTED.

9. #5 BAR OR SMALLER = 1 1/2" COVER U.N.O.

10. #6 BAR OR LARGER = 2" COVER U.N.O.

11. WALLS:

12. FOOTINGS:

13. WALL NOTES & CONSTRUCTION PRACTICES:

14. PROVIDE CONTROL JOINTS IN CONCRETE WALLS TO MATCH FORMLINER PATTERN.

15. COORDINATE CONCRETE WALL CONTROL AND EXPANSION JOINTS TO MATCH PRECAST CAP JOINTS AND BRICK JOINTS.

16. EXPANSION JOINTS: PROVIDE EXPANSION JOINTS IN WALLS AS SHOWN ON WALL ELEVATION, AT 80'-0" ON CENTER MAXIMUM.

17. JOINTS IN WALLS AT SPACING TO MATCH TWO TIMES THE WALL HEIGHT FOR WALLS GREATER THAN 6'-0" IN HEIGHT (30'-0" MAX SPACING), U.N.O.

18. COORDINATE WITH WALL FINISHES AS NOTED BELOW.

19. LATERAL WALL LOADS (EQUIVALENT FLUID PRESSURE)

20. COEFFICIENT OF SLIDING FRICTION FACTOR = 0.32

21. SURCHARGE PRESSURE = 100 PSF TYPICAL

22. LATERAL PASSIVE EARTH PRESSURE = 240 PSF PER VERTICAL FOOT OF SOIL

23. WALL 2

24. WALL 1

25. ACHIEVE THE REQUIRED DESIGN BEARING CAPACITY OR FOR COORDINATION WITH UTILITIES.

26. THE FREDERICK COUNTY INSPECTOR PRIOR TO THE CONCRETE FOOTING INSTALLATION.

27. THE ELEVATION AT THE TOP OF FOOTINGS SHALL NOT BE HIGHER THAN INDICATED ON THE FOUNDATION PLAN, NOTES AND SECTIONS. THE

28. THE ELEVATION AT THE TOP OF FOOTINGS SHALL NOT BE HIGHER THAN INDICATED ON THE FOUNDATION PLAN, NOTES AND SECTIONS. THE

29. MAXIMUM AGGREGATE SIZE FOR CONCRETE SHALL BE IN ACCORDANCE WITH THE MAXIMUM AGGREGATE SIZES IN ACI 318 AND AS FOLLOWS:

30. ALL REINFORCING STEEL MARKED "CONTINUOUS" SHALL BE LAPPED AS REQUIRED WITH CLASS B TENSION SPLICES PER ACI 315. PROVIDE CLASS B

31. THE USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE PERMITTED.
<table>
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<th>General Furn. Schedule</th>
<th>General Furnishing and Equipment Notes</th>
<th>Locker Schedule</th>
<th>Metal Shelving</th>
<th>Display Case</th>
<th>Countertop Schedule</th>
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**General Furnishing and Equipment Notes**

- **Cabinets**
  - All cabinets and drawers to have cam locks except for sink base cabinets.
  - Provide resilient base for all casework that meets the floor on front and exposed sides and back.
  - Manufacturer and catalog numbers are for reference and illustration purposes only. See specification for details.

- **Countertops**
  - Provide continuous countertop over all similar height casework, unless otherwise noted.
  - All countertops corners shall be 1/2" radiused unless otherwise noted.
  - All countertops shall be 36" wide x 24" deep, except for sink base countertops.
  - Provide resilient base for all casework that meets the floor on front and exposed sides and back.

- **Lockers**
  - Provide 46 lockers as indicated.
  - All lockers shall be 4' high x 12' wide x 72" deep.

- **Metal Shelving**
  - Metal shelving shall be 8' high, 36" wide, and 84" deep.
  - Provide metal shelving and countertop schedule.

- **Display Cases**
  - Display cases shall be 6' high, 36" wide, and 84" deep.
  - Provide display case and countertop schedule.

- **Countertop Schedule**
  - Countertop schedule shall be 16' high, 36" wide, and 84" deep.
  - Provide continuous countertop over all similar height casework, unless otherwise noted.

- **General**
  - Contractor to field verify all clear openings prior to millwork or casework fabrication.

**Maker Space**

- **Maker Tables**
  - 30" wide x 60" deep x 24" high.
  - Provide casters for tables.

- **Maker Chairs**
  - 18" wide x 18" deep x 28" high.
  - Provide casters for chairs.

**Sensory Room**

- **Sensory Tables**
  - 30" wide x 60" deep x 24" high.
  - Provide casters for tables.

- **Sensory Chairs**
  - 18" wide x 18" deep x 28" high.
  - Provide casters for chairs.

**Media Center Furnishings**

- **Media Center Furniture**
  - Provide casters for furniture.

**Equipment Notes**

- **Equipment**
  - Provide equipment as indicated.
  - Equipment shall be mounted on adjustable-height casters.

**Notes**

- **Other Notes**
  - Additional notes may be provided as indicated.

**Project Information**

- **Project Name**
  - F.S. Barnum Elementary School

- **Location**
  - Howard County, Maryland

- **Website**
  - www.grimmandparker.com

- **Contact Information**
  - 11720 Beltsville Drive
  - 12007
  - 11/09/2020

- **Project Manager**
  - John Parker, AIA

- **Architect**
  - Grim & Parker Architects

- **Co-Design**
  - Studio Architecture

- **Landscape Architecture**
  - landscape architecture

- **Structural Engineering**
  - structural engineering

- **Mechanical-Electrical-Plumbing Engineering**
  - mechanical-electrical-plumbing engineering

- **General Contractor**
  - General Contractor

- **Construction**
  - Construction

- **Schedule**
  - Schedule

- **Additional Information**
  - Additional information may be provided as indicated.

**Drawings**

- **Drawings**
  - General and specific drawings are included.

- **Drawings Details**
  - Details are provided as indicated.

- **Drawings Specifications**
  - Specifications are provided as indicated.

**Figure Notes**

- **Figure Notes**
  - Notes are provided as indicated.

- **Figure Details**
  - Details are provided as indicated.
1. TOP OF FIN. SLAB ELEVATION SHALL BE 446.08'. TO BE POURED IN PLACE OVER VAPOR BARRIER AND AGGREGATE BASE. RE. SOIL REPORT.

2. TOP OF FOOTING ELEVATIONS NOTED ON PLAN ARE TAKEN FROM REFERENCE ELEV. 446.08'.

3. NONBEARING PARTITION WALLS ARE SHOWN ONLY FOR CLARITY OF NEW STRUCTURAL ELEMENTS. THIS DRAWING IS S-5.1 FOR TYPICAL DETAILS & STRUCTURAL NOTES.

4. WHEREVER AN INTERIOR NON-BEARING WALL OCCURS AT A CONSTRUCTION JOINT OR CONTROL JOINT, THE JOINT SHALL BE OFFSET BY TWICE THE WIDTH OF THE WALL.

5. THE LIGHT GAUGE FRAMING, STOREFRONT & EXPOSED CEILING FRAMES SHALL BE DESIGNED FOR LOADS AS REQUIRED.

6. BEARING CAPACITY OF THE COLUMN / PIER FOOTING AREA AS SHOWN ON THE PLAN OR SCHEDULE (5 kips x THE FOOTING AREA).

7. C.J. DENOTES SLAB CONTROL JOINTS, SEE 7/S-5.1 & CONST. JT. DENOTES CONSTRUCTION JOINTS, SEE 6/S-5.1 TYPICAL.

8. WHEREVER AN INTERIOR NON-BEARING WALL OCCURS AT A CONSTRUCTION JOINT OR CONTROL JOINT, THE JOINT SHALL BE OFFSET BY TWICE THE WIDTH OF THE WALL.

9. THE FACE OF VENEER TO MATCH SEE CIVIL DWG. FOR THE FACE OF VENEER TO MATCH.

10. THE LIGHT GAUGE FRAMING, STOREFRONT & EXPOSED CEILING FRAMES SHALL BE DESIGNED FOR LOADS AS REQUIRED.

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30. THE LIGHT GAUGE FRAMING, STOREFRONT & EXPOSED CEILING FRAMES SHALL BE DESIGNED FOR LOADS AS REQUIRED.
3. TOP OF FOOTING ELEVATIONS NOTED ON PLAN ARE TAKEN FROM REFERENCE ELEV. 446.08'. PROVIDE TERMITE PROTECTION UNDER THE SLAB & FOOTING. REFERENCE ARCH'T DWGS. & SPECIFICATIONS.

12. THE LOADING FOR ALL WALL FOOTINGS WILL BE 6 kip/ft AND THE LOADING FOR COLUMNS / PIERS WILL BE THE REQUIRED DRAWINGS SHALL BE SIGNED & SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.

DETAIL 1/S

PLAN VIEW TRACK ANCHORAGE DETAIL

6" METAL

ALIGN w/ CMU BELOW

BEAM BRG.

6' - 0"

FIN. GRADE

RAMP UP

+1'

C.J.

COLUMN

Lc

PARTIAL FIRST FLOOR PLAN- AREA C1

URBANA ELEMENTARY SCHOOL

DATE DESCRIPTION

ARCH'T FOR ELEVATION RE. ARCH'T DWG.
1. ELEVATIONS SHOWN +0'-0" ON PLAN ARE TOPS OF STEEL BEAMS TAKEN ABOVE FIRST FLOOR ELEVATION 000.00'.

2. Tops of structural steel beams shall be -4 1/2" below finished slab elevation, U.N.O.

3. Coordinate with the construction manager and mechanical dwgs. for openings thru the slab.

4. Structural steel beams shall be supported on 4 1/2" normal wt. conc. slab.

5. The stair landing shall be 4 1/2" (total) normal weight concrete on 2" 20 Ga. LOK-floor.

6. Provide horizontal or diagonal bridging in accordance with S.J.I. requirements U.N.O. on plan. All bridging.

7. The outrigger shall be supported on 2' - 2" 1 1/2" 22 Ga. galv. roof deck frames around roof drains. See S-5.2 for angle frame details.

8. The stair post, re. to the arch't panel, re. the arch't slope.

9. The curt' must span between joist (see mechanical dwgs.) unless otherwise noted.

10. The stair landing shall be 4 1/2" (total) normal weight concrete on 2" 20 Ga. LOK-floor.

11.etween joist, typical @ the deck.

12. The structural steel beams shall be supported on 4 1/2" normal wt. conc. slab.

13. Coordinate with the mechanical equipment. The curt' must span between joist (see mechanical dwgs.) unless otherwise noted.

14. The structural steel beams shall be supported on 4 1/2" normal wt. conc. slab.

15. The structural steel beams shall be supported on 4 1/2" normal wt. conc. slab.

16. Coordinate with the mechanical equipment. The curt' must span between joist (see mechanical dwgs.) unless otherwise noted.

17. The structural steel beams shall be supported on 4 1/2" normal wt. conc. slab.

18. Coordinate with the mechanical equipment. The curt' must span between joist (see mechanical dwgs.) unless otherwise noted.

19. The structural steel beams shall be supported on 4 1/2" normal wt. conc. slab.

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34. Coordinate with the mechanical equipment. The curt' must span between joist (see mechanical dwgs.) unless otherwise noted.

35. The structural steel beams shall be supported on 4 1/2" normal wt. conc. slab.

36. Coordinate with the mechanical equipment. The curt' must span between joist (see mechanical dwgs.) unless otherwise noted.

37. The structural steel beams shall be supported on 4 1/2" normal wt. conc. slab.
1. Elevations shown +0'-0" on plan are tops of steel beams taken above first floor elevation 000.00'.

2. Typical roof deck shall be 1 1/2" 22 Ga. Galv. Type 'B' metal deck unless otherwise noted on plan.


4. Coordinate with structural engineer for possible design. Coordinate with the mechanical equipment. The curb must span between joist (see mechanical dwgs.) unless otherwise noted.

5. Elevations shown +2'-0" are the center lines of the foundation walls. See plan. Elevations shown +2'-0" on roof are the tops of the steel beams taken above the roof-structure E.O.

6. Provide horizontal or diagonal bridging in accordance with S.J.I. requirements shown on plan. All bridging shall be at least 1 1/4x1 1/4x7/64 angle. Diagonal bridging shall be bolted at the center with 1/2" bolts.

7. Provide horizontal or diagonal bridging in accordance with S.J.I. requirements shown on plan. All bridging shall be at least 1 1/4x1 1/4x7/64 angle. Diagonal bridging shall be bolted at the center with 1/2" bolts.

8. The ownership of documents were prepared or licensed professional engineer under the laws of the State of Maryland. License NO. 8998. 

9. Scale: 1 inch = 8 feet

10. KEY PLAN: AREA B

11. ROOF FRAMING NOTES

12. DECK SUPPORT NOTES

13. SERVICE, IS THE PROPERTY OF WOLFMAN & ASSOCIATES, P.C.
1. Elevations shown +0'-0" on plan are tops of steel beams taken above first floor elevation 000.00'.
2. S.P. denotes 'special joist', extend bottom chord to beam or column. See details on sheet S-5.2.
3. Deck span direction is shown on plan. See sheet S-5.2 for opening support framing details.
4. Each roof top unit has weight as indicated on plan. Any changes on the unit weight & location of the RTU.
6. See sheets: S-5.1 & S-5.2 for structural notes & typical details.
7. Provide horizontal or diagonal bridging in accordance with S.J.I. requirements. U.N.O. on plan. All bridging shall be at least 1 1/4x 1 1/4x 7/64 angle. Diagonal bridging shall be bolted at the center with 1/2" bolts.
8. Steel beams with (+2 1/2") mark indicates that this beam is 2 1/2" above steel beam @ bearing.
9. © GRIMM AND PARKER, P.C. 2013

Part of the content is not visible in the image.
GENERAL NOTES:
1. PROVIDE SHEETMETAL TRANSITIONS TO EQUIPMENT CONNECTIONS.

PART PLAN - MECHANICAL - PENTHOUSE C204

MECHANICAL PENTHOUSE C204 - 3D-1

MECHANICAL PENTHOUSE C204 - 3D-2
### VARIABLE REFRIGERANT CONDENSING UNIT SCHEDULE

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