SAN FRANCISCO UNIFIED SCHOOL DISTRICT
2016 PROPOSITION A BOND PROGRAM
GEORGE WASHINGTON HIGH SCHOOL – PROJECT #11898
VOLUNTARY SEISMIC STRENGTHENING

ADDENDUM NO. 1

PROJECT: George Washington High School
DATE: March 8, 2019

OWNER: San Francisco Unified School District
DSA FILE NO.: 38- H1

Notice is hereby given to all prospective bidders that plans and specifications on the subject project are modified as hereinafter set forth. This Addendum shall be attached to and form a part of the plans and specifications. All bidders must acknowledge receipt of this addendum on the Bid Form. In case of difference with previous addenda or communications, this addendum takes precedence.

It is the responsibility of all bidders to notify all subcontractors from whom they request bids and from whom they accept bids of all changes contained in this addendum.

SPECIFICATIONS:

1. Item No. 1
   Reference: Section 08 45 23 – Fiberglass Panel Skylight System.
   Description:
   • Remove section 07 81 00 Unit Skylight. Add the above referenced section.
   Attachment: Section 08 45 23 – Fiberglass Panel Skylight System.

2. Item No. 2
   Reference: Section 08 71 00 – Door Hardware.
   Description:
   • Make the following changes:

   • There are two PR-01 hardware groups listed. Remove the second PR-01 group on page 13 of this section.
   • Revise article 2.03 Keying as follows, changes indicated in bold:

   A. Furnish a Schlage master and grand master key system as directed by the owner or architect.

   B. A detailed keying schedule is to be prepared by the owner and/or architect in consultation with a representative of Allegion or an Authorized Key Center or Authorized Security Center. Each keyed cylinder on every keyed lock is to be listed separately showing the door #, key group (in BHMA terminology), cylinder type, finish and location on the door.

   C. Key to existing master and grand master key system for this project as directed by the keying schedule.
D. Furnish all cylinders in the Schlage conventional style except the exit device and removable mullion cylinders which will be supplied in Schlage Full Size Interchangeable Core (FSIC).

E. Furnish construction keying for doors requiring locking during construction.

F. Furnish mechanical keys as follows:

1. Furnish 2 cut keys for each Cylinder Lock
2. Furnish 5 blank keys for each Cylinder Lock
3. Provide change keys in individual envelopes for each cylinder delivered. Envelopes shall have respective door identification numbers. Stamp each change key with change number and stamp set symbol, and stamp each master key with set symbol as applicable. In addition to change number, stamp keys “Do Not Duplicate” and tag.

E. Do not issue master keys. Only the SFUSD Lock Shop Supervisor has authority to issue master keys.

**Attachment:** None.

3. Item No. 3

**Reference:** Section 09 65 16 – Resilient Flooring and Base

**Description:**
- Make the following changes:
  - Remove article 1.01.B.2.
  - Replace article 2.02.A with the following:
    Concrete Sealer: Moisture Limitor by Forbo Linoleum, Inc., or sealer as recommended by manufacturer of resilient flooring material for conditions of installation. Concrete sealer shall be compatible with flooring adhesive and flooring material.
  - Replace article 3.02 with the following:
    A. Comply with ASTM F710 and manufacturer's recommendations for surface preparation.
      1. After removal of existing flooring, bead blast all exposed concrete subfloors that shall receive resilient flooring. Coordinate bead blasting with requirements of Section 01732 – Selective Demolition and District’s hazardous materials specification. Do not use solvents to remove old flooring because solvent residue will act to prevent proper adhesion of new flooring.
      2. Use leveling and patching compounds, as recommended by the resilient flooring manufacturer, for filling cracks, holes, and depressions in the subfloor to within specified tolerances and criteria.
      3. Remove protrusions, and grind smooth.
      4. Remove coatings that might prevent adhesive bond, including curing compounds incompatible with resilient flooring adhesives.
      5. Provide up to 3 skim coats of floor leveling compound over the entire area to receive resilient flooring in order to provide a flat, smooth, rigid, level, permanently dry, and clean surface free of foreign materials.
      6. Properly roughen (sand) steel troweled concrete to ensure suitable adhesion.
      7. Vacuum surfaces to be covered.

**Attachments:** None.
DRAWINGS:

4. Item No. 4
   Reference: A0.00D Title Sheet – Volume 1
   Description:
   • Make the following changes to the Drawing List:
     • Add “FP2.30 EAST Classroom Basement Fire Sprinkler Plan”
     • The title for Volume 3 to “Interim Housing and Hazardous Materials”.
     • Add to the bottom of Volume 3 list “See HZ0.00 for Hazardous Material Drawing List”.
   Attachment: None.

5. Item No. 5
   Reference: A1.11 North Classrooms First Floor Plan Demo
   Description:
   • Change keynote 02.12 to read “Remove Lockers”.
   Attachment: None.

6. Item No. 6
   Reference: A1.12 North Classrooms Second Floor Plan Demo
   Description:
   • Change keynote 02.12 to read “Remove Lockers”.
   Attachment: None.

7. Item No. 7
   Reference: A1.13 North Classrooms Third Floor Plan Demo
   Description:
   • Remove all skylights. Count of 6.
   Attachment: None.

8. Item No. 8
   Reference: A1.14 North Classrooms Roof Plan Demo
   Description:
   • Change keynote 02.12 to read “Remove Lockers”.
   Attachment: None.

9. Item No. 9
   Reference: A1.24 South Classrooms Roof Plan Demo
   Description:
   • Remove all skylights. Count of 10.
   Attachment: None.

10. Item No. 10
    Reference: A1.31 East Classrooms First Floor Plan Demo
    Description:
    • Revise per the attached ASK-01A to add demolition for shear wall foundation.
    Attachment: ASK-01A

Continue to next page.
11. Item No. 11  
Reference: A1.34 East Classrooms Roof Plan Demo  
Description:  
- Remove all skylights. Count of 7.  
Attachment: None.

12. Item No. 12  
Reference: A2.11 North Classrooms First Floor Plan  
Description:  
- Change keynote 12.04 to read “Provide and Install Lockers”.  
- Locker Replacement Count 1st Floor: 92.  
Attachment: None.

13. Item No. 13  
Reference: A2.12 North Classrooms Second Floor Plan  
Description:  
- Change keynote 12.04 to read “Provide and Install Lockers”.  
- Locker Replacement Count 2nd Floor: 68.  
Attachment: None.

14. Item No. 14  
Reference: A2.13 North Classrooms Third Floor Plan  
Description:  
- Change keynote 12.04 to read “Provide and Install Lockers”.  
Attachment: None.

15. Item No. 15  
Reference: A2.14 North Classrooms Roof Plan  
Description:  
- Add keynote 8.01 “provide and install skylight” to all skylights. Count 7 skylights, 6'-0”x 6'-0” size outside curb to curb.  
Attachment: None.

16. Item No. 16  
Reference: A2.24 South Classrooms Penthouse Plan  
Description:  
Make the following changes:  
- Change the drawing title and detail title to “South Classrooms Roof Plan”.  
- Rectangular skylights shall be changed from hip roof shape to gable roof shape with gable ends.  
- Add keynote 8.01 “provide and install skylight” all skylights. Count 4 skylights, 6'-0”x 6'-0” and count 3 skylights 6'-0”x 10’-0” sizes outside curb to curb.  
Attachment: None.

17. Item No. 17  
Reference: A2.25 South Classrooms Roof Plan  
Description:  
Make the following changes:  
- Change the drawing title and detail title to “Penthouse Roof Plan”.  
- Add keynote 8.01 “provide and install skylight” to skylight. Count 1 skylights, 6'-0”x 7'-0” size outside curb to curb.  
Attachment: None.
18. Item No. 18  
Reference: A2.31 East Classrooms First Floor Plan  
Description:  
- Revise per the attached ASK-01B to add demolition for shear wall foundation.  
Attachment: ASK-01B

19. Item No. 19  
Reference: A2.34 East Classrooms Roof Plan  
Description:  
- Make the following changes:  
  - Rectangular skylights shall be changed from hip roof shape to gable roof shape with gable ends.  
  - Add keynote 8.01 “provide and install skylight” to all skylights. Count 4 skylights, 6’-0”x 6’-0” and count 3 skylights 6’-0”x 10’-0” sizes outside curb to curb.  
Attachment: None.

20. Item No. 20  
Reference: A4.10 – Section G - H  
Description:  
- Change all skylight profiles shown in the sections to indicate pyramid or gable shapes, not bubble or hip roof shapes.  
Attachment: None.

21. Item No. 21  
Reference: A4.11 – Section M - N  
Description:  
- Change all skylight profiles shown in the sections to indicate pyramid or gable shapes, not bubble or hip roof shapes.  
Attachment: None.

22. Item No. 22  
Reference: A4.12 – Section T - U  
Description:  
- Change all skylight profiles shown in the sections to indicate pyramid or gable shapes, not bubble or hip roof shapes.  
Attachment: None.

23. Item No. 23  
Reference: A4.13 – Section I - J  
Description:  
- Change all skylight profiles shown in the sections to indicate pyramid or gable shapes, not bubble or hip roof shapes.  
Attachment: None.

24. Item No. 24  
Reference: A4.14 – Section – Longitudinal A  
Description:  
- Change all skylight profiles shown in the sections to indicate pyramid or gable shapes, not bubble or hip roof shapes.  
Attachment: None.
25. Item No. 25  
Reference: A4.15 – Section Stairs  
Description:  
Change all skylight profiles shown in the sections to indicate pyramid or gable shapes,  
not bubble or hip roof shapes.  
Attachment: None.

26. Item No. 26  
Reference: A4.16 – Section U - V  
Description:  
Change all skylight profiles shown in the sections to indicate pyramid or gable shapes,  
not bubble or hip roof shapes.  
Attachment: None.

27. Item No. 27  
Reference: A4.17 – Section 14.2 – 14.9  
Description:  
Change all skylight profiles shown in the sections to indicate pyramid or gable shapes,  
not bubble or hip roof shapes.  
Attachment: None.

28. Item No. 28  
Reference: A4.18 – Section Q – Q7  
Description:  
Change all skylight profiles shown in the sections to indicate pyramid or gable shapes,  
not bubble or hip roof shapes.  
Attachment: None.

29. Item No. 29  
Reference: A4.19 – Section 10 - 11  
Description:  
Change all skylight profiles shown in the sections to indicate pyramid or gable shapes,  
not bubble or hip roof shapes.  
Attachment: None.

30. Item No. 30  
Reference: A9.03 – Roof Details  
Description:  
- Replace detail 9/A9.03 with ASK-02A  
- ASK-02A and 02B shall apply to skylight/curb attachment in details 13/A9.03 &  
14/A9.03.  
Attachment: ASK-02A, ASK-02B

31. Item No. 31  
Reference: A9.03B – Roof Details  
Description:  
- ASK-02A and 02B shall apply to skylight/curb attachment in details 8/A9.03B.  
- Add detail 9/A9.03B per ASK-02C  
- Add detail 10/A9.03B per ASK-02D  
- Add detail 11/A9.03B per ASK-02E  
- Add detail 12/A9.03B per ASK-02B  
Attachment: ASK-02B, ASK-02C, ASK-02D, ASK-02E
32. Item No. 32  
**Reference:** S1.02 – Typical Details No.2  
**Description:**  
Detail 9/S1.02 – Revise #4 tie spacing in boundary elements to 6" OC.  
**Attachment:** None.

33. Item No. 33  
**Reference:** MP2.22 - South Classrooms Second Floor MP New Plan  
**Description:**  
In room 220 MDF remove the two fan coil units indicated at the southeast end of the wall. The scope of work is to reinstall the 2 salvaged fan coils.  
**Attachment:** None.

34. Item No. 34  
**Reference:** E0.10LV – Low Voltage Site Plan  
**Description:**  
Make the following changes:  
- Remove IDF M4 in Interim Housing room #4.  
- Clarification: AT&T copper and fiber originating from exterior poles on 32nd Ave. shall be removed and re-installed by AT&T. Pullbox at exterior of building shall be 36" deep and rated NEMA 4x.  
- Add Sheet note 5 regarding new conduit pathway from the exterior pole on 32nd Ave., underground, and intercepting existing conduit within the building. Sheet note 5 reads: “PROVIDE 4” C.O. FIBER AND COPPER BY AT&T.”  
**Attachment:** None.

35. Item No. 35  
**Reference:** E0.10P – Electrical Site Plan  
**Description:**  
Between buildings UC2 and UC3 add a surface mounted pull box where the conduits penetrate the retaining wall. Conduit shall penetrate the wall 12” to 24” above grade into the pull box and the go down the wall and underground.  
**Attachment:** None.

36. Item No. 36  
**Reference:** E0.11 - Proposed Main Service Yard  
**Description:**  
Make the following changes:  
- Detail 4/E0.11 – Transformer indicated as “(E) utility transformer” shall be labelled “(E) PG&E transformer”. Transformer indicated as “main transformer” shall be labelled “SFPUC transformer”.  
- Conduits between the new ‘Stadium Transformer’ and ‘(E) MSB-Grandstand’ shall be routed above ground and enter the transformer from the side and the switchboard through the back.  
**Attachment:** None.

37. Item No. 37  
**Reference:** E2.11 – North Classrooms First Floor Power & Signal Plan  
**Description:**  
Replace sheet E2.11 with sheet E2.11 – AD. Various power and data revisions.  
**Attachment:** E2.11 – AD
38. Item No. 38  
   Reference: E2.12 – North Classrooms Second Floor Power & Signal Plan  
   Description:  
   Replace sheet E2.12 with sheet E2.12 – AD. Various power and data revisions.  
   Attachment: E2.12 - AD

39. Item No. 39  
   Reference: E2.13 – North Classrooms Third Floor Power & Signal Plan  
   Description:  
   Replace sheet E2.13 with sheet E2.13 – AD. Various power and data revisions.  
   Attachment: E2.13 - AD

40. Item No. 40  
   Reference: E2.20 – South Classrooms Basement Power & Signal Plan  
   Description:  
   Replace sheet E2.20 with sheet E2.20 – AD. Various power and data revisions.  
   Attachment: E2.20 - AD

41. Item No. 41  
   Reference: E2.21 – South Classrooms First Floor Power & Signal Plan  
   Description:  
   Replace sheet E2.21 with sheet E2.21 – AD. Various power and data revisions.  
   Attachment: E2.21 - AD

42. Item No. 42  
   Reference: E2.22 – South Classrooms Second Floor Power & Signal Plan  
   Description:  
   Replace sheet E2.22 with sheet E2.22 – AD. Various power and data revisions.  
   Attachment: E2.22 - AD

43. Item No. 43  
   Reference: E2.23 – South Classrooms Third Floor Power & Signal Plan  
   Description:  
   Replace sheet E2.23 with sheet E2.23 – AD. Various power and data revisions.  
   Attachment: E2.23 - AD

44. Item No. 44  
   Reference: E2.32 – East Classrooms Second Floor Power & Signal Plan  
   Description:  
   Replace sheet E2.32 with sheet E2.32 – AD. Various power and data revisions.  
   Attachment: E2.32 - AD

45. Item No. 45  
   Reference: E2.33 – East Classrooms Third Floor Power & Signal Plan  
   Description:  
   Replace sheet E2.33 with sheet E2.33 – AD. Various power and data revisions.  
   Attachment: E2.33 - AD

46. Item No. 46  
   Reference: E4.02 – Telecommunications Riser New  
   Description:  
   Replace sheet E4.02 with sheet E4.02 – AD. Various power and data revisions.  
   Attachment: E4.02 - AD
47. Item No. 47
   Reference: E4.05A – Campus Electrical Block Diagram
   Description:
   Add the following general note: “480-208Y/120 Transformer Spec: Exterior Pad Mount
   Transformers shall be fully encapsulated and rated Nema 4X. Manufacturers shall be
   Eaton, Square D, MGM Transformer Company or engineer approved equal.”
   Attachment: None.

48. Item No. 48
   Reference: E4.05B – Academic Building Single Line Diagram New
   Description:
   Revise portion of single line diagram per ESK-01.
   Attachment: ESK-01.

49. Item No. 49
   Reference: E6.01 – Enlarged MDF Plans
   Description:
   Refer to ESK-02 for location of panel ‘MDF’ and (E) panel ‘1M’.
   Attachment: ESK-02.

50. Item No. 50
   Reference: E7.04 – New Panel Schedules
   Description:
   Replace panel schedule for ‘MDF’ with attached ESK-04. Add panel schedule ‘1M’ per
   ESK-03.
   Attachment: ESK-03, ESK-04

51. Item No. 51
   Description:
   Remove IDF M4 in room #4. Add an additional 4” conduit between modular building
   classrooms #4 and #9 for low voltage cabling.
   Attachment: None.

52. Item No. 52
   Reference: HZ0.00 – Title Sheet
   Description:
   Add HZ4.02 to the drawing index.
   Attachment: None.

53. Item No. 53
   Reference: HZ1.11 – North Classrooms First Floor Abatement Plan
   Description:
   Remove exterior doors, frames, transom windows and frames including all asbestos-
   containing caulking located between frames and rough openings at the north end of
   Corridor C191.
   Attachment: None.

54. Item No. 54
   Reference: HZ1.20 – South Classrooms Basement Abatement Plan
   Description:
   Replace referenced sheet with attached. Added flooring abatement.
   Attachment: HZ1.20 - AD
55. Item No. 55
Reference: HZ1.23 – South Classrooms Third Floor Abatement Plan
Description:
Add Key 1 “Remove and Dispose of Lead Sheet Flooring (Battleship), Jutted Backing and all associated mastics/glues down to bare concrete…” at Math Dept. Office 318”.
Attachment: None.

56. Item No. 56
Reference: HZ1.31 – East Classrooms First Floor Abatement Plan
Description:
Replace referenced sheet with attached. Added flooring abatement.
Attachment: HZ1.31 - AD

57. Item No. 57
Reference: HZ1.32 – East Classrooms Second Floor Abatement Plan
Description:
Add Key 1 “Remove and Dispose of Lead Sheet Flooring (Battleship), Jutted Backing and all associated mastics/glues down to bare concrete…” at Library 233. Work includes the removal of all existing carpeting.
Attachment: None.

58. Item No. 58
Reference: HZ1.50 – RCP – South Classrooms Basement Abatement Plan
Description:
Replace referenced sheet with attached. Added ceiling abatement.
Attachment: HZ1.50 – AD

59. Item No. 59
Reference: HZ1.53 – RCP – South Classrooms Third Floor Abatement Plan
Description:
Add Key 10 “Remove and Dispose of all ceiling finishes coated with lead-based paint and/or lead-containing paint scheduled for demolition…” at Stair 3-1S and Stair 3-2S.
Attachment: None.

60. Item No. 60
Reference: HZ1.63 – RCP – East Classrooms Third Floor Abatement Plan
Description:
Add Key 10 “Remove and Dispose of all ceiling finishes coated with lead-based paint and/or lead-containing paint scheduled for demolition…” at Office 334.
Attachment: None.

61. Item No. 61
Reference: HZ4.02 – South Elevation – East Wing Abatement Plan
Description:
Add the new sheet in the reference.
Attachment: HZ4.02

END OF ADDENDUM ITEMS
ATTACHMENTS:

SPECIFICATIONS:

08 45 23  Fiberglass Panel Skylight System

DRAWINGS – VOLUME 1 OF 3:

ARCHITECTURAL

ASK – 01A
ASK – 01B
ASK – 02A
ASK – 02B
ASK – 02C
ASK – 02D
ASK – 02E

DRAWINGS – VOLUME 2 OF 3:

ELECTRICAL

ESK-01
ESK-02
ESK-03
ESK-04
E2.11 – AD
E2.12 – AD
E2.13 – AD
E2.20 – AD
E2.21 – AD
E2.22 – AD
E2.23 – AD
E2.32 – AD
E2.33 – AD
E4.02 – AD

DRAWINGS – VOLUME 3 OF 3:

HAZARDOUS MATERIALS

HZ1.20 – AD
HZ1.31 – AD
HZ1.50 – AD
HZ4.02

END OF ADDENDUM
SECTION 08 45 23

FIBERGLASS PANEL SKYLIGHT SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the pre-engineered self-supporting insulated translucent sandwich panel skylight system and accessories as shown and specified. Work includes providing and installing:

1. Flat factory prefabricated structural insulated translucent sandwich panels
2. Aluminum installation system
3. Aluminum flashing attached to skylights

B. Related Sections:

1. 07 52 00 Modified Bitumen Roofing
2. 07 60 00 Flashing and Sheet Metal
3. 07 92 00 Joint Sealers
4. 09 22 16 Light Gauge Metal Framing

1.2 SUBMITTALS

A. Submit manufacturer's product data. Include construction details, material descriptions, profiles and finishes of skylight components.

B. Submit shop drawings. Include elevations and details.

C. Submit manufacturer's color charts showing the full range of colors available for factory-finished aluminum.

1. When requested, submit samples for each exposed finish required, in same thickness and material indicated for the work and in size indicated below. If finishes involve normal color variations, include sample sets consisting of two or more units showing the full range of variations expected.

   a. Sandwich panels: 14” x 28” units
   b. Factory finished aluminum: 5” long sections

D. Submit Installer Certificate, signed by installer, certifying compliance with project qualification requirements.

E. Submit product reports from a qualified independent testing agency indicating each type and class of panel system complies with the project performance requirements, based on comprehensive testing of current products. Previously completed reports will be acceptable if for current manufacturer and indicative of products used on this project.

1. Reports required are:

   b. Flame Spread and Smoke Developed (UL 723) – Submit UL Card
   c. Burn Extent (ASTM D 635)
   d. Color Difference (ASTM D 2244)
1.3 QUALITY ASSURANCE

A. Manufacturer’s Qualifications

1. Material and products shall be manufactured by a company continuously and regularly employed in the manufacturing of specified materials for a period of at least ten consecutive years and which can show evidence of those materials being satisfactorily used on at least six projects of similar size, scope and location. At least three of the projects shall have been in successful use for ten years or longer.

2. Panel system must be listed by an ANSI accredited Evaluation Service, which requires quality control inspections and fire, structural and water infiltration testing of sandwich panel systems by an accredited agency.

3. Quality control inspections shall be conducted at least once each year and shall include manufacturing facilities, sandwich panel components and production sandwich panels for conformance with AC177 “Translucent Fiberglass Reinforced Plastic (FRP) Faced Panel Wall, Roof and Skylight Systems” as issued by the ICC-ES.

B. Installer’s Qualifications: Installation shall be by an experienced installer, which has been in the business of installing specified skylight systems for at least two consecutive years and can show evidence of satisfactory completion of projects of similar size, scope and type.

1.4 PERFORMANCE REQUIREMENTS

A. The manufacturer shall be responsible for the configuration and fabrication of the complete skylight panel system.

1. When requested, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

2. Standard skylight system shall have less than 0.01 cfm/ft² air leakage by ASTM E 283 at 6.24 PSF (50 mph) and no water penetration by ASTM E 331 at 15 PSF; and structural testing by ASTM E 330.

3. Structural Loads; Provide skylight system capable of handling the following loads:

   a. Live Load: 20 PSF
   b. Snow Load: None
   c. Wind Load: +5.9 PSF, -30.7 PSF

1.5 DELIVERY STORAGE AND HANDLING
A. Deliver panel system, components and materials in manufacturer's standard protective packaging.

B. Store panels on the long edge; several inches above the ground, blocked and under cover in accordance with manufacturer's storage and handling instructions.

1.6 WARRANTY

A. Submit manufacturer's and installer's written warranty agreeing to repair or replace panel system work, which fails in materials or workmanship within one year of the date of delivery. Failure of materials or workmanship shall include leakage, excessive deflection, deterioration of finish on metal in excess of normal weathering, defects in accessories, insulated translucent sandwich panels and other components of the work.

B. Extended Warranty: See 00 65 36 Warranty & Guarantee Forms

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. The basis for this specification is for products manufactured by Kalwall Corporation. Other manufacturers may bid this project provided they comply with all of the performance requirements of this specification and submit evidence thereof. Listing other manufacturers’ names in this specification does not constitute approval of their products or relieve them of compliance with all the performance requirements contained herein.

B. Kalwall Corporation, Tel: (800) 258-9777 – Fax: (603) 627-7905 – Email: info@kalwall.com

2.2 PANEL COMPONENTS

A. Face Sheets

1. Translucent faces: Manufactured from glass fiber reinforced thermoset resins, formulated specifically for architectural use.
   a. Thermoplastic (e.g. polycarbonate, acrylic) faces are not acceptable.
   b. Face sheets shall not deform, deflect or drip when subjected to fire or flame.

2. Interior face sheets:
   a. Flame spread: Underwriters Laboratories (UL) listed, which requires periodic unannounced retesting, with flame spread rating no greater than 25 and smoke developed no greater than 250 when tested in accordance with UL 723.
   b. Burn extent by ASTM D 635 shall be no greater than 1”.

3. Exterior face sheets:
   a. Color stability: Full thickness of the exterior face sheet shall not change color more than 3 CIE Units DELTA E by ASTM D 2244 after 3 years outdoor South Florida weathering at 5° facing south, determined by the average of at least three white samples with and without a protective film or coating to ensure long-term color stability. Color stability shall be unaffected by abrasion or scratching.
b. Strength: Exterior face sheet shall be uniform in strength, impenetrable by hand held pencil and repel an impact minimum of 70 ft. lbs. without fracture or tear when impacted by a 3-1/4" diameter, 5 lb. free-falling ball per UL 972.

4. Appearance:
   a. Exterior face sheets: Smooth, 0.045 thick and Crystal in color.
   b. Interior face sheets: Smooth, 0.045 thick and White in color.
   c. Face sheets shall not vary more than ± 10% in thickness and be uniform in color.

B. Grid Core
   1. Aluminum I-beam grid core shall be of 6063-T6 or 6005-T5 alloy and temper with provisions for mechanical interlocking of muntin-mullion and perimeter. Width of I-beam shall be no less than 7/16".
   2. I-beam Thermal break: Minimum 1", thermoset fiberglass composite.

C. Laminate Adhesive
   1. Heat and pressure resin type adhesive engineered for structural sandwich panel use, with minimum 25-years field use. Adhesive shall pass testing requirements specified by the International Code Council “Acceptance Criteria for Sandwich Panel Adhesives”.
   2. Minimum tensile strength of 750 PSI when the panel assembly is tested by ASTM C 297 after two exposures to six cycles each of the aging conditions prescribed by ASTM D 1037.
   3. Minimum shear strength of the panel adhesive by ASTM D 1002 after exposure to four separate conditions:
      a. 50% Relative Humidity at 68° F: 540 PSI
      b. 182° F: 100 PSI
      c. Accelerated Aging by ASTM D 1037 at room temperature: 800 PSI
      d. Accelerated Aging by ASTM D 1037 at 182° F: 250 PSI

2.3 PANEL CONSTRUCTION

A. Provide sandwich panels of flat fiberglass reinforced translucent face sheets laminated to a grid core of mechanically interlocking I-beams. The adhesive bonding line shall be straight, cover the entire width of the I-beam and have a neat, sharp edge.
   1. Thickness: 2-3/4"
   2. Light transmission: 20%
   3. Solar heat gain coefficient 0.28.
   4. Panel U-factor by NFRC certified laboratory: 2-3/4" aluminum grid 0.29
   5. Complete insulated panel system shall have NFRC certified U-factor of 0.29.
   6. Grid pattern: Nominal size 12"x 24" pattern Shoji.

B. Standard panels shall deflect no more than 1.9" at 30 PSF in 10’ 0” span without a supporting frame by ASTM E 72.

C. Standard panels shall withstand 1200° F fire for minimum one hour without collapse or exterior flaming.

D. Thermally broken panels: Minimum Condensation Resistance Factor of 80 by AAMA 1503 measured on the bond line.

E. Skylight System:
1. Skylight system shall pass Class A Roof Burning Brand Test By ASTM E 108.

F. Skylight System shall meet the fall through requirements of OSHA 1910.23 as demonstrated by testing in accordance with ASTM E 661, thereby not requiring supplemental screens or railings.

2.4 BATTENS AND PERIMETER CLOSURE SYSTEM

A. Closure system:
   1. Extruded aluminum 6063-T6 and 6063-T5 alloy and temper clamp-tite screw type closure system.
   2. Skylight perimeter closures at curbs shall be factory sealed to panels.

B. Sealing tape: Manufacturer's standard, pre-applied to closure system at the factory under controlled conditions.

C. Fasteners: 300 series stainless steel screws for aluminum closures, excluding final fasteners to the building.

D. Finish:
   1. Manufacturer's factory applied finish, which meets the performance requirements of AAMA 2604. Color to be gray #80

2.5 STRUCTURAL SUPPORT FOR STANDARD MODELS

A. Center Ridge Skylights: Center Ridge Skylights to 22'-0" span shall have concealed support integral with the installation system. Options: exposed stiffeners as required by design loads. (Min. slope of 18.43°). Aluminum curb cap extrusions and flashing shall be supplied.

B. Pyramid skylights: Pyramids to 16'-0" square shall have concealed support integral with the installation system. Pyramids 17'-0" to 20'-0" shall have factory prefabricated exposed aluminum box beam supports at the hips only. (27.25°, 33.33° or 45° slope). Aluminum curb cap extrusions and flashing shall be supplied.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Installer shall examine substrates, supporting structure and installation conditions.

B. Do not proceed with panel installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Metal Protection:
   1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose.
   2. Where aluminum will contact concrete, masonry or pressure treated wood, protect against corrosion by painting contact surfaces with bituminous paint or method recommended by manufacturer.

3.3 INSTALLATION

A. Install the skylight system in accordance with the manufacturer's suggested installation recommendations and approved shop drawings.
1. Anchor component parts securely in place by permanent mechanical attachment system.
2. Accommodate thermal and mechanical movements.
3. Set perimeter framing in a full bed of sealant compound, or with joint fillers or gaskets to provide weather-tight construction.

B. Install joint sealants at perimeter joints and within the panel system in accordance with manufacturer's installation instructions.

3.4 FIELD QUALITY CONTROL

A. Water Test: Installer to test skylights according to procedures in AAMA 501.2.

B. Repair or replace work that does not pass testing or that is damaged by testing and retest work.

3.5 CLEANING

A. Clean the skylight system interior and exterior, immediately after installation.

B. Refer to manufacturer's written recommendations.

END OF SECTION 08 45 23
STAIRS
1-10S

STAIRS
1-11S

CLASSROOM
141

02.62 REMOVE (E) PLASTER VENEER, PREP CONCRETE FOR SHEAR WALL - SSD

02.158 SAWCUT AND REMOVE (E) 5" PAVING, EXCAVATE FOR FOUNDATIONS, SSD

REFERENCE DRAWING: A1.31
ADDITIONAL REFERENCE: 
SCALE: 1/8" = 1'-0"

ASK-01A

SHEET NAME: 1st FLOOR PLAN - EAST CLASSROOMS - DEMO

GPA JOB NUMBER: 1529
02.157  CONCRETE PAVING OVER NEW FOUNDATION, RESTORE (E) GRADES

REFERENCE DRAWING: A2.31
ADDITIONAL REFERENCE: 
SCALE: 1/8" = 1'-0"

SHEET NAME: 1st FLOOR PLAN - EAST CLASSROOMS
GPA JOB NUMBER: 1529
3-5/8" METAL STUD CURB
8" MIN.
1/2" PLY, TYP
FRAMED CURB - SEE DETAIL
13/A9.03 TYP
INSULATION
TRANSLUCENT END PANEL
#12 x 3" S.M.S. AT 1'-6" O.C.
SET SKYLIGHT IN BED OF SEALANT
2 1/2" METAL STUD CURB
TERMINATION BAR AT TOP OF CURB
FLASHING CLEARANCE IS 0.375"
16 GA ALUMINUM FLASHING
5/8" GYP BOARD
HPR MODIFIED MEMBRANE FLASHING
PLY 9" MIN ON FIELD
INSULATION
1/2" PLY, TYP
FRAMED CURB - SEE DETAIL
13/A9.03 TYP
BASE PLY
HPR MODIFIED MEMBRANE

SKYLIGHT
3" = 1'-0"

REFERENCE DRAWING: A9.03
ADDITIONAL REFERENCE: 
SCALE: 3" = 1'-0"

ASK-02A
SKYLIGHT - GABLE END.

3" = 1'-0"

REFERENCE DRAWING: A9.03B
ADDITIONAL REFERENCE: 
SCALE: 3" = 1'-0"

ASK-02B
TYPICAL RIDGE

3/4" [19mm]

TYPICAL PANEL SEAM

#10 SMS WITH NEOPRENE WASHER PER MANF.

9 SKYLIGHT - JOINTS.

NOT TO SCALE

REFERENCE DRAWING: A9.03B
ADDITIONAL REFERENCE: 
SCALE: NOT TO SCALE

ASK-02C
SKYLIGHT - PYRAMID PEAK.

NOT TO SCALE

10

STANDARD FLASHING BY KALWALL

STANDARD FLASHING BY KALWALL

NO EXPOSED STRUCTURE
SKYLIGHT - GABLE END CORNER.
NOT TO SCALE

REFERENCE DRAWING: A9.03B
ADDITIONAL REFERENCE: 
SCALE: NOT TO SCALE

ASK-02E

WASHINGTON HIGH SCHOOL 600 32nd Avenue
San Francisco, CA 94121

DATE 03/04/19
REPLACE EXISTING JUNCTION BOX IN SOUTH BASEMENT WITH 200A RATED ATS.
### Panel Schedule 1M

**Location:** IN MDF [220]

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**Phase A:** 10.5

**Phase B:** 10.94

**Phase C:** 10.94

**Notes:**
1. 225A BUS RATING
2. PROVIDE DOOR-IN-DOOR ENCLOSURE
3. PROVIDE LABEL STATEING "CORE EQUIPMENT LOADS ONLY, NO MDF OR SECURITY EQPM POWER"

**Subtotal:**

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**TOTAL DEMAND:** 36

**amps @ 120/208:** 99

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**Reference Drawing:** E7.04

**Additional Reference:** PANEL SCHEDULE 1M

**Scale:** SCHEMATIC

**Sheet Name:**

**GPA Job Number:** 1529

**Date:** 3/8/19

**Wagner High School 600 32nd Avenue San Francisco, CA 94121**

**Gelfand Partners Architects**

**168 10th St, Suite 100 | SF, CA 94105 | 415.348.4040**
## Panel 'MDF' Phases

### Phase A
- MCB 100A
- Location: In MDF [220]

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### Phases
- **Phase A**: Subtotal Demand Calculation
- **Phase B**: 0 Continuous Load (C) 125%
- **Phase C**: 18 Dedicated Load (D) 100%

### Notes:
1. 225A Bus Rating
2. Provide door-in-door enclosure
3. Provide label stating "MDF Rack and Security Equipment Loads Only"

### Total Demand
- 23

### Amps
- @ 120/208
- 65

---

**Sheets Name:** ESK-04

**Drawing:** E7.04

**Reference:** PANEL SCHEDULE MDF

**Scale:** SCHEMATIC

**GPA Job Number:** 1529