

# ADDENDUM NO. 8

Date: July 31, 2018

## Health Center–Concessions and Parking Lot Phase 1A Irvine Valley College

**Bid No. 350**

South Orange County Community College District

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General-All project documents including contract documents, drawings, and specifications, shall remain unchanged with the exception of those elements added, revised, deleted, or clarified by this addendum.

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## 8-1 Clarifications for Permanent Grandstands (Bleachers)

8-1.1 Revise Specification Section 13 34 16, Part 2.02-A., to read as follows:

From:

- A. Bleachers shall be elevated type Steel Beam construction with wide flange columns, stringers and cross beams, connected by structural steel cross bracing angles. Structural steel members shall be of adequate size and location and reinforced as required to carry required design loads.

To:

- A. Bleachers shall be elevated type *steel member* construction with *angle frame* columns, stringers and cross beams, connected by structural steel cross bracing angles. Structural steel members shall be of adequate size and location and reinforced as required to carry required design loads.

8-1.2 Revise Drawing 4/A2402 by:

- A. Delete Note 5: “Ramps and handrails at sides of grandstands are part of grandstands deferred approval”. The bleachers have no ramp and therefore, no associated handrails. Other handrails found within the bleacher composition are to be included with bleacher approvals, as required. The side “ramps” shall be concrete slab-on-grade “sloped walks” not to exceed 4.9% gradient in the path of travel direction as shown. The side ramps are not manufactured “ramps and railings” provided by the permanent grandstands manufacturer.
- B. Permanent grandstands (bleachers) manufacturer to provide design. With regard to above finished slab detail, details 4 and 6/A2402 shall prevail over detail 5/A2402, i.e., the bleachers shall be constructed to be plus 12-inches above finish slab.

## 8-2 Revise Health Center-Concessions Specifications

8-2.1 Revise Specification 03 30 00 Cast-in-Place Concrete as follows.

a. Part 2.6.A.2.c: Delete Griffolyn 15 Mil Green by Reef Industries from list of Acceptable Products.

8-2.2 Replace Specification Section 07 13 26 Self-Adhering Sheet Waterproofing, with attached Specification Section 07 14 00 Fluid-Applied Waterproofing.

8-2.3 Revise Specification Section 07 26 50 Vapor Emission Control System, Parts 1.7-A and 3.1-C and elsewhere as referenced as follows: Do not install VECS until 180 days after installation. Consult with Architect prior to installation.

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8-2-4 Revise Specification Section 07 27 26 Fluid-Applied Membrane Air Barriers as follows: Submittal requirements under 1.3B shall also include manufacturer's letters documenting project-specific material compatibilities. Submit manufacturer's maintenance instructions.

8-2-5 Revise Specification Section 07 27 26 Fluid-Applied Membrane Air Barriers. Add the following paragraph: 1.3-C.3. Provide sheathing fastener layout and spacing.

8-2-6 Revise Specification Section 07 27 26 Fluid-Applied Membrane Air Barriers as follows: Add the following paragraph: 1.4 D. Coordinate a pre-installation meeting with Installer, Manufacturer's Representative, OAR, Architect, and Inspector prior to installation.

8-2-7 Revise Specification Section 07 27 26 Fluid-Applied Membrane Air Barriers. Add the following instruction directly after the title: 3.2. SURFACE PREPARATION - Start of work indicates installer's acceptance of substrate condition.

8-2-8 Revise Specification Section 07 42 13.13, Custom-Formed Metal Wall Panels, add the following sentence to the end of section 2.3-A.: As applicable, for drainage purposes **horizontal** furring shall be shimmed.

8-2-9 Revise Specification Section 07 42 13.13, Custom-Formed Metal Wall Panels, add the following sentence to section 2.3-D: Exterior grade fasteners shall be as recommended by the manufacturer.

8-2-10 Revised Specification Section 07 42 93, Soffit Panels, add the following sentence to section 1.3-A.: Meeting shall be attended by the General Contractor, Installer, Manufacturer's Representative, OAR, Architect and Inspector.

8-2-11 Revise Specification Section 07 42 93, Soffit Panels, 1.4-C. Add section 1.4-C.3.: Shop drawings shall be project specific.

8-2-12 Revise Specification Section 07 54 23, Thermoplastic-Polyolefin Roofing, Part 2.1-A.1.c. Remove GAF Materials Corp. EverGuard TPO 60 and replace with Johns Manville TPO SA – 60 Mil.

8-2-13 Revise Specification Section 07 54 23 Thermoplastic-Polyolefin Roofing. Part 3.3. INSULATION INSTALLATION, add the following sentence to section 3.3-A.: Provide 48-inch square sumps at drain, with insulation tapering to 1/2" thickness at drain.

8-2-14 Revise Specification Section 07 54 23 Thermoplastic-Polyolefin Roofing. Part 3.5-D. Welding of Laps, add the following sentence section 5: Contractor shall provide a requirement for testing the heat welded seams at least three (3) separate times during each day of membrane installation. All welded seams should also be continuously probed for any voids or discontinuity.

8-2-15 Specification Section 07 62 00, Sheet Metal Flashing and Trim,

A. Revise 1.4-A.

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From:

Applicator: Company specializing in sheet metal flashing work with sufficient documented experience.

To:

Applicator: Company specializing in sheet metal flashing work with *three years* documented experience.

- B. Add Section 1.4-B.: Provide sheet metal flashing and trim that allows for thermal movement resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. - Temperature Change (Range): a range of 120 degree F, ambient; a range of 180 degree F, material surfaces.

8-2-16 Revise Specification Section 07 62 00 Sheet Metal Flashing and Trim. Modify sections 2.2-B & F, as follows: In lieu of bituminous coatings and asphalt roofing cement, provide compatible coatings and cements as recommended by the roofing manufacturer.

8-2-17 Revise Specification Section 07 62 00 Sheet Metal Flashing and Trim, Parts 2.5-A. as follows: Omit No. 2. MM Systems and No. 3. Superior as acceptable manufacturers. Replace with No. 2. Heckmann Building Products and No. 3. Hohmann and Barnard.

8-2-18A Revise Specification Section 07 92 00 Joint Sealants, section 1.2.C.: add ASTM C 1193 as a referenced standard.

8-2-18B Revise Specification Section 07 92 00 Joint Sealants Section 1.4.C., add section 4. Per ASTM C 1193, submit a quality control and testing program for review/acceptance by Architect in the Submittal.

8-2-19 Revise Specification Section 07 92 00 Joint Sealants, Part 3.1 Preparation, add the following sentence to section 3.1.D.: In conjunction with inspection, provide examination of substrate(s) with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance. Installer to proceed with installation only after unsatisfactory conditions have been corrected and/or that installation of sealant constitutes acceptance from the installer of acceptable substrate conditions.

8-2-20 Revise Specification Section 07 92 00 Joint Sealants. Part 2.2-B.2. Revise Tremco Spectrum 1 to read Tremco Spectrem 1.

8-2-21 Revise Specification Section 07 92 00 Joint Sealants, Part 2.2-B.1 as follows: In lieu of polyurethane sealant, provide silicone waterproof sealant. Provide GE SCS2000 Silpruf or equal.

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8-2-22 Revise Specification Section 07 92 00 Joint Sealants, Part 2.2-B.1.a: In lieu of Dymeric 240FC, provide GE SCS2000 Silpruf or equal.

8-2-23 Specification Section 07 92 00 Joint Sealants, Part 2.2-B.8.b. Delete this portion of the specification in its entirety.

8-2-24 Revise Specification Section 07 92 00 Joint Sealants, Part 2.3-C. Joint Backing, replace: "closed-cell polyethylene foam rod" with "bi-cellular skinned non-gassing backer rod."

8-2-25 Revise Specification Section 08 41 13 Aluminum-Framed Entrances and Storefronts, Part 1.2., by adding the following references: AAMA 501.2 - Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems, ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference, ASTM E 331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference, ASTM E 783 - Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors and ASTM E 1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference.

8-2-26 Revise Specification Section 08 41 13 Aluminum-Framed Entrances and Storefronts, Part 1.5., as follows: Add 1.5 D. Per ASTM E 331, water pressure resistance shall meet or exceed 8 PSF.

8-2-27 Revise Specification Section 08 41 13 Aluminum-Framed Entrances and Storefronts. Part 1.5. Manufacturer to evaluate anticipated interior and exterior temperatures and interior relative humidity and design the storefront assembly so that no part of the assembly is below the dew point temperature.

8-2-28 Revise Specification Section 08 41 13 Aluminum-Framed Entrances and Storefronts. Part 2.1-D., Delete: United States Aluminum Commercial Products Group, Waxahachie, TX: 800-627-6440, [www.usalum.com](http://www.usalum.com): Replace with CR Laurence Co. Inc., Los Angeles, CA: 800-421-6144, [www.crlaurence.com](http://www.crlaurence.com).

8-2-29 Specification Section 08 41 13 Aluminum-Framed Entrances and Storefronts. Part 1.7 Quality Assurance. Add section 1.7E: Contractor to provide water infiltration testing per AAMA 501.2., and air and water infiltration testing per ASTM E 783 and ASTM E1105 (chamber testing). Field performance requirement and test pressure should be specified by the manufacturer. Water leakage shall be defined as "any uncontrolled water penetrating assemblies or water appearing on the interior surfaces of assemblies from sources other than condensation".

8-2-32 Revise Specification Section 08 51 13 Aluminum Windows, Part 1.2., by adding the following references: Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors and ASTM E 1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference.

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8-2-30 In Specification Section 08 51 13 Aluminum Windows. Part 1.3-A.: Revise and replace the performance class designation with current performance classes R, LC, CW and AW. Aluminum windows for this project shall meet CW or AW performance class.

8-2-31 Revise Specification Section 08 51 13 Aluminum Windows, Part 1.5., Quality Assurance. Add 1.5.B: Contractor to provide testing per ASTM E 783 and ASTM E 1105 for a minimum of 50 percent of all aluminum windows, measured by total building window area. Field performance requirements and test pressure shall be as specified based on the performance class and grade specified.

8-2-32 Specification Section 08 51 13 Aluminum Windows. Part 1.7. Add 1.7.I: Manufacturer to evaluate anticipated interior and exterior temperatures and interior relative humidity and design the aluminum window assembly so that no part of the assembly is below the dew point temperature.

8-2-33 Revise Specification Section 08 51 13 Aluminum Windows, Part 1.7-B add the following sentence: "Meet gateway performance requirements or provide PG, DP and STP requirements."

8-2-34 Revise Specification Section 08 51 13 Aluminum Windows, Part 1.7-F: In lieu of 2.86 pounds per square foot, pressure difference shall be 15% of PC for class CW or 20% of PC for class AW.

8-2-35 In Specification Section 08 56 59, Aluminum Pass-Thru and Service Windows, Part 1.3-A, revise and replace the performance class designation with current performance classes R, LC, CW and AW. Aluminum windows for this project shall meet CW or AW performance class.

8-2-36 Revise Specification Section 08 56 59 Aluminum Pass-Thru and Service Window, Add Part 1.7.J., "Meet gateway performance requirements or provide PG, DP and STP requirements."

8-2-37 Add Specification Section 01 43 39 Mock-ups.

8-2-38 Revise Specification Section 06 41 00 Architectural Casework, Part 2.8.K add the following sentence: "Provide locks at all casework doors and drawers for all cabinets."

### **8-3 Deadline for Requests for Clarification**

8-3.1 The Deadline for Requests for Clarification, restricted to revised drawings issued under Addendum 7 and revised specification issued under this addendum, is 2:00 p.m. August 1, 2018.

## **8-4 Questions and Answers**

Q1: Specifications describe Access Control and Video Surveillance Systems, and we are able to find some camera symbols on the building Telecom Plan. There don't appear to be any "Security" plans showing access control devices or interior cameras.

A1: Reference specification section 28 13 01 for PACS and Camera requirements. Reference detail 3/E0.2 for door conduit requirements. All doors except for Doors 25, 26 and 33 to receive access controls.

Q2: Can aluminum wire be substituted for copper for the main building feeders?

A2: No. Specification Section 26 05 30, Part 2.4-A states, "All wire and cable shall be single-conductor, annealed copper, insulated 600 volt, #12AWG minimum unless specifically noted otherwise on the Drawings." As referenced in Part 2.4-D of the specification, and as elsewhere referenced in this specification, omit all references to aluminum wire. Aluminum wire is not to be used for this project.

Q3: Please clarify the hardware specified for the Reception/Check-In laminated glass opening into the Waiting Area.

A3: Reception counter glass shall be 3/8-inch laminated glass per Section 08 81 00 with 3form (or equal) stainless steel patch hardware. Provide shop drawings for review and approval prior to fabrication and installation. Data sheet for 3form hardware is attached for reference.

Q4: Please confirm that waterproofing on the back side of the wall, and/or perforated drain at the base of wall are not required for Concrete Head Wall shown on 9/C5.01 of the Parking Lot 6 drawings.

A4: Confirmed. No waterproofing of drainage will be required at the back side of the wall.

Q5: Specification Section 31 05 16, Aggregates for Exterior Improvements, is shown on the table of contents but is not included with the Parking Lot 6 Specifications. Please provide the missing specification.

A5: Section 31 05 16, Aggregates for Exterior Improvements, is not used and is not included in the specifications.

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Q6: On Parking Lot Sheet C5.00, Detail 2 for AC paving says 95% compacted crushed aggregate or miscellaneous base course. Please confirm that Crushed Miscellaneous Base is OK to use at parking lot areas?

A6: Confirmed. Crushed aggregate base is acceptable. Per page 21 of geotechnical report, "aggregate base materials shall conform with the latest specification in Section 200-2.4 for crushed miscellaneous base of the Greenbook."

Q7: Section 01 50 00, 1.5A states that permanent HVAC system is not permitted to be used to meet indoor air quality requirements. Please confirm that per section 01 81 13, 3.2A, HVAC systems can be used with MERV 8 filters according to ASHRAE 52.2 for acclimation of products to building and that temporary ambient temperature requirements detailed in 01 50 00, 1.5A only apply to the comfort of construction workers.

A7: A/C units can be used during construction to maintain the required temperature/humidity conditions for the installation of certain products only as required. Contractor shall install temporary filters on all return grilles and replace all permanent filters at the end of construction. Excessive dust and debris in the ductwork shall be cleaned by the contractor at the end of construction.

Q8: Section 064100/1.3.E.3.a. indicates Woodwork Institute Certified Compliance Certificate. 064100/1.3.E.4. indicates Woodwork Institute Monitored Compliance. Please verify that W.I. Monitored Compliance is required.

A8: W.I. Monitored Compliance is required.

Q9: Section 06 41 00/2.8.K. lists casework locks, but locations are not provided. Please verify the locations of any casework locks.

A9: All casework doors and drawers for all cabinets shall have locks per revised Specification Section 06 41 00 referenced in 8-2-38 above.

Q10: Architectural Sheet A2400 appears to show a cabinet on the east wall of Room 027, but the interior elevation 9/A5002 does not show this cabinet. Please clarify if this is casework or furniture/equipment.

A10: Provide a 42" w. x 84" h. 400 tall storage cabinet.



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Q11: Section 12 24 13 details Roller Window Shades but there are no roller window shades indicated on the plans. Please confirm section 12 24 13 does not apply to this project.

A11: Provide roller shades at all interior and exterior windows within 9-feet of finish floor. Inside-frame head-mounted, typical. Coordinate detailing in the submittal/shop drawing phase with window submittal.

Q12: Section 01 43 39 calls for visual mock-ups for concrete, paving, roofing, sheet metal, joint sealants, storefronts, windows, glazing, painting, casework, gypsum board, ceramic tile, and flooring. Within the specification sections for the trades indicated, no mock-up is indicated or a mock-up is indicated but can be incorporated into the work for the project. Please confirm visual mock-ups will only be required when called out in the individual specification sections they refer to.

A12: See attached Specification Section 01 43 39 Mock-ups, including Attachment I, Water Intrusion Prevention & Building Enclosure Control Program.

Q13: Regarding Details 1, 2, 3, 4 and 6 on Sheet A8200, the details show 7/8 - 18 gauge hat channel at the exterior of the 1" rigid XPS insulation. Is this detailed correctly or should the hat channel be applied to the 5/8 glass mat faced gypsum sheathing with the insulation installed between the hat channel? Also is another weather barrier paper required prior to the siding being installed?

A13: The details are correct. The hat channel is installed over the (minimum 25 psi) rigid insulation. No additional moisture barrier is required over the insulation.

Q14: Two DERO 33 Bike Lockers are called out on the plans, but there is no specification. Please give finish and attachment specifics or confirm these bike lockers are not in the scope of work for this project.

A14: Bike Lockers shall be provided and installed per Specification Section 32 92 13.

**End of Addendum No. 8**

SECTION 07 14 00  
FLUID-APPLIED WATERPROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. The work of this section includes, but is not limited to, the following:
1. Fluid applied waterproofing system at concrete walls.
  2. Protection board over waterproofing system at below grade concrete walls.

1.2 REFERENCES

- A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Division 01 for definitions, acronyms, and abbreviations.
- B. Unless otherwise noted, standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes.
- C. Referenced Standards:
1. ASTM C836 – Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course.
  2. ASTM D412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension.
  3. ASTM D903 – Standard Test Methods for Peel or Stripping Strength of Adhesive Bonds.
  4. ASTM D1644 – Standard Tests Methods for Nonvolatile Content of Varnishes.
  5. ASTM D1970 – Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
  6. ASTM D3767 – Standard Practice for Rubber- Measurement of Dimensions.
  7. ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials.
  8. ASTM E283 – Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, installation instructions, use limitations, recommendations, and Material Safety Data Sheets.
- B. Samples: Submit representative samples of the following for approval:
1. Fluid applied membrane.
  2. Protection Board.

#### 1.4 QUALITY ASSURANCE

- A. Installer: A firm having sufficient experience in work of the type required by this Section. Installer shall be approved, in writing, by the fluid applied manufacturer.
- B. Materials: Fluid applied waterproofing material shall be two-part, self-curing, synthetic rubber based system free of isocyanates, solvents and bitumen. For each type of material required for the Work of this Section, provide primary materials that are the products of one manufacturer.
- C. Manufacturer's Representative: Make arrangements necessary to have a trained employee of the manufacturer on-site periodically during waterproofing work to review installation procedures.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials and products in labeled packages. Store and handle in strict compliance with manufacturer's instructions, recommendations and material safety data sheets. Protect from damage from sunlight, weather, excessive temperatures and construction operations. Remove damaged material from the Site and dispose of in accordance with applicable regulations.
  - 1. Do not double-stack pallets of waterproofing on the job site. Provide cover on top and all sides, allowing for adequate ventilation.
  - 2. Store protection board flat and off the ground. Provide cover on top of all sides.
  - 3. Protect waterproofing materials from freezing; store material at temperature between 40 degrees F and 90 degrees F.
- B. Sequence deliveries to avoid delays, but minimize on-site storage.

#### 1.6 PROJECT CONDITIONS

- A. Perform Work only when existing and forecasted weather conditions are within the limits established by the manufacturer of the materials and products used.
- B. Proceed with installation only when substrate construction and preparation work is complete and in condition to receive membrane waterproofing.

#### 1.7 WARRANTY

- A. Material Warranty: Provide manufacturer's standard two year material warranty.

### PART 2 PRODUCTS

#### 2.1 ACCEPTABLE MANUFACTURERS

- A. Grace Construction Products, Product: Procor 20 Fluid Applied Waterproofing System.
- B. Gaco-Western LM 60.
- C. Tremco TP60.
- D. Substitutions: Under provisions of Division 01.

#### 2.2 MATERIALS

A. Fluid Applied Waterproofing Membrane: Two-part, self curing, solvent and bitumen free, synthetic rubber based material, meeting or exceeding the performance requirements of ASTM C836 and other ASTM standards as shown in the following table.

B. Waterproofing Membrane Physical Properties:

<u>Property</u>	<u>Test Method</u>	<u>Typical Value</u>
Color, mixed	—	Terra Cotta
Cured Film Thickness	ASTM D3767 Method A	0.060 inch nominal
Solids Content	ASTM D1644	100 percent
Flexibility, 180° bend over 1 in. mandrel at -25°F	ASTM D1970	Unaffected
Elongation	ASTM D412	500 percent
Peel Adhesion to Concrete	ASTM D903 (Modified) (Waterproofing membrane is applied to concrete and allowed to cure. Peel adhesion of the membrane is measured at a rate of 2" per minute with a peel angle of 90° at room temperature).	5 pounds per inch
Water Vapor Permeance	ASTM E96 (Procedure A)	<0.4 perms
Air Leakage @ 75 Pa differential pressure	ASTM E283	0.00012 cfm/ft <sup>2</sup>

C. Protection Board: Expanded polystyrene protection board: 1 inch thick for vertical applications with the following characteristics:

1. Normal Density: 1.0 pounds per cubic foot.
2. Thermal Conductivity, K Factor: 0.25 at 40 degrees F, 0.26 at 75 degrees F.
3. Thermal Resistance, R-Value: R-4 per inch of thickness.

### PART 3 EXECUTION

#### 3.1 PREPARATION OF SUBSTRATES

A. Refer to manufacturer’s literature for requirements for preparation of substrates. Surfaces shall be structurally sound and free of voids, spalled areas, loose aggregate and sharp protrusions. Remove contaminates such as grease, oil and wax from exposed surfaces. Remove dust, dirt, loose stone and debris. Use repair materials and methods which are acceptable to manufacturer of the fluid applied waterproofing.

B. Concrete Substrates:

1. Waterproofing application shall occur only when ambient and substrate surface temperatures are above 40 degrees F. Surface shall be free of any visible water.
2. Fill form tie rod holes with concrete and finish flush with surrounding surfaces.
3. Repair bugholes over 1/2 inch in length and 1/4 inch deep and finish flush with surrounding surface.

4. Remove scaling to sound, unaffected concrete and repair exposed area.
5. Grind irregular construction joints to suitable flush surface.

C. Related Materials: Treat joints and install flashing as recommended by waterproofing manufacturer.

D. Detail all inside corners, penetrations and surfaces to receive waterproofing per manufacturer's recommendations.

### 3.2 MIXING

A. Comply with manufacturer's written instructions.

### 3.3 INSTALLATION

A. Install waterproofing membrane system per manufacturer's recommendations, including but not limited to, the following:

1. If area to be waterproofed is in direct sunlight and temperature is rising, apply "search coat" (a thin application of fluid applied waterproofing) prior to the full application of the waterproofing membrane.
2. In horizontal applications where a minimum slope of 0.13 inch per foot can not be achieved, a two-coat application of membrane is required.
3. Apply protection board and related materials in accordance with manufacturer's recommendations.

B. Concrete Substrates: Apply one 60 mils thick coat of waterproofing material.

### 3.4 CURING

A. Allow waterproofing membrane to cure at least 24 hours prior to backfilling and at least 48 hours prior to flood testing.

### 3.5 TESTING

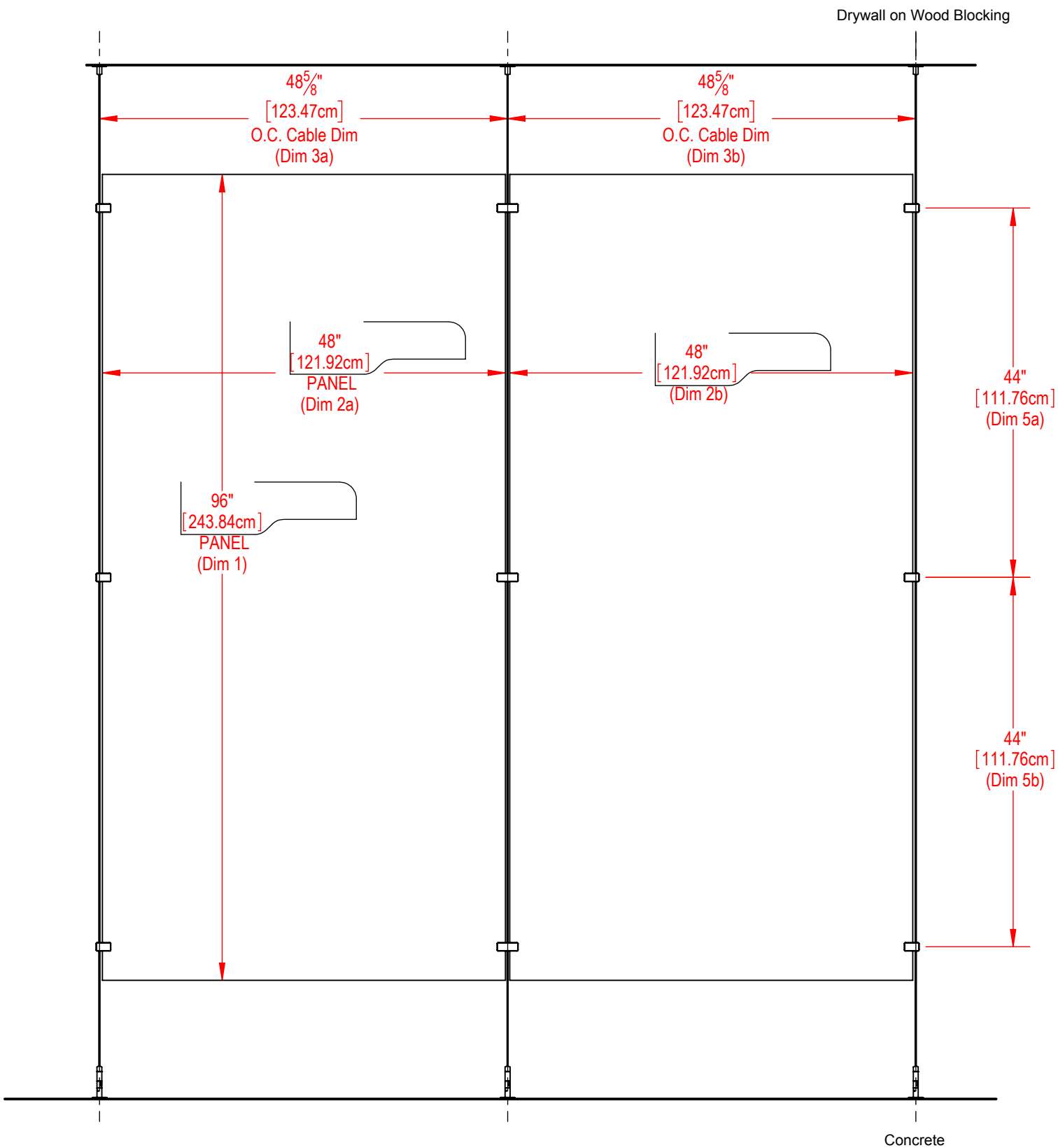
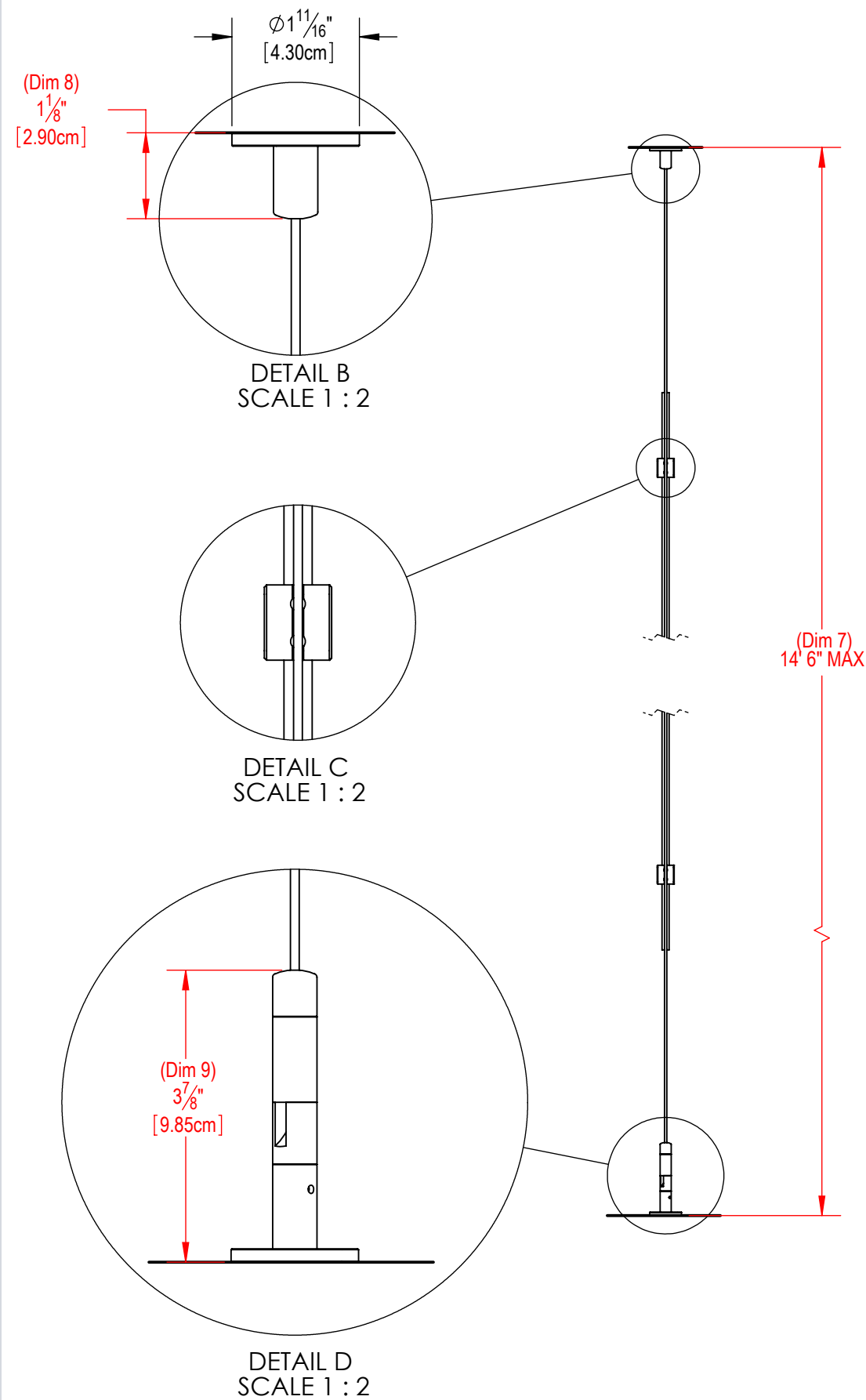
A. Flood Install waterproofing membrane system per manufacturer's recommendations, including but not limited to, the following test surfaces after installation of waterproofing membrane and prior to installation of protection board.

### 3.6 CLEANING AND PROTECTION

A. Remove any masking materials after installation. Clean any stains on materials that would be exposed in the completed work.

B. Protect completed membrane waterproofing from subsequent construction activities as recommended by manufacturer.

END OF SECTION



**KEYED NOTES**

REFER TO READY TO GO DOCUMENTS FOR PART QUANTITIES, PRICING, AND KIT INFORMATION

REFER TO 3form ANCHORING SOLUTION DOCUMENT FOR ANCHORING INFORMATION AND LIMITATIONS; WWW.3-FORM.COM/ANCHORING

ALL DIMENSION IN THIS DOCUMENT BASED ON MAX PANEL SIZE RELATIVE TO SOLUTION

FOR TECHNICAL INFORMATION REFER TO WWW.3-FORM.COM/HARDWARE

FOR GAUGE COMPATABILITY INFORMATION REFER TO WWW.3-FORM.COM/GAUGE

DIMENSIONS WITHIN THIS SURROUND CAN BE MODIFIED WITHIN PANEL OR HARDWARE LIMITATIONS, SEE SOLUTION DOCUMENTS

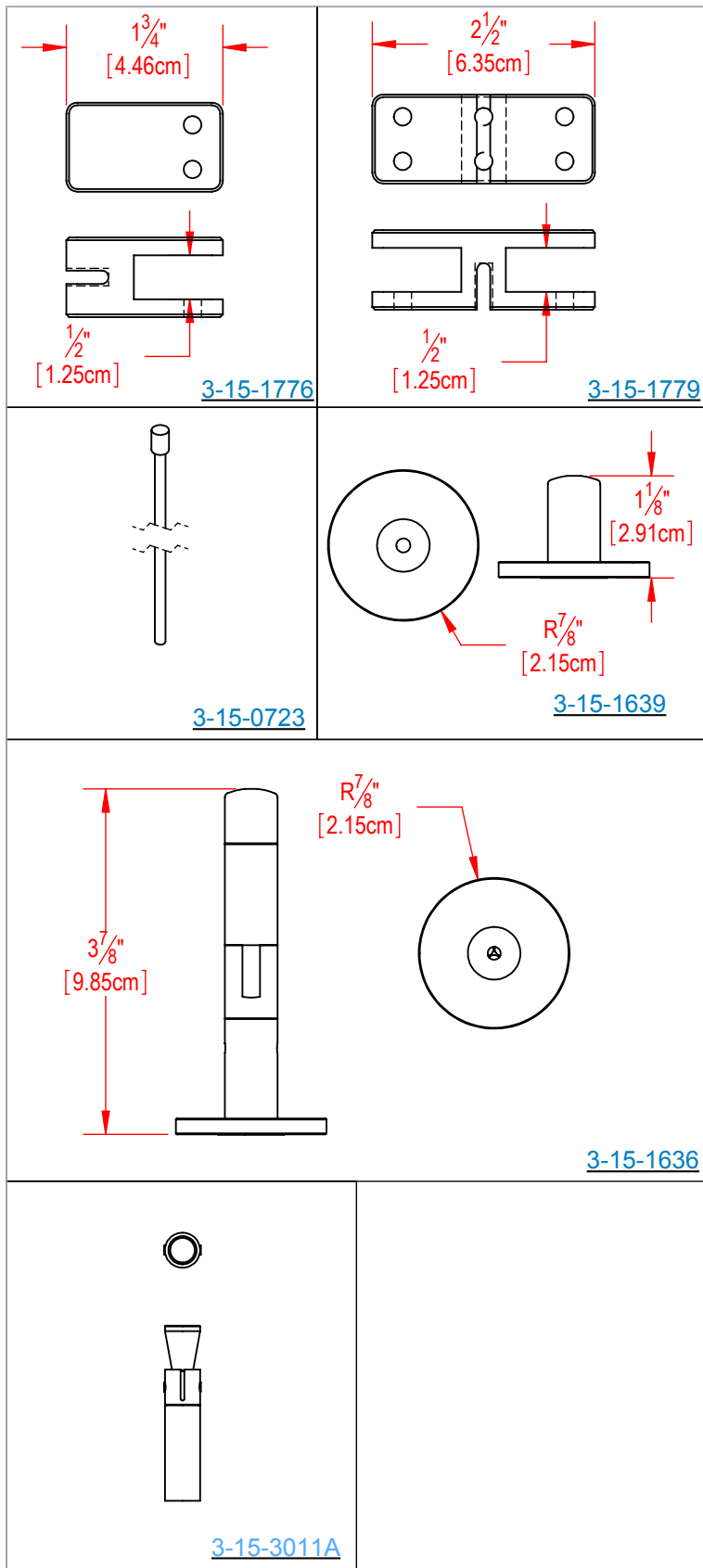
**Addendum 8 - Attachment 8B**

**200.08 - READY TO GO SOLUTION**

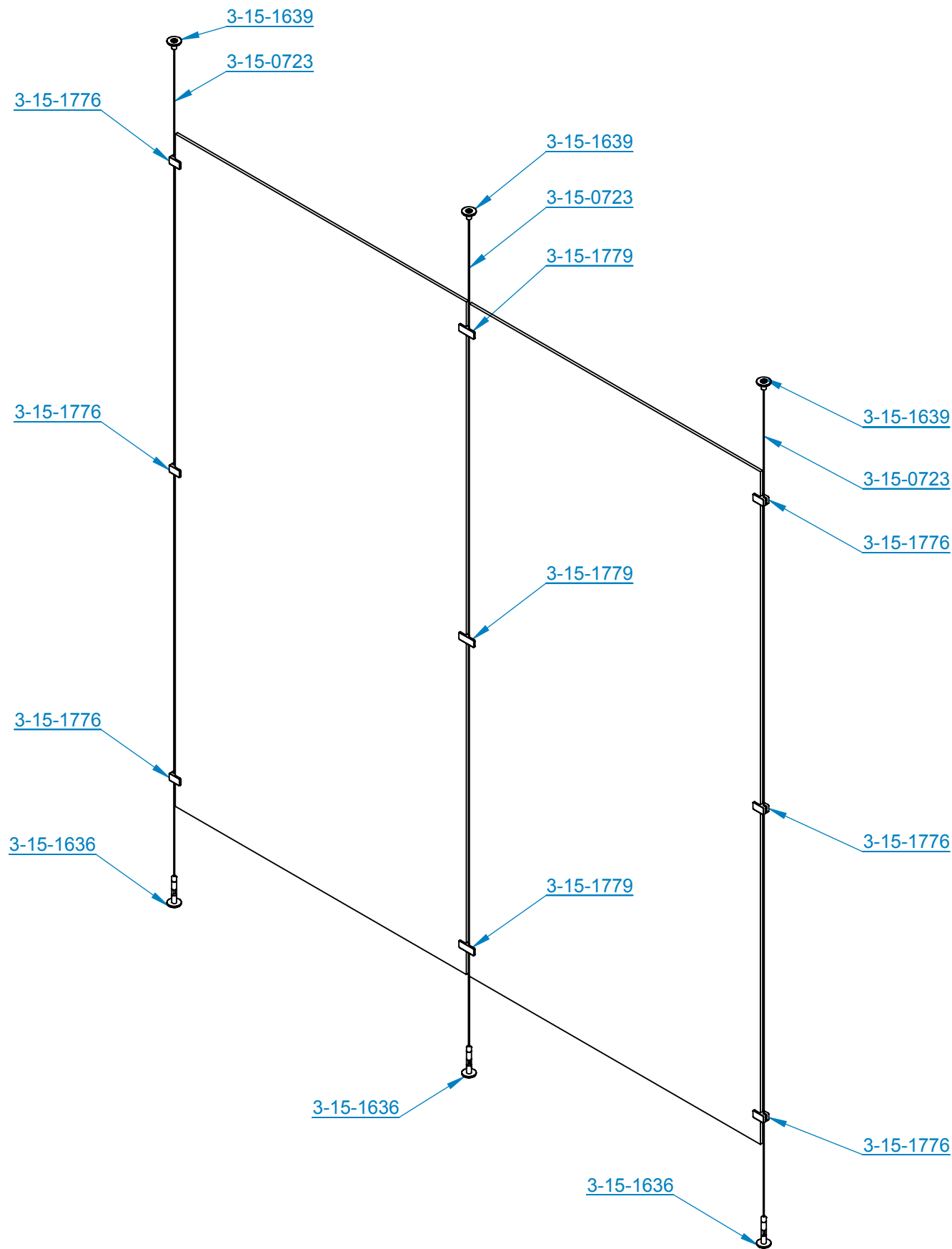
NOT FOR CONSTRUCTION, DESIGN AID ONLY | **SUSPEND**  
11X17 SHEET, DO NOT SCALE DRAWING | LAST MODIFIED DATE: 3/27/2017  
RTG - 200.08 - REV-001



**CONFIDENTIAL:** This drawing may contain proprietary information including design concepts, drawings and details that are protected by copyright and are to be treated as confidential. You must not disclose copy, circulate or use the information contained in this drawing without the consent of 3form or for any non-3form supplied project. This drawing is intended only for the use of the addressee(s). If you are not the intended recipient, or the person responsible to deliver it to the intended recipient, you may not use, distribute or copy this drawing.



All Detail Views are 1:2 Scale unless specified otherwise.



**KEYED NOTES**

REFER TO READY TO GO DOCUMENTS FOR PART QUANTITIES, PRICING, AND KIT INFORMATION

REFER TO 3form ANCHORING SOLUTION DOCUMENT FOR ANCHORING INFORMATION AND LIMITATIONS; WWW.3-FORM.COM/ANCHORING

ALL DIMENSION IN THIS DOCUMENT BASED ON MAX PANEL SIZE RELATIVE TO SOLUTION

FOR TECHNICAL INFORMATION REFER TO WWW.3-FORM.COM/HARDWARE

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**Addendum 8 - Attachment 8B**

**200.08 - READY TO GO SOLUTION**

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**KEYED NOTES**

REFER TO READY TO GO DOCUMENTS FOR PART QUANTITIES, PRICING, AND KIT INFORMATION

REFER TO 3form ANCHORING SOLUTION DOCUMENT FOR ANCHORING INFORMATION AND LIMITATIONS; [WWW.3-FORM.COM/ANCHORING](http://WWW.3-FORM.COM/ANCHORING)

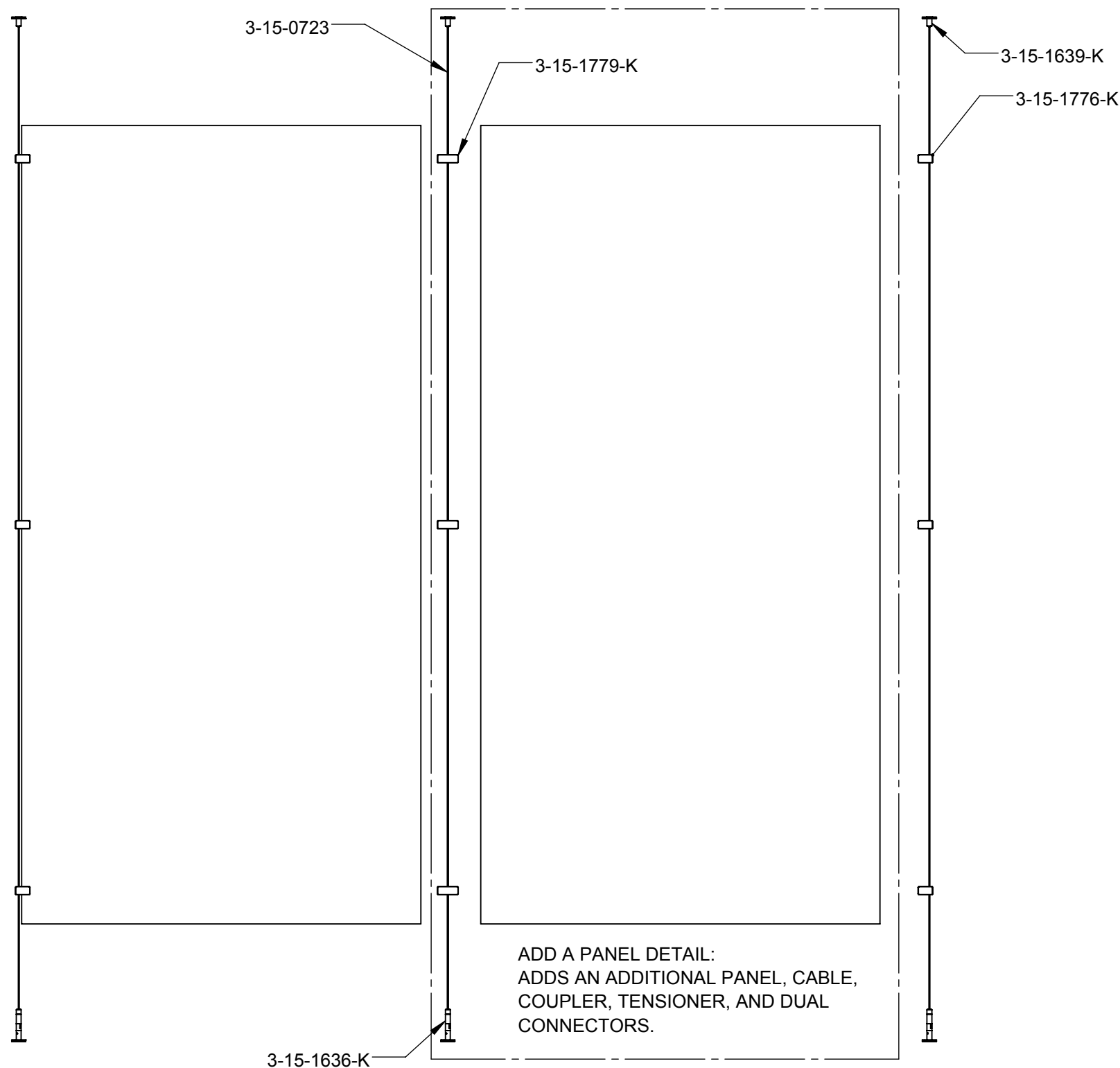
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SECTION 01 43 39

MOCKUPS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Visual Mockups; separate or freestanding construction; removal and demolition work; size and location as directed by District.
  - 1. Interior.
  - 2. Exterior.
- B. Benchmark Mockups; in-place or separate construction; associated removal work; size and location as specified in this Section and other applicable Sections.
  - 1. Interior.
  - 2. Exterior.

1.2 RELATED SECTIONS

- A. Section 01 33 00 – Submittal Procedures.
- B. Section 01 40 00 – Quality Requirements.
- C. Section 03 30 00 – Cast-In-Place Concrete.
- D. Section 03 35 46 – Sealed Concrete Finishing.
- E. Section 06 41 00 – Architectural Wood Casework.
- F. Section 07 42 13.13 – Custom Formed Metal Wall Panels.
- G. Section 07 42 93 – Soffit Panels.
- H. Section 07 45 70 – Cementitious Panels.
- I. Section 07 46 20 – Siding.
- J. Section 07 54 23 – Thermoplastic-Polyolefin Roofing.
- K. Section 07 62 00 – Sheet Metal Flashing and Trim.
- L. Section 07 72 33 – Roof Hatches.
- M. Section 07 92 00 – Joint Sealants.
- N. Section 08 41 13 – Aluminum-Framed Entrances and Storefronts.
- O. Section 08 51 13 – Aluminum Windows.
- P. Section 08 56 59 – Aluminum Pass-Thru And Service Windows.
- Q. Section 08 62 23 – Tubular Skylights.
- R. Section 08 71 00 – Door Hardware.

- S. Section 08 81 00 – Glass Glazing.
- T. Section 09 30 00 – Tiling.
- U. Section 09 29 00 – Gypsum Board.
- V. Section 09 65 00 – Resilient Flooring.
- W. Section 09 91 00 – Painting.
- X. Section 32 05 23 –Cement and Concrete for Exterior Improvements.

### 1.3 VISUAL MOCKUPS

#### A. Definitions:

1. Visual Mockup: Separate mockup construction, intended to illustrate materials and workmanship in an assembly, and used for technical and aesthetic evaluation, and testing. Mockup not to be a part of the finished construction.
  - a. Configuration and Extent of Mockup: As indicated herein and as required to illustrate the design intent for District’s evaluation.
2. Integrated Visual Mockup: A single, freestanding visual mockup assembly incorporating elements specified in various Sections, and demonstrating interface of various materials and systems, constructed at the site prior to installation of the actual assembly in the Project. Mockup not to be a part of the finished construction.
  - a. Configuration and Extent of Mockup: As indicated herein.
  - b. All instances of adjacent exterior finishes including those items noted within this specification section as “Integrated Visual Mock-up” shall be incorporated into a single Mock-Up construction including associated weatherproofing measures to meet testing requirements.

- B. Provide Visual Mockups as indicated in Mockup descriptions within this specification section.
- C. Testing of Mockups: As indicated herein, and as specified in associated sections.
- D. Maintain and protect Visual Mockups from damage during construction, and dispose of mockups when no longer required.

### 1.4 BENCHMARK MOCKUPS

#### A. Definition:

1. Benchmark Mockup: In-place or separately constructed portions of assemblies to be repeated throughout the Work. Approved Benchmark Mockups are intended to serve as a standard by which the work will be judged. Acceptable Benchmark Mockups may be incorporated into the final construction.
- B. Provide Benchmark Mockups as indicated in Mockup descriptions within this specification section.
  - C. Construct Benchmark Mockups to verify selections made under sample submittals, to demonstrate aesthetic effects, to set quality standards for materials and execution, and to set quality standards for fabrication and installation.

- D. Approval of Benchmark Mockups incorporated in the Work does not constitute approval of deviations from the Contract Documents unless District specifically approves such deviations in writing.
- E. Protect Benchmark Mockups from damage and ensure it is not disturbed at time of Substantial Completion.

## 1.5 MOCKUP DESCRIPTION

### A. General: Provide mockups as specified below.

- 1. Shop Drawings: Provide shop drawings for Integrated Visual Mockups in accordance with Section 01 33 00.
- 2. Mockup Construction Schedule: Indicate time required for mockup construction, District's review and acceptance, and removal/demolition work associated with mockups, in Construction Progress Schedule. Refer to Section 01 33 00 requirements.

### B. Sitework:

#### 1. Site Concrete: (Visual Mock-up)

- a. Flatwork: Construct a module for each type and finish; minimum size 4 feet by 4 feet.
- b. Paving Module (Including Colored/Stained/Stamped Concrete): Construct one paving module including banding where present; minimum size 4 feet by 4 feet.

#### 2. Unit Pavers: (Visual Mock-up)

- a. Paving Module: Construct one paving module showing form and pattern of stone pavers required to verify selections made under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution; minimum size 4 feet by 4 feet.

#### 3. Exposed Aggregate Paving: (Visual Mock-up)

- a. Paving Module: Construct one paving module of each concrete finish and color showing control and expansion joints, with full range of aggregate color represented; minimum size 4 feet by 4 feet.

#### 4. Sandblasting Paving: (Visual Mock-Up)

- a. Paving Module: Construct one paving module of each concrete finish and color showing control and expansion joints; minimum size 4 feet by 4 feet.

### C. Building Envelope (Integrated Visual Mockup):

- 1. Provide building envelope mock-up in accordance with following Sections (as applicable to building design):
  - a. Section 03 30 00 – Cast-In-Place Concrete.
  - b. Section 03 35 46 – Sealed Concrete Finishing.
  - c. Section 06 41 00 – Architectural Wood Casework.
  - d. Section 07 42 13.13 – Custom Formed Metal Wall Panels.
  - e. Section 07 42 93 – Soffit Panels.
  - f. Section 07 45 70 – Cementitious Panels.
  - g. Section 07 46 20 – Siding.
  - h. Section 07 54 23 – Thermoplastic-Polyolefin Roofing.

- i. Section 07 62 00 – Sheet Metal Flashing and Trim.
  - j. Section 07 72 33 – Roof Hatches.
  - k. Section 07 92 00 – Joint Sealants.
  - l. Section 08 41 13 – Aluminum-Framed Entrances and Storefronts.
  - m. Section 08 51 13 – Aluminum Windows.
  - n. Section 08 56 59 – Aluminum Pass-Thru And Service Windows.
  - o. Section 08 62 23 – Tubular Skylights.
  - p. Section 08 71 00 – Door Hardware.
  - q. Section 08 81 00 – Glass Glazing.
  - r. Section 09 30 00 – Tiling.
  - s. Section 09 29 00 – Gypsum Board.
  - t. Section 09 65 00 – Resilient Flooring.
  - u. Section 09 91 00 – Painting.
  - v. Section 32 05 23 –Cement and Concrete for Exterior Improvements.
2. The mockup shall be a replica of a section of the actual building envelope, to full scale and of a size and scale necessary to demonstrate the manner in which dissimilar materials and systems will meet and be attached. The Contractor and the District will mutually determine which portion of the building, if any, shall be excluded from the mocked-up and what size the mock-up shall be. It is anticipated that the Mock-Up be approximately 24' in length and 8' in height, or longer/higher as needed to provide full demonstration of materials with at least one full height convex and one full height concave corner. The mockup shall be constructed on the site in a place that will not hinder construction activities and that is accessible to District's representatives. The mockup shall remain in place until the District directs it to be removed.
  3. The mockup will be used for testing of water-tightness and air infiltration. Refer to Attachment I herein for District's *Water Intrusion Prevention Program & Building Enclosure Control Program* for testing requirements.
  4. Submit shop drawings for Integrated Visual Mockup for District's review and acceptance, prior to construction of mockup.
- D. Architectural Cast-In-Place Concrete Finish: (Integrated Mock-Up)
1. Construct a wall mock-up demonstrating cast-in-place concrete color and finish, formwork system including form ties, and corner/edge treatment; minimum 4 feet by 4 feet by wall thickness.
- E. Architectural Wood Casework: (Benchmark Mock-Up)
1. Construct a mock-up, minimum one unit including drawers, countertop, backsplash, hardware, finishes, and base/ceiling/joint conditions.
- F. Gypsum Board Wall Assemblies: (Benchmark Mock-Up)
1. Construct one full height mock-up showing gypsum board application including framing, joint treatment, sealants, base, and wall finish as specified in Sections 07 92 00, 09 22 16, 09 29 00, and 09 91 00.
- G. Gypsum Board Ceiling Assemblies: (Benchmark Mock-Up)

1. Construct a gypsum board ceiling assembly mock-up, minimum 64 square feet, showing joint treatment, wall-ceiling transition, and finish.

H. Interior Ceramic Tile Finish (Wall): (Benchmark Mock-Up)

1. Construct a mock-up of an area demonstrating one design pattern module, minimum 4 feet by 4 feet. Show corner, edge, and field units, base, and grout in the selected color(s).

I. Interior Floor Finishes: (Benchmark Mock-Up)

1. Construct a mock-up of an area demonstrating one pattern module, selected color(s), metal dividers (if any), and coved base (if any), minimum 4 feet by 4 feet.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

## ATTACHMENT I - WATER INTRUSION PREVENTION & BUILDING ENCLOSURE CONTROL PROGRAM

The District desires a completed project that is free of moisture damaged finishes, contaminated surfaces including dust and mold, skylights, windows, doors, louvers, and roofs that do not leak, and workmanship of the best quality. The District's Water Intrusion Prevention Program (W.I.P.P.), Building Enclosure Control Program (B.E.C.P) and instruction for the elimination of contaminants is as follows:

During construction activities, the Contractor shall take all required precautions to prevent building water infiltration, moisture damage and contamination from deleterious materials. A program shall be developed and submitted to the District for review at least fourteen (14) calendar days PRIOR, but no later than 60 days following Notice to Proceed, to the commencement of any activity that exposes the Building to water intrusion from the roof, through windows or from relocation of utility piping or activities that expose finished products to dust, mold, and any other contaminants.

In order to complete the project within the stipulated duration, the Contractor may need to include in the cost of the work temporary water infiltration protective measures as noted below at the skylights, exterior windows, and prior to roof membrane installation.

The Contractor shall also take precautions to prevent any of the following from entering occupied portions of work not under construction.

These precautions include but may not be limited to:

1. Prevention of water infiltration through the open building enclosure such as doors, windows, skylights, open roofing during replacement operations and other moisture barriers. The Contractor shall outline specific procedures and submit for acceptance (note that not all of the below may be applicable to the Work):
  - a. Use of moisture resistant materials
  - b. Protecting open walls parapets covered by tarps
  - c. Use of polyethylene sheeting on scaffolding
  - d. Sealing floor penetrations at designated floor
  - e. Furnishing Temporary heat to prevent material damage
  - f. Temporary roof drains to channel water safely from the work
  - g. Temporary roof coverings
  - h. Install window-door opening shields to prevent entry of wind driven rain
  - i. Store materials on dunnage
  - j. Diversion ditches to channel water from the work area
  - k. Install Silt fence to control erosion
  - l. Keep sump pumps on site during the rainy season

- m.** Temporary grading of site to channel water to collection points
- n.** Temporary retention and settling ponds
- o.** Emergency drainage piping
- p.** Temporary equipment material stocking openings sealed during non-use
- q.** Floor water sensors
- r.** Isolation valve maps
- s.** Lockout-tagout of piping
- t.** Water flow monitoring on pressurized water piping for notification of water line breach
- u.** System openings sealed as installed

Immediately remove moisture damaged drywall, insulation, wood, flooring, and any other damaged materials that may cause the growth of mold or mildew.

Protect all materials from dust, fugitive paint overspray and other contaminants. The Contractor shall initiate the use of walk-off mats, temporary poly dust walls, shrink wrapping, positive pressure systems, masking, and any other appropriate methods. When possible, retain original shipping protection. Materials to be protected include: Ductwork, millwork, flooring and carpet, wall-covering, ceiling tile, light fixtures, etc. Contaminated materials shall be properly cleaned to a “like new” condition.

The Contractor is encouraged to use visual and functional Mock-ups (note that not all of the below may be applicable to the Work):

- a.** Exterior paving - colored cement, exposed aggregates/special finishes, expansion joints
- b.** Sample millwork - when repetitive units are involved.
- c.** Masonry Brick sample - surface texture/mortar joints/control joints - block filler.
- d.** Architectural coatings - color/texture.
- e.** Millwork finishes.
- f.** Individual window samples - full size.
- g.** Roofing details, i.e., leaders, pitch pockets, flashing, etc.
- h.** Typical ceramic installation.
- i.** Painted walls and ceiling including texture.
- j.** Vinyl fabric (including seams).
- k.** Drywall construction above ceiling (including penetrations and detail at structure above).
- l.** Fire Damper and Smoke Damper Installation.

- m. Typical clean-out and drain installation in ceramic tile, vinyl tile and concrete floors.
  - n. Waterproofing and waterproof tests.
  - o. Expansion joints and control joints, especially those which are to be watertight.
  - p. Wall and Deck Penetration Fireproofing.
  - q. Other "Mock-ups" or sample construction items as deemed applicable or required elsewhere in the contract documents.
- 2. The Contractor shall participate in the Building Enclosure Coordination Mock-up (refer to Division 1 Requirements, Section 01 43 39 – Mockups). The Coordination Meetings will discuss building the field mock-up, and the details of interfaces of the multiple Subcontractors' work of the building enclosure components. The Contractor will be responsible to coordinate with appropriate Subcontractors and District for these meetings including but not limited to: Exterior Framing, Plaster, Masonry, Windows & Glazing, Curtain wall, Flashings, Sealants, Roofing, Skylights, Exterior Insulation, Metal Panels, Misc Steel, Finish System, and MEPs. The District will coordinate attendance of the District's Building Enclosure Consultant (BEC).
- 3. Field Testing of the Building Enclosure Mock-up is required. The Contractor is responsible for testing the mock-up using an independent testing company acceptable to the Owner. Testing of the Mock-up will be in conjuncture with the District's Building Enclosure Consultant (BEC). The test will be negative air w/ spray rack in accordance AAMA & ASTM E1105 with a pressure differential 6.24 PSF. Assume two tests will be required on the Mock-up. It is intended that the test be accomplished as soon as practical in the construction of the mock-up in order to verify integrity and continuity of the individual components and their interfaces. Any retesting required due to the Contractor's workmanship will be the responsible of the Contractor.
- 4. On-Going Building Enclosure Field Testing
  - a. In addition to testing the onsite Mock-up, the Contractor shall be responsible to perform additional ASTM E 1105 negative air water tests at 9 locations using the above independent lab on work in place. Locations will be coordinated with the District and its BEC during the building enclosure coordination meetings stated in paragraph 5. Assume each test is performed once and three test locations are performed at one time (three move-ins). Any failed test will be retested. Retesting required due to the Contractor's design or workmanship will be the responsibility of the Contractor.
  - b. Sealants – sealant pull tests to be accomplished according to ASTM C1193 on at least one representative sample of each different sealant interface condition. The test is to be performed by the Contractor and witnessed by the District's BEC.