



QUATTROCCHI KWOK
ARCHITECTS

LIBERTY HIGH SCHOOL NEW CLASSROOMS

Addendum 02

9/2/2022

DSA File Number: 07-H4
DSA Application Number: 01-119994
PTN: 61721-83

Owner:
Liberty Union High School District
20 Oak Street
Brentwood, CA 94513

Architect:
Quattrocchi Kwok Architects
636 Fifth Street
Santa Rosa, California 95404
P:707.576.0829
F: 707.576.0295

Architect's Project No.: 1925.00

To: Prospective Bidders

The following changes, modifications and additions to Project Manual and Drawings described below are made a part thereof and are subject to all of the requirements thereof as if originally specified. The Bidder must acknowledge receipt of the Addendum in the space provided on the Bid Form; failure to do so may subject the Bidder to disqualification.

Table of Contents - Addendum 02

This Addendum consists of 7 pages and the attachments as listed below dated September 2, 2022.

Deleted Text is shown in ~~strikeout type~~.

Added Text is shown in *bold italicized type*.

ATTACHMENTS:

Project Manual

ADDENDUM 02		BID FORM
ADDENDUM 02	01 2300	ALTERNATIVES
ADDENDUM 02	05 7000	DECORATIVE METAL
ADDENDUM 02	07 2633	WATER VAPOR EMISSION CONTROL COATING
ADDENDUM 02	12 3600	COUNTERTOPS
ADDENDUM 02	10 1400	SIGNAGE

ADD Drawings (8.5 inch by 11 inch & 11 inch by 17 inch):

ALTERNATIVE #1

Drawings: (30 inch by 42 inch)

None.

Project Record

None.

End of Table of Contents

A. CHANGES TO PREVIOUS ADDENDA

None

B. CHANGES TO THE BIDDING AND CONTRACT REQUIREMENTS

Item No. 2. 01

The following document denoted Addendum 02 supersedes previous published section.
Document: BID FORM

Item No. 2. 02

Alternative #1:

Description of scope for Alternate #1: Removal and replacement of 11,400 sf of existing concrete flatwork at the area between the new buildings and the existing Performing Arts Center.

Include all required demolition of the existing concrete flatwork and aggregate base and add all finish grading, aggregate base, and reinforced concrete flatwork to replace the 11,400 sf of existing concrete identified on sheet Addendum 02 Alternative #1. Within the 11,400 sf area, the concrete located at the EVA access road is to be constructed in accordance with detail "Vehicular Concrete Pavement Section" on Sheet C-2.1. All other areas within the 11,400 sf that are outside of the EVA access road should be constructed in accordance with detail "Pedestrian Concrete Pavement Section". The concrete expansion joint layout and finish of the 11,400 sf of concrete flatwork replacement work, should be consistent with the concrete layout and finish requirements identified on Sheet L1.0. The phasing of this work should be in accordance with the Logistics Plan issued in Bid Clarification 01.

If Alternate #1 is not accepted and awarded, the contractor will be responsible to protect the 11,400 sf of concrete area identified on sheet Addendum 02 alternative #1. Any areas that are damaged during the construction process will be removed and replaced by the contractor at the contractor's expense.

C. CHANGES/ ADDITIONS TO THE SPECIFICATIONS

Item No. 2. 03

The following documents denoted Addendum 01 is added to the project manual.

Section **05 7000 - DECORATIVE METAL**

Section **07 2633 - WATER VAPOR EMISSION CONTROL COATING**

Section **12 3600 - COUNTERTOPS**

Revise Table of Contents accordingly.

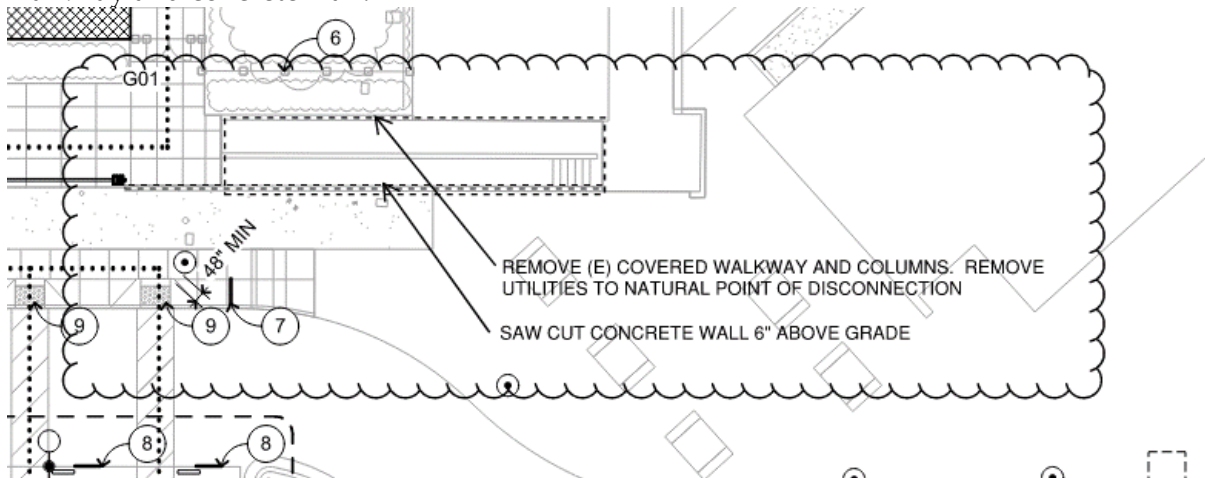
Item No. 2.04

The following document denoted Addendum 02 supersedes previous published section.
Section 10 1400 SIGNAGE

D. CHANGES/ ADDITIONS TO THE DRAWINGS

Item No. 2.05

Revise sheet A1.1 SITE PLANS as shown below to include the demolition of the existing covered walkway and concrete wall.



E. BIDDERS QUESTIONS

Item No. 2.06

Q: Design Sheets A-A5.1 & A9.9 show details of individual letters on a corten mesh backer however, on neither sheet does it call out sizes of the screen or the letters. Actually, there is no information on the letters at all (materials, size, illumination?, etc.) this sign is not mentioned in the specs either. Can you provide proper information so this can be quoted?

A See changes to specifications for lettering information and panel information

Item No. 2.07

Q: On Page A-A2.1 room A106, A110 & A111 clearly show furring around SSC and reference detail 26 on page A9.1 says (type). Classroom 101 Through 105 show no furring at SSC. One is to assume that the type note only pertains to the classrooms A106, A110 and A111 since no furring is shown in classrooms 101-105?

A: Yes, as shown on the plans.

Item No. 2. 08

Q: On the Second Floor of the A Bldg, is the concrete mix light weight or as specified for the ground floor slab?

A: Second floor concrete is normal weight

Item No. 2. 09

Q: Once back pulled, is the Existing Campus (20) 6-Strand Fiber cables long enough to reach the Admin Building MDF?

A: Confirmed. There is available slack and the location selected is within range of the available cable length.

Item No. 2. 10

Q: Note 3 states "New MDF Equipment", is this New Equipment? Or the old MDF equipment in a new location?

A: For ease of transition, a NEW rack (similar to existing) and a new Fiber Optic Distribution Panel (similar to existing) have been specified on the plans. All network downtime shall be carefully coordinated with the District.

Item No. 2. 11

Q: Are there ADMIN BLDG MDF drawing, rack elevations?

A: Rack elevations have not been provided due to the fact that the installation is primarily Fiber Terminations/Testing only. There are no copper patch panels required. The FODP shall be installed at the upper portion of the rack. The remainder of the active equipment and patching is by the District.

Item No. 2. 12

Q: Plan sheet E 1.0 mentions directional line bore, please advise if we are to include bore and conduits.

A: Confirmed. The directional line bore, and the conduit and feeder shown on the drawings is to be provided and installed as part of this contract.

Item No. 2. 13

Q: Is an in ground direct acting plunger an option for this job?

A: No.

Item No. 2. 14

Q: There were no changes to spec section 72500 Weather Barriers (which is where the liquid applied weather barrier is). The new spec section 72114 Thermal and Air Barrier Wall System, provided in Addenda 1, only covers metal wall panel, please clarify.

A: Section 072114 Article 1.01 is worded awkwardly but is the correct section. Section 07 2114 applies to all exterior walls that are framed out of metal. There is NOT a liquid applied weather barrier over the rigid insulation on the A bldg. However, there is liquid spray flashing required (which is different then a liquid applied weather barrier) per 07 114.2.03.B.

Please note that there are two assemblies on this project, one with fluid applied AWB over wood framing (per 07 2500) , and one with exterior insulation board over metal framing (per 07 114).

Item No. 2. 15

Q: Detail 4 on page A-9.1 (Type Cement Plaster at Metal Framing w/ Ext Insulation) these details do not included liquid applied weather barrier over the rigid insulation, please confirm.

A: See Section 07 2114.

Item No. 2. 16

Q: The specifications for this section reference Section 09 7723 but there is no such Spec section in the documents. In 2.02 Wall Coverings B. calls out TAC1 & TAC2 which is listed on Finish Schedule A-8.3 using Carnegie Xorel Meteor fabric. There is no allowance for a tackable substrate. Bid Clarification 01 009114.01 RFI page 8 item No. 2.28 answers: "The Xorel product is meant to be installed direct to the drywall." Drywall is not a tackable surface. With force you can push a tack into it but that will be very difficult for teachers and or students. We would like to recommend a site fabricated track system which uses a tackable core installed within a pvc framework into which the Xorel fabric is mounted. This is an advantageous system since the fabric is removable if there should be some damage or soiling. There is also the advantage that the tackable core provides an acoustical enhancement to the room. Please look at the www.tech-wall.com website to see the benefits and flexibility of this system. Can that be considered?

A: Bid per spec

Item No. 2. 17

Q: The survey(s) [HAZMAT] also does not identify how many layers of roofing are existing and will require abatement. Please provide missing information.

A: At the existing Buildings B, C, and D, each building has one layer of a roofing system (without rigid insulation). The only existing roof that includes hazardous material is Building D.

Item No. 2.18

Q: Does the existing utility demolition scope include any removal of hazardous material?

A: At the existing Building C there is 400 lf of below slab on grade boiler piping that is hazardous and needs to be removed and disposed of as a part of the abatement scope. See Asbestos Survey Report received on August 26, 2022.

END OF ADDENDUM

ADDENDUM 03

BID FORM

FOR

New Classroom Buildings

Liberty High School

850 Second Street, Brentwood, CA 94513

Project No. 1925.00

Bid No. U2225L

FOR

LIBERTY UNION HIGH SCHOOL DISTRICT

CONTRACTOR
NAME:

ADDRESS:

TELEPHONE:

()

FAX:

()

EMAIL

TO: Liberty Union High School District, acting by and through its Governing Board, herein called "District".

1. Pursuant to and in compliance with your Notice Inviting Bids and other documents relating thereto, the undersigned bidder, having familiarized himself with the terms of the Contract, the local conditions affecting the performance of the Contract, the cost of the work at the place where the work is to be done, with the Drawings and Specifications, and other Contract Documents, hereby proposes and agrees to perform within the time stipulated, the Contract, including all of its component parts, and everything required to be performed, including its acceptance by the District, and to provide and furnish any and all labor, materials, tools, expendable equipment, and utility and transportation services necessary to perform the Contract and complete all of the Work in a workmanlike manner required in connection with the construction of:

LIBERTY HIGH SCHOOL NEW CLASSROOM BUILDINGS SCOPE OF WORK (as described below):

This project is for the demolition of three (3) existing single-story buildings (currently designated as Buildings B, C, and D) and construction of two (2) new classroom buildings for Liberty High School in Brentwood, California.

Building A is a two-story, steel-framed, Type II-B construction building with 14 general education classrooms at 960-sf each; 2 Special Day classrooms at 1,045-sf each, each with a restroom and sensory room; shared staff prep room and restroom; elevator and machine room; and utility rooms, including fire riser, electrical, tele/com and custodial closets. The second floor of Building A will be accessible by an elevator as well as exterior stairs and walkway at 2,715-sf.

Building B is a single-story, wood-framed, Type V-B construction building with 2 science labs at 1,656-sf; two (2) multi-stall student restrooms; and maintenance/custodial accessory spaces.

The project site will be accessible by an upgraded, adjacent drop-off lane. The two buildings will form a learning and gathering courtyard and have 2 gated entry points to control access after hours. No new parking is required.

Both buildings will be E-occupancy, with the pupil per square foot load factor for general education rooms being 20 and 50 for science labs. Exterior finishes include cement plaster, fiber cement boards, aluminum storefront windows, metal sunshade canopies, built-up roof and standing seam metal roof. Interior finishes including custom teaching-wall casework, painted gyp bd walls with tackable surface at general education classrooms, linoleum and carpeted flooring. Ceilings shall be suspended acoustic ceiling tile at classrooms, exposed structure ceilings at labs, and painted gypsum board at restrooms and utility areas.

For the:

LIBERTY HIGH SCHOOL NEW CLASSROOM BUILDINGS

BID SCHEDULE NO. U2225L

Liberty High School New Classroom Buildings

in the District described above, all in strict conformance with the drawings and other Contract Documents on file at the Facilities Office of said District for amounts set forth herein.

2. BIDDER ACKNOWLEDGES THE FOLLOWING BID CLARIFICATION/ADDENDUM:

Bid Clarification Number	Bid Clarification Number	Bid Clarification Number	Addendum Number	Addendum Number	Addendum Number
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Acknowledge the inclusion of all addenda issued prior to bid in the blanks provided above. Your failure to do so may render your bid non-responsive.

3. TOTAL CASH PURCHASE PRICE IN WORDS & NUMBERS:

Base Bid:

_____ DOLLARS

(\$ _____)

Alternative #1:

_____ DOLLARS

(\$ _____)

Total Bid:

_____ DOLLARS

(\$ _____)

Low Bid determination: The Low bid will be determined based on the base bid plus the Alternative(s)

4. TIME FOR COMPLETION: The District may give a notice to proceed within ninety (90) days of the award of the bid by the District. Once the Contractor has received the notice to proceed, the Contractor shall complete the work in the time specified in the Agreement. By submitting this bid, Contractor has thoroughly studied this Project and agrees that the Contract Time for this Project is adequate for the timely and proper completion of the Project. Further, Contractor has included in the analysis of the time required for this Project, Rain Days, Governmental Delays, and the requisite time to complete Punch List.

In the event that the District desires to postpone giving the notice to proceed beyond this ninety (90) day period, it is expressly understood that with reasonable notice to the Contractor, giving the notice to proceed may be postponed by the District. It is further expressly understood by the Contractor, that the Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of giving the notice to proceed.

If the Contractor believes that a postponement will cause a hardship to it, the Contractor may terminate the contract with written notice to the District within ten (10) days after receipt by the Contractor of the District's notice of postponement. Should the Contractor terminate the Contract

as a result of a notice of postponement, the District shall have the authority to award the Contract to the next lowest responsible bidder, if applicable.

It is understood that the District reserves the right to reject any or all bids and/or waive any irregularities or informalities in this bid or in the bid process. The Contractor understands that it may not withdraw this bid for a period of ninety (90) days after the date set for the opening of bids.

5. Attached is bid security in the amount of not less than ten percent (10%) of the bid:

Bid bond (10% of the Bid), certified check, or cashier's check (circle one)

6. The required List of Designated Subcontractors is attached hereto.

7. The required Non-Collusion Declaration is attached hereto.

8. The Substitution Request Form, if applicable, is attached hereto.

9. It is understood and agreed that if written notice of the acceptance of this bid is mailed, telegraphed, or delivered to the undersigned after the opening of the bid, and within the time this bid is required to remain open, or at any time thereafter before this bid is withdrawn, the undersigned will execute and deliver to the District a Contract in the form attached hereto in accordance with the bid as accepted, and that he or she will also furnish and deliver to the District the Performance Bond and Payment Bond, all within five (5) calendar days after award of Contract, and that the work under the Contract shall be commenced by the undersigned bidder, if awarded the Contract, by the start date provided in the District's Notice to Proceed, and shall be completed by the Contractor in the time specified in the Contract Documents.

10. The names of all persons interested in the foregoing proposal as principals are as follows:

(IMPORTANT NOTICE: If bidder or other interested person is a corporation, state the legal name of such corporation, as well as the names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state the true names of the firm, as well as the names of all individual co-partners comprising the firm; if bidder or other interested person is an individual, state the first and last names in full.)

11. PROTEST PROCEDURES. If there is a bid protest, the grounds shall be submitted as set forth in the Instructions to Bidders.

12. The undersigned bidder shall be licensed and shall provide the following California Contractor's license information:

License Number: _____

License Expiration Date: _____

Name on License: _____

Class of License: _____

DIR Registration Number: _____

If the bidder is a joint venture, each member of the joint venture must include the above information.

13. Time is of the essence regarding this Contract, therefore, in the event the bidder to whom the Contract is awarded fails or refuses to post the required bonds and return executed copies of the Agreement form within five (5) calendar days from the date of receiving the Notice of Award, the District may declare the bidder's bid deposit or bond forfeited as damages.

14. The bidder declares that he/she has carefully examined the location of the proposed Project, that he/she has examined the Contract Documents, including the Plans, General Conditions, Supplemental Conditions, Addenda, and Specifications, all others documents and requirements that are attached to and/or contained in the Project Manual, all other documents issued to bidders and read the accompanying instructions to bidders, and hereby proposes and agrees, if this proposal is accepted, to furnish all materials and do all work required to complete the said work in accordance with the Contract Documents, in the time and manner therein prescribed for the unit cost and lump sum amounts set forth in this Bid Form.

15. DEBARMENT. In addition to seeking remedies for False Claims under Government Code section 12650 et seq. and Penal Code section 72, the District may debar a Contractor pursuant to Article 15 of the General Conditions if the Board, or the Board may designate a hearing officer who, in his or her discretion, finds the Contractor has done any of the following:

- a. Intentionally or with reckless disregard, violated any term of a contract with the District;
- b. Committed an act or omission which reflects on the Contractor's quality, fitness or capacity to perform work for the District;
- c. Committed an act or offense which indicates a lack of business integrity or business honesty; or
- d. Made or submitted a false claim against the District or any other public entity. (See Government Code section 12650, et seq., and Penal Code section 72)

16. DESIGNATION OF SUBCONTRACTORS. In compliance with the Subletting and Subcontracting Fair Practices Act (California Public Contract Code section 4100 et seq.) and any amendments thereof, each bidder shall list subcontractors on the District's form Subcontractor list. This subcontractor list shall be submitted with the bid and is a required form

I agree to receive service of notices at the e-mail address listed below.

I the below-indicated bidder, declare under penalty of perjury that the information provided and representations made in this bid are true and correct.

Proper Name of Company

Liberty High School New Classroom Buildings
Liberty Union High School District

Bid Form
Page 6

Name of Bidder Representative

Street Address

City, State, and Zip

()
Phone Number

()
Fax Number

E-Mail

By: _____ Date: _____
Signature of Bidder Representative

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of authorized officers or agents and the document shall bear the corporate seal; if bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership; and if bidder is an individual, his signature shall be placed above.

All signatures must be made in permanent blue ink.

ADDENDUM 02

SECTION 01 2300

ALTERNATES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Alternative submission procedures.
- B. Documentation of changes to Contract Sum and Contract Time.

1.02 RELATED SECTIONS

- A. Document - Instructions to Bidders: Instructions for preparation of pricing for alternatives.
- B. Document Contract: Incorporating monetary value of accepted alternatives.

1.03 ACCEPTANCE OF ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at the Owner's option. Accepted alternatives will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each alternative.

1.04 SCHEDULE OF ALTERNATES

- A. Alternative No. 01- ADDITIONAL FLATWORK:
 - 1. Base Bid Item: Section 32 1313 and Drawing number C2.0 & C2.1 Alternative 01: Per drawing Addendum 02 Alternative #1

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 05 7000
DECORATIVE METAL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Section includes aluminum plate panels with laser cut patterns for exterior applications.
 - 1. Decorative metal architectural elements.
 - 2. Decorative metal guard railing infill.

1.02 RELATED REQUIREMENTS

- A. Pertinent Sections specifying Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 05 5000 - METAL FABRICATIONS: Supports.

1.03 REFERENCE STANDARDS

- A. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels; 2013.
- B. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.
- C. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes [Metric]; 2013.
- D. California Code of Regulations, Title 24, Part 2, California Building Code (CBC), International Building Code.
- E. California Code of Regulations, Title 24, Part 11, California Green Building Standards Code, "CAL-Green".

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Installation Meeting: Schedule and conduct a preinstallation meeting one week before starting work of this section. Attendees shall include, but not be limited to:
 - 1. Contractor.
 - 2. Manufacturer's representative.
 - 3. Architect.
 - 4. Owner's representative.
 - 5. Other subcontractors of adjacent work.

1.05 SUBMITTALS

- A. General: Submit in accordance with Section 01 3300.
- B. Product Data: Submit manufacturer's product data including description of materials, components, finishes, fabrication details, glass, anchors, and accessories.
- C. CAL-GREEN Submittals: Product Data - VOC Limits: For adhesives sealants, fillers, primers and coatings, documentation including printed statement of VOC contents, comply with limits specified in related section.
- D. Shop Drawings: Indicate metal screen system elevations and sections, details of profile, pattern, dimensions, sizes, connection attachments, anchorage, size and type of fasteners, and accessories. Indicate anchor and joint locations, brazed connections, transitions, and terminations.
- E. Samples: Submit one (1) of each item below for each type and condition shown.

1. Screen Cladding: 24 inch by 24 inch (____ mm by ____ mm) sample of each type of screen cladding, illustrating finish and pattern.
- F. Test Reports: Submit test reports from an independent testing agency showing compliance with specified design and performance requirements.
- G. Manufacturer's Installation Instructions.
- H. Maintenance Data: Manufacturer's instructions for care and cleaning.
- I. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 1. Engage a single firm with a minimum of 5 years successful experience in the fabrication of panel systems of similar sizes, shapes, designs and finishes as required for this project.
 2. Production facilities are capable of producing and supplying the panels as required for installation per the construction schedule.
- B. Installer Qualifications: Engage a single firm with a minimum of 5 years successful experience in the erection of panel systems of similar sizes, shapes and finishes as required for this project; with adequate manpower, expertise and equipment to layout, and install the complete panel system.
- C. Templates: Supply installation templates, reinforcing and required anchorage devices.

1.07 MOCK-UP

- A. Provide mock-up of batten assembly, 8 feet (____ m) long by 10 feet (____ m) wide, illustrating each type of material, cladding, and finish.
- B. Locate where directed.
- C. Mock-up may remain as part of the Work.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in factory provided protective coverings and packaging.
- B. Protect materials against damage during transit, delivery, storage, and installation at site.
- C. Inspect materials upon delivery for damage. Repair damage to be indistinguishable from undamaged areas; if damage cannot be repaired to be indistinguishable from undamaged parts and finishes, replace damaged items.
- D. Prior to installation, store materials and components under cover, in a dry location.
- E. Retain strippable protective covering on metal panels during installation.

1.09 WARRANTY

- A. Warranty: Manufacturer's standard one year warranty against defects in materials, fabrication, and installation commencing on Date of Substantial Completion.
- B. Special Finish Warranty: Manufacturer's standard fifteen (15) year warranty against defects in finishes, including checking, cracking, chalking, color change, gloss retention, and adhesion of finish, commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. VOC Limits for adhesives, sealants, fillers, primers and coatings . Comply with limits specified in related section.

2.02 DECORATIVE METAL PLATE PANELS

- A. Metal Plate Panels: Aluminum plate panels with laser cut open patterns by fabricator per Architectural Drawings. Pattern A14 and A26, see drawings for location of each type of panel.
 - 1. Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations or blemishes; unless allowed for specific metal types and finishes.
 - 2. Provide factory-formed, metal plate wall panels fabricated from single sheets of metal formed into profile for installation method indicated. Include all accessories required.
- B. Panel Thickness: 1/8 inch (3 mm).
- C. Aluminum Sheet: Tension-leveled, smooth aluminum sheet, ASTM B 209.
- D. Aluminum Extrusions: ASTM B 221, 0.125 inch minimum wall thickness.
- E. Attachment: As detailed on Drawings.
- F. Acceptable Manufacturers:
 - 1. BOK™ Modern, San Francisco, CA; tel: (415)749-6500; web: <http://bokmodern.com> .
 - 2. California Panel Systems (CPS), El Cajon, CA; tel: (619) 562 7010; web: <http://calpanelsystems.com> .
 - 3. Steel Crest Architectural Panels; <https://www.steelcrestonline.com>.
 - 4. Substitutions: Per Division 01.

2.03 MATERIALS

- A. Aluminum Components: ASTM B221 or ASTM B221M.
 - 1. Tubes: Schedule 40 pipe.
 - 2. High Performance Organic Finish: AAMA 2604; multiple coats, thermally cured fluoropolymer system.

2.04 ACCESSORIES

- A. Panel Accessories: Provide components required for a complete panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
- B. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, end walls, framed openings, rakes, fasciae, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.
- C. Anchors and Fasteners: Provide anchors and other materials as required to attach to structure, made of same materials as railing components unless otherwise indicated; where exposed fasteners are unavoidable provide flush countersunk fasteners. For attachment of aluminum, provide stainless steel fasteners.
 - 1. For anchorage to concrete, provide inserts to be cast into concrete for bolting anchors.
 - 2. For anchorage to masonry, provide brackets to be embedded in masonry for bolting anchors.

3. For anchorage to stud walls, provide backing plates for bolting anchors.
4. Exposed Fasteners: No exposed bolts or screws.

D. Sealant: Silicone; to match panel color.

2.05 FABRICATION

- A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance and design requirements. Comply with indicated profiles and with dimensional and structural requirements.
 1. Die marks in finished materials are not acceptable.
- B. Fabricate metal panel assemblies to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish and anchorage, but not less than required to support structural loads.
- C. Fabricate systems in accordance with approved shop drawings and the supplier's instructions. Form work true to line and level with accurate angles and surfaces.
- D. Assemble metal panels in the shop to greatest extent possible to minimize field splicing and assembly.
- E. Cut, drill and laser cut metals cleanly and accurately. Remove burrs and ease edges; unless allowed for specific metal types and finishes. Remove sharp or rough areas on exposed surfaces.
- F. Cut, reinforce, drill and tap as indicated to receive finish hardware, screws and similar items.
- G. Use grommets, bushings and washers or methods as recommended by the supplier for separation of dissimilar metals.
- H. Tolerances:
 1. Panel Bow: Maximum 0.2 percent of width or length, whichever is greater.
 2. Wide or Length Variation: ± 0.064 inch to 48 inch, ± 0.032 inch to 144 inch.
 3. Thickness Variation: ± 0.008 inch.
 4. Squareness Variation: 0.1875 inch difference between diagonals.
 5. Camber Variation: 0.062 inch maximum.

2.06 FINISHES

- A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
 2. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
 3. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
 4. Exposed surfaces shall be free of scratches and other serious blemishes.
- B. Finishes for Aluminum Panels and Accessories:
 1. Three-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

- a. Color: As shown on finish schedule.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate and site conditions are acceptable and ready to receive work.
- B. Verify field dimensions of locations and areas to receive work.
- C. Notify Architect immediately of conditions that would prevent satisfactory installation.
- D. Do not proceed with work until detrimental conditions have been corrected.
- E. Furnish components to be installed in other work to installer of that other work, including but not limited to blocking, sleeves, inserts, anchor bolts, embedded plates and supports for attachment of anchors.

3.02 PREPARATION

- A. Review installation drawings before beginning installation. Coordinate diagrams, templates, instructions and directions for installation of anchorages and fasteners.
- B. Clean surfaces to receive units. Remove materials and substances detrimental to the installation.

3.03 INSTALLATION

- A. Comply with manufacturer's drawings and written instructions.
- B. General: Install metal panels according to approved shop drawings in orientation, sizes, and locations indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
- C. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual."
 - 1. Install exposed flashing and trim that is without buckling and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof performance.
 - 2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.
- D. Install components plumb and level, accurately fitted, free from distortion or defects and with tight joints, except where necessary for expansion.
- E. Anchor securely to structure using fasteners of size, type, spacing, and embedment to resist imposed loads.
- F. Conceal anchor bolts and screws whenever possible. Request Architect written permission for exposed fasteners.
- G. Isolate dissimilar materials with bushings, grommets or washers to prevent electrolytic corrosion.

3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch (6 mm) per floor level, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch (6 mm).
- C. Maximum Out-of-Position: 1/4 inch (6 mm).

3.05 CLEANING

- A. Remove protective film from exposed metal surfaces.

- B. Metal: Clean exposed metal finishes with potable water and mild detergent, in accordance with manufacturer recommendations; do not use abrasive materials or chemicals, detergents or other substances that may damage the material or finish.

3.06 PROTECTION

- A. Protect installed components and finishes from damage after installation.
- B. Repair damage to exposed finishes to be indistinguishable from undamaged areas.
 - 1. If damage to finishes and components cannot be repaired to be indistinguishable from undamaged finishes and components, replace damaged items.

END OF SECTION

ADDENDUM 03

SECTION 07 2633

WATER VAPOR EMISSION CONTROL COATING

PART 1 GENERAL

1.01 SUMMARY

- A. Epoxy type, environmentally safe, 100 percent solids, water vapor emission and alkalinity control coating. A Moisture Mitigation and Alkalinity Control System as defined in ASTM F3010.
- B. Cementitious leveling underlayment applied over moisture mitigation coating as required by specific flooring adhesive to be used at each finish flooring condition.
 - 1. Coordinate all flooring manufacturers adhesive requirements for submitted flooring materials in each area to determine requirements for flooring adhesive underlayments.

1.02 RELATED REQUIREMENTS

- A. Section 01 4000 - Quality Control for product manufacturer's independent laboratory qualifications.
- B. Section 01 6116 - VOC Restrictions.
- C. Division 03 section specifying Cast-in-Place Concrete for concrete slab substrate.
- D. Division 09 Section specifying concrete floor surface preparation.
- E. Division 09 Section specifying floor moisture and pH testing.
- F. Division 09 Floor Covering Sections, for installation requirements and to verify compatibility with the floor covering manufacturer's adhesives.

1.03 REFERENCED STANDARDS

- A. California Code of Regulations, Title 24, Part 2, California Building Code (CBC), International Building Code, with California Amendments.
- B. California Code of Regulations, Title 24, Part 11 California Green Building Standards Code, "CAL-Green".
- C. American Concrete Institute:
 - 1. ACI 318 - Building Code Requirements for Structural Concrete.
- D. ASTM International:
 - 1. ASTM C109 - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. Cube Specimens).
 - 2. ASTM D1308 - Standard Test Method for Effort of Household Chemicals on Clear and Pigmented Organic Finishes.
 - 3. ASTM D1653-03(2008) Standard Test Methods for Water Vapor Transmission of Organic Coating Films
 - 4. ASTM D7234-12 - Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers
 - 5. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
 - 6. ASTM E1155 Standard Test Method for Determining FF Floor Flatness and FI Floor Levelness Numbers
 - 7. ASTM F2170-09 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
 - 8. ASTM F3010 - 13 Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings.

- E. International Concrete Repair Institute (ICRI) Guideline No. 03732- Selecting and Specifying Concrete; Surface Preparation for Sealers, Coatings and Polymer Overlays.
- F. EPA Method 24 VOC Content Testing.

1.04 DEFINITIONS

- A. Water Vapor Emission Control Coating (Moisture Mitigation Control System): A sequence of products applied on a concrete floor to isolate moisture and high pH in the concrete from adhesive and finish floor covering.
- B. Water Vapor Emission Control Barrier: Coating applied on concrete floor that acts as the primary barrier to moisture movement.
- C. Underlayment: Trowelable or pourable cementitious patching/leveling compounds to which the finish floor covering is adhered. Underlayment is installed on top of the Water Vapor Emission Control Barrier.

1.05 SUBMITTALS

- A. General: Submit in accordance with Section 01 3300.
- B. Provide complete submittals at the same time as submittals for work in related sections to permit review of complete and integrated systems and assemblies.
- C. Product Data: For each type of product indicated, demonstrate compliance with specified attributes.
 - 1. Include detailed installation requirements, spread rates, joint and crack treatment and final barrier surfaces for floor coverings.
 - 2. ASTM Reports: Certified laboratory reports for specified ASTM performance.
 - 3. Extended Warranty Certificate: Manufacturers standard 15 year warranty for manufacturing defects and on site material performance. Warranty shall not list ACI-318 compliance exclusions.
 - 4. Pail Labels: Collect and submit each original pail label of Water Vapor Emission Control Coating installed. Copies are not acceptable. If pail labels are not removable, provide pails.
- D. Quality Control Post-Testing: Tensile pull-off testing results per ASTM D7234 performed by Owner's Testing Agency prior to floor covering installation.
- E. CAL-GREEN Submittals: Product Data – VOC Limits: For adhesives sealants, fillers, primers and coatings, documentation including printed statement of VOC contents, comply with limits specified in related section.
- F. Shop Drawings: Floor Plans, indicating areas of installation, sequencing, and total area of installation in square feet.
- G. Manufacturer Certification: Provide letterhead documentation of complete review of concrete mix designs, admixtures, sub-slab vapor retarder installation and curing methods with written acceptance prior to installation.
- H. Installer Proof of Qualification: Factory licensed, approved or certified applicator certificate signed by the manufacturer.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer shall have not less than five years experience in manufacturing floor moisture mitigation systems. The products shall be specifically

formulated and marketed to reduce concrete floor moisture vapor interaction with resilient floor coverings and for pH control.

- B. Installer Qualifications: Installer shall have not less than five years experience installing the selected fluid based coating systems, shall be trained by the manufacturer, experienced in surface preparation and application of the material and shall be subject to inspection and control by the manufacturer.
- C. Pre-installation Testing:
 - 1. Document floor and building conditions are within acceptable limits of temperature, relative humidity, and concrete condition before proceeding with product application.
 - 2. File a pre-installation checklist with the manufacturer and receive written confirmation of approval to proceed to support manufacturer's 10-year warranty.
- D. Product Performance:
 - 1. Manufacturer shall provide independent laboratory test reports documenting the following:
 - a. Water vapor transmission by ASTM E96 (water method) or ASTM D1653 indicating a maximum 0.1 perms net for coating on concrete.
 - b. Warrant no loss in moisture-resistance properties for a period of ten years of exposure to continuous water contact and pH greater than 10 after final cure.
- E. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and moisture mitigation system application workmanship.
 - 1. Mockup area of at least 200 sq ft in location approved by Architect / Owner.
 - 2. Do not proceed with work until mockup workmanship and underlayment surface appearance are approved by manufacturer's representative and Owner's representative.
 - 3. Mockup bond tests: Owner's Testing Agency will perform tensile bond tests in triplicate on mockup, no sooner than 72 hours after installation is completed, according to ASTM D7234 through entire Water Vapor Emission Control Coating into concrete substrate.
Comply with the following:
 - a. No cohesive failure of leveling underlayment with at least 200 psi, or tensile failure in concrete substrate with no inter-layer or intra-layer failure of Water Vapor Emission Control Coating.
 - b. If failure occurs, determine cause and method(s) to avoid further unacceptable work. Remove and re-apply mock-up area as required to produce acceptable work. Do not proceed with installation of Water Vapor Emission Control Coating until bond test results meet requirements above and are acceptable to Water Vapor Emission Control Coating manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to the job site in their original unopened containers, clearly labeled with the manufacturer's name and brand designation.
- B. Store products in an approved ventilated dry area; protect from dampness, freezing, and direct sun light. Do not store in areas with temperatures in excess of manufacturer's written instructions.
- C. Handle product in a manner that will prevent breakage or leakage of containers and damage to products.
- D. Use products before manufacturer's expiration dates.

1.08 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits required by moisture mitigation system manufacturer. Do not install products under environmental conditions outside manufacturer's limits.
- B. Do not apply Water Vapor Emission Control Coating to unprotected surfaces or when moisture is present on the surface of the concrete.
- C. Do not apply Water Vapor Emission Control Coating when air or floor temperature is lower than 50 degrees F (10 degrees C) or expected to fall below this temperature within 24 hours from time of application.
- D. Install Water Vapor Emission Control Coating only when concrete floor surface temperature is a least 5 degrees Fahrenheit above the dewpoint temperature of the air over the floor. Maintain and document coated floor surface temperature at least 5 degrees Fahrenheit above air dewpoint temperature for at least 24 hours after application.
- E. Provide continuous ventilation and air movement at all times during application and curing process of the moisture mitigation system.
- F. Protect work to prevent damage that will affect performance and the finished underlayment surface.

1.09 WARRANTY

- A. Extended Warranty: Warranty shall provide, at Owner's option, repair or replacement of the Water Vapor Emission Control Coating and flooring damaged due to failure of the Water Vapor Emission Control Coating during the warranty period. Warranty definition of damage shall include at least the following:
 - 1. Distress of flooring caused by moisture including but not limited to
 - a. Adhesive deterioration resulting in loss of flooring bond to the floor;
 - b. Formation of bubbles, mole trails, lumps, bumps, seam separation, or other significant displacement that interferes with the intended use of the flooring;
 - 2. Distress of the Water Vapor Emission Control Coating including but not limited to
 - a. Deformation of patching/leveling compounds installed under the Water Vapor Emission Control Coating;
 - b. Adhesive or cohesive failure of Water Vapor Emission Control Coating components;
 - c. Distress of underlayment above the Water Vapor Emission Control Coating such as delamination, disbanding, expansion, chemical reaction, or other deformation or displacement that interferes with the intended use of the flooring.
- B. Water Vapor Emission Control Coating Warranty coverage shall commence on the date of completion of flooring installation.
- C. Warranty shall include the replacement of Water Vapor Emission Control Coating, flooring system, patching compounds, installation accessories flooring materials and labor costs.
 - 1. Warranty shall not exclude or become void due to non-conformance to ACI-318 parameters, dew-point, concrete salts, admixtures, resin and silicate surface treatments or cohesive substrate failure in the concrete surface due to normal concrete movement. Installation of Water Vapor Emission Control Coating indicates acceptance of site conditions.

PART 2 PRODUCTS

2.01 SYSTEM DESCRIPTION

- A. Comply with product requirements of ASTM F3010: Non-corrosive, low viscosity, high gloss, microbial resistant, moisture-alkaline resistant coating to suppress, control and mechanically restrict water emission and pH level of concrete substrates for compliance with subsequent floor coverings or coating materials.
- B. Coating product must contain 100% epoxy resin solids. Products based on silicate chemistry, potassium, sodium, lithium, and similar formulations, water-based acrylics, or resin formulations containing or mixed with water, are not acceptable and will be rejected.
- C. Barrier Coating Requirements: It is the intent of this section and the drawings to require a complete barrier system. Any items not specifically noted but necessary for a complete barrier system shall be provided under this section.
 - 1. Coating shall be compatible with all types of floor covering products, no system failures due to improper installations and contain no water/alkaline soluble compounds.
 - 2. Coating shall have a sufficient density to reduce water vapor transmission, avoid water vapor damage to other adhered systems and resistant to most commonly encountered acids/solvents in case of topical exposure (spills).
 - 3. Coating shall be resistant to mold, mildew and biological growth when applied to prepared substrates

2.02 PERFORMANCE REQUIREMENTS

- A. Moisture and Alkalinity: Barrier shall remain tolerant to alkalinity of 14 pH per ASTM D1308 and to 100% relative humidity per ASTM F2170.
- B. Water Vapor Transmission:
 - 1. Manufacturer shall provide independent laboratory test reports documenting the following:
 - a. Water vapor transmission by ASTM E96 (water method) or ASTM D1653 indicating a maximum 0.1 perms net for coating on concrete.
 - b. Warrant no loss in moisture-resistance properties for a period of fifteen years of exposure to continuous water contact and pH greater than 8 after final cure.

2.03 WATER VAPOR EMISSION CONTROL COATING

- A. Source Limitations: Provide materials approved by one Water Vapor Emission Control Coating manufacturer including moisture-resistant concrete patching and leveling compounds for use under Water Vapor Emission Control Coating, primers, coatings, sand, and underlayment leveling/patching compounds.
- B. Basis of Design: VAP I 2000 Zero VOC family of products by Koster Waterproofing Systems. Subject to compliance with requirements specified in this section, provide one of the following products:
 - 1. VAP I 2000 Zero VOC family of products by Koster Waterproofing Systems, www.kosterusa.com.
 - a. VAP I 2000 Zero VOC, twelve hour cure time to final flooring.
 - b. VAP I 2000 FS (Fast Set); four hour cure time to final flooring.
 - c. VAP I 2000 UFS (Ultra Fast Set); two hour cure time to final flooring.
 - 2. A C Tech ® 2170 FC ZERO System: by Allied Construction Technologies, Inc. www.actamerican.net, www.combimix.com.
 - 3. VaporTight SG3 by Aquafin, www.aquafin.net.
 - 4. MC™ RAPID by Ardex, www.ardexamericas.com.

5. Substitutions: See Section 01 6000.
- C. Single Coat System: 2-component, VOC Compliant, 100% solids epoxy formulated as a vapor barrier against high moisture and alkalinity in concrete substrates. Apply at manufacturer's recommended rate, minimum average 15-mils (0.015-in.), to provide maximum 0.1 net perms (grains/hr/sq ft/in. Hg) water vapor transmission.
 1. Floor preparation in compliance with coating manufacturers written requirements and meeting warranty criteria.
 2. Manufacturer's approved bonding agent/primer
 3. Moisture Mitigation System Control Coating: Apply a single coat at manufacturer's recommended and tested coverage rate, minimum average to provide maximum 0.1 net perms (grains/hr/sq ft/per 1-inch Hg) water vapor transmission.
 4. Cementitious Leveling Underlayment: Manufacturer's approved.
- D. Water Vapor Emission Control Coating: Epoxy resins and other chemical compounds; 100 % solids, specifically formulated chemicals and resins to provide the following properties. Coating product must contain 100% epoxy resin solids.
 1. Solid Content: 100%.
 2. VOC, mixed: 0 g/L.
 3. Flash Point: 200° F.
 4. Perm Rating, ASTM E96: Not to exceed 0.1 grains/ sq.ft. /hour in Hg.
 5. ASTM E 96, Water Vapor Transmission (wet methods) Performance shall be documented by an independent testing laboratory at a minimum 97% for water vapor transmission reduction compared to untreated concrete.
 6. ASTM D 1308; Insensitivity to alkaline environment up to, and including, pH 14 in a 14 day bath test.
 7. Certify acceptance and exposure to continuous topical water exposure after final cure.
 8. System must be able to perform as required with ASTM F2170 RH Probe readings of 100%.
- E. Expansion Joint Treatment: By Coating manufacturer or approved by coating manufacturer and type recommended to suit site conditions.
 1. Basis of Design for KOSTER system: KOSTER Joint Sealant FS-H.
- F. Non-Moving Crack Treatment: By Coating manufacturer or approved by coating manufacturer and type recommended to suit conditions indicated.
 1. Basis of Design for KOSTER system: KOSTER TA mixed with KOSTER VAP I 2000.
- G. Self-Leveling Primer: By Coating manufacturer or approved by coating manufacturer and type recommended to suit site conditions.
 1. Basis of Design for KOSTER system: KOSTER VAP I® 06 Primer.
 2. Application: Applied over Moisture Mitigation System Coating Control System coating prior to installation of Underlayment.
- H. Patching / Leveling Compounds: Formulated primarily of calcium aluminate or portland hydraulic cements, minimum compressive strength 3,000 psi at 28 days when tested in accordance with ASTM C109. Patching / Leveling compounds that rely primarily on gypsum for their cementing properties shall not be used.
 1. By Coating manufacturer or approved by coating manufacturer and type recommended to suit site conditions.
 2. Basis of Design for KOSTER system: KOSTER SL, Cementitious Underlayment.
- I. Surface treatment for concrete contaminated with Soluble Silicates: By Coating manufacturer or approved by coating manufacturer and type recommended to suit conditions indicated.
 1. Basis of Design for KOSTER system: KOSTER IB.

2. Application: Apply to contaminated concrete prior to Moisture Mitigation System Coating Control System Sealer application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Site Verification: Verify substrate conditions are acceptable for a warranted system.
- B. Verify new concrete floors have cured minimum 28 days.
- C. Verify concrete cleaned by shot blasting or other mechanical abrasion as specified in related section to an ICRI CSP-3 to CSP-4 profile and is not excessively rough for sealing at specified moisture mitigation coating application rates.
 1. Verify removal of dirt, oils, films, and other materials detrimental to sealer application.
- D. Examine substrates, with Installer present, for compliance with requirements for surface contamination, damage, and other conditions affecting performance of the Work.
- E. Examine substrate to determine repairs required to restore substrate surface to be within tolerances required for floor finishes specified in other sections, prior to completing Work of this section.
- F. Examine substrate to verify surfaces prepared in accordance with this section will be suitable for application of finishes specified in other sections.
- G. Prepare written report, endorsed by Installer, listing conditions detrimental to performance with recommendations for methods and materials required to correct conditions before proceeding with work of this section.
- H. Proceed with surface preparation only after unsatisfactory conditions have been corrected.
 1. Proceeding with surface preparations indicates acceptance and of surfaces and conditions of substrate.
- I. Verify items which penetrate concrete substrate to receive coating are securely installed and coating installation will not affect proper installation and warranty requirements.
- J. Surfaces shall be free of water, rain, snow and frost.

3.02 PREINSTALLATION TESTING

- A. Moisture and pH Testing: As specified in related Section 09 0512.
- B. Verify relative humidity testing in accordance with ASTM F2170 and alkalinity-pH testing is completed using methods specified and acceptable results obtained.

3.03 PREPARATION

- A. Surface Preparation: As specified in related Section 09 0511.
- B. Protection: Mask and protect walls, equipment from adjacent work and finishes during installation process.
- C. Concrete Fiber Reinforcement, if present after shot blasting, shall be burned off, scraped and vacuumed, leaving no fibers protruding from the concrete surface.
- D. Cleaning: Broom-sweep and vacuum slab surfaces to remove contaminants.
- E. Do not acid etch surface. Do not apply water to surface.
- F. Joints and Cracks: Fill cracks, construction joints, sawcut control joints, and surface irregularities with crack repair compound.

1. Route cracks with 4 to 6-inch diameter x 0.060-inch diamond abrasive wheel to not more than 1-1/8 to 1-1/4-inch depth. Clean by vacuum to remove dust and residue.
2. Mix and apply crack repair compound according to manufacturer's instructions using gravity feed.
3. Fill cracks to within 1/8-inch. of surface, add sand and apply additional crack repair compound to saturate sand and slightly overfill crack.
4. Scrape or lightly grind flush after curing to provide a level surface for Water Vapor Emission Control Coating.
5. Fill cracks completely to stabilize against concrete movement and to provide moisture barrier.

3.04 INSTALLATION

- A. Apply Water Vapor Emission Control Coating where relative humidity and alkalinity tests do not meet flooring manufacturers requirements for floor finishes:
- B. Apply Water Vapor Emission Control Coating based on relative humidity and alkalinity test results in strict compliance with the manufacturer's written instructions.
- C. Water Vapor Emission Control Coating System Application:
 1. Coverage rates are dependent on the surface texture and porosity of the substrate.
 2. Apply sufficient coating to achieve the manufacturer's recommended minimum film thickness using manufacturer's recommended squeegee or roller. Periodically check application rate and wet film thickness. Follow manufacturer's recommended curing times.
 3. Two-coat system: Apply sand broadcast to rejection into second coat according to manufacturer's written instructions. After curing, remove excess sand by sweeping and vacuuming.
- D. Cementitious Underlayment System:
 1. Self-Leveling Cementitious Underlayment:
 - a. One-coat Water Vapor Emission Control Coating without sand broadcast, apply primer to coating. Do not exceed manufacturer's recommended application rate and film thickness. Thicker primer can lead to cracking of underlayment. Allow manufacturer's specified cure time. Do not exceed manufacturer's specified open time. Mix and pour the underlayment product on the floor and disperse with the approved spreader, followed by smoothing the material with the approved smoother. Wear cleated shoes to avoid leaving marks.
 - b. Do not exceed maximum application thickness specified by underlayment manufacturer. Provide a smooth, uninterrupted, level finish without bumps, clumps, depressions, or other defects that would reflect through flooring.
 - c. Floor finish shall be flat to within 1/8-inch. in 10 ft, and as measured by ASTM E1155. Provide Ff of 50 and Fl of 30.
 2. Inspect and Repair defects:
 - a. Inspect hardened underlayment for flatness.
 - b. Lightly sand flat any bumps in the underlayment. Unhydrated or partially hydrated clumps of underlayment cement shall be removed by carefully chiseling and patching with compatible trowel-applied patching compound recommended by underlayment manufacturer. Do not penetrate the moisture mitigation coating.
 - c. Fill low spots with compatible trowel-applied patching compound recommended by underlayment manufacturer. Sand smooth to remove trowel marks.
- E. Allow surfaces to cure and re-apply additional coats as required to form a uniform control layer.

3.05 FIELD QUALITY CONTROL

- A. Manufacturer and installer to guarantee installed Water Vapor Emission Control Coating is compatible with all specified floor coverings.
- B. Post-Installation Testing: Owner's Testing Agency to perform the following testing:
 - 1. Tensile bond tests: Perform tensile bond tests in triplicate, at the same rate as Relative Humidity testing specified in related section, no sooner than 72 hours after installation is completed, according to ASTM D7234 through entire Water Vapor Emission Control Coating into concrete substrate. Comply with the following:
 - a. No cohesive failure of leveling underlayment with at least 200 psi, or tensile failure in concrete substrate with no inter-layer or intra-layer failure of Water Vapor Emission Control Coating.
 - 2. Repair failed test locations at no cost to Owner and re-test to demonstrate compliance.

3.06 PROTECTION

- A. Protect each coat from damage due to traffic, topical water and contaminants during required cure period until acceptance by related floor covering section.

END OF SECTION

ADDENDUM 03
SECTION 10 1400
SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Room and door signs with raised tactile letters and braille.
- B. Interior directional and informational signs with raised tactile letters and braille.
- C. Vinyl Graphics.

1.02 RELATED REQUIREMENTS

- A. Division 08: Pertinent sections specifying doors and glazing materials serving as the mounting surface for signage.
- B. Division 09: Pertinent sections specifying wall finishes and substrates serving as the mounting surface for signage.

1.03 REFERENCE STANDARDS

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines.
- B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- C. California Code of Regulations, Title 24, Part 2, California Building Code (CBC), International Building Code.
- D. Standards for jurisdiction where project is located.

1.04 SUBMITTALS

- A. See Section 01 3300 - Submittals for submittal procedures.
- B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.
- C. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
 - 1. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.
 - 2. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
 - 3. Submit for approval by Owner through Architect prior to fabrication.
- D. Shop Drawings: Indicate sign styles, lettering font, foreground and background colors, locations, overall dimensions of each sign.
 - 1. Submit shop drawing at scaled size for each typical sign. Indicate: Proposed copy, letter height, spacing and location of lettering on the sign field, colors and materials of each element and lettering. Tabular listing of signage and copy alone is not acceptable.
 - 2. Submit tabular listing for each sign keyed to location indicated on drawings, including all text and adjacent space for Owner modification/confirmation of text.
 - 3. Provide all drawings and detail documents necessary to complete the project.

4. Where sizes for signs are impacted by dimensions of surfaces or locations on which they are to be installed, verify dimensions by field measurement. Indicate measurements and signage locations on shop drawings for approval prior to production.
 5. Indicate for monument sign: Member and material profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details
- E. Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating sign style, font, and method of attachment.
- F. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.
- G. Manufacturer's Installation Instructions: Include installation templates and attachment devices.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum Five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Package signs as required to prevent damage before installation.
- B. Package room and door signs in sequential order of installation, labeled by floor or building.
- C. Store adhesive at normal room temperature.

1.07 FIELD CONDITIONS

- A. Do not install adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

- A. Conform to applicable code for requirements..
1. C.C.R., Title 24, Part 2. California Building Code, Sections 1009.8, 1009.9, 1023.8, 1023.9, 1023.10 and 11B-703 for requirements governing signage design, location and attributes.
 2. Braille Symbols: California Contracted Grade 2 Braille symbols shall be used per CBC 11B-703.3. Provide only domed Contracted Grade 2 Braille symbols with dimensions in accordance with Table 11B-703.3.1.
 3. Signs shall be field-inspected per CBC 11B-703.1.1.2.
- B. It is the sole responsibility of the signage contractor to obtain all permits required for signage contained in this project. Signage contractor to obtain, provide, produce and process all documentation, and pay all fees required for the permitting process.

2.02 MANUFACTURERS

- A. Plaque Signs:
1. Advance Corporation / Braille-Tac Division; Product Braille-Tac Etched Magnesium (Chemsast): 8200 - 97th Street South, Cottage Grove, Minnesota 55016: Telephone 800-328-9451; www.advancecorp.com/brailletac
 2. Substitutions: See Section 01 6000 - Product Requirements.

- B. Dimensional Letter Signs:
 - 1. A.R.K. Ramos Architectural Signage Systems; Cast Aluminum Letters:
www.arkramos.com/#sle.
 - 2. Cosco Industries; Cast Aluminum: www.coscoarchitecturalsigns.com/#sle.
 - 3. Substitutions: See Section 01 6000 - Product Requirements.
- C. Vinyl Graphics:
 - 1. 3M / Commercial Products Division; Product 3M Premium Grade Vinyl: 3M Center, Building 220-6W-06, Post Office Box 33220, St. Paul, Minnesota 55133-3220: Telephone 800-374-6772.
 - 2. Substitutions: See Section 01 6000 - Product Requirements.

2.03 SIGNAGE APPLICATIONS

- A. Accessibility Compliance: Signs are required to comply with ADA Standards and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas.
 - 1. Sign Type: Flat signs with engraved panel media as specified.
 - 2. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
 - 3. Character Height: 1 inch.
 - 4. Sign Height: 3 inches, unless otherwise indicated.
 - 5. Service Rooms: Identify with room names and numbers to be determined later, not those indicated on drawings.
 - 6. Rest Rooms: Identify with pictograms, the names "MEN" and "WOMEN", room numbers to be determined later, and braille, provide separate Facility Identification Symbols on doors as shown on Drawings.
- C. Interior Directional and Informational Signs:
 - 1. Sign Type: Same as room and door signs.
 - 2. Lift Signage: Pictograms and copy shown on Drawings.
 - 3. Room Occupancy Signage: All rooms with Occupant Load greater than 50. Verify actual numbers with Architect.
 - 4. Tactile Exit and Exit Route Signs: Raised letters and Braille as specified for Room and Door signs.
 - 5. Exit Stair and Exit Ramp Signs: Raised letters and Braille as specified for Room and Door signs.
 - 6. Assistive Listening Sign: Pictogram and copy shown on Drawings.
 - 7. Other sign types indicated on the Drawings.
 - 8. Wording of signs is scheduled on drawings.
- D. Traffic and Regulatory Signs: Conform to requirements of local authority having jurisdiction and CalTrans Traffic Manual for the type of sign indicated.

2.04 PLAQUE SIGNS

- A. Plaque Signs: One piece magnesium metal construction with raised character copy and braille with thermal-set, polyurethane finish. Tactile legends and Braille shall comply with Americans with Disabilities Act (ADA), California Building Code (CBC) and requirements indicated for quantities, sizes, layouts, materials, finishes, color, etc. as specified in the Graphics Schedule and Drawings/Specifications.
 - 1. Exterior durability rating: 3 years minimum.
 - 2. Painted Finish:

- a. Weatherability: When tested in accordance with ASTM G 53, after 500 hours in a Weatherometer (equivalent to 3 years of exterior exposure) gloss retention of not less than 88.0 determined in accordance with ASTM D 523 as a 60 degree angle.
 - b. Color Fade Resistance: Color shall not change more than 1.68 units determined in accordance with ASTM D 2244 and measured with a Hunter colorimeter, Model D25.
 - c. Durability: Sign finish shall show no effect after requested use of cleaners such as Graffiti Remover #1120 manufactured by Fine Organics Corp., Lodi, NJ.
3. Colors: Custom, as selected by Architect.
 4. Total Thickness: 0.153 inches.
 5. Sign Edges: Square. Sign edges at geometric symbols shall be eased or chamfered in accordance with governing code.
- B. Raised Characters:
1. Comply with applicable provisions of ANSI/ICC A117.1, including Braille.
 2. Character Color: As selected by Architect..
 3. Character Font: As Indicated.
 4. Character Stroke Width: As required by referenced codes, 1/8 inch.
 5. Character Height: As indicated. If not shown, provide 1 inch.
 6. Character Edges: Square.
 7. Character Case: Upper case only.

2.05 VINYL GRAPHICS

- A. Adhesive Vinyl Graphics of ISA for installation on glass or similar substrates.
- B. Base Material: Premium Grade with an outdoor durability rating of five years.
 1. Color: Provide as shown on Drawings. If no colors are indicated, provide International Blue with white pictograms..

2.06 DIMENSIONAL LETTERS

- A. Metal Letters:
 1. Metal: Aluminum casting.
 2. Metal Thickness: 1/8 inch minimum.
 3. Letter Height: 24"H, Width varies, 36" max inches.
 4. Text and Typeface:
 - a. Character Font: Helvetica, Arial, or other sans serif font.
 - b. Character Case: Upper case only.
 5. Finish: Brushed, satin.
 6. Mounting: Tape adhesive.

2.07 ACCESSORIES

- A. Concealed Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.
- B. Exposed Screws: Stainless steel.
- C. Mounting Hardware: Vandal-proof screws, stainless steel, size recommended by manufacturer to suit applications and resist applied loads.
- D. Adhesive: 3M Corporation, "VHB", applied in 5 mil thickness covering entire back of sign plaque without void or bubble.
- E. Silicon Adhesive: Silglaze II #2801 GE Clear - Silicone Sealant / Adhesive.
- F. Tape Adhesive: Double sided tape, permanent adhesive.

- G. Accessories and materials required for complete installation as indicated.

PART 3 EXECUTION

3.01 COORDINATION

- A. For signs supported by or anchored to permanent construction such as building such as building fascias, advise installers about specific requirements for placement of anchorage devices and similar items to be used for attaching signs.

3.02 EXAMINATION

- A. Confirm visibility of site signage and graphics in indicated locations. Do not install signs in locations where they will not be visible or where they will obstruct visibility of other related building elements, such as exit signage or life safety equipment provided under other contracts or sections. Request direction from Architect in the event of conflict with signage and building elements.
- B. Verify that substrate surfaces are ready to receive work.
- C. Clean substrates to receive adhered vinyl graphics or tape adhesive using means recommended by adhesive manufacturer that will not damage substrates. Remove contamination and materials that might impede film adhesion.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install signs after surfaces are finished, in locations indicated.
- C. Install neatly, with horizontal edges level.
- D. Locate signs and mount at heights indicated on drawings and in accordance with ADA Standards and ICC A117.1.
- E. Install signage and graphics plumb, level and proportionally spaced or kerned as required for uniform appearance; centered on, or aligned with related building elements, measured from established lines and levels, accurately fitted, free from distortion or defects.
- F. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing items to in-place construction; including threaded fasteners for concrete inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors as required.
- G. Install vinyl graphics on clean substrates in accordance with vinyl manufacturer instructions, flat, smooth, free of defects, bubbles dust, blemishes and air pockets.
- H. Plaque Mounting on Glazing: Install on glazing with double stick tape and silicone adhesive. Provide self-adhesive opaque plastic film, in matching or contrasting color as selected, to conceal reverse side of signs mounted on glazing. No exposed fasteners, adhesives or glazing tapes permitted. Film backer must be computer cut to match the shape of the plaque(s).
- I. Plaque Mounting at all other interior locations: Provide double stick tape and silicone.
- J. Plaque Mounting at all other exterior locations: Provide double stick tape and anchorage devices and fasteners as necessary for securing items to in-place construction; including threaded fasteners for concrete inserts, toggle bolts, through-bolts, lag bolts, wood screws, wedge anchors and other connectors as required.

3.04 ADJUSTING

- A. Correct all damaged work by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
- B. Protect from damage until Substantial Completion; repair or replace damaged items.

3.05 SCHEDULES

- A. Refer to Graphics Plans, Schedules and Details on the Drawings.

END OF SECTION

ADDENDUM 03
SECTION 12 3600
COUNTERTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Countertops for architectural cabinet work.

1.02 RELATED REQUIREMENTS

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 01 8113 - Sustainable Design Requirements.
- C. Section 06 4100 - Architectural Wood Casework
- D. Section 12 3553.19 - Wood Laboratory Casework: Laboratory countertops.
- E. Pertinent sections of other divisions specifying work penetrating countertops.
- F. Pertinent sections of other divisions specifying assembly, installation, and connection of plumbing work, plumbing elements penetrating countertops or splashes.
- G. Pertinent sections of other divisions specifying assembly, installation, and connection of electrical work, electrical elements penetrating countertops or splashes.

1.03 REFERENCE STANDARDS

- A. ANSI A208.1 - American National Standard for Particleboard.
- B. ANSI A208.2 - American National Standard for Medium Density Fiberboard for Interior Use.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- D. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards.
- E. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards, U.S. Version 3.0.
- F. California Code of Regulations, Title 24, Part 2, California Building Code (CBC), International Building Code.
- G. California Code of Regulations, Title 24, Part 11 California Green Building Standards Code, "CAL-Green".
- H. NEMA LD 3 - High-Pressure Decorative Laminates.
- I. PS 1 - Structural Plywood.
- J. WI (CCP) - Certified Compliance Program (CCP).
- K. AWI/AWMAC/WI - Architectural Woodwork Standards (AWS)

1.04 SUBMITTALS

- A. See Section 01 3300 - Submittals, for submittal procedures.
- B. Provide complete submittals at the same time as submittals for work in related sections to permit review of complete and integrated systems and assemblies.
- C. Product Data: Demonstrate compliance with specified attributes, provide Manufacturer's data sheets on each product to be used, including:

1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Specimen warranty.
- D. CAL-GREEN Submittals:
1. Product Data - VOC Limits: For adhesives, sealants, fillers, primers and coatings, documentation including printed statement of VOC contents, comply with limits specified in related section.
 2. Composite Wood Formaldehyde Limits: Provide certification that all products meet current CARB Airborne Toxic Control Measure (ATCM) for Composite Wood Formaldehyde Limits by Mandatory Compliance Dates as specified in related section.
- E. Shop Drawings: Complete details of materials and installation; combine with shop drawings of cabinets and casework specified in other sections.
- F. Selection Samples: For each finish product specified, color chips representing manufacturer's full range of available colors and patterns.
- G. Verification Samples: For each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.
- H. Test Reports: Chemical resistance testing, showing compliance with specified requirements.
- I. Certificate: Submit labels and certificates required by quality assurance and quality control programs.
- J. Installation Instructions: Manufacturer's installation instructions and recommendations.
- K. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator.
- B. Quality Certification:
1. Provide labels or certificates indicating that the installed work complies with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade or grades specified.
 2. Provide designated labels on shop drawings as required by certification program.
 3. Provide designated labels on installed products as required by certification program.
 4. Submit certifications upon completion of installation that verifies this work is in compliance with specified requirements.
 5. Arrange and pay for inspections required for certification.
 6. Replace, repair, or rework all work for which certification is refused.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 FIELD CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. VOC Limits for adhesives, sealants, fillers, primers and coatings . Comply with limits specified in related section.
- B. Composite Wood products must meet current CARB Airborne Toxic Control Measure (ATCM) for Composite Wood Formaldehyde Limits by Mandatory Compliance Dates as specified in Section 01 6116.

2.02 COUNTERTOPS

- A. Match Quality Standard of cabinets specified in Section 06 4100. Minimum Custom Grade, otherwise.
- B. Plastic Laminate Countertops: High-pressure decorative laminate (HPDL) sheet bonded to substrate.
 - 1. Laminate Sheet: NEMA LD 3, Grade HGS, 0.048 inch nominal thickness.
 - a. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
 - b. NSF approved for food contact.
 - c. Wear Resistance: In addition to specified grade, comply with NEMA LD 3 High Wear Grade requirements for wear resistance.
 - d. Finish: Matte or suede, gloss rating of 5 to 20.
 - e. Manufacturers: Selected from those listed in Section 06 4100. Provide all materials from a single manufacturer.
 - 2. Exposed Edge Treatment: Square, substrate built up to minimum 1-1/4 inch thick; covered with matching laminate.
 - 3. Back and End Splashes: Same material, same construction.
- C. Epoxy resin countertops and molded sinks: Type specified in Section 12 3553.19 - Wood Laboratory Casework.

2.03 MATERIALS

- A. Wood-Based Components:
 - 1. Wood fabricated from old growth timber is not permitted.
- B. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch thick; join lengths using metal splines.
- C. Particleboard for Supporting Substrate: ANSI A208.1 Grade 2-M-2, 45 pcf minimum density; minimum 3/4 inch thick; join lengths using metal splines.
- D. Medium Density Fiberboard for Supporting Substrate: ANSI A208.2.
 - 1. Type specified in Section 06 4100.
- E. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.
- F. Countertop Support Brackets: Provide at locations where countertop span is not supported by base cabinet, maximum 36 inches on center.
 - 1. Steel, welded construction, powder coat finish, color selected by Architect.
 - 2. Support Arms: Match countertop depth, 2 inch flanges, extended arm predrilled for bolting to wall studs or other support.
 - 3. A&M Hardware, Inc. 2.0 inch Surface Mounted Brackets: www.AandMhardware.com.
 - 4. Substitutions: See Section 01 6000 - Product Requirements.

- G. Joint Sealant: Mildew-resistant silicone sealant, color-matched to countertop, clear at stainless steel.

2.04 FABRICATION

- A. Fabricate in accordance with standards governing fabrication quality that are specified in Section 06 4100.
- B. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
 - 1. Join lengths of tops using best method recommended by manufacturer.
 - 2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
 - 3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
 - 4. Locate openings accurately and use templates or roughing-in diagrams to provide accurate size and shape.
 - 5. Smooth edges of cutoffs and, where located in countertops and similar exposures, seal edges of cutouts with a water resistant coating.
- C. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
 - 1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
 - 2. Height: 4 inches, unless otherwise indicated.
- D. Epoxy and Solid Surfacing: Fabricate tops up to 144 inches long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.

PART 3 EXECUTION

3.01 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.
- C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 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.

3.03 INSTALLATION

- A. Install concealed support brackets before wall finishes are applied. Install at spacings indicated on Drawings, except if none are shown, install at maximum 36 inches on center.
- B. Securely attach countertops to cabinets or concealed brackets using concealed fasteners. Make flat surfaces level; shim where required.
- C. Attach plastic laminate countertops using screws with minimum penetration into substrate board of 5/8 inch.
- D. Seal joint between back/end splashes and vertical surfaces.

3.04 TOLERANCES

- A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.
- B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.
- C. Field Joints: 1/8 inch wide, maximum.

3.05 CLEANING

3.06 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

**ADDENDUM 02
BID ALTERNATE #1**

PERFORMING
ARTS
CENTER

11,400 SF

BUILDING B

BUILDING A

