1. GENERAL

This document includes requirements that clarify or supersede portions of the bid and/or contract requirements for the project. This Addendum is a Contract Document.

2. SUMMARY

The following changes, additions and deletions shall be made to the following document(s); all other conditions shall remain the same.

Pre-bid Questions and Answers

Question: Section 00 01 10 Table of Contents - There is a call-out for Section 04200 - Concrete Masonry Units. The spec section is missing in the body of the specs. Is there any masonry required on this job?
Answer: Existing openings in CMU walls will be infilled with CMU to match existing construction, per plans. See Addendum #1 structural drawings.

Question: Section 00 32 13 Scheduling of Work - Part 1.02.A.2 calls out for CPM schedule to be Cost & Resource load. Is this really necessary?
Answer: Yes.

Question: Section 00 41 13 Bid Form and Proposal - In item #1 it calls out to include allowances, which is in 01 11 00 Summary of work totaling $90k, within our bid price. You realize that the amount will be marked up and bond added to this 90k amount, right? So I take it that ESUHSD will issue the contract for Base bid minus the 90k allowance?
Answer: The District understands that the amount will be marked up. The District will be issuing the contract for Base Bid plus the Allowance, refer to the updated Bid Form issued with Addendum #02.

Question: Section 00 45 46.09 Buy American Certificate - Is this a mandatory requirement of this job i.e. “Buy American” products and /or will any other paperwork be required?
Answer: This specification has been removed in Addendum #02.
Question: Section 01 52 13 Field Office - Under part 1.05 Quality Assurance part D calls for the “State Personnel Training”. Please clarify.
Answer: Section 01 52 13 Field Office - Part 1.05 Quality Assurance Part D shall be deleted in its entirety.

Question: Section 07 51 13 Built-up Asphalt Roofing - This section appear to be contradict Project no. Z-XXX-803, DW Roof Replacement – Package D (EV, FH, JL, ST and YB) which is using TPO as the new district standard. Please confirm ESHUSD intent on which roofing material to use.
Answer: Built-up asphalt roofing will be used on this project.

Question: Section 07 51 13 Built-up Asphalt Roofing - Part 2.02.D – Decking calls out TREX products. Where are these used on the job?
Answer: There is no TREX / composite decking in the project.

Question: Section 09 83 14 Acoustical Wall Panels - This spec section references 09 00 00 for panel types & color which doesn’t exist. Please provide missing spec’s.
Answer: Specification Section 09 83 14 has been removed from the project; refer to Addendum #1.

Question: Section 10 14 00 Signage - Part 1.0.A.1 Calls out to “Coordinate with Districts signage program”. Please provide web link or copy of signage program.
Answer: Specification Section 10 14 00 has been revised to provide more information on signage and to remove references to a District signage program. Refer to Addendum #2 specifications.

Question: Sheet C2.1 Horizontal Control & Paving Plan - In the site improvement legend there is a call-out for (N) AC (Vehicular) which references detail 1A on C7.2, where is this used? i.e. none could be found.
Answer: C2.1: Added callouts in Addendum #1 to plan referencing new AC “vehicular.” See note #15.

Question: Sheet C2.1 Horizontal Control & Paving Plan - There appears to be some trench paving missing where the new SD line ties into the (E) DI at the end of the concrete V gutter, i.e. keynote #15 on C4.1.
Answer: Replace trench paving in kind (i.e. pavement / concrete v-gutter, etc.).
Question: Sheet C3.1 Grading Plan - At the planter on the SE – S & SW corner of the building uses abbreviations TW, BFC and BFW that are not mentioned on sheet C1.1 abbreviations. Please clarify.
Answer: TW is Top of Wall, BFC is Bottom Face of Curb, BFW is Bottom Face of Wall. Abbreviations Legend has been added to C3.1 in Addendum #2.

Question: Sheet A1.01 Demolition Floor Plan - At approximately grid line E and 3 there is a keynote #8 which references a 4” gas line yet there is line on the page to see. Please clarify the amount of piping to remove.
Answer: Line of gas line to be demolished has been added in Addendum #2.

Question: Sheet A1.02 Demolition Roof Plan - At grid lines 4 to 7 between B.8 and C there is a diagonal hatch which references ”Slab to be Demolished”. Yet the corresponding location on A2.10, A2.07 and S1.0 doesn’t call for any work to be done. Please clarify the reason to remove the SOG.
Answer: Extent of slab demolition has been updated in Addendum #2.

Question: Sheet A2.02 Lower Roof Plan - At grid line 3.2 between C and G shows a gutter at the edge of the roof, which is confirmed by cross section 2 on A3.22. Why is a gutter needed on the high side of the roof? Also, if the gutter is not needed then what is the purpose of the “Treatment Planter” below i.e. no rainwater to “filter” on high side of roof.
Answer: The gutter referenced in the question collects water from the high roof above. It is internally sloped to bring the water to the RWL and treatment planter located at gridlines G and 3.1. Detail 11/A8.51 has been updated in Addendum #2 to clarify this.

Question: Sheet A2.02 Lower Roof Plan - At grid line 2 and B.5 there is a keynote #11 that references a “Translucent Roof Panel” but this is NOT bore out on the cross section 2 on A3.21. Please confirm there is only roofing to be installed.
Answer: The keynote #11 indicating a translucent roof panel at gridlines 2 & B.5 has been removed in Addendum #1.

Question: Sheet A2.03 Upper Roof Plan - At grid line 8 and 2 between B and C the details 16 and 9 on A8.00 makes no reference if there is (N) “edge metal” required. Please confirm none is required.
Answer: New roofing and accessories are required at the high roof. Provide a complete new roofing assembly including edge metal for this roof. Refer to general note #3 on A2.03.
Question: Sheet A2.03 Upper Roof Plan - At grid line 3.2 between C and G shows a gutter at the edge of the roof, which is confirmed by cross section 1 on A3.21 that further references detail 9 on 4.21. Why is a gutter needed on the high side of the roof? i.e. only fascia is needed.

Answer: The gutter referenced in the question collects water from the high roof above. It is internally sloped to bring the water to the RWL and treatment planter located at gridlines G and 3.1. Detail 11/A8.51 has been updated in Addendum #2 to clarify this.

Question: Sheet A4.20 Wall Sections - Cross section 17 shows concrete stem wall under the windows on grid line c.1 that contradicts cross section 3 on A3.20. Please confirm the curb heights along grid line c.1 between 1.5 and 6.3. Also, confirm grid line D between – 1 and 1.5.

Answer: Provide concrete curb height per detail 1/A8.30, typical, unless otherwise noted. The stem wall in detail 17/A4.20 is not required and should be provided as shown in 3/A3.20. Exceptions to the curb dimensions of 1/A8.30 are the 2” curbs provided below full-height windows, as indicated on other details on A4.20.

Question: Sheet S1.0 Foundation Plan - On grid line 1 at grid lines A, B & C calls for HHS column but there are no references to the base plate anchorage. Please confirm it is similar to detail 12 on S2.0.

Answer: Reference detail has been added to 3/S2.1 in Addendum #2.

Question: Sheet S1.0 Foundation Plan - On grid line A at grid lines 1.1, 1.5, 3, 4 and 5 there are no reference to the base plate anchorage. Please confirm it is similar to 10 on S2.0.

Answer: Yes.

Question: Sheet S1.0 Foundation Plan - On grid line 6.3 there is a call out for detail 3 on S2.0. Detail 3 refers to detail 1 on S2.0 which shows a raised curb of significant height with note “S.A.D.” The corresponding details are 11 & 15 on A4.20, which shows a nominal 2” curb. Yet detail 2 on A8.41 shows an ~6” curb which seems to be corroborated by detail 1 on A8.30. Please confirm exterior wall curb heights.

Answer: See 7/S2.1 for similar; will add reference on sheet S1.0 in Addendum #2.
Question: Sheet S1.0 Foundation Plan - Under Foundation Notes, #21 calls for “Re-Tightened” at Foundation Inspection. Did you mean “Rough Frame Inspection”?
Answer: Yes, has been revised in Addendum #2.

Question: Sheet S1.1 – Ceiling / Canopy Framing Plan - On grid line B at grid line 6.2 and as well as grid line C at grid line 7.2 calls for HHS column but there are no corresponding base plate call-outs on sheet 1.0. Please confirm base plate design.
Answer: See 7/S2.1 for similar; reference has been added on sheet S1.0 in Addendum #2.

Additions to Contract Documents

A. Preliminary Storm Water Pollution Prevention Plan (Risk Level 2) for Student Center & Quad, prepared by SWPPP Solutions, Inc., dated February 28, 2017.

B. Appendix A – Phasing and Access Plan

Revisions to Project Manual

A. Revised Specification Section 00 41 13 Bid Form and Proposal
   Remove Specification in its entirety and replace with new.

B. Revised Specification Section 01 11 00 Summary of Work
   Remove Specification in its entirety and replace with new.

C. Remove Specification Section 00 45 46.09 Buy American Certification in its entirety.

Revisions to Technical Specifications (Refer to Cody Anderson Wasney Architect’s Addendum #02 Coversheet for additional information.)

A. Revised Specification Section 01 00 00 Table of Contents.
   Remove Specification in its entirety and replace with new.

B. Added Specification Section 04 20 00 Concrete Unit Masonry.

C. Revised Specification Section 06 17 36 Metal Web Wood Joists.
   Remove Specification in its entirety and replace with new.

D. Revised Specification Section 07 21 10 Building Insulation.
   Remove Specification in its entirety and replace with new.
E. Revised Specification Section 08 16 13 Fiberglass Doors.
   Remove Specification in its entirety and replace with new.

F. Revised Specification Section 08 71 00 Door Hardware.
   Remove Specification in its entirety and replace with new.

G. Revised Specification Section 09 51 00 Acoustical Ceilings.
   Remove Specification in its entirety and replace with new.

H. Added Specification Section 09 67 20 Epoxy Resinous Flooring.

I. Revised Specification Section 09 68 13 Tile Carpeting.
   Remove Specification in its entirety and replace with new.

J. Revised Specification Section 09 90 00 Painting and Coating.
   Remove Specification in its entirety and replace with new.

K. Revised Specification Section 10 14 00 Signage.
   Remove Specification in its entirety and replace with new.

L. Revised Specification Section 11 40 00 Food Service Equipment.
   Remove Specification in its entirety and replace with new.

M. Revised Specification footers for the following Specifications, new Specifications
   will not be reissued.
   1) 23 09 00 Direct Digital Control System
   2) 23 31 13 Metal Ducts
   3) 23 33 00 Duct Accessories
   4) 23 74 00 Rooftop Air Conditioners

Revisions to Drawings (Refer to Cody Anderson Wasney Architect’s Addendum #02
Coversheet for additional information.)

A) Civil Sheets:
   1) Revised Drawing Sheet C1.1 Existing Site & Demolition Plan.
      Remove Drawing in its entirety and replace with new.

   2) Revised Drawing Sheet C2.1 Horizontal Control & Paving Plan.
      Remove Drawing in its entirety and replace with new.

   3) Revised Drawing Sheet C3.1 Grading Plan.
      Remove Drawing in its entirety and replace with new.
4) Revised Drawing Sheet C4.1 Utility Plan.
   Remove Drawing in its entirety and replace with new.

B) Landscape Sheets:
1) Revised Drawing Sheet L1.1 Landscape Plan.
   Remove Drawing in its entirety and replace with new.

2) Revised Drawing Sheet L1.2 Layout Plan.
   Remove Drawing in its entirety and replace with new.

3) Revised Drawing Sheet L2.1 Irrigation Plan.
   Remove Drawing in its entirety and replace with new.

4) Revised Drawing Sheet L3.1 Planting Plan.
   Remove Drawing in its entirety and replace with new.

5) Revised Drawing Sheet L4.1 Landscape Details.
   Remove Drawing in its entirety and replace with new.

C) Architectural Sheets:
1) Revised Drawing Sheet A1.01 Demolition Floor Plan.
   Remove Drawing in its entirety and replace with new.

2) Revised Drawing Sheet A1.02 Demolition Roof Plan.
   Remove Drawing in its entirety and replace with new.

3) Revised Drawing Sheet A1.03 Demolition Reflected Ceiling Plan.
   Remove Drawing in its entirety and replace with new.

4) Revised Drawing Sheet A2.07 Finishes and Signage Plan.
   Remove Drawing in its entirety and replace with new.

5) Revised Drawing Sheet A2.08 Reflected Ceiling Plan.
   Remove Drawing in its entirety and replace with new.

6) Revised Drawing Sheet A3.00 Exterior Elevations.
   Remove Drawing in its entirety and replace with new.

7) Revised Drawing Sheet A4.21 Wall Sections.
   Remove Drawing in its entirety and replace with new.

8) Revised Drawing Sheet A5.00 Interior Elevations.
   Remove Drawing in its entirety and replace with new.
9) Revised Drawing Sheet A5.05 Interior Elevations. 
   Remove Drawing in its entirety and replace with new.

10) Revised Drawing Sheet A5.06 Interior Elevations. 
    Remove Drawing in its entirety and replace with new.

11) Revised Drawing Sheet A8.01 Section Details. 
    Remove Drawing in its entirety and replace with new.

12) Revised Drawing Sheet A8.30 Exterior Details – Cement Plaster. 
    Remove Drawing in its entirety and replace with new.

13) Revised Drawing Sheet A8.41 Exterior Details – Openings. 
    Remove Drawing in its entirety and replace with new.

14) Revised Drawing Sheet A8.50 Roof Details. 
    Remove Drawing in its entirety and replace with new.

15) Revised Drawing Sheet A8.51 Roof Details. 
    Remove Drawing in its entirety and replace with new.

16) Revised Drawing Sheet A9.41 Interior Details – Openings. 
    Remove Drawing in its entirety and replace with new.

17) Revised Drawing Sheet A9.50 Interior Details – Ceilings. 
    Remove Drawing in its entirety and replace with new.

18) Revised Drawing Sheet A9.52 Interior Details – Ceilings. 
    Remove Drawing in its entirety and replace with new.

D) Structural Sheets:
   1) Revised Drawing Sheet S1.0 Foundation Plan. 
      Remove Drawing in its entirety and replace with new.

   2) Revised Drawing Sheet S1.1 Ceiling / Canopy Framing Plan. 
      Remove Drawing in its entirety and replace with new.

   3) Revised Drawing Sheet S1.2 Lower Roof Framing Plan. 
      Remove Drawing in its entirety and replace with new.

   4) Revised Drawing Sheet S1.3 Upper Roof Framing Plan. 
      Remove Drawing in its entirety and replace with new.
5) Revised Drawing Sheet S2.0 Foundation Details.
   Remove Drawing in its entirety and replace with new.

6) Revised Drawing Sheet S2.1 Foundation Details.
   Remove Drawing in its entirety and replace with new.

7) Revised Drawing Sheet S3.1 Framing Details.
   Remove Drawing in its entirety and replace with new.

8) Revised Drawing Sheet S3.2 Framing Details.
   Remove Drawing in its entirety and replace with new.

E) Mechanical Sheets:
   1) Revised Drawing Sheet M0.1 Mechanical Symbols, Abbreviations, General
      Notes and Drawing Index.
      Remove Drawing in its entirety and replace with new.

   2) Revised Drawing Sheet M2.1D Mechanical Demolition Floor Plan.
      Remove Drawing in its entirety and replace with new.

   3) Revised Drawing Sheet M2.1 Mechanical Floor Plan.
      Remove Drawing in its entirety and replace with new.

   4) Revised Drawing Sheet M2.2 Mechanical Roof Plan.
      Remove Drawing in its entirety and replace with new.

   5) Revised Drawing Sheet M4.1 Schedules.
      Remove Drawing in its entirety and replace with new.

   6) Revised Drawing Sheet M6.1 Mechanical Details.
      Remove Drawing in its entirety and replace with new.

   7) Revised Drawing Sheet M6.3 Mechanical Details.
      Remove Drawing in its entirety and replace with new.

   8) Revised Drawing Sheet M7.1 Mechanical Control Diagrams.
      Remove Drawing in its entirety and replace with new.

F) Plumbing Sheets:
   1) Revised Drawing Sheet P1.0 Plumbing Gas Rerouting Site Plan.
      Remove Drawing in its entirety and replace with new.

   2) Revised Drawing Sheet P2.0 Plumbing Underground Floor Plan.
      Remove Drawing in its entirety and replace with new.
3) Revised Drawing Sheet P2.1 Plumbing Floor Plan. 
   Remove Drawing in its entirety and replace with new.

4) Revised Drawing Sheet P2.2 Plumbing Roof Plan. 
   Remove Drawing in its entirety and replace with new.

5) Revised Drawing Sheet P3.2 Plumbing Enlarged Floor Plan – Kitchen. 
   Remove Drawing in its entirety and replace with new.

6) Revised Drawing Sheet P3.3 Plumbing Enlarged Floor Plan – Kitchen. 
   Remove Drawing in its entirety and replace with new.

7) Revised Drawing Sheet P4.1 Plumbing Schedules. 
   Remove Drawing in its entirety and replace with new.

G) Electrical Sheets:
   1) Revised Drawing Sheet E2.1 Lighting Plan. 
      Remove Drawing in its entirety and replace with new.

   2) Revised Drawing Sheet E2.2 Power & Signal Plan. 
      Remove Drawing in its entirety and replace with new.

   3) Revised Drawing Sheet E5.1 Wiring Diagrams. 
      Remove Drawing in its entirety and replace with new.

H) Food Service Sheets:
   1) Revised Drawing Sheet FS-101 Equipment Floor Plan. 
      Remove Drawing in its entirety and replace with new.

   2) Revised Drawing Sheet FS-201 Equipment Schedule. 
      Remove Drawing in its entirety and replace with new.

END OF ADDENDUM 02
DOCUMENT 00 41 13

BID FORM AND PROPOSAL

To: Governing Board of East Side Union High School District ("District" or "Owner")

From: ____________________________________________________________

(Proper Name of Bidder)

The undersigned declares that Bidder has read and understands the Contract Documents, including, without limitation, the Notice to Bidders and the Instructions to Bidders, and agrees and proposes to furnish all necessary labor, materials, and equipment to perform and furnish all work in accordance with the terms and conditions of the Contract Documents, including, without limitation, the Drawings and Specifications of Bid No. **B-24-16-17**.

**PROJECT:**

James Lick High School
JL Student Center & Quad Modernization /
JL Site Infrastructure Improvements

("Project" or "Contract") and will accept in full payment for that Work the following total lump sum amount, all taxes included:

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<th>ITEM</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>1.</td>
<td>All Work of Contract Documents including allowances noted in 01 11 00 Summary of Work, Section 1.02.B.</td>
<td>Lump Sum</td>
<td>$</td>
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| 2.   | Total Bid Amount | | $

**TOTAL BID AMOUNT**

Bidder acknowledges and agrees that the Total Bid Amount accounts for any and all Allowance(s), Total Cost for Unit Prices, and **OCIP excluded costs**.

EAST SIDE UNION HIGH SCHOOL DISTRICT
Z-030-601/ I-030-003,
James Lick High School
JL Student Center & Quad Modernization /
JL Site Infrastructure Improvements
Bid #: B-24-16-17

BID FORM AND PROPOSAL
DOCUMENT 00 41 13-1
Issued: 03/23/2017 - Addendum 02

Adopted: 01/19/2017
**Additional Detail Regarding Calculation of Base Bid**

1. The undersigned acknowledges receipt of Document 00 73 16.13 describing the OCIP Insurance Program the District is implementing in connection with the Project and the Work. The undersigned represents as follows:
   
   a. The insurance coverages to be provided by the OCIP have been understood by the undersigned.
      Initials___________
   
   b. As required by document 00 73 16.13, the cost of the insurance coverages to be provided by the OCIP has been excluded from the Base Bid.
      Initials___________
   
   c. The undersigned is able to substantiate, upon award of the contract, the insurance costs excluded from the Base Bid.
      Initials___________

2. The undersigned has reviewed the Work outlined in the Contract Documents and fully understands the scope of Work required in this Proposal, understands the construction and project management function(s) is described in the Contract Documents, and that each Bidder who is awarded a contract shall be in fact a prime contractor, not a subcontractor, to the District, and agrees that its Proposal, if accepted by the District, will be the basis for the Bidder to enter into a contract with the District in accordance with the intent of the Contract Documents.

3. The undersigned has notified the District in writing of any discrepancies or omissions or of any doubt, questions, or ambiguities about the meaning of any of the Contract Documents, and has contacted the Construction Manager before bid date to verify the issuance of any clarifying Addenda.

4. The undersigned agrees to commence work under this Contract on the date established in the Contract Documents and to complete all work within the time specified in the Contract Documents.

5. The liquidated damages clause of the General Conditions and Agreement is hereby acknowledged.

6. It is understood that the District reserves the right to reject this bid and that the bid shall remain open to acceptance and is irrevocable for a period of ninety (90) days.

7. The following documents are attached hereto:
   
   - Bid Bond on the District's form or other security
   - Designated Subcontractors List
   - Site Visit Certification
   - Non-Collusion Declaration
   - Iran Contracting Act Certification
   - OCIP Insurance forms
8. Receipt and acceptance of the following Addenda is hereby acknowledged:

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<tr>
<th>No.</th>
<th>Dated</th>
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9. Bidder acknowledges that the license required for performance of the Work is a ____ _____ license.

10. The undersigned hereby certifies that Bidder is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the Work.

11. Bidder specifically acknowledges and understands that if it is awarded the Contract, that it shall perform the Work of the Project while complying with all requirements of the Department of Industrial Relations [and with all requirements of the Project Labor Agreement].

12. Bidder specifically acknowledges and understands that if it is awarded the Contract, that it shall perform the Work of the Project while complying with the Davis Bacon Act, applicable reporting requirements, and any and all other applicable requirements for federal funding. If a conflict exists, the more stringent requirement shall control.

13. The Bidder represents that it is competent, knowledgeable, and has special skills with respect to the nature, extent, and inherent conditions of the Work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the Work that may create, during the Work, unusual or peculiar unsafe conditions hazardous to persons and property.

14. Bidder expressly acknowledges that it is aware of such peculiar risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the Work with respect to such hazards.

15. Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms “claim” and “knowingly” are defined in the California False Claims Act, Gov. Code, § 12650 et seq.), the District will be entitled to civil remedies set forth in the California False Claim Act. It may also be considered fraud and the Contractor may be subject to criminal prosecution.

16. The undersigned Bidder certifies that it is, at the time of bidding, and shall be throughout the period of the Contract, licensed by the State of California to do the type of work required under the terms of the Contract Documents and registered as a public works contractor with the Department of Industrial Relations. Bidder further
certifies that it is regularly engaged in the general class and type of work called for in the Contract Documents.

Furthermore, Bidder hereby certifies to the District that all representations, certifications, and statements made by Bidder, as set forth in this bid form, are true and correct and are made under penalty of perjury.

Dated this __________ day of ___________________________ 20 __

Name of Bidder: ________________________________

Type of Organization: ________________________________

Signed by: ________________________________

Title of Signer: ________________________________

Address of Bidder: ________________________________

Taxpayer Identification No. of Bidder: ________________________________

Telephone Number: ________________________________

Fax Number: ________________________________

E-mail: ________________________________ Web Page: ________________________________

Contractor's License No(s): No.: ________ Class: ________ Expiration Date: ______

No.: ________ Class: ________ Expiration Date: ______

No.: ________ Class: ________ Expiration Date: ______

Public Works Contractor Registration No.: ________________________________
PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

A. General Conditions, including, without limitation, Site Access Conditions and Requirements;

B. Special Conditions;

C. Scheduling of Work.

1.02 SUMMARY OF WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of this Contract may consist of the following:

Renovation to an existing multipurpose building / cafeteria making it into a student union building. This includes approximately 6,000 square feet of demolition of existing structure and a 16,000 square feet addition.

Also included is the installation of supporting infrastructure including a fire service that will pick up on the North Side of the site, run around the back of the site and end outside the South East side of the site. Outside we will be renovating the area directly outside the building to the North as well as performing upgrades to the inner campus storm water system.

James Lick High School will remain an active campus for the duration of this project including the summer months. Much of the new construction will be put in place in locations directly adjacent to instructional spaces or in areas where access and flow-through must be maintained. As a result there will be limitations as to the areas where the contractor can work during certain periods. These are detailed on the attached document titled “Appendix A – Phasing and Access Plan” Contractor will be required to submit and gain approval of construction fencing plans detailing the areas which will be affected by work within each of the construction areas shown on the Phasing and Access Plan and durations of work within each area. Also contractor shall provide fencing plans for the work to Reroute Utilities Running through Building 900 as described within section 01-32-13 Scheduling of Work section of these contract documents. At a minimum the plan must provide the following detail:

a. Limits of construction fencing
b. Areas that will be inaccessible to the students and staff due to construction fencing or equipment traffic.

c. Areas that must remain accessible such as fire access roads

d. Alternate passageway(s) through or around the areas of work.

e. Temporary way finding signage explaining how to get around the areas under construction.

All work that will remain in the Southeast landscape area not reduced in the work by others section including:

(a) Work to install temporary utilities to serve P1 and P2 buildings.

(b) Installation of the fire hydrant system and supporting infrastructure.

(c) Installation of the irrigation system up to and including the valve boxes and components within.

(d) Contractor shall transition new to existing surfaces in this area using cold-patch AC

(e) Installation of the smaller rectangular landscape area located just to the West.

B. Allowances:

(1) Provide a $10,000 line item allowance to isolate, temporarily tie in, and finally permanently tie in the fire alarm systems serving restroom building located in the quad just North West of the 900 building. Contractor shall also protect in place the exterior conduits running underground from the 900 building to that building, these conduits will be re-utilized when the building is permanently tied in at the completion of the 900 building construction. During construction a design for permanent tie in will be generated, approved and issued to the contractor to install.

(2) Provide a $50,000 line item allowance to repair dry rot termite damage to sections of the building that are not shown to be replaced as part of this project.

(3) Contractor shall provide a $20,000 line item allowance to perform repairs to existing onsite water service systems.

(4) Contractor shall provide a $10,000 allowance to expose, inspect and repair the sewer lateral servicing outside of the westerly corner of Building 300.
(5) Contractor shall provide a $20,000 allowance to reinstall ductwork serving the kitchen area that’s currently exposed. Ductwork shall be reinstalled in the above ceiling space.

1.03 CONTRACTS

A. Perform the Work under a single, fixed-price Contract.

1.04 WORK BY OTHERS

A. Work on the Project that will be performed by others:

(1) Demolition of portable buildings P1 and P2 and construction of the landscape area in the buildings’ general location. The District has opted to keep portable buildings P1 and P2 which are currently located to the Southeast of building 900. These buildings will be used for future swing spaces. The district does intend to bring services into the space to be continued by a future project.

The limits of work not included in this contract include the areas surfaced with decomposed granite, plantings, landscape rocks, the majority of the irrigation systems within the area and the concrete curb currently running along the south side of the space and turning northerly.

Note: the following work within this area shall remain in contract:

(a) Work to install temporary utilities to serve P1 and P2 buildings.

(b) Installation of the fire hydrant system and supporting infrastructure.

(c) Installation of the irrigation system up to and including the valve boxes.

(d) Contractor shall transition new to existing surfaces in this area using cold-patch AC.

(e) Installation of the smaller rectangular landscape area located just to the West.

B. Work on the Project that will be performed by others concurrent with the Work of this Contract:

(1) Roofing replacement at various buildings throughout the site, this roof replacement project will also provide and install downspouts that will be tied into the storm drain laterals we will be installing in the summer of 2017 serving the 200 and 300 buildings.
Beginning in the summer of 2017 a new school will be constructed on the site to the North of the James Lick campus. Also a new parking lot will be constructed on the site currently occupied by the school garden and the northerly portion of the existing soccer field. This new parking lot will also protrude into the north westerly portion of the westerly parking area. The contractors performing this construction will need to be granted access through Comet Lane and through the North West corner of the back parking lot to the garden.

1.05 CODES, REGULATIONS, AND STANDARDS

A. The codes, regulations, and standards adopted by the state and federal agencies having jurisdiction shall govern minimum requirements for this Project. Where codes, regulations, and standards conflict with the Contract Documents, these conflicts shall be brought to the immediate attention of the District and the Architect.

B. Codes, regulations, and standards shall be as published effective as of date of bid opening, unless otherwise specified or indicated.

1.06 PROJECT RECORD DOCUMENTS

A. Contractor shall maintain on Site one set of the following record documents; Contractor shall record actual revisions to the Work:

(1) Contract Drawings.

(2) Specifications.

(3) Addenda.

(4) Change Orders and other modifications to the Contract.

(5) Reviewed shop drawings, product data, and samples.

(6) Field test records.

(7) Inspection certificates.

(8) Manufacturer's certificates.

B. Contractor shall store Record Documents separate from documents used for construction. Provide files, racks, and secure storage for Record Documents and samples.

C. Contractor shall record information concurrent with construction progress.
D. Specifications: Contractor shall legibly mark and record at each product section of the Specifications the description of the actual product(s) installed, including the following:

(1) Manufacturer's name and product model and number.

(2) Product substitutions or alternates utilized.

(3) Changes made by Addenda and Change Orders and written directives.

1.07 EXAMINATION OF EXISTING CONDITIONS

A. Contractor shall be held to have examined the Project Site and acquainted itself with the conditions of the Site and of the streets or roads approaching the Site.

B. Prior to commencement of Work, Contractor shall survey the Site and existing buildings and improvements to observe existing damage and defects such as cracks, sags, broken, missing or damaged glazing, other building elements and Site improvements, and other damage.

C. Should Contractor observe cracks, sags, and other damage to and defects of the Site and adjacent buildings, paving, and other items not indicated in the Contract Documents, Contractor shall immediately report same to the District and the Architect.

1.08 CONTRACTOR'S USE OF PREMISES

A. If unoccupied and only with District’s prior written approval, Contractor may use the building(s) at the Project Site without limitation for its operations, storage, and office facilities for the performance of the Work. If the District chooses to beneficially occupy any building(s), Contractor must obtain the District's written approval for Contractor's use of spaces and types of operations to be performed within the building(s) while so occupied. Contractor's access to the building(s) shall be limited to the areas indicated.

B. If the space at the Project Site is not sufficient for Contractor's operations, storage, office facilities and/or parking, Contractor shall arrange and pay for any additional facilities needed by Contractor.

C. Contractor shall not interfere with use of or access to occupied portions of the building(s) or adjacent property.

D. Contractor shall maintain corridors, stairs, halls, and other exit-ways of building clear and free of debris and obstructions at all times.

E. No one other than those directly involved in the demolition and construction, or specifically designated by the District or the Architect shall be permitted in the areas of work during demolition and construction activities.
F. The Contractor shall install the construction fence and maintain that it will be locked when not in use. Keys to this fencing will be provided to the District.

1.09 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. The Drawings show above-grade and below-grade structures, utility lines, and other installations that are known or believed to exist in the area of the Work. Contractor shall locate these existing installations before proceeding with excavation and other operations that could damage same; maintain them in service, where appropriate; and repair damage to them caused by the performance of the Work. Should damage occur to these existing installations, the costs of repair shall be at the Contractor's expense and made to the District's satisfaction.

B. Contractor shall be alert to the possibility of the existence of additional structures and utilities. If Contractor encounters additional structures and utilities, Contractor will immediately report to the District for disposition of same as indicated in the General Conditions.

1.10 UTILITY SHUTDOWNs AND INTERRUPTIONS

A. Contractor shall give the District a minimum of three (3) days written notice in advance of any need to shut off existing utility services or to effect equipment interruptions. The District will set exact time and duration for shutdown, and will assist Contractor with shutdown. Work required to re-establishing utility services shall be performed by the Contractor.

B. Contractor shall obtain District's written approval as indicated in the General Conditions in advance of deliveries of material or equipment or other activities that may conflict with District's use of the building(s) or adjacent facilities. Contractor shall include all costs associated with such shutdowns/interruptions within its bids.

1.11 STRUCTURAL INTEGRITY

A. Contractor shall be responsible for and supervise each operation and work that could affect structural integrity of various building elements, both permanent and temporary.

B. Contractor shall include structural connections and fastenings as indicated or required for complete performance of the Work.

PART 2 – PRODUCTS Not Used.

PART 3 – EXECUTION Not Used.

END OF DOCUMENT
ADDENDUM #02

EAST SIDE UNION HIGH SCHOOL DISTRICT

BUILDING 900 STUDENT CENTER & QUAD MODERNIZATION

57 NORTH WHITE ROAD
SAN JOSE, CA 95126

Issue Date: March 22, 2017
Job No.: 15013

PAGE SUMMARY:
TITLE SHEET (THIS PAGE): 1
ADDENDUM SUMMARY TEXT PAGE(S): 8
SPECIFICATION PAGES: 128
30” X 42” DRAWINGS: 54
### Project: **Building 900 Student Center & Quad Modernization**  
57 North White Road  
San Jose, CA 95126

DSA File No.: 43-H10  
DSA App No.: 01-116045

### Owner: **East Side Union High School District**  
830 North Capitol Avenue  
San Jose, CA 95133

Addendum No.: 02

### Contractor: **All Prime Contract Bidders**  
Issued By: **Brent McClure**  
Cody Anderson Wasney Architects

CAW Project No.: 15013  
Date: **March 22, 2017**

This Addendum forms a part of the current documents and modifies the Original Contract Documents (drawings and specifications) issued as **CONSTRUCTION DOCUMENTS – DSA BACKCHECK SET** dated **2/8/2017**.

### SPECIFICATIONS

**Section 01 10 00 – Table of Contents**  
A. Section updated

**Section 04 20 00 – Concrete Unit Masonry**  
A. Section Provided.

**Section 06 17 36 – Metal Web Wood Joists**  
A. LEED references removed, typical throughout contract document.

**Section 07 21 10 – Building Insulation**  
A. Mock up information added. PSK color updated to white.

**Section 08 16 13 – Fiberglass Doors**  
A. Warranty section added.

**Section 08 71 00 – Door Hardware**  
A. Note for Schlage cylinder added to groups 10 and 17.

**Section 09 51 00 – Acoustical Ceilings**  
A. Provision added for mechanically fastened ceiling panels.  
B. Part 2 products updated for sizes and product names. Section for attached acoustical ceiling panels provided.

**Section 09 67 20 – Epoxy Resinous Flooring**
A. Title: Epoxy Resinous Flooring (not Epoxy Mosaic) - remove references to “mosaic” throughout the spec
B. Products / Manufacturers: Revised for consistency of product and manufacturer.
C. Removed the references to mosaic aggregate and anti-microbial additive.

Section 09 68 13 – Tile Carpeting
A. 2.02 Materials - A-1. Change size to 12” x 48” carpet plank
B. 8. and 9. color and product “per finish plan”
C. Add section C. Entryway systems, for walk-off mat, to provide consistency with drawings.

Section 09 90 00 – Painting and Coating
A. 2.01-A approved equal removed.
B. 3.05 – sections B and C removed. Section D revised to be used everywhere.

Section 10 14 00 – Signage
A. Section updated per campus standards.

Section 11 40 00 – Foodservice Equipment
A. Added Item #82 for concrete tables

Specifications Text Revisions (Not Reissued)
A. Revise the Footers for the following sections (erroneous section numbers were indicated):
   23 33 00: Duct Accessories to 23 33 00
   23 09 00: Direct Digital Control System for HVAC to 23 09 00.
   23 31 13: Metal Ducts to 23 31 13
   23 74 00: Rooftop Air Conditioners to 23 74 00

DRAWINGS

Civil:

Sheet C1.1 – Existing Site & Demolition Plan
A. Added note to relocate existing Landscape Container with contents to new location at track entrance.

Sheet C2.1 – Horizontal Control & Paving Plan
A. Added note callout 15 for new AC “vehicular” pavement

Sheet C3.1 – Grading Plan
A. Added Legend from grading sheet, including abbreviations from RFI#1

Sheet C4.1 – Utility Plan
A. Added new downspout location at canopy cut off, new 6” pipe and SDCO callout to connect to pipe system/cleanout at flow through planter.
Landscape:

Sheet L1.1 – Landscape Plan
A. Revised trash receptacle type, locations and quantity.
B. Added two roof drain outfalls to planters.
C. Flow through planter on the North side of building was enlarged 3′-0” to the East, typical all plans.

Sheet L2.1 – Irrigation Plan
A. The amount of stations on the controller was increased to 16.
B. Irrigation sleeves were added to accommodate irrigation wires and laterals.
C. An additional remote control valve was added in planter between courtyards.
D. Courtyard to the north of the plaza: Added a note to ‘Repair and restore existing irrigation in turf areas as required by grading work, see civil plans for limit of grading in these areas’.

Sheet L3.1 – Planting Plan
A. Additional planting was included in planter between buildings.
B. Courtyard to the north of the plaza: Added a note to ‘re-sod existing turf area where damage to existing turf occurs due to grading, see civil plans for limits of grading’

Sheet L4.1 – Landscape Details
A. Detail 14 – Trash receptacle pad/mounting was added to sheet.

Architectural:

Sheet A1.01 – Demolition Floor Plan
A. Area of slab to be removed revised.
B. Note added referencing abatement specification.

Sheet A1.02 – Demolition Roof Plan
A. Line added for pipe line to be demolished.

Sheet A1.03 – Demolition Reflected Ceiling Plan
A. Note added to protect existing hood and above-ceiling framing in kitchen.

Sheet A2.07 – Finishes and Signage Plan
A. Carpet finishes revised.
B. New columns changed to square sections, typical all plans. All columns noted to be painted.

Sheet A2.08 – Reflected Ceiling Plan
A. Finishes revised.
B. Duct location revised in Resource, near gridline A.
C. Callout added for gyp enclosure for mechanical unit at office 920D.
D. Sound blanket insulation indicated behind wood slat ceiling.
E. Keynote 6 replaced 20. 20 not used.

Sheet A3.00 – Exterior Elevations
A. Louver relocated to above door to Resource, view 1.
B. Louver added to east elevation per mechanical drawings, view 3.

Sheet A4.21 – Wall Sections
A. Detail 11 updated.

Sheet A5.00 – Interior Elevations
A. Linear return grille height changed to 1’-0” above lower grille, view 1D.
B. Column-mounted light fixtures removed.
C. W-3A and B colors clarified, typical all interior elevations. Accents in Hub shown.

Sheet A5.05 – Interior Elevations
A. W-3A and B colors clarified, typical all interior elevations. Accents in Learning Center shown.

Sheet A5.06 – Interior Elevations
A. Tack panel removed from 3C.
B. Louver added to 4D.

Sheet A8.01 – Section Details
A. Round column sections changed to square, typical all details (#5 this sheet).
B. Detail 17, Acoustical treatment at mechanical unit provided.

Sheet A8.30 – Exterior Details – Cement Plaster
A. Detail 18 updated.
B. Detail 1 updated to show width of concrete at columns.

Sheet A8.41 – Exterior Details - Openings
A. Round column sections changed to square, typical all details (#6, 7, 8 this sheet).

Sheet A8.50 – Roof Details
A. Details 17 and 18 updated.

Sheet A8.51 – Roof Details
A. Details 7 and 12 updated.

Sheet A9.41 – Interior Details – Openings
A. Round column sections changed to square, typical all details (#17, 18, 19, 20 this sheet).

Sheet A9.50 – Interior Details – Ceilings
A. Detail 14 added.
Sheet A9.52 – Interior Details – Ceilings
   A. Product name revised in detail 7.

Structural:

Sheet S1.0 – Foundation Plan
   A. At grid lines -1/A, -1/b, and -1/c – added reference detail for column connection.
   B. At grid lines 3/b, 5/b, and 7/c – revised pipe column to HSS square column.
   C. At grid lines 7/c & 7/B – added HSS column call out and reference detail.
   D. At grid lines 1.4/A – reference HSS column removed.
   E. Foundation notes no. 21 – revised note “foundation” to “rough framing”.
   F. Graphically changed pipe columns to HSS columns at grid lines A, b, & c

Sheet S1.1 – Ceiling Framing Plan
   A. At grid lines 7.2/C & 6.3/B – revised reference detail from “8/S3.2” to “5/S3.2” and “full height” to “below”.
   B. At grid lines 3/b – revised pipe column to HSS square column.
   C. At grid lines 6/c – added HSS square column and reference detail for connection at header.
   D. Graphically changed pipe columns to HSS columns at grid lines A, b, & c

Sheet S1.2 – Lower Roof Framing Plan
   A. At grid lines 7.2/C & 6.3/B – column called out removed.
   B. At grid lines 3/b. – revised pipe column to HSS square column.

Sheet S1.3 – Upper Roof Framing Plan
   A. At grid lines 1.4/A. – added “typ. u.n.o.” to column call-out.
   B. At grid lines 3/b.5 – reference column note removed.
   C. Graphically changed pipe columns to HSS columns at grid lines A, b, & c

Sheet S2.0 – Foundation Details
   A. Detail 10 – Revised note “pipe column, per plan” to “column, per plan” and graphically changed pipe column to HSS column.

Sheet S2.1 – Foundation Details
   A. Detail 2 – Graphically revised column size. Revised base plate dimension.
   B. Detail 3 – Graphically revised pipe column to HSS column and added call-out for anchorage. Revised base plate width dimension.
   C. Detail 4 – Revised detail to graphically look like 3.

Sheet S3.1 – Framing Details
A. Detail 16 - Graphically revised column profile to HSS column. Changed “pipe column, per plan” to “column, per plan.”
B. Detail 17 - Graphically revised column profile to HSS column.

Sheet S3.2 – Framing Details
A. Detail 3 - Graphically revised column profile to HSS column. Changed “pipe column, per plan” to “column, per plan.”

**Mechanical:**

Sheet M0.1 - Mechanical Symbols, Abbreviations, General Notes and Drawing Index
A. Added “AC - AIR CURTAIN” to the Abbreviations list.

Sheet M2.1D - Mechanical Demolition Floor Plan
A. Added Sheet Notes #2 & 3.
B. Identified existing Fan Coil Units and Air Curtains.
C. Identified combustion air intakes and vent in existing boiler room.

Sheet M2.1 - Mechanical Floor Plan
A. Relocate outside air connection and balance dampers for Ghirardelli Conference Room fan coil unit (FCU/1-5).
B. The linear slot diffusers in HUB shall be 7’ long in accordance with Sheet Note #14; not 6’ long as indicated in call out (typical – 2).
C. Return ducts to AC2 and AC/3 shall have 2” acoustical lining inside the building to match the lining in the ducts outside the building.
D. MAU/1 was shifted north to be located above Resource Room ceiling.
E. Ductwork for EF/2 has been shifted east to allow space for new MAU/1 location.
F. Modified Sheet Note 16.
G. Added Sheet Note 18.
H. Added transfer duct out of Office 905.
I. Identified thermostat in IDF 908 to control FCU/2-1 in lieu of FCU 1-2.

Sheet M2.2 - Mechanical Roof Plan
A. Exhaust Fan EF/2 has been shifted east.
B. Added “(2/M6.1)” to end of Sheet Note 4.
C. Added Sheet Note #6.
D. Modified ducts out of AC/3; added space for possible future noise attenuator expansion chamber in the return duct.
E. Added space for possible future noise attenuator expansion chamber in AC/2 return duct.
F. Provided detail call outs to refer to Detail 3/M6.3 for the support of the power exhaust fans on AC/1 & 2.

Sheet M4.1 - Schedules
A. Diffuser, Grille, Register Schedule: Revise size of LRG to 15’ (feet) x 6” (in lieu of 15” x 6”).
B. Diffuser, Grille, Register Schedule: Added in Remarks for SWS1: “CFM listed for diffuser is the total for complete diffuser assembly.”

C. Make Up Air Unit Schedule: MAU/1 has been reselected (quieter unit).

D. AC Package Unit Schedule: Added “See Detail 7/M6.2” to the end of Note 4.

E. Exhaust Fan Schedule: Revised CEF/3 to be serving the Resource Room in lieu of Storage.

F. Exhaust Fan Schedule: Added “Interlock with existing to remain Kitchen AC Unit.” To Note 2.

G. Exhaust Fan Schedule: Revised the Detail call out for Note 3 from 3/M6.1 to 8/M6.1.

H. Split System Fan Coil Unit Schedule: Revise all filters, with the exceptions of FCU/1-5 and FCU/2-1, to MERV 8. FCU/1-5 shall remain MERV 13 and FCU/2-1 shall be “Washable”.

I. Make Up Air Unit Schedule: added “Interlock MAU operation with CU/1” to the end of Note 1.

Sheet M6.1 - Mechanical Details
A. Detail 1: Added a flexible connection and additional support for filter plenum. The louver shall be minimum 50% free area.

B. Detail 2: Revise subtitle to be (GRAVITY RELIEFS, CEILING EXHAUST FAN DISCHARGE OR INTAKE VENTS SIMILAR).

C. Detail 8: Added rubber grommets at each support point from blocking.

Sheet M6.3 - Mechanical Details
A. Detail 1: Added Mason Industries Type 30N isolators with 1” deflection to each hanger. Indicated to provide slack in the seismic restraints.

B. Detail 3: Revised the title to include Condensing Unit support and the isolators to be Mason Industries SSLFH-X with 1” deflection.

C. Detail 5: Revised isolators to be Mason Industries 30N with 1” deflection.

Sheet M7.1 - Mechanical Control Diagrams
A. Detail 2: Revise title to “IDF ROOM FAN COIL UNIT (FCU/2-1)”.

B. Detail 6: Revised detail to include speed control for power exhaust fan.

Plumbing:

Sheet P1.0 - Plumbing Gas Rerouting Site Plan
A. Gas pipe identified by Sheet Note #1 was removed under a previous scope of work. Routing is shown for reference only.

Sheet P2.0 - Plumbing Underground Floor Plan
A. Delete trap primer, sanitary and vent piping for three removed floor drains
B. Add trap primer, sanitary and vent piping for new floor drain location behind the counter in the servery.
Sheet P2.1 - Plumbing Floor Plan
   A. Revised roof drain and overflow drain at north end of kitchen, spilling to grade.
   B. Remove three floor drains and relocated one floor drain to the new location indicated.

Sheet P2.2 - Plumbing Roof Plan
   A. Revised roof to include overflow drain at north end of roof.

Sheet P3.2 – Plumbing Enlarged Floor Plan – Kitchen
   A. Revised floor drain locations

Sheet P3.3 – Plumbing Enlarged Floor Plan Kitchen
   B. Revised floor drain locations

Sheet P4.1 - Plumbing Schedules
   A. Added Roof Drain and Overflow Drain to the Plumbing Fixture Schedule.

**Electrical:**

Sheet E2.1 - Lighting Plan
   A. Deleted (7) type “F8B” column fixtures
   B. Revised fixture layout / control zones at stage
   C. Revised circuitry at trellis fixtures

Sheet E2.2 - Power & Signal plan
   A. Revised circuits for MAU-1 and MAU-2 to 9M/27 in lieu of 9PB/27.
   B. Provide power connection for roller shades

Sheet E5.1, Wiring diagrams
   A. Added Roller Shade control wiring diagram 3/E5.1

**Food Service:**

Sheet FS 101 – Equipment Floor Plan
   A. Concrete tables added to floor plan.

Sheet FS 201 – Equipment Schedule
   A. Concrete tables added to equipment schedule.
End of Addendum #02
00 01 10

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SECTION 04 20 00

'A2 CONCRETE UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes all labor, materials, equipment, operations, or methods listed, mentioned or scheduled on the plans and/or herein specified, including all incidentals necessary and required for completion of work under this Section.

B. Provide and install site concrete block walls complete, including the following principal items:
   1. Concrete masonry units
   2. Mortar
   3. Grout

1.2 RELATED SECTIONS

A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Special Conditions and Division 1 of these Contract Documents.

B. Division 31 – Earthwork.

C. Section 03 1000 - Concrete Formwork

D. Section 03 3000– Cast-in-Place Concrete

E. Section 03 2000 – Reinforcing Steel

1.3 SUBMITTALS FOR REVIEW

A. Section 013300, Submittal Procedures.

B. The Contractor's Testing Laboratory's certificate of compliance.

C. The Contractor shall submit:
   1. Certified copies of mix designs for each concrete class specified including compressive strength test reports.
   2. Certification that materials meet requirements specified.
   3. Certification from vendor that samples originate from and are representative of each lot proposed for use.

D. The District's Testing Agency will submit reports on tests and inspections performed to the District, the Architect and Structural Engineer, the Contractor, and the Division of the State Architect.
E. Schedule of placing for the Construction Manager’s review before starting Work.

1.4 QUALITY ASSURANCE

A. Reference and Standards:
   1. Perform work in accordance with all applicable laws, codes and regulations required by the State of California.

B. Stipulations:
   1. The Contractor shall be responsible for quality of masonry in place and shall bear burden of proof that masonry meets minimum requirements.

1.5 FIELD SAMPLES AND TESTS

A. The District or the District’s representative will select a qualified testing laboratory to take samples for testing during the course of the work as considered necessary. The District will pay costs for such tests. Contractor shall cooperate in making tests and shall be responsible for notifying the designated laboratory in sufficient time to allow taking of samples at time of pour.

B. Should tests show that masonry is below specified strength, Contractor shall remove all such masonry, as directed by the Project Inspector. Full cost of removal of low strength masonry, its replacement with concrete of proper specified strength and testing, shall be borne by Contractor.

C. The Testing Laboratory Qualifications: The Testing Laboratory shall be under direction of a Civil Engineer registered in the State of California, shall have operated successfully for four years prior to this work, and shall conform to requirements of ASTM E329.

D. All samples and testing shall conform with CBC.

1.6 COORDINATION

A. Coordinate items of other trades. Contractor shall be responsible for the proper installation of all accessories embedded in the masonry and for the provision of holes, openings, etc., necessary to the execution of the work of the trades.

PART 2 - PRODUCTS

2.1 CONCRETE MASONRY UNITS

A. Provide “Basalite” Structural Block, split face 6 Taper score, color D345, lightweight hollow load-bearing concrete masonry units complying with ASTM C90, grade N.
B. Masonry unit strength shall be as required to meet F'm 2000 psi at prizm tests.

C. Sizes: 8 x 8 x 16" and 12 x 8 x 16" units.

D. Provide accessory shapes as indicated on Drawings or otherwise required.

2.2 REINFORCEMENT AND ACCESSORIES

A. Reinforcement steel required for concrete masonry units shall be the type and quality specified in Section 032000, Concrete Reinforcement.

2.3 MORTAR

A. Ingredients:
   1. Portland Cement: Complying with CBC; ASTM C150, Type I or II, low alkali; the brand of cement shall not be changed during the progress of the job unless authorized in writing by the Architect.
   2. Lime: Provide hydrated lime complying with ASTM C207.
   3. Aggregate: Provide Aggregate complying with ASTM C144.
   4. Water: Clean and free of deleterious amounts of acid, alkalis, salt, oils and organic substances.

B. Mixing:
   1. Provide mortar type "M" in accordance with ASTM C270.
   2. Mortar shall be proportioned to meet F'm 2000 psi at prizm tests.
   3. Mechanically mix in a batch mixer for not less than three minutes, using only sufficient water to produce a mortar which is spreadable and of a workable consistency.
   4. Retempering is not allowed.

2.4 GROUT

A. Ingredients:
   1. Portland cement: Complying with CBC; ASTM C150, Type I or II, low alkali; the brand of cement shall not be changed during the progress of the job unless authorized in writing by the Architect.
   2. Standard Weight Aggregates: Complying with CBC; ASTM C33 from accepted pits; maximum size used in a particular location consistent with the form, locations and spacing of reinforcing steel and with the method of vibration; sized to produce dense, uniform grout, free of rock pockets, honeycombs and other irregularities.
   3. Water: Clean and free of deleterious amounts of acid, alkalis, salts, oils and organic substances.
B. Mixing:
1. Provide "fine" grout in accordance with ASTM C476.
2. Grout shall be proportioned to meet $F'_m$ 2000 psi at prizm tests.
3. "Fluid consistency" is interpreted as meaning as fluid as possible for pouring intimately in place without segregation.

2.5 ADMIXTURES

A. Will not be allowed.

2.6 JOINT DEVICES AND FILLER MATERIALS

A. Control Joint Fillers: ASTM D1751, asphaltic compound strips, ¼ inch thick unless otherwise noted, precut to proper size.

B. Joint Sealant: "Sonolastic Two-Part Sealant" as manufactured by Sonneborn Building Products.
   1. Bond Breaker Tape: As recommended by sealant manufacturer.
   2. Backer Rod: "Sonofoam Backer-Rod" as manufactured by Sonneborne Building Products.

2.7 OTHER MATERIALS

A. Other materials not specifically described but required for a complete and proper installation of the concrete unit masonry, shall be as selected by the Contractor subject to the acceptance of the Architect.

2.8 MIX DESIGN

A. Submit grout mix design proportioned in accordance with CBC to the Architect for review by District's Testing Laboratory. Design mixes shall be prepared under the supervision of a registered civil engineer and shall bear the stamp and signature of that engineer.

B. Submit the name and source of each type of aggregate and Portland cement to be used. The District's Testing Laboratory will select representative samples of each type of aggregate and Portland cement and test in accordance with procedures herein specified.

C. No grout shall be allowed to be poured until mix designs and test reports have been submitted and reviewed by the Architect.

D. No substitution shall be allowed in the materials used on the job without additional test results as specified herein, showing that the quality of the concrete is satisfactory.
2.9  SOURCE QUALITY CONTROL

A. The District's Testing Agency will:
   1. Review mix designs, certificates of compliance, and samples of materials
      the Contractor proposes to use.
   2. Test and inspect materials, as necessary, in accordance with ACI 318 and
      CBC Sections 1704 and 1705 for compliance with requirements.
   3. Take samples as required from the Contractor's designated sources.
   4. Take one grab sample for each 100 tons of Portland cement except that,
      when used in bulk loading ready-mix plants where separate bins for pre-
      tested cement are not available, take grab samples for each shipment of
      cement placed in bin with not less than one sample being taken for each
      day's pour and subsequently test such samples if required by the Architect
      and Structural Engineer.
   5. Test both coarse and fine aggregate by use of solution of sodium or
      magnesium sulfate, or both whenever in the judgment of the Architect and
      Structural Engineer such tests are necessary to determine quality of
      material. Perform such tests in accordance with ASTM C88. Loss shall not
      exceed 6-percent of either fine or coarse aggregate. Aggregate failing to
      comply with this requirement may be used in the Work provided it
      contains less than 2- percent of shale and other deleterious particles and
      shows a loss in soundness test of not more than 10-percent when tested in
      the sodium sulphate solution. Test aggregates as required by ACI 318.
   6. Test for sand equivalent of fine aggregate in accordance with California
      Test 217.
   7. Test for cleanness value of coarse aggregate in accordance with California
      Test 227.
   8. Inspect plant prior to any work to verify following:
      a. Plant is equipped with approved metering devices for determining
         moisture content of fine aggregate.
      b. Other plant quality controls are adequate.
   9. Continuously inspect quality and quantity of materials used in transit
      mixed concrete, in batched aggregates and ready-mixed concrete at mixing
      plant or other location per CBC Section 1916A where other materials are
      measured.

B. Waiver of Batch Plant Inspection:
   1. The concrete supplier shall furnish to the Architect and Engineer of
      Record certification that the cement proposed conforms to the
      requirements of ACI 318:
      a. Testing Agency shall check the first batching at the start of work
         and furnish mix proportions to the licensed Weighmaster.
      b. Licensed Weighmaster shall identify material quantities and certify
         each load by a ticket.
      c. Project Inspector shall collect truck mix tickets with load
         identification and maintain a daily record of placement. Trucks
         without a load ticket identifying the mix shall be rejected. Copies
         of daily placement record shall be submitted to Architect and
         Engineer of Record.
d. At the end of the project, the Weighmaster shall submit an affidavit to Architect and Engineer of Record certifying that all concrete supplied conforms to proportions established by mix designs.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are correct.

3.2 INSTALLATION

A. General:

1. Do not commence installation of the work of this section until horizontal and vertical alignment of foundation is within 1 inch of plumb and the lines shown on the Drawings.
2. Dampen, but do not saturate, units immediately before installation.
3. Use masonry saws to cut and fit masonry units.
4. Set units plumb, true to line, and with level courses accurately spaced.
5. Clean the top surface of foundation free from dirt, debris, and laitance, and expose the aggregate prior to start of installing first course.
6. Accurately fit the units to plumbing, ducts, openings, and other interfaces, neatly patching holes.
7. Keep the walls continually clean to prevent grout and mortar stains. If grout does run over, clean immediately.

B. Lay up in running bond.

C. Do not use chipped or broken units. If such units are discovered in the finished wall, the Architect may require their immediate removal and replacement with new units at no additional cost to the District.

D. Laying up:

1. Place units in mortar with full shoved bed and head joints.
2. Align vertical cells of hollow units to maintain a clear and unobstructed system of flues.
3. Hold racking to an absolute minimum.
4. Provide cleanouts at the bottom of each cell of hollow units for removing mortar droppings. Do not close the cleanouts until they have been reviewed by the Architect.
5. Blockwork shall be kept continuously moist for three days after laying.

E. Reinforcement:
1. Provide reinforcement as shown on the Drawings, fully embedded in grout and not in mortar joints.
2. Vertical bars shall be held firmly in place by means of suitable devices and special care shall be taken to prevent movement and jarring while masonry is being placed.
3. Horizontal bars may be laid in grout in bond beam units as work progresses.
4. Splices in steel reinforcement shall be wired together and lapped as designated on the Drawings.
5. Provide required metal accessories to ensure adequate alignment of steel during grout filling operations.

F. Control Joints:
1. Do not continue horizontal and joint reinforcement through control joints.
2. Install preformed control joint devices in continuous lengths. Seal but and corner joints in accordance with manufacturer's instructions.

G. Built-In Work:
1. As work progresses, install gate hinges, built-in door frames, anchor bolts, plates and other items to be built-in the work and furnished by other sections.
2. Install built-in items plumb and level.
4. Do not build in organic materials subject to deterioration.

3.3 GROUTING

A. Perform grouting in strict accordance with the provisions of CBC.
1. Solidly fill vertical cells containing reinforcements.
2. Maximum grout lift is four feet.
3. Do not grout until masonry has cured 24 hours or more.
4. Consolidate grout at time of pour by puddling with a mechanical vibrator, filling all cells of the masonry, and then reconsolidating later by puddling before the plasticity is lost.
5. Grout pours shall be stopped one and one half inches (1-1/2) below the top of the course to form a key at pour joints. Horizontal steel shall be fully embedded by grout in an uninterrupted pour.
6. Minimum grout space is 2-1/2 inches.

3.4 MORTAR JOINERY

A. General:
1. Cut out and repoint defective joints.
2. On joints exposed to the weather, tool and make smooth, solid, and watertight.

B. Joint Configuration:
   2. Joints Exposed to the Weather:
      a. Existing Building: Tooled to match existing.
      b. Construction to Receive Bonded Cement Plaster: "Flush tooled."

3.5 CLEANING UP

A. Inspection and adjustment: Upon completion of the work of this section, make a thorough inspection of installed concrete unit masonry and verify that units and joints have been installed in accordance with the provisions of this section. Make necessary adjustments.

B. Cleaning:
   1. Clean surfaces of concrete unit masonry as required for proper applications of the specified finishes.
   2. Upon completion of work of this section, promptly remove from the job site mortar droppings, broken units, debris arising from the work of this section, and tools and equipment of this section, leaving areas in a neat and orderly condition subject to the acceptance of the Architect.

3.6 FIELD QUALITY CONTROL

A. General: Tests and inspections shall be performed by the Testing Laboratory who shall perform those special inspections required by the CBC, those tests and inspections specified below and such other tests and inspections as the Architect or District may require to establish the acceptability of the work.

B. Furnish and prepare material and handling for test cylinders, prisms and other samples which Testing Laboratory requires for analysis of concrete masonry work.

C. Preconstruction prisms shall be made to verify an assembly \( F'_m = 2000 \) psi per CBC.

D. Slump: ASTM C143; one test for each grout load at point of discharge; and one test for each set of compressive strength test specimens.

E. Compression Tests:
   1. Three (3) compression test cylinders will be taken for each pour of 100 cubic yards or fraction thereof for each day's pour. Make, cure and store test cylinders as per ASTM C31. One cylinder will be broken at 7 days; one at 28 days; and one retained as a spare. Cylinders will be numbered in...
sets (1A, 1B, 1C; 2A, 2B, 2C; etc.) and a record kept of extent of pour represented by each set of grout tested.

2. Cylinders will be broken in accordance with ASTM C39. If a test report indicates 28 day specimen below required strength (within standard of acceptability established by ACI 318, paragraph 4.3), and if required by Architect, the District's Testing Laboratory will take test prisms of in accordance with CBC. Concrete masonry shown to be defective shall be removed and replaced. Cost of prism tests, repairs and removal and replacement of defective concrete masonry shall be paid by Contractor.

F. Testing Laboratory will supervise the preparation of samples taken at the site.

G. Test results will be reported in writing to Architect and Contractor on same day that tests are made. Reports of identification name and number, date of concrete placement, name of concrete testing service, grout type and class, location of grout batch in structure, design compressive strength at 28 days, grout mix proportions and materials; compressive breaking strength and type of break for both 7-day tests and 28-day tests.

H. Additional Tests: The testing service will make additional tests of grout when test results indicate specified grout strengths and other characteristics have not been attained in the structure, as directed by Architect. Testing service may conduct tests to determine adequacy of grout by cored cylinders complying with ASTM C42, or by other methods as directed. Contractor shall pay for such tests conducted, and any other additional testing as may be required, when unacceptable concrete is verified.

END OF SECTION
SECTION 06 17 36

METAL-WEB WOOD JOISTS

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes all labor, materials, equipment, operations, or methods listed, mentioned or scheduled on the plans and/or herein specified, including all incidentals necessary and required for completion of work under this Section.

B. Provide and install wood chord metal joists for roof framing; bridging, bracing and anchorage; framing for openings; preservative treatment of wood, and any incidentals as required to complete this work of this Section.

1. These products shall be designed and manufactured to the standards set forth in the ICC ESR-1774. Alternate products may be submitted with current ICC ESR.

1.2 RELATED SECTIONS

A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Special Conditions and Division 1 of these Contract Documents.

B. Document 06 10 00, Rough Carpentry

1.3 SUBMITTALS

A. Comply with provisions of Document 01 33 00, Submittal Procedures.

*B2 C. Shop Drawings: Shall be submitted to the Engineer for review prior to ordering joists. Indicate framing system and associated components, sizes and spacing of joists, loads and joist cambers, required openings for web penetrations, and framed openings.

D. Product Data: Provide joist configurations, bearing and anchor details, bridging and bracing, and fastener finish.

1.4 QUALITY ASSURANCE

A. Perform work in accordance with lumber grading agency certified by NIST PS 20.

B. Maintain one copy of Shop Drawings on site

C. Manufacturer: Company specializing in manufacturing Products specified in this
Section with minimum five years experience.

PART 2 – PRODUCTS

2.1 MATERIALS

A. All wood chords and bridging shall be FSC.

B. All materials shall be fabricated locally.

C. All metal webbing shall have a minimum of 23% post consumer and 7.3% pre-consumer recycled content.

D. Materials shall comply with ICC ESR requirements. Chord members, web members, connecting pins and bearing hardware shall be of material and size as required by manufacture’s design.

E. Joist bridging shall be the type, size and spacing recommended by joist manufacturer.

2.2 FABRICATION

A. Joists shall be manufactured in a plant listed in the ICC ESR and under the supervision of a third-party inspection agency.

B. Joists identified on Architectural drawings to be exposed are not to have any grade stamps or other markings on the underside of the lumber members. Lumber members to be architectural exposure quality.

C. Install top chord extensions as indicated on Drawings.

D. Frame special sized openings in joist web framing as detailed.

E. Tolerances: Length bearing to bearing +/- 1/8”, Depth +/- 1/8”

F. Identification: Each joist shall be identified by a stamp indication joist series, ICC-ESR number, manufacture’s name, plant number, and independent inspector agency’s logo. Stamps shall be located on the top surface of the top chord.

PART 3 –EXECUTION

3.1 EXAMINATION

A. Joists shall be stored in a vertical position and protect from weather.

B. Verify supports and openings are ready to receive joists.

C. Coordinate placement bearing supports where required.

3.2 INSTALLATION

A. Handle joists with care to avoid damage.
B. Set joists level and plumb, in correct position. Erection tolerance +/- ½” maximum from indicated position.

C. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure plumb and in indicated alignment until completion of erection and installation of permanent bracing.

D. Do not field cut or alter structural members without approval of Engineer.

E. Frame openings between joists with lumber in accordance with Document 06 10 00, Rough Carpentry.

F. Coordinate placement of sheathing with work of this Section.

G. After erection, touch-up damaged galvanized surfaces with primer consistent with shop coat.

H. Prior to enclosing the joists, the Contractor shall coordinate with the Engineer for structural observation.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Provision of thermal and acoustical building insulation.

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

C. Related Sections

1. Section 07 84 00 - Firestopping: Provision of firestopping.
2. Section 09 29 00 - Gypsum Board: Provision of gypsum board.

1.02 REFERENCES

A. ASTM - American Society for Testing and Materials


1.03 SYSTEM DESCRIPTION

A. Performance Requirement: All ceiling, wall, and floor insulation shall contain no added formaldehyde.

1.04 SUBMITTALS

A. Product Data: Submit manufacturer’s product data for insulation products specified.

B. Certifications: Submit certification that insulation was furnished and installed in accordance with CBC requirements.
SECTION 07 21 10

BUILDING INSULATION

*A2

1.05 QUALITY ASSURANCE

A. Mockup: Provide 4 feet by 4 feet mock-up of both PSK and draft-faced insulation at a location to be determined in the field with the Architect.
  1. Mockup shall include painting of framing and insulation.
  2. Paint Color: As indicated on the Drawings.*A2

1.065 DELIVERY, STORAGE, AND HANDLING

A. Storage and Protection: Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer’s recommendations for handling, storage and protection during installation.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Thermal Insulation

1. Typical, Batt Insulation at Exterior Stud Walls
   a. Provide “EcoTouch Pink Fiberglass Insulation” as manufactured by Owens Corning, or equal.
   b. At 5.5 inch studs, provide R-21 minimum.
   c. At 7.25 inch studs, provide R-22 minimum.
   d. At wider studs, provide higher R-value.
   e. Fire resistive requirements when tested in accordance with ASTM E84:
      1) Flame Spread: Not more than 25.
      2) Smoke Developed: Not more than 450.

2. Typical, Roof Insulation
   a. Provide “EcoTouch Pink Fiberglass Insulation” as manufactured by Owens Corning, or equal.
   b. Thickness: 10.25 inches maximum.
   c. R-38 minimum. Provide higher R-value at extra dense type insulation.
   d. Fire resistive requirements when tested in accordance with ASTM E84:
      1) Flame Spread: Not more than 25.
      2) Smoke Developed: Not more than 450.
   e. Facing: Kraft faced.
SECTION 07 21 10

BUILDING INSULATION

3. Rigid Insulation Board Where Indicated at Curbs
   a. Provide expanded polystyrene, with thickness as indicated on the Drawings.
   b. Fire resistive requirements when tested in accordance with ASTM E84:
      1) Flame Spread: Not more than 75.
      2) Smoke Developed: Not more than 450.

B. Acoustical Insulation

1. Typical, Interior Partitions Where Indicated
   a. Unfaced, 3-1/2 inches thick, friction-fit, flexible batt or blanket of fiberglass, 15 inch width to fit stud space, and conforming to ASTM C665, Type I, non-combustible when tested in accordance with ASTM E136, and having the following fire resistive requirements when tested in accordance with ASTM E84:
      1) Flame Spread: 10 or less.
      2) Smoke Developed: 10 or less.

C. Insulation Support: Galvanized springwire and staples as required.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates and conditions with installer present, for compliance with requirements of the Sections in which substrates and related work are specified and to determine if other conditions affecting performance of insulation are satisfactory. Do not proceed with installation of insulation until unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

A. Comply with insulation manufacturer’s instructions applicable to products and application indicated. If printed instructions are not available or do not apply to project conditions, consult manufacturer’s technical representative for specific recommendations before proceeding with installation of insulation.
SECTION 07 21 10

BUILDING INSULATION

B. Extend insulation full thickness as indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation. Remove projections that interfere with placement.

C. Apply a single layer of insulation of required thickness, unless otherwise shown or required to make up total thickness.

D. At roof joists, provide corrugated blocking, or equal, to maintain 1 inch minimum clearance for venting between top of insulation and bottom of roof sheathing.

3.03 INSTALLATION OF GENERAL BUILDING INSULATION

A. Apply insulation units to substrate by method indicated, complying with manufacturer’s recommendations. If no specific method is indicated, use mechanical anchorage to provide permanent placement and support of units.

B. Maintain required separations from electric fixtures and appliances.

3.04 PROTECTION

A. General: Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation will be subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Exterior flush fiberglass reinforced plastic (FRP) doors, including requirements for glazing and factory reinforcement for door hardware.

B. Products Installed but not Furnished Under this Section

1. Section 08 71 00 - Finish Hardware: Furnishing of finish hardware.

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

D. Related Sections

1. Section 08 12 13 - Hollow Metal Frames: Provision of hollow metal frames.
2. Section 08 80 00 - Glazing: Provision of glass and glazing.

1.02 REFERENCES

A. ASTM - American Society for Testing and Materials

1. D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.

1.03 SUBMITTALS

A. Product Data: Submit product data for each type of door, including details of core and edge construction, trim for openings, and factory-finishing specifications.

B. Shop Drawings: Submit shop drawings indicating location and size of each door referenced to the Architect’s door mark and hardware group, elevation of each kind of door, details of construction, location and extent of hardware blocking, requirements for factory finishing, and other pertinent data.

1. For factory machined doors, indicate dimensions and locations of cutouts for locksets and other cutouts adjacent to light openings.
FIBERGLASS DOORS

1.04 QUALITY ASSURANCE

A. Regulatory Requirements: All FRP component parts, including the gelcoat finish, shall have a flame spread classification of 25 or less per ASTM E84 and shall be self extinguishing per ASTM D635 unless operating conditions dictate otherwise.

1.05 DELIVERY, STORAGE AND HANDLING

A. Packing and Shipping: Identify each door with individual opening numbers as designated on shop drawings, using temporary, removable or concealed markings. Use the Architect’s door numbering system.

B. Storage and Protection: Protect doors during transit, storage, and handling to prevent damage, soiling, and deterioration. Comply with requirements of referenced standard and manufacturer’s instructions.

1.06 WARRANTY

A. Manufacturer’s Limited Warranty: Provide manufacturer’s limited warranty for fiberglass doors and frames to be free of defective materials and faulty workmanship.

1. Duration: 10 years from date of shipment.

B. Manufacturer’s Limited Lifetime Warranty: Provide manufacturer’s limited lifetime warranty that the door is in its specified application in its original installation covering the following:

1. Failure of corner joinery.
2. Core deterioration.
3. Delamination or bubbling of door skin.
4. Corrosion of all fiberglass products.

C. Manufacturer’s Warranty for Door Hardware: Provide manufacturer’s warranty for door hardware installed by the manufacturer’s personnel as follows.

1. Hardware is installed in accordance with the hardware manufacturer’s specifications and instructions.
2. Hardware is securely mounted and, in normal usage, will not separate from the door.
3. Duration: 10 years.
PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers: Special-Lite, “AF-100 Pultruded Smooth Door”, or equal.

2.02 DOORS

A. Face Sheets

1. Standard face sheets shall be manufactured using a corrosion resistant resin system with light stabilizing additives. Resin shall be reinforced with fiberglass, 40 percent by weight.
2. Thickness: 0.070-inch to 0.125-inch. Total door thickness shall be 1-3/4 inch nominal.
3. Finish: Heavy pebble surface.
4. Color: As selected by the Architect from manufacturer’s standard colors.

B. Internal Construction

1. Typical Core: Polyurethane foam core.
2. Stiles and Rails: 1-1/2 inch square pultruded fiberglass tubes. Polyester based resin filled with 1/4-inch chopped glass strands and aerosil shall be used for reinforcement and corner block. Bottom rail shall allow 1-1/4 inches of height alterability without loss of panel’s integrity. No metal or wood lumber reinforcement shall be allowed.

C. Hardware Preparation

1. Reinforcement Blocking
   a. Lockset, Surface Mounted Hardware, Thru-Bolted Hardware: Non-swelling polymer blocking.
2. Doors shall be mortised and reinforced to allow application of hinges and locks in accordance with hardware schedule and manufacturer’s templates. Hinges shall be attached by using stainless steel wood screws. Pilot holes shall be in strict accordance to manufacturer’s recommendations.

D. Glazing: Glass support structures shall ensure that glass area is weathersealed as not to permit moisture to enter the core of the door. Pultruded FRP tubes shall be used to fabricate window opening. Glazing shall allow for ready access for repair.
SECTION 08 16 13

FIBERGLASS DOORS

without affecting sealed integrity of the cutout in the door panel itself. Openings cut directly into the core material shall not be allowed. Refer to Section 08 80 00 for glazing standards.

E. Frames: Steel, as specified in Section 08 12 13.

2.03 FABRICATION

A. Fabricate FRP door systems as indicated. Field measurements shall be taken as required for coordination with adjoining work.

B. Form exposed surfaces free from warp, wave and buckle, with all corners square, unless otherwise indicated. Set each member in proper alignment and relationship to other members with all surfaces straight and in a true plane.

C. Reinforce members and joints with plates, tubes or angles for rigidity and strength.

D. Doors shall be mortised and reinforced for hardware in accordance with the hardware manufacturer’s instructions and templates. The reinforcing shall be designed to receive hinges, locks, strikes, closures, etc.

E. Provide clearance for doors of 1/8-inch at jambs and heads; 1/4-inch clearance above threshold.

F. Dimensions: As indicated on the Drawings.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Installer shall examine the substrate and conditions under which fiberglass reinforced plastic work is to be installed and notify the General Contractor in writing of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.02 INSTALLATION

A. General: Install FRP doors, frames, and accessories in accordance with final shop drawings and as herein specified. Installation to be similar to that of hollow metal doors and frames, and in accordance with FRP manufacturer’s written instructions.
FIBERGLASS DOORS

B. Door Installation: Fit FRP doors accurately in frames, within clearances as specified above.

3.03 TOLERANCES

A. Maximum Diagonal Distortion: 1/8-inch measured with a straight edge, corner to corner. Maximum measurable plane is 4 feet-0 inches by 7 feet-0 inches.

3.04 ADJUSTING

A. At substantial completion, adjust all operable components to ensure proper installation and that they function smooth and freely.

3.05 CLEANING

A. Remove dirt and excess sealant from exposed surfaces. Follow the manufacturer’s recommended cleaning techniques and procedures for cleaning all surfaces. Use only cleaning products that will not scratch or damage the surfaces, and are recommended by the manufacturer.

B. Remove debris from Project site.

END OF SECTION
PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions of Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same sections as the doors and door frames on which they are installed.

B. This Section includes the following, but is not necessarily limited to:

1. Door Hardware, including electric hardware.
2. Storefront and Entrance door hardware.
3. Low-energy door operators plus sensors and actuators.
4. Thresholds, gasketing and weather-stripping.
5. Door silencers or mutes.

C. Related Sections: The following sections are noted as containing requirements that relate to this Section, but may not be limited to this listing.

1. Division 8: Section - Steel Doors and Frames.
2. Division 8: Section - Wood Doors.
3. Division 8: Section - Aluminum Storefront

1.03 REFERENCES (USE DATE OF STANDARD IN EFFECT AS OF BID DATE.)

A. 2013 California Building Code, CCR, Title 24.
B. BHMA – Builders’ Hardware Manufacturers Association
C. DHI – Door and Hardware Institute
   1. NFPA 80 - Fire Doors and Other Opening Protectives
   2. NFPA 105 - Smoke and Draft Control Door Assemblies
E. UL - Underwriters Laboratories.
   1. UL 10C - Fire Tests of Door Assemblies
   2. UL 305 - Panic Hardware
F. WHI - Warnock Hersey Incorporated
G. SDI - Steel Door Institute

1.04 SUBMITTALS & SUBSTITUTIONS

A. General: Submit in accordance with Conditions of the Contract and Division 1 Specification sections. Forward submittal to the District with half size floor plan and door hardware schedule.

B. Submit product data (catalog cuts) including manufacturers' technical product information for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.

C. Submit in electronic format or six (6) hard copies of schedule organized vertically into “Hardware Sets” with index of doors and headings, indicating complete designations of every item required for each door or opening. Include following information:

1. Include a Cover Sheet with;
   a. Job Name, location, telephone number.
   b. Architects name, location and telephone number.
   c. Contractors name, location, telephone number and job number.
   d. Suppliers name, location, telephone number and job number.
   e. Hardware consultant's name, location and telephone number.

2. Job Index information included;
   a. Numerical door number index including; door number, hardware heading number and page number.
   b. Complete keying information (referred to DHI hand-book "Keying Systems and Nomenclature"). Provision should be made in the schedule to provide keying information when available; if it is not available at the time the preliminary schedule is submitted.
   c. Manufacturers' names and abbreviations for all materials.
   d. Explanation of abbreviations, symbols, and codes used in the schedule.
   e. Mounting locations for hardware.
   f. Clarification statements or questions.
   g. Catalog cuts and manufacturer’s technical data and instructions.

3. Vertical schedule format sample:

<table>
<thead>
<tr>
<th>Heading Number 1 (Hardware group or set number – HW -1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) 1 Single Door #1 - Exterior from Corridor 101</td>
</tr>
<tr>
<td>(b) 90°</td>
</tr>
<tr>
<td>(c) RH</td>
</tr>
<tr>
<td>(d) 3' 0&quot;x7' 0&quot; x 1-3/4&quot; x (e) 20 Minute (f) WD x HM</td>
</tr>
<tr>
<td>(g) 1 (h) (i) ea</td>
</tr>
<tr>
<td>(j) Hinges - (k) 5BB1HW 4.5 x 4.5 NRP (l) ½ TMS</td>
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<tr>
<td>(m) 626</td>
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<tr>
<td>(n) IVE</td>
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2 6AA 1 ea Lockset - ND50PD x RHO x RH x 10-025 x JTMS 626 SCH

(a) - Single or pair with opening number and location.  (b) - Degree of opening  (c) - Hand of door(s)  (d) - Door and frame dimensions and door thickness.  (e) - Label requirements if any.  (f) - Door by frame material.  (g) - (Optional) Hardware item line #.  (h) - Keyset Symbol.  (i) - Quantity.  (j) - Product description.  (k) - Product Number.  (l) - Fastenings and other pertinent information.  (m) - Hardware finish codes per ANSI A156.18.  (n) - Manufacture abbreviation.
D. Make substitution requests in accordance with Division 1. Substitution requests must be made prior to bid date. Include product data and indicate benefit to the project. Furnish samples of any proposed substitution.

E. Keying Schedule: Submit separate detailed schedule indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.

F. Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

G. Furnish as-built/as-installed schedule with close-out documents, including keying schedule and transcript, wiring/riser diagrams, manufacturers’ installation and adjustment and maintenance information.

H. Fire Door Assembly Testing: Submit a written record of each fire door assembly to the Owner to be made available to the Authority Having Jurisdiction (AHJ) for future building inspections.

1.05 QUALITY ASSURANCE

A. Obtain each type of hardware (latch and lock sets, hinges, closers, exit devices, etc.) from a single manufacturer.

B. Supplier Qualifications: A recognized architectural door hardware supplier, with warehousing facilities in the project's vicinity, that has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this project and that employs an experienced architectural hardware consultant (AHC) who is available to Owner, Architect, and Contractor, at reasonable times during the course of the Work, for consultation.

1. Responsible for detailing, scheduling and ordering of finish hardware.
2. Meet with Owner to finalize keying requirements and to obtain final instructions in writing.
3. Stock parts for products supplied and are capable of repairing and replacing hardware items found defective within warranty periods.

C. Hardware Installer: Company specializing in the installation of commercial door hardware with five years documented experience.

D. Fire-Rated Openings: Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and tested by UL or Warnock Hersey for given type/size opening and degree of label. Provide proper latching hardware, door closers, approved-bearing hinges and seals whether listed in the Hardware Schedule or not.

1. Where emergency exit devices are required on fire-rated doors, (with supplementary marking on doors' UL labels indicating "Fire Door to be Equipped with Fire Exit Hardware") provide UL label on exit devices indicating "Fire Exit Hardware".

E. Exit Doors: Operable from inside with single motion without the use of a key or special knowledge or effort.

1.06 DELIVERY, STORAGE AND HANDLING

A. Coordinate delivery of packaged hardware items to the appropriate locations (shop or field) for installation.
B. Hardware items shall be individually packaged in manufacturers’ original containers, complete with proper fasteners. Clearly mark packages on outside to indicate contents and locations in hardware schedule and in work.

C. Provide locked storage area for hardware, protect from moisture, sunlight, paint, chemicals, etc.

D. Contractor to inventory door hardware jointly with representatives of hardware supplier and hardware installer until each all are satisfied that count is correct.

1.07 WARRANTY

A. Provide warranties of respective manufacturers’ regular terms of sale from day of final acceptance as follows:

1. Locksets: Ten (10) years.
2. Electronic: One (1) year.
3. Closers: Thirty (30) years – except electronic closers shall be two (2) years.
4. Exit devices: Three (3) years.
5. *A1: All hardware for Special-Lite doors to be installed at the Special-Lite manufacturing facilities to obtain ten (10) year warranty on doors.
6. All other hardware: Two (2) years.

1.08 MAINTENANCE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

1.09 PRE-INSTALLATION CONFERENCE

A. Convene a pre-installation conference at least one week prior to beginning work of this section.

B. Attendance: Architect, Construction Manager, Contractor, Hardware Supplier, Installer, Key District Personnel, and Project Inspector.

C. Agenda: Review hardware schedule, products, installation procedures and coordination required with related work.
PART 2 - PRODUCTS

2.01 MANUFACTURERS

<table>
<thead>
<tr>
<th>Item</th>
<th>Manufacturer</th>
<th>Acceptable Substitutes</th>
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<tr>
<td>Hinges</td>
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<td>Hager, Stanley, McKinney</td>
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<td>Or Approved Equal</td>
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<td>Closers</td>
<td>LCN</td>
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</tr>
<tr>
<td>Seals &amp; Bottoms</td>
<td>Zero</td>
<td>Pemko, National Guard</td>
</tr>
</tbody>
</table>

2.02 MATERIALS

A. Hinges: Exterior out-swinging door butts shall be non-ferrous material and shall have stainless steel hinge pins. All doors to have non-rising pins.

1. Hinges shall be sized in accordance with the following:
   a. Height:
      1) Doors up to 42" wide: 4-1/2" inches.
      2) Doors 43" to 48" wide: 5 inches.
   b. Width: Sufficient to clear frame and trim when door swings 180 degrees.
   c. Number of Hinges: Furnish 3 hinges per leaf to 7'-5" in height. Add one for each additional 2 feet in height.

2. Furnish non-removable pins (NRP) at all exterior out-swing doors and interior key lock doors with reverse bevels.

B. Heavy Duty Cylindrical Locks and Latches: Schlage "ND" Series as scheduled with "Rhodes" design, fastened with through-bolts and threaded chassis hubs.
1. Locksets to comply with ANSI A156.2, Series 4000, Grade 1; tested to exceed 3,000,000 cycles. Locksets shall meet ANSI A117.1, Accessible Code.
2. Chassis: One piece modular assembly and multi-functional allowing function interchange without disassembly of lockset.
3. Spindle shall be deep-draw manufactured not stamped. Spindle and spring cage to be one-piece integrated assembly.
4. Anti-rotation plate to be interlocking to the lock chassis. Lock design utilizing bit-tabs are not acceptable.
5. Lever Trim: Accessible design, bi-directional, independent assemblies.
6. Locks shall be of such construction that when locked, the door may be opened from within by using lever and without the use of a key or special knowledge.
7. Thru-bolts to secure anti-rotation plate without sheer line. Fully threaded thru-bolts are not acceptable.
8. Spring cage to have double compression springs. Manufacturers utilizing torsion springs are not acceptable.
9. Latchbolt to be steel with minimum ½” throw deadlatch on keyed and exterior functions; ¾” throw anti-friction latchbolt on pairs of doors.
10. Strikes: ANSI curved lip, 1-1/4” x 4-7/8”, with 1” deep dust box (K510-066). Lips shall be of sufficient length to clear trim and protect clothing.

C. Deadlocks: Rotating cylinder trim rings of attack-resistant design. Mounting plates and actuator shields of plated cold-rolled steel. Mounting screws of ¼” diameter steel and protected by drill-resistant ball bearings. Steel alloy deadbolt with hardened steel roller. Strike alloy deadbolt with reinforcer and two 3” long screws. ANSI A156.5, 2001 Grade 1 certified.

D. Exit devices: Von Duprin as scheduled.
   1. Provide certificate by independent testing laboratory that device has completed over 1,000,000 cycles and can still meet ANSI/BHMA A156.3 - 2001 standards.
   2. All internal parts shall be of cold-rolled steel with zinc dichromate coating.
   3. Mechanism case shall have an average thickness of .140”.
   4. Compression spring engineering.
   5. Non-handed basic device design with center case interchangeable with all functions.
   6. All devices shall have quiet return fluid dampeners.
   7. All latchbolts shall be deadlocking with ¾” throw and have a self-lubricating coating to reduce friction and wear.
   8. Device shall bear UL label for fire and or panic as may be required.
   9. All surface strikes shall be roller type and utilize a plate underneath to prevent movement.
   10. All Exit Devices to be sex-bolted to the doors.
   11. Panic Hardware shall comply with CBC Section 11B.404.2.7 and shall be mounted between 34” and 44” above the finished floor surface.
      a. Provide exit devices UL certified to meet maximum 5 pound requirements according to the California Building Code section 11B-309.4, and UL listed for Panic Exterior Fire Exit Hardware.

E. Closers: LCN as scheduled. Place closers inside building, stairs, room, etc.
   1. Door closer cylinders shall be of high strength cast iron construction with double heat treated pinion shaft to provide low wear operating capabilities of internal parts throughout the life of the installation. All door closers shall be tested to ANSI/BHMA A156.4 test requirements by a BHMA certified testing laboratory. A written certification showing successful completion of a minimum of 10,000,000 cycles must be provided.
   2. All door closers shall be fully hydraulic and have full rack and pinion action with a shaft diameter of a minimum of 11/16 inch and piston diameter of 1 inch to ensure longevity and durability under all closer applications.
3. All parallel arm closers shall incorporate one piece solid forged steel arms with bronze bushings. 1-9/16” steel stud shoulder bolts, shall be incorporated in regular arms, hold-open arms, arms with hold open and stop built in. All other closers to have forged steel main arms for strength, durability, and aesthetics for versatility of trim accommodation, high strength and long life.

4. Closers shall be installed to permit doors to swing 180 degrees.

5. All closers shall utilize a stable fluid withstanding temperature range of 120 degrees F. to -30 degrees F. without requiring seasonal adjustment of closer speed to properly close the door.

6. Provide the manufactures drop plates, brackets and spacers as required at narrow head rails and special frame conditions. NO wood plates or spacers will be allowed.

7. Maximum effort to operate closers shall not exceed 5 lbs., such pull or push effort being applied at right angles to hinged doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the closer may be increased but shall not exceed 15 lbs. when specifically approved by fire marshal. All closers shall be adjusted to operate with the minimum amount of opening force and still close and latch the door. These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position. Per 11B-404.2.8.1, door shall take at least 5 seconds to move from an open position of 90 degrees to a position of 12 degrees from the latch jamb.

F. Flush Bolts & Dust Proof Strikes: Automatic Flush Bolts shall be of the low operating force design. Utilize the top bolt only model for interior doors where applicable and as permitted by testing procedures.

1. Manual flush bolts only permitted on storage or mechanical openings as scheduled.
2. Provide dust proof strikes at openings using bottom bolts.

G. Door Stops:

1. Unless otherwise noted in Hardware Sets, provide floor type with appropriate fasteners. Where wall type cannot be used, provide floor type. If neither can be used, provide overhead type.
2. Do not install floor stops more than four (4) inches from the face of the wall or partition (CBC Section 11B-307).
3. Overhead stops shall be made of stainless steel and non-plastic mechanisms and finished metal end caps. Field-changeable hold-open, friction and stop-only functions.

H. Protection Plates: Fabricate either kick, armor, or mop plates with four beveled edges. Provide kick plates 10” high and 2” LDW. Sizes of armor and mop plates shall be listed in the Hardware Schedule. Furnish with machine or wood screws of bronze or stainless to match other hardware.

I. Thresholds: As Scheduled and per details.

1. Thresholds shall not exceed 1/2” in height, with a beveled surface of 1:2 maximum slope.
2. Set thresholds in a full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements in Division 7 “Thermal and Moisture Protection”.
3. Use ¼” fasteners, red-head flat-head sleeve anchors (SS/FHSL).
4. Thresholds shall comply with CBC Section 11B-404.2.5.

J. Seals: Provide silicone gasket at all rated and exterior doors.

1. Fire-rated Doors, Resilient Seals: UL10C Classified complies with NFPA 80 & NFPA 252. Coordinate with selected door manufacturers' and selected frame manufacturers' requirements.
2. Fire-rated Doors, Intumescent Seals: Furnished by selected door manufacturer. Furnish fire-labeled opening assembly complete and in full compliance with UL10C Classified complies with...
NFPA 80 & NFPA 252. Where required, intumescent seals vary in requirement by door type and door manufacture -- careful coordination required.


K. Door Shoes & Door Top Caps: Provide door shoes at all exterior wood doors and top caps at all exterior out-swing doors.

L. Silencers: Furnish silencers for interior hollow metal frames, 3 for single doors, 2 for pairs of doors. Omit where sound or light seals occurs, or for fire-resistive-rated door assemblies.

2.03 **A1 KEYING**

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

B. Furnish all cylinders in “E” Section Keyway “0” Bitted.

C. East Side Union High School District to verify keyway and Registry number. Provide three (3) keys for each cylinder.

D. Furnish Master 6600 series Padlocks and the cylinders to tie them into the masterkey system for gates, storage boxes, utility valve security, roof hatches and roll-up doors keyed as directed in the keying schedule.

2.04 FINISHES

A. Generally to be satin bronze US26D (612 on bronze and 639 on steel) unless otherwise noted.

B. Door closers shall be powder-coated to match other hardware, unless otherwise noted.

C. Aluminum items to be finished anodized aluminum except thresholds which can be furnished as standard mill finish.

D. **A1 Manufacturer’s finishes to be used.**

2.05 FASTENERS

A. Screws for strikes, face plates and similar items shall be flat head, countersunk type, provide machine screws for metal and standard wood screws for wood.

B. Screws for butt hinges shall be flathead, countersunk, full-thread type.

C. Fastening of closer bases or closer shoes to doors shall be by means of sex bolts and spray painted to match closer finish.

D. Provide expansion anchors for attaching hardware items to concrete or masonry.

E. All exposed fasteners shall have a phillips head.

F. Finish of exposed screws to match surface finish of hardware or other adjacent work.

G. All Exit Devices and Lock Protectors shall be fastened to the door by the means of sex bolts or through bolts.
PART 3 - EXECUTION

3.01 INSPECTION

A. Verify that doors and frames are square and plumb and ready to receive work and dimensions are as instructed by the manufacturer.

B. *A1 Salvage existing door hardware before demolition.

C. Beginning of installation means acceptance of existing conditions.

D. Fire-Rated Door Assembly Inspection: Upon completion of the installation, all fire door assemblies shall be inspected to confirm proper operation of the closing device and latching device and that only the manufacturer’s furnished fasteners are used for installation and that it meets all criteria of a fire door assembly per NFPA 80 (Standard for Fire Doors and Other Opening Protectives) 2013 Edition. A written record shall be maintained and transmitted to the Owner to be made available to the Authority Having Jurisdiction (AHJ). The inspection of the swinging fire doors shall be performed by a certified FDAI (Fire Door Assembly Inspector) with knowledge and understanding of the operating components of the type of door being subjected to the inspection. The record shall list each fire door assembly throughout the project and include each door number, an itemized list of hardware set components at each door opening, and each door location in the facility.

3.02 INSTALLATION

A. Install hardware in accordance with manufacturer's instructions and requirements of DHI.

B. Use the templates provided by hardware item manufacturer.

C. Mounting heights for hardware shall be as recommended by the Door and Hardware Institute. Operating hardware will to be located between 34” and 44” AFF.

D. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

E. Drill and countersink units that are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.

F. Set thresholds for exterior doors in full bed of butyl-rubber sealant.

G. If hand of door is changed during construction, make necessary changes in hardware at no additional cost.

H. *A1 Provide district at least one (1) month notice for keying for move in and occupancy.

3.03 ADJUST AND CLEAN

A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.

B. Clean adjacent surface soiled by hardware installation.

C. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy, return to that work area and make final check and adjustment of all hardware items in
such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

D. Instruct Owner's Personnel in proper adjustment and maintenance of hardware finishes, during the final adjustment of hardware.

E. Continued Maintenance Service: Approximately six months after the completion of the project, the Contractor accompanied by the Architectural Hardware Consultant, shall return to the project and re-adjust every item of hardware to restore proper functions of doors and hardware. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures. Replace hardware items which have deteriorated or failed due to faulty design, materials or installation of hardware units. Prepare a written report of current and predictable problems (of substantial nature) in the performance of the hardware.

3.04 HARDWARE LOCATIONS

A. Conform to CCR, Title 24, Part 2; and ADAAG; and the drawings for access-compliant positioning requirements for the disabled.

3.05 FIELD QUALITY CONTROL

A. Contractor is responsible for providing the services of an Architectural Hardware Consultant (AHC) or a proprietary product technician to inspect installation and certify that hardware and its installation have been furnished and installed in accordance with manufacturers' instructions and as specified herein.

3.06 SCHEDULE

A. The items listed in the following schedule shall conform to the requirements of the foregoing specifications.

B. While the hardware schedule is intended to cover all doors, and other movable parts of the building, and establish type and standard of quality, the contractor is responsible for examining the Plans and Specifications and furnishing proper hardware for all openings whether listed or not. If there are any omissions in hardware groups in regard to regular doors they shall be called to the attention of the Architect prior to bid opening for instruction; otherwise, list will be considered Complete. No extras will be allowed for omissions.

C. The Door Schedule on the Drawings indicates which hardware set is used with each door.

Manufacturers Abbreviations (Mfr.)

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Company Name</th>
<th>Products</th>
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<tbody>
<tr>
<td>GLY</td>
<td>Glynn-Johnson Corporation</td>
<td>Overhead Door Stops</td>
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<tr>
<td>IVE</td>
<td>Ives</td>
<td>Hinges, Pivots, Bolts, Coordinators, Dust Proof Strikes, Push Pull &amp; Kick Plates, Door Stops &amp; Silencers</td>
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<td>LCN</td>
<td>Door Closers</td>
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<td>Pemko Mfg.</td>
<td>Thresholds, Gasketing &amp; Weather-stripping</td>
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<td>SCH</td>
<td>Schlage Lock Company</td>
<td>Locks, Latches &amp; Cylinders</td>
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<td>Stanley</td>
<td>Hinges</td>
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<td>Trimco</td>
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<td>Von Duprin</td>
<td>Exit Devices</td>
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EAST SIDE UNION HIGH SCHOOL DISTRICT
Z-030-601, James Lick High School,
JL Student Center & Quad Mod
Bid #: B-24-16-17

DOOR HARDWARE

*Addendum 2: 3/22/2017
SECTION 08 71 00-10
SPEXTRA: 263834

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WEATHER-STRIPPING FURNISHED WITH DOOR & FRAME ASSEMBLY

HARDWARE GROUP NO. 02A

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**EAST SIDE UNION HIGH SCHOOL DISTRICT**

**Z-030-601, James Lick High School,**

**JL Student Center & Quad Mod**

**Bid #: B-24-16-17**

**DOOR HARDWARE**

*Addendum 2: 3/22/2017*  
**SECTION 08 71 00-14**
HARDWARE GROUP NO. 11

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WEATHER-STRIPPING FURNISHED WITH DOOR & FRAME ASSEMBLY

HARDWARE GROUP NO. 14

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HARDWARE GROUP NO. 15

EAST SIDE UNION HIGH SCHOOL DISTRICT
Z-030-601, James Lick High School,
JL Student Center & Quad Mod
Bid #: B-24-16-17

DOOR HARDWARE
*Addendum 2: 3/22/2017
SECTION 08 71 00-15
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END OF SECTION
SECTION 09 51 00

ACOUSTICAL CEILINGS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes

1. Provision of suspended mineral fiber board ceiling systems.
2. Provision of adhered mineral fiber board ceiling system.
*A2
3. Provision of mechanically fastened acoustic ceiling panels.*A2

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

C. Related Sections

1. Section 05 45 00 - Metal Support Assemblies: Provision of suspended metal framing for gypsum board ceilings.
2. Section 09 29 00 - Gypsum Board: Provision of gypsum board for ceilings.

1.02 REFERENCES

A. ASTM - American Society for Testing and Materials

2. A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
5. E1264 - Classification for Acoustical Ceiling Products.


C. UL - Underwriters Laboratories Inc.

1.03 SYSTEM DESCRIPTION

A. Design Requirements: Architectural reflected ceiling plan drawings shall govern over Mechanical and Electrical Drawings.

1.04 SUBMITTALS

A. Product Data: Submit manufacturer’s product data completely describing products.

B. Shop Drawings: Show complete ceiling layouts, seismic bracing methods and details of installation, and information required for related work.

C. Samples: Provide 1 panel of each type of acoustical ceiling specified and sample of grid support.

D. Quality Control Submittals

1. Manufacturer’s Instructions: Submit manufacturer’s installation instructions.

1.05 QUALITY ASSURANCE

A. Qualifications: Installer shall have completed at least 3 previous projects of similar size and complexity.

1.06 DELIVERY, STORAGE AND HANDLING

A. Packing and Shipping: Deliver and store packaged products in original containers with seals unbroken and labels intact until time of use.

B. Storage and Protection

1. Keep materials dry by storing off ground; under watertight covers.

2. Immediately before installation, panels shall be stored for sufficient time to stabilize temperature and humidity conditions ambient during installation and anticipated for occupancy.

1.07 PROJECT CONDITIONS

A. Environmental Requirements: Do not begin work until residual moisture has dissipated and comply with the following:
ACOUSTICAL CEILINGS

1. Acoustical Ceilings: Maintain uniform temperature of minimum 60 degrees Fahrenheit and maximum of 90 degrees Fahrenheit and humidity of 20 to 40 percent but no more than 90 percent prior to, during and after installation.

1.08 SEQUENCING AND SCHEDULING

A. Schedule installation of acoustic units after interior wet work is dry.

B. Coordinate installation of ceilings with mechanical and electrical work.

1.09 MAINTENANCE

A. Extra Materials: Provide 5 percent extra quantity of each type of acoustical surface installed. Provide in original unbroken containers plainly marked with type and quantity of contents.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Suspended Acoustical Ceiling System Type C-4

1. Panels: Moisture resistant wet formed mineral fiber with factory applied vinyl latex paint, mildew resistant, and with the following properties:

   a. Size: 24 inches by 24 inches by 3/4-inch thick, where indicated on the Drawings.
   b. Edge: Angled tegular.
   c. Surface Burning Characteristics: Class A in accordance with ASTM E84, with flame spread 25 or under.
   d. Light Reflectance: 0.90.
   e. Color: White.

2. Mechanical Suspension System: Medium-duty, non-fire rated, exposed grid system for ceiling panels, double-web tees, steel body with exposed surfaces factory painted with baked polyester paint.

   a. Provide panel centering devices built into each grid member.
   b. Pull out tension values greater than 300 pounds.
   d. Width: 15/16-inch.
ACOUSTICAL CEILINGS

e. Manufacturer: Armstrong, “Prelude XL Suspension System”, or equal.

*A2 B. Suspended Acoustical Ceiling System Type C-4B*A2

2. Panels: Washable lay-in ceiling tile:
   a. Size: 24 inches by 48 inches by 3/4-inch thick, where indicated on the Drawings.*A2
   b. Surface Burning Characteristics: Class A in accordance with ASTM E84, with flame spread 25 or under.
   c. Light Reflectance: 0.90.
   e. Manufacturer: Armstrong, “Clean Room VL Unperforated”, or equal.

3. Mechanical Suspension System: Medium-duty, non-fire rated, exposed grid system for ceiling panels, double-web tees, aluminum body with clean room exposed surfaces.
   a. Provide panel centering devices built into each grid member.
   b. Pull out tension values greater than 300 pounds.
   d. Width: 15/16-inch.
   e. Manufacturer: Armstrong, “Clean Room Aluminum Suspension System”, or equal.

C. Fasteners and Attachments

1. Wire for Hangers and Ties: ASTM A641, Class 1 zinc coating, soft temper, with gauge in accordance with CBC.
2. Angle-Type Hangers: Angles with legs not less than 7/8-inch wide, formed from 0.0635-inch thick galvanized steel sheet complying with ASTM A653, G90 Coating Designation, with bolted connections and 5/16-inch diameter bolts.
3. Ceiling Clips: Minimum 13 gauge by 3/4-inch wide, as manufactured by Hilti, “Ceiling Clips”, or equal.
4. Light Fixture Protection and Hold Down Clips: Provide light fixture protection panels, fasteners and hold down clips as required by UL FRD listing, manufacturer’s standard types.
5. Provide framing system and supports as detailed on the Drawings.

*A2 D. Adhered Ceiling Tile, Type C-4A*A2

1. Tile: Manufactured from wet formed mineral fiber and recycled content with factory applied latex paint:
SECTION 09 51 00

ACOUSTICAL CEILINGS

b. Light Reflectance: Minimum LR 0.85 in accordance with ASTM E1264.
c. NRC Range: 0.55.
d. Surface Burning Characteristics, Class A, ASTM E84:
   1) Flame Spread: 25 or less.
   2) Smoke Density: 50 or less.
e. Insulation Value: Average R factor at 75 degrees Fahrenheit of 1.6.
g. Edge Condition: Beveled tongue and groove.
h. Surface: Medium texture.
i. Application: Adhered to gypsum board ceiling.

* A2
3. Tile Adhesive: As recommended by ceiling tile manufacturer.

* A2  E. Attached Acoustical Ceiling Panels
a. Size: 48 inches by 96 inches by 7/8-inch thick.
b. Surface Burning Characteristics: Class A in accordance with ASTM E84, with flame spread 25 or under.
c. Light Reflectance: 0.88.
d. Color: Custom, as selected by the Architect.
e. Attachment: Ceiling manufacturer’s standard threaded studs.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine areas to receive acoustical treatment and verify that:

1. Installation of building components located in ceiling plenum is complete.
2. Spacing, direction and details of grid members and supports to accommodate installation of light fixtures, diffusers and other ceiling located items are correct.
3. Areas are clean and free of materials or rubble that could damage acoustical surfaces.

B. Do not start work until unsatisfactory conditions are corrected.
SECTION 09 51 00

ACOUSTICAL CEILINGS

3.02 INSTALLATION

A. Suspended Ceiling System

1. Install ceiling material and suspension system, including necessary hangers and other supporting hardware in accordance with manufacturer’s instructions, CBC and ASTM C636.

2. Lay work out symmetrically about centers of rooms and provide symmetrical borders not less than half size of tile specified unless noted otherwise on the Drawings.

3. Make penetrations through ceiling panels in such a manner to ensure tight fit and neat appearance. Center penetrations in tile unless otherwise noted.

B. Suspension System

1. Install in accordance with CBC.

2. For Hanger and Lateral Bracing Wires: Install expansion bolts or ceiling clips as required.

3. Hanger Wires
   a. Insert hanger wires around expansion bolts or through ceiling clips in accordance with Code and secure as specified for hanger wires following in this Article. Load test hanger wires as specified in Article titled “Field Quality Control” in this Section.
   b. Plumb hanger wires. Add counterbrace wires when hanger wires are more than 1 in 6 out of plumb.

4. Provide additional metal framing and hanger wires to clear furred-area interferences with suspension system. Do not penetrate ductwork with hanger wires.

5. Ceiling wires and unbraced ducts, pipes and similar type items shall be separated by at least 6 inches.

6. Provide hanger wires at intersection of grid members.

7. Provide hanger wire supports for all recessed light fixtures and mechanical items as required for total support independent of acoustical ceiling systems.

8. Use of scrap or short-cut members is not permitted.

9. Connect grid members with positive interlocking method as standard with reviewed manufacturer.

10. Secure ends of suspension system members at 2 adjacent walls as indicated and leave floating at other 2 adjacent walls.
ACOUSTICAL CEILINGS

11. Interconnect carriers over 12 inches not interconnected to walls near free end with 16 gauge tie wire or a metal strut securely attached to prevent spreading.

12. Level grid assembly in each area after installation of mechanical and electrical equipment within 1/8 inch in 12 inches or conforming to slope as appropriate to area of installation.

C. Adhered System: Apply in accordance with manufacturer’s written instructions.

*D2 D. Attached System: Attach in accordance with manufacturer’s written instructions.*D2

3.03 FIELD QUALITY CONTROL

A. Acoustical Ceiling Connection Devices: Test devices for capability to support the following loads:

1. Hanger Wires: 100 pounds in accordance with requirements of CBC.
2. Lateral Force Bracing Wires: 200 pounds or actual design load whichever is greater, with safety factor of 2, in accordance with CBC.

3.04 CLEANING AND ADJUSTING

A. Remove damaged or soiled material and replace with new prior to the District’s acceptance of Project.

3.05 PROTECTION

A. Protect acoustical treatment installation from damage during remainder of construction.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

*A2 A. Section Includes: Provide epoxy resinous flooring and integral base.*

*A2 B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

C. Related Sections


2. Section 09 98 00 - Vapor Emission Treatment Systems: Provision of vapor emission treatment systems, if required.

*A2 3. Division 22 - Plumbing: Floor drains and clean-outs shall be of the "floor-flange" type as manufactured for use with epoxy resinous floors.*

1.02 REFERENCES

A. ACI - American Concrete Institute

B. ASTM - American Society for Testing and Materials


SECTION 09 67 20

**EPOXY RESINOUS FLOORING**

C. FTMS - Federal Test Method Standards

D. NFPA - National Fire Protection Association
   1. 56A - Standard for the Use of Inhalation Anesthetics (Flammable and Nonflammable)

1.03 SUBMITTALS

A. Product Data: Submit manufacturer's technical data, application instructions and general recommendations for the epoxy resinous flooring specified herein.

B. Samples: Submit samples for initial selection purposes in form of manufacturer's color charts showing full range of colors and finishes available.
   1. Submit 2-1/2 inches by 4 inches samples of color chips from color chart selection designated by the Architect.

C. Material certificates signed by manufacturer certifying that the epoxy resinous flooring complies with requirements specified herein.

D. Maintenance Instructions: Submit manufacturer's written instructions for recommended maintenance practices.

1.04 QUALITY ASSURANCE

A. Qualifications
   1. Installer: Engage an experienced installer or applicator who has specialized in installing resinous flooring types similar to that required for this Project and who is acceptable to manufacturer of primary materials.

B. Single Source Responsibility: Obtain epoxy resinous flooring materials, including primers, resins, hardening agents, colored aggregates and finish or sealing coats, from a single manufacturer.
C. Qualified Materials: Request for material approvals for any products other than the specified products must be submitted to the Architect 2 weeks prior to the bid, including complete application specification, physical characteristics, and chemical resistance data. Any request after this date will not be accepted. Failure of performance requires immediate removal and replacement of unapproved substituted material with those originally specified at no cost to the Owner, Architect, General Contractor.

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in original packages and containers with seals unbroken and bearing manufacturer's labels containing brand name and directions for storage and mixing with other components.

B. Store materials to comply with manufacturer's directions to prevent deterioration from moisture, heat, cold, direct sunlight, or other detrimental effects.

1.06 PROJECT CONDITIONS

A. Environmental Conditions: Comply with epoxy resinous flooring manufacturer's directions for maintenance of ambient and substrate temperature, moisture, humidity, ventilation, and other conditions required to execute and protect work.

B. Lighting: Permanent lighting will be in place and working before installing resinous flooring.

PART 2 - PRODUCTS

2.01 MANUFACTURERS


2.02 MATERIALS

A. Waterproofing Membrane: Type recommended or produced by manufacturer of epoxy resinous flooring system for type of service and floor condition indicated.

B. Epoxy Resinous Flooring: Provide epoxy flooring with the following properties:

1. Thickness: 1/4-inch.
PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine the areas and conditions where the epoxy resinous flooring is to be installed and notify the Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected by the Contractor in a manner acceptable to the Architect.

B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F710 and the following:

1. Slab substrates are dry and free of curing compounds, sealers, hardeners and other materials whose presence would interfere with bonding of adhesive. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by epoxy resinous flooring manufacturer.

2. Subfloors are free of cracks, ridges, depressions, scale and foreign deposits of any kind.

3.02 PREPARATION

A. Substrate: Perform preparation and cleaning procedures according to flooring manufacturer's instructions for particular substrate conditions involved, and as specified. Provide clean, dry, and neutral substrate for flooring application.
B. Concrete Surfaces

1. Shot-blast, acid etch or power scarify as required to obtain optimum bond of flooring to concrete. Remove sufficient material to provide a sound surface free of laitance, glaze, efflorescence, and any bond-inhibiting curing compounds or form release agents. Remove grease, oil, and other penetrating contaminants. Repair damaged and deteriorated concrete to acceptable condition. Leave surface free of dust, dirt, laitance, and efflorescence.

2. The General Contractor shall be responsible for acceptability of moisture emission of concrete.

   a. Before installing epoxy resinous flooring, concrete slab shall be tested as specified in Section 09 98 00 for moisture emission. The test shall be conducted around the perimeter of each room, at columns and where moisture may be evident. A diagram of the areas showing the locations and results of each calcium chloride test shall be submitted to the Architect. At each area where the moisture emission exceeds 3.5 pounds per 1,000 square feet per 24 hours, a sealant shall be applied as specified in Section 09 98 00.

C. Materials: Mix resin hardener and aggregate when required, and prepare materials according to flooring system manufacturer's instructions.

3.03 APPLICATION

A. General: Apply each component of epoxy resinous flooring system according to manufacturer's directions to produce a uniform monolithic flooring surface of thickness indicated.

B. Bond Coat: Apply bond coat over prepared substrate at manufacturer's recommended spreading rate.

C. Body Coat: Over primer, trowel apply epoxy mortar mix at nominal 1/4-inch thickness; hand or power trowel. Allow to cure before proceeding.

D. Grout Coats: Apply 2 coats of grout. Sand and inspect the surface for consistency.

E. Finish or Sealing Coats: After grout coats have cured sufficiently, apply finish coats of type recommended by flooring manufacturer to produce finish matching approved sample and in number of coats and spreading rates recommended by manufacturer.
**EPOXY RESINOUS FLOORING**

1. Final finish coat shall be in color and skid retardant profile as approved by the Architect.
2. Finished floor shall be 1/4-inch thick, uniform in color and free of trowel marks.

F. Cove Base: Apply cove base mix to wall surfaces at locations shown to form cove base height of 4 inches unless otherwise indicated. Follow manufacturer's instructions and details including taping, mixing, priming, troweling, sanding, and top-coating of cove base.

3.04 CURING, PROTECTION AND CLEANING

A. Cure epoxy resinous flooring materials according to manufacturer's directions, taking care to prevent contamination during application stages and before completing curing process. Close application area for a minimum of 24 hours.

B. Protect finished floor with wax paper. Use Masonite, if rolling load traffic exists.

C. Clean with manufacturer recommended cleaner.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

*A2 A. Section Includes: Provision of carpet plank and carpet tile.*A2

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

C. Related Sections

1. Section 01 35 20 - GreenPoint Rated Requirements: For requirements.
2. Section 03 30 00 - Cast-In-Place Concrete: Provision of cast-in-place concrete.
3. Section 09 98 00 - Vapor Emission Treatment System: Provision of vapor emission treatment system, if required.

1.02 REFERENCES

A. ADA - Americans with Disabilities Act


B. ASTM - American Society for Testing and Materials


C. CRI - Carpet and Rug Institute

1. 104 - Standard for Installation of Commercial Carpet.

D. DOC - Department of Commerce

1. FF 1-70 - Methenamine Pill Test.

E. NFPA - National Fire Protection Association


F. UL - Underwriters Laboratories, Inc.
TILE CARPETING

1.03 SUBMITTALS

A. Product Data: Submit manufacturer's product data for each type of carpet material and installation accessory required. Submit written data on physical characteristics, durability, resistance to fading, and flame resistance characteristics.

B. Shop Drawings: Submit shop drawings showing layout and seaming diagrams. Indicate pile or pattern direction and locations and types of edge strips. Indicate columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet. Show installation details at special conditions.

C. Samples

1. Submit 4 minimum 12 inch square samples of each carpet type illustrating color, weave, texture and pattern.
2. Submit manufacturer's full range of color selections for carpet edge strips.

D. Contract Closeout Submittals

1. Maintenance Data: For carpet tile to include in maintenance manuals specified in Division 01. Include the following:
   a. Methods for maintaining carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
   b. Precautions for cleaning materials and methods that could be detrimental to carpet tile.

1.04 QUALITY ASSURANCE

A. Qualifications

1. Manufacturer: Firm whose carpet materials comply with "Use of Materials Bulletin UM-44C" published by U.S. Department of Housing and Urban Development (HUD) and are currently listed in HUD "Certified Products Directory" and so identified by imprint on back of carpet.
2. Installer: An experienced installer who is certified by the Floor Covering Installation Board or who can demonstrate compliance with its certification program requirements.
TILE CARPETING

B. Regulatory Requirements

1. Carpet floor coverings shall have minimum critical radiant flux limit of 0.45 watts/cm² when tested in accordance with NFPA 253. Such rating shall be maintained for distance of 5 feet on all sides of fire door except as otherwise prohibited by building design and construction.

2. Carpet Surface Burning Characteristics: Provide carpet identical to that tested for the following fire performance characteristics, per test method indicated below, by UL or other testing and inspecting organizations acceptable to authorities having jurisdiction. Identify carpet with appropriate markings of applicable testing and inspecting organization.
   b. Test Method: CPSC FF 1-70 (ASTM D2859)

3. NBS Smoke Chamber Test: Exceed test requirements with maximum specific optical density of 450 or less in the flaming mode.

4. Carpet pile height shall meet requirements of ADA.

5. Carpet plank and tile shall meet Pittsburgh Protocol for toxicity.

1.05 DELIVERY, STORAGE AND HANDLING

A. Acceptance at Site: Deliver materials to Project site in original factory wrappings and containers, labeled with identification of manufacturer, brand name, and lot number.

B. Storage and Protection: Store materials in original undamaged packages and containers, inside well-ventilated area protected from weather, moisture, soilage, extreme temperatures, and humidity. Lay flat, blocked off ground. Maintain minimum temperature of 68 degrees Fahrenheit at least 3 days prior to and during installation in area where materials are stored.

1.06 PROJECT CONDITIONS

A. Environmental Limitations: Comply with CRI 104, Section 6.1. Do not install carpet plank and tile until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Where demountable partitions or other items are indicated for installation on top of carpet, install carpet before installing these items.
**TILE CARPETING**

### 1.07 WARRANTY

**A2**

A. Unless otherwise noted, manufacturer's 15 years written warranty for new carpet plank and tiles or 7 years for reprocessed re-used carpet tiles. Warranty shall be submitted to the Owner against product failure covering both labor and material in the following areas: **A2**

1. Edge ravel.
2. Secondary back adhesion.
3. Average 20 pounds tuft bind.
4. No more than 10 percent face yarn loss.
5. Static control protection.
6. Seam separation.
7. Zippering.
8. Loss of resiliency.

### 1.08 MAINTENANCE

A. Extra Materials

1. Deliver extra materials to the Owner. Furnish extra materials matching products installed as described below, packaged with protective covering for storage and identified with labels describing contents.

2. Carpet: Before installation begins, furnish quantity of full width for each type of material equal to 5 percent of amount installed.

### PART 2 - PRODUCTS

#### 2.01 MANUFACTURERS

A. Acceptable Manufacturer: Mannington, or equal.

#### 2.02 MATERIALS

**A2**

A. Carpet Plank

1. Size: 12 inches by 48 inches. **A2**
3. Flammability: NBS smoke chamber NFPA 258, less than 450 flaming mode.
4. Flooring Radiant Panel: Meets NFPA Class 1 when tested in accordance with ASTM E648 glue down.
TILE CARPETING

5. Warranties: Minimum of non-prorated, 15 year warranty covering material and labor against edge ravel, backing delamination, wet or dry, static protection, face yarn loss no more than 10 percent or 20 lb. tuft bind.

6. Odor Emissions: Carpet shall be void of 4-phenylcyclohezene, a byproduct of SBR latex.

7. Carpet shall economically maximize the following appearance retention characteristics:
   a. Minimize crushing and matting.
   b. Manage dry soil concerns and ease of maintenance.
   c. Manage staining.
   d. Eliminate seam failure and unravelling.
   e. Eliminate moisture exposure concerns.
   f. Minimize loss of coloration and fading.


B. Carpet Tile

1. Size: 24 inches by 24 inches.


3. Flammability: NBS smoke chamber NFPA 258, less than 450 flaming mode.

4. Flooring Radiant Panel: Meets NFPA Class 1 when tested in accordance with ASTM E648 glue down.

5. Warranties: Minimum of non-prorated, 15 year warranty covering material and labor against edge ravel, backing delamination, wet or dry, static protection, face yarn loss no more than 10 percent or 20 lb. tuft bind.

6. Odor Emissions: Carpet shall be void of 4-phenylcyclohezene, a byproduct of SBR latex.

7. Carpet shall economically maximize the following appearance retention characteristics:
   a. Minimize crushing and matting.
   b. Manage dry soil concerns and ease of maintenance.
   c. Manage staining.
   d. Eliminate seam failure and unravelling.
   e. Eliminate moisture exposure concerns.
   f. Minimize loss of coloration and fading.


CB. Adhesive System: Manufacturer's microencapsulated tackifier applied to 94 percent of backing during manufacturing.
2.03 ACCESSORIES

A. Carpet Edge Guard: Aluminum with fold-down edge and concealed gripper teeth; minimum 1-1/2 inch wide punched anchorage flange; minimum 5/8-inch wide fold flange. Anodized aluminum finish, manufacturer's standard colors.

   1. Finish: Hammered texture.

B. Seaming Cement: Hot-melt adhesive tape or similar product recommended by carpet manufacturer for taping seams and butting cut edges at backing to form secure seams and to prevent pile loss at seams.

C. Adhesives: As recommended by carpet manufacturer, or if acceptable to manufacturer use low pressure sensitive, releasable low VOC water based adhesive, as manufactured by W. F. Taylor - Envirotech, "Healthguard", or approved equal. Adhesive shall be compatible with vapor emission treatment system specified in Section 09 98 00. Comply with GreenPoint rated requirements regarding adhesives.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine concrete flooring before installing carpeting. Surfaces to receive carpet materials shall be level, plumb, true and clean, free of projections, ridges and waves and free of loose dirt and dust, grease, oil and other deleterious materials such as resin type curing compounds, paint glue and similar materials.

B. The General Contractor shall be responsible for acceptability of moisture emission of concrete.

   *A2 1. Before installing carpet plank and tile, concrete slab shall be tested as specified in Section 09 98 00 for moisture emission. The test shall be conducted around the perimeter of each room, at columns and where moisture may be evident. A diagram of the areas showing the locations and results of each calcium chloride test shall be submitted to the Architect. At each area where the moisture emission exceeds 3.5 pounds per 1,000 square feet per 24 hours, a sealant shall be applied in accordance with Section 09 98 00.
SECTION 09 68 13

TILE CARPETING

3.02 PREPARATION

*A2

A. General: Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and carpet plank and tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet plank and tile installation.*A2

B. Clear away debris and scrape up cementitious deposits from concrete surfaces to receive carpet; apply sealer to prevent dusting.

C. Remove coatings, including curing compounds and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone without using solvents. Use mechanical methods recommended in writing by the carpet manufacturer.

D. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes and depressions in substrates.

E. Floors shall be primed prior to the start of installation.

F. Broom and vacuum clean substrates to be covered immediately before installing carpet. After cleaning, examine substrates for moisture, alkaline salts, carbonation or dust. Proceed with installation only after unsatisfactory conditions have been corrected.

G. Unwrap and unroll carpet and cushion in a well ventilated location prior to installation. Air the carpet out in off-site location such as a ventilated warehouse for at least 2 days prior to installation.

3.03 INSTALLATION

A. General: Comply with CRI 104, Section 13.

B. Carpet shall be installed after building has been painted and subjected to an airing out of at least a week by forced ventilation, with maximum outside air. Contractor shall ensure construction involving high VOCs and other pollutant will be completed before the airing out.

C. Comply with manufacturer's recommendations for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doorways, center seams under door in closed position; do not place seams perpendicular to door frame, in direction of traffic through doorway. Do not bridge building expansion joints with continuous carpet.
SECTION 09 68 13

TILE CARPETING

D. Extend carpet under removable flanges and furnishings and into alcoves and closets of each space.

E. Provide cutouts where required, and bind cut edges where not concealed by protective edge guards or overlapping flanges. Maintain reference markers, holes and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, nonstaining marking device.

F. Install carpet edge guard where edge of carpet is exposed; anchor guards to substrate.

G. Install with pattern as determined by the Architect.

H. Observe CRI and EPA carpet air-out guidelines.

1. Continuously operate the building ventilation system at normal temperature and maximum outdoor air during installation and for 72 hours after installation is complete. Avoid recirculating air from the installation area, through the heating, ventilation and air-conditioning system, and into occupied areas. Create a temporary exhaust system using fans, open doorways, stairwells and windows. Seal return air grilles.

*A2 I. Separate waste carpet and padding and recycle. Provide carpet planks and tiles larger than 1/2 tile to the Owner as additional material above the 5 percent extra materials specified above.*A2

3.04 CLEANING

A. Remove adhesive from carpet surface with manufacturer's recommended cleaning agent.

B. Remove and dispose of debris and unusable scraps.

3.05 PROTECTION

A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer, to ensure carpet is not damaged or deteriorated at time of Substantial Completion.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Surface preparation, painting and finishing of exposed interior and exterior items and surfaces for opaque and transparent painting.

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

C. Related Sections

1. Section 05 50 00 - Metal Fabrications: For shop priming ferrous metal.
2. Section 06 20 00 - Finish Carpentry: For backpriming and finish painting of finish carpentry.
3. Section 07 62 00 - Sheet Metal Flashing and Trim: For finish painting of sheet metal flashing and trim.
5. Section 08 14 16 - Flush Wood Doors: For finish painting of wood doors.
7. Section 08 71 00 - Door Hardware: For protection of finish hardware.
8. Section 08 90 00 - Louvers and Vents: For finish painting of louvers and vents.
9. Section 09 29 00 - Gypsum Board: For finish painting of gypsum board.

1.02 REFERENCES

A. CFR - Code of Federal Regulations


B. EPA - Environmental Protection Agency

C. FM - Factory Mutual

D. SSPC - The Society for Protective Coatings

1. SP-10 - Surface Preparation Specification No. 10: Near-White Blast Cleaning.

E. UL - Underwriters Laboratories Inc.

1.03 DEFINITIONS

A. “Paint”: As used herein, means coating systems materials including primers, emulsions, epoxy, enamels, sealers, fillers, and other applied materials whether used as prime, intermediate or finish coats.

1.04 SYSTEM DESCRIPTION

A. Performance Requirements

1. Paint exposed surfaces whether or not colors are designated in the schedules, except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the Architect will select from standard colors or finishes available.

2. Painting is not required on prefinished items, finished metal surfaces, concealed surfaces, operating parts and labels.

3. Do not paint over UL, FM or other code required labels or equipment name, identification, performance rating or nomenclature plates.

1.05 SUBMITTALS

A. Product Data: Submit manufacturer’s product data for each paint system specified, including block fillers and primers.

1. Provide manufacturer’s technical information including label analysis and instructions for handling, storage and application of each material proposed for use.

2. List each material and cross reference the specific coating, finish system and application. Identify each material by the manufacturer’s catalog number and general classification.
B. Samples: Following the selection of colors and glosses by the Architect, submit samples for the Architect’s review.
   1. Provide 3 samples of each color and each gloss for each material on which the finish is specified to be applied.
   2. Except as otherwise directed by the Architect, make samples approximately 8 inches by 10 inches in size.
   3. Do not commence finish painting until approved samples are on file at the job site.

C. Quality Control Submittals: Provide certification by the manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).

1.06 QUALITY ASSURANCE

A. Provide primers and undercoat paint produced by the same manufacturer as finish coats.

   1. Review other Sections of these Specifications as required, verifying the prime coats to be used and assuring compatibility of the total coating system for the various substrates.
   2. Upon request, furnish information on the characteristics of the specific finish materials to assure that compatible prime coats are used.
   3. Provide barrier coats over non-compatible primers, or remove the primer and re-prime as required.
   4. Notify the Architect in writing of anticipated problems in using the specified coating systems over prime coatings supplied under other Sections.

B. Applicator Qualifications: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

C. Provide field mockups for final paint color and texture approval in the form of actual application of the materials on actual surfaces to be painted for approval by the Architect. Areas shall be 10 feet by 10 feet.

   1. Field mockups, when approved, will become standards of color and finish for accepting or rejecting the work of this Section.
1.07 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site: Deliver materials to the job site in manufacturer’s original, unopened packages and containers bearing manufacturer’s name and label and the following information:
1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Manufacturer’s stock number and date of manufacture.
4. Contents by volume for pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.
7. Color name and number.

B. Storage and Protection: Store materials not in use in tightly covered containers in well ventilated area at minimum ambient temperature of 45 degrees Fahrenheit. Maintain containers used in storage in clean condition, free of foreign materials and residue.

1.08 PROJECT CONDITIONS

A. Environmental Requirements

1. Apply water based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90 degrees Fahrenheit, unless otherwise permitted by the manufacturers’ printed instructions as approved by the Architect.
2. Do not apply solvent-thinned paints when the temperature of surfaces to be painted and the surrounding air temperatures are below 45 degrees Fahrenheit, unless otherwise permitted by the manufacturers’ printed instructions as approved by the Architect.
3. Do not apply paint in rain, fog or mist; or when the relative humidity exceeds 85 percent. Do not apply paint to damp or wet surfaces, unless otherwise permitted by the manufacturers’ printed instructions as approved by the Architect.
4. Applications may be continued during inclement weather only within the temperature limits specified by the paint manufacturer as being suitable for use during application and drying periods.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

*A2 A. Acceptable Manufacturer: Dunn Edwards.*A2
2.02 PAINT MATERIALS

A. Paint Materials, General: Provide block fillers, primers, finish coat materials, and related materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by the manufacturer, based on testing and field experience.

B. Material Quality: Provide manufacturer’s best quality trade sale paint material of the various coating types specified. Paint material containers not displaying manufacturer’s product identification will not be acceptable.

C. Chemical Components of Field-Applied Interior Paints and Coatings: Provide products that comply with the following limits for VOC content, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24) and the following chemical restrictions; these requirements do not apply to primers or finishes that are applied in a fabrication or finishing shop:

1. Flat Paints and Coatings: VOC content of not more than 50 g/L.
2. Nonflat Paints and Coatings: VOC content of not more than 150 G/L.
3. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
4. Restricted Components: Paints and coatings shall not contain any of the following:
   a. Acrylonitrile.
   b. Antimony.
   c. Benzene.
   d. Butyl b
   e. Acrolein enzyl phthalate.
   f. Cadmium.
   g. Di (2-ethylhexyl) phthalate.
   h. Di-n-butyl phthalate.
   i. Di-n-octyl phthalate.
   j. 1,2-dichlorobenzene.
   k. Diethyl phthalate.
   l. Dimethyl phthalate.
   m. Ethylbenzene.
   n. Formaldehyde.
   o. Hexavalent chromium.
   p. Isophorone.
   q. Lead.
   r. Mercury.
   s. Methyl ethyl ketone.
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t. Methyl isobutyl ketone.
u. Methylene chloride.
v. Naphthalene.
w. Toluene (methylbenzene).
x. 1,1,1-trichloroethane.
y. Vinyl chloride.

D. Colors: As selected by the Architect.

1. The Architect will prepare a color schedule with samples for guidance in painting.
2. Apart from the colors identified on the Drawings, the Architect may select, allocate and vary colors on different surfaces throughout the Work, subject to the following:
   a. Exterior Work: A maximum of 6 different colors will be used, with variations for trim, doors, miscellaneous work and metal work.
   b. Interior Work: A maximum of 6 different pigmented colors will be used, with variations for trim and wall surfaces and wainscots.
   c. Dark Tones: A maximum of 4 dark tones will be used as accent colors for the building interior.

2.03 APPLICATION EQUIPMENT

A. For application of the approved paint, use only such equipment as is recommended for application of the particular paint by the manufacturer of the particular paint, and as approved by the Architect.

B. Prior to use of application equipment, verify that the proposed equipment is actually compatible with the material to be applied, and that integrity of the finish will not be jeopardized by use of the proposed equipment.

2.04 OTHER MATERIALS

A. Provide other materials not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.
PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates and conditions, with applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
   1. Interior Substrates:
      a. Wood: 8 percent or less.
      b. Plaster: 5 percent or less.
      c. Gypsum Board: 5 percent or less.
   2. Exterior Substrates:
      a. Wood: 15 percent or less.
      b. Plaster: 5 percent or less.

C. Portland Cement Plaster Substrates: Verify that plaster is fully cured, including pH testing to determine that alkalinity is within limits established by the manufacturer.

D. Interior and/or Exterior Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

E. Concrete floors require a calcium chloride test to measure hydrostatic pressure. Consult floor coating manufacturer with test results prior to beginning surface preparation.

F. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

G. Proceed with coating application only after unsatisfactory conditions have been corrected.
   1. Application of coating indicates acceptance of surfaces and conditions.

3.02 PREPARATION

A. Comply with manufacturers’ written instructions applicable to substrates and paint systems indicated.
B. Scraping or sanding surfaces of older buildings (especially pre-1978) may release dust containing lead or asbestos. EXPOSURE TO LEAD OR ASBESTOS CAN BE VERY HAZARDOUS TO YOUR HEALTH. Always wear appropriate personal protective equipment during surface preparation, and finish cleanup of any residues by water-washing all surfaces. For more information, see Dunn-Edwards brochure on “Surface Preparation Safety” or call EPA’s National Lead Information Hotline at 1-800-424-LEAD, or visit www.epa.gov/lead or/asbestos, or contact your state or local Health Department.

C. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

D. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and re-prime substrate with compatible primers or apply bond coat as required to produce paint systems indicated.

E. Where mildew is present, remove mildew by scrubbing with a commercial mildew remover, or with a solution of 1 part household bleach mixed in 3 parts water by volume. The solution should be left on the surface for a minimum of 20 minutes, rinsed thoroughly with clean water to remove any residue, and then allowed to dry completely prior to application of patching/caulking/prime/finish coat systems.

F. Moisture: All areas that may cause paint failure due to moisture shall be addressed and eliminated. This would include, but is not limited to:

1. Gutters and downspouts not working properly.
2. Previous coats of paint not adhering properly.
3. Wood checking (cracks and splits in wood).
4. Deteriorated caulking.
5. Gaps between substrates.
6. Rotten wood.
7. Areas affected by water splashing.
8. Painting in inclement weather.
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9. Painting a substrate where residual moisture exceeds limits stated in 3.01.B.
10. Un-caulked nail holes.

G. Pressure Washing and Surface Preparation Methods: Pressure wash or water blast to remove oil, grease, dirt, loose mill scale, and loose paint at pressures of 2500 to 3500 p.s.i. at a flow of 3.0 to 3.5 gallons per minute. This is the recommended standard for optimal efficiency.

H. Prior to application of prime/finish interior and/or exterior coat systems, provide a clean, sound surface free of dust, dirt contaminants, mildew and efflorescence by use of a power wash and hand scraping or use of mechanical grinders where necessary. Additionally, areas are to be scrubbed with a bristle brush to insure complete removal of any residual salts. Remove all labels, stickers, price tags, etc. from surfaces before priming. Wood areas stamped with ink codes shall be spot primed with blocking primers. Power wash areas to be coated to ensure that new salt deposits do not occur. Failure to do so may cause adhesion issues or result in delamination and invalidate any manufacturer warranty given or implied. After cleaning if there is still chalk evident, this condition shall be brought to the Owner’s attention in writing before any further work is done.

I. Cementitious Substrates (Concrete, Stucco, and Masonry): Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

1. Wire brush all loose and peeling paint and dust all surfaces before spot priming or applying finish coats. Industry standards apply to applications of cracks, voids, and repairs. Any areas of repair shall be patched and dried before coatings are applied. Cracks should be repaired as follows:
   a. Cracks less than 1/4-inch wide should be filled using Dunn-Edwards, “Brush Grade Elastomeric Patch”.
   b. Cracks wider than 1/4-inch should be cut and scraped to a “V” shape and filled with Dunn-Edwards, “Trowel Grade Elastomeric Patch”. Large cracks and holes may require repeated applications of patching materials to bring flush with adjacent substrate. Feather-in all repairs and caulking to blend with adjacent substrate.

2. Large holes in stucco/plaster/concrete will be patched with “Rapid Set Premium Stucco Patch” or Rapid Set Wunderfixx Concrete Patching Compound” in appropriate texture to blend with existing texture. Allow stucco patch to cure to acceptable pH level (10) prior to
3. Spot prime over all patched areas, cracks, and holes. Then use an appropriate topping material to match existing surface level and texture.

3.03 PAINT APPLICATION

A. General

1. Touch-up shop-applied prime coats which have been damaged, and touch-up bare areas prior to start of finish coats application.
2. Slightly vary the color of succeeding coats.
   a. Do not apply additional coats until the completed coat has been inspected and approved.
   b. Only the inspected and approved coats of paint will be considered in determining the number of coats applied.
3. Sand and dust between coats to remove defects visible to the unaided eye from a distance of 5 feet.
4. On removable panels and hinged panels, paint the back sides to match the exposed sides.

B. Drying

1. Allow sufficient drying time between coats, modifying the period as recommended by the material manufacturer to suite adverse weather conditions.
2. Consider oil base and oleo-resinous solvent-type paint as dry for re-coating when the paint feels firm; does not deform or feel sticky under moderate pressure of the thumb, and when the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

C. Brush Applications

1. Brush out and work the brush coats onto the surface in an even film.
2. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness and other surface imperfections will not be acceptable.

D. Spray Application

1. Where spray application is used, apply each coat to provide the hiding equivalent of brush coats.
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2. Do not double back with spray equipment to build up film thickness of 2 coats in 1 pass.

3. Protect all adjacent buildings, cars, plants, floors, etc., from over spray.

E. For completed work, match the approved samples as to texture, color and coverage. Remove, refinish or repaint work not in compliance with the specified requirements.

F. Miscellaneous Surfaces and Procedures

1. Exposed Mechanical Items
   a. Finish electric panels, access doors, conduits, pipes, ducts, grilles, registers, vents and items of similar nature to match the adjacent wall and ceiling surfaces, or as directed.
   b. Paint visible duct surfaces behind vents, registers, and grilles flat black.
   c. Wash metal with solvent, prime and apply 2 coats of alkyd enamel.

2. Exposed Pipe and Duct Insulation
   a. Apply 1 coat of latex paint on insulation which has been sized or primed under other Sections; apply 2 coats on such surfaces when unprepared.
   b. Match color of adjacent surfaces.
   c. Remove band before painting, and replace after painting.

3. Hardware
   a. Paint prime coated hardware to match adjacent surfaces.
   b. Paint metal portions of head seals, jamb seals, and astragal seals to match the color of the door frame unless otherwise directed by the Architect.

4. Wet Areas
   a. For oil base paints, use 1 percent phencimercuric or 4 percent tetrachlorophenol.
   b. For water emulsion and glue size surfaces, use 4 percent sodium tetrachlorophenate.

5. Exposed Vents: Apply 2 coats of heat resistant paint approved by the Architect.

3.04 EXTERIOR PAINT SCHEDULE

A. Wood

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a. Primer: Acrylic-latex-based, exterior wood primer, as recommended by the manufacturer for this substrate, applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.4 mils.
   1) Product: Dunn Edwards, “EZ-Prime (EZPR 00) or approved equal.

b. First and Second Coats: Satin, acrylic-latex, exterior coating applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.8 mils.
   1) Product: Dunn Edwards, “Evershield, Semi-Gloss (EVSH 50), or approved equal.

2. Suspended Slatted Wood Ceiling

B. Ferrous Metal

1. Primer is not required on shop-primed items.
   a. Primer: Rust-inhibitive metal primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.3 mils.
      1) Product: Dunn Edwards, “Bloc-Rust (BRPR 00), or approved equal.

b. First and Second Coats: Semi-gloss, exterior, acrylic-latex enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.6 mils.
   1) Product: Dunn Edwards, “Evershield, Semi-Gloss (EVSH 50), or approved equal.

C. Zinc-Coated Metal

   a. Primer: Galvanized metal primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils.
      1) Product: Dunn Edwards, “Galv-Alum (GAPR 00), or “Ultra-Grip (UGPR 00)”, or approved equal.
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b. First and Second Coats: Semi-gloss, exterior, acrylic-latex enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.6 mils.

1) Product: Dunn Edwards, “Evershield, Semi-Gloss (EVSH 50), or approved equal.

3.05 INTERIOR PAINT SCHEDULE

A. Clear Sealer: As manufactured by Dunn Edwards, “Rainguard Clear-Sealer Acrylic Urethane Sealer, Low Gloss”, or approved equal.

*B2* B. Gypsum Board Walls and Ceilings*B2*

1. Semi-Gloss Acrylic Enamel Finish: 2 finish coats over a primer at toilet room walls and ceilings and at other “wet areas”.

a. Primer: Latex based, interior primer applied at spreading rate recommended by the manufacturer.

1) Product: Dunn Edwards, “Vinylastic (VNPR 00)”, or approved equal.

b. Finish Coats: Factory formulated full gloss acrylic-latex interior enamel applied at a spreading rate recommended by the manufacturer.


*C2* C. Wood*C2*

1. Semi-Gloss, Acrylic-Enamel Finish: Coat to cover over a wood undercoat.

a. Undercoat: Alkyd- or acrylic-latex-based, interior wood undercoater, as recommended by the manufacturer for this substrate, applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils.

1) Product: Dunn Edwards, “Inter-Kote (IKPR 00)”, or approved equal.

2) Undercoat may be omitted on factory-primed material.

b. First and Second Coats: Semi-gloss, acrylic-latex, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.6 mils.

*A2 D. Interior Flush Wood Doors*A2

1. Stain: As selected by the Architect.

*A2 E. Ferrous Metal*A2

1. Semi-Gloss, Acrylic Enamel Finish: 2 finish coats over a primer. Primer is not required on shop-primed items.
   a. Primer: Quick drying, rust-inhibitive alkyd based or epoxy metal primer, as recommended by the manufacturer for this substrate, applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.5 mils.
      1) Product: Dunn Edwards, “Bloc-Rust (BRPR 00)”, or Galv-Alum (GAPR 00)”, or approved equal.
   b. Finish Coat: Alkyd, interior enamel undercoat or semi-gloss, acrylic latex, interior enamel, as recommended by the manufacturer for this substrate, applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.3 mils.
   c. Finish Coat: Semi-gloss, acrylic latex, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.3 mils.

*A2 F. Galvanized Metal*A2

1. Semigloss, Acrylic Enamel Finish: 2 finish coats over a primer.
   a. Primer: Galvanized metal primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils.
      1) Product: Dunn Edwards, Galv-Alum (GAPR 00)”, or approved equal.
   b. First and Second Coats: Semi-gloss, acrylic latex interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.6 mils.

END OF SECTION
**PART 1 – GENERAL**

1.1 GENERAL

A. Section Includes:

1. Acrylic signs at exterior doors for room names and/or room numbers as specified on drawings.
2. All signs shall include raised braille characters complying with the requirements of Title 24.
3. Restroom signage applied directly to the door at student and staff restrooms.
4. Tactile exit signage where indicated on the drawings.

B. Submittals: Submit the following:

1. Shop Drawings: Provide plans, elevations, and sections showing typical members, anchors, layout, reinforcement, accessories, and installation details. Include the following:
   a. Provide shop drawings showing construction details for approval before proceeding with fabrication. Include full size details of exposed edges, joints between materials, hanging, hinging and locking systems and any other details which would affect sign appearance.
2. Fasteners: Detail methods of fastenings and provide exact specifications for all fasteners noted on shop drawings.
3. Artwork
   a. Submit full size patterns or prints of typical copy layouts and/or graphic elements to be applied on signs. Using layouts on the Drawings as a guide, optically enlarge and hand correct images before submitting to the Architect for approval before fabrication.
4. Sign Location: Provide Graphic Schedule and location plans to identify and locate all signs. Item numbers listed in the Graphic Schedule shall be found on location plans and shall identify locations of specific sign items.

2. Samples: For initial selection of color, pattern, and surface texture, and for verification of compliance with requirements indicated.

   a. Cast Acrylic Sheet and Plastic Laminate: 8-1/2-by-11-inch sample panel for each material, color, texture, and pattern. Show graphic image process showing style, colors and finishes.
   b. All signage shall comply with
      A. ADA - Americans with Disabilities Act
      1. March 15, 2010 ADA Standards for Accessible Design

C. Regulatory Requirements: Comply with jurisdiction, ADA and CBC requirements for signage to include Braille.

D. Quality Assurance
   Pre-Installation Conferences: Sign locations shown on the location plans are for general information only. Prior to installation and as required, arrange meetings with the Architect at the site for final location for all sign items.

**PART 2 – PRODUCTS**

1.2 PRODUCTS

_EAST SIDE UNION HIGH SCHOOL DISTRICT_  
_Z-030-601, James Lick High School, _  
_JL Student Center & Quad Mod_  
_Bid #: B-24-16-17_  

_METAL-WEB WOOD JOISTS_  
 Addendum 2: 3/22/17  
 SECTION 10 14 00-1
SECTION 10 14 00

SIGNAGE

A. Manufacturers of Acrylic Sign Panels:
   1. Action Signs, ASI, Comar

B. Acrylic Sheet: Cast methyl methacrylate monomer plastic sheet with 16,000-psi minimum flexural strength, and minimum allowable continuous service temperature of 176 deg F (80 deg C).
   1. Opaque Sheet: Colored opaque acrylic sheet in colors and finishes indicated.

C. Fasteners: Concealed noncorrosive metal.

D. Anchors and Inserts: Nonferrous metal or hot-dipped galvanized. Use toothed steel or lead expansion bolt devices for drilled-in-place anchors. Furnish inserts for concrete or masonry work.

E. Colored Coatings for Acrylic Plastic Sheet: Nonfading colored coatings, including inks and paints for copy and background colors.

F. Brackets: Fabricate brackets and fittings from extruded aluminum to suit panel construction and mounting conditions. Factory-paint brackets color matching background color of sign panel.

G. Graphic Content and Style: Provide sign copy that complies with size, style, spacing, content, position, material, finishes, and colors of letters, numbers, and other graphic devices.

H. Raised Copy: Machine-cut copy characters from matte-finished opaque acrylic sheet, cut from same sheet as sign, and chemically weld onto the acrylic sheet forming sign panel face.
   3. Raised Copy Thickness: Not less than 1/32 inch.

I. Braille Lettering: California Grade 2 Braille must accompany raised text characters.
   1. Braille characters shall be rounded or domed California Braille dots. Dots with straight sides and flat tops are not permitted.
   2. Braille dots within cells must be 1/10” apart on center spacing. Cells must be 2/10” apart. Measure cell distance from the center of top dot location of column two of the first cell to the center of the top dot location of column one of the next cell on right, withing the same word. Dots must be 1/40” height at dot apex.

J. Character width 100% maximum and 60 percent minimum of height, measure by width of uppercase “X” at base, or by width of uppercase “O” (whichever is more narrow). Stroke width must be 10% minimum to 20% maximum of character height, measured by stroke, width and height of uppercase “I”.

K. Ease all edges and corners of signs. On signs installed on poles, provide radius corners and eased edges.

L. 1/32” min. raised characters must use sans serif font, in all uppercase characters. No serif fonts of any kind are allowed. Minimum of 1/8” distance between two closest points of adjacent tactile characters, measured at top surface of characters. Font typeface shall have rounded or beveled characters.

M. Raised characters must be 5/8” minimum and 2” maximum in height.

N. Tactile signs must be installed adjacent to specific door they identify, at 60” from the centerline of the tactile letters / numbers to finish floor. Sign must not be installed behind an obstruction, and the reader must be able to approach sign within 3” without being hit by swing of door. Space centerline of sign 18” from latch side of door frame.

EAST SIDE UNION HIGH SCHOOL DISTRICT
Z-030-601, James Lick High School,
JL Student Center & Quad Mod
Bid #: B-24-16-17

METAL-WEB WOOD JOISTS
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SECTION 10 14 00-2
O. Restroom graphic signages shall comply with the sizes and profile requirements of 2010 CBC Chapter IIB.

P. Characters, symbols, and their background shall have a non-glare finish. Characters and symbols shall contrast with their background, either light on a dark background or dark on a light background.

Q. Final color of sign panels and text colors shall be reviewed by the owner and architect prior to fabrication.

R. Frame: Fabricate signage frame from extruded aluminum to suit panel construction and mounting conditions. Frame thickness shall be 1/8” minimum and have eased 3/8” edges. Finish: Anodized Satin Silver finish.

PART 3 - EXECUTION

A. Installation: Locate signs where indicated, using mounting methods specified. Install level, plumb, and at the height indicated, with sign surfaces free from distortion or other defects in appearance.

B. Wall-Mounted Panel Signs: Attach using methods indicated below:

1. Face Mounting: Securely attach the sign panel to the supporting wall structure with concealed fasteners. All signs must be fastened with a minimum of 2 brass, tamper proof screws.

C. Cleaning: After installation, clean soiled surfaces. Protect units from damage until acceptance by the Owner.

1.4 SIGNAGE SCHEDULE

A. See Drawings for sign types and locations.

B. All sign text shall be confirmed with the District prior to submittal. Assume all classroom sign text shall be one letter followed by three numbers. Room name signage shall be the name of the room only.

END OF SECTION
SECTION 11 40 00

FOOD SERVICE EQUIPMENT

PART 1 - GENERAL

1.01 SUMMARY

A. The work referred to in this section consists of furnishing all labor and material required to provide and deliver all food service equipment hereinafter specified into the building, uncrate, assemble, hang, set in place, level, and completely install, exclusive of final utility connections. Final utility connections to all equipment, shall be part of the work under additional appropriate sections of the work and not part of the food service work.

1. The equipment and its component parts shall be new and unused. All items of standard manufactured equipment shall be current models at the time of delivery. Parts subject to wear, breakage, or distortion shall be accessible for adjustment, replacement and repair.

2. Each refrigeration items specification is written to provide minimum specifications and scope of work. Refrigeration equipment shall be designed and installed to maintain the following general temperature unless otherwise specified.

   a. Walk-In Refrigerators 1.7°C / 35°F
   b. Walk-In Freezers -23.2°C / -10°F
   c. Reach-In Refrigerators 1.7°C / 35°F
   d. Reach-In Freezers -23.2°C / -10°F
   e. Undercounter Refrigerators 1.7°C / 35°F
   f. Undercounter Freezers -23.2°C / -10°F
   g. Cold Pan 5°C / 41°F

3. The materials or products specified herein by trade names, manufacturer’s name or catalog number shall be provided as specified. Substitutions will not be permitted unless approved by owner’s representative in writing no later than 10 days prior to bidding. This stipulation applies to all equipment and materials. All substitutions or alternates will be expected to perform in all respects as well as the original specification. Should no request for substitution be received and approved as listed above, the project is to be provided as specified.

4. The food service equipment contractor shall be responsible for all costs associated with the acceptable alternate or approved alternate items, if the item requires additional space or specific utilities that differ from specifications or drawings.
The FSEC is responsible for all coordination, documentation and costs associated with any alternate item that was not submitted for approval and accepted by the consultant prior to bid. The FSEC shall be responsible for any costs associated with building changes, utility changes and drawings changes.

B. Coordinate Owner and Vendor-supplied equipment noted on the drawings or in the specifications as NIFSEC, "not in food service equipment contract". Show on roughing in Plans and sizes, utilities, and other requirements as furnished in the specifications, by owner or appropriate supplier in submittals as if the equipment is contractor furnished.

C. Bidders shall carefully examine the specifications and the project site including location and condition of existing equipment to determine cost for each “Existing-Reset” and “Existing-Modify” item to cover removal, modification (including materials), cleaning, inspection for damage, repair and resetting.

D. Field measurements shall be made prior to fabrication or installation of any equipment item.

E. The cutting of holes in equipment for pipe, drains, electrical outlets, etc., required for this installation, shall be part of this work. Work shall conform to the highest standards of workmanship and shall include welded sleeves, collars, ferrules and escutcheons.

F. Repair of all damage to the premises as a result of the equipment installation as well as the removal of all debris left by the work of this section.

G. Food service equipment and fixtures shall be cleaned and ready for operation at the time the facility is turned over to the Owner for final inspection by the Owner’s Representative.

H. Food Service Equipment Contractor shall be responsible for coordinating with the Architect and Contractor in submitting all applicable documents.

I. All bidders shall submit with their costing a list of the subcontractors that are included in their bids and a complete "schedule of values" for all equipment and labor.

1.02 RELATED SECTIONS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. Related Work In Other Sections by appropriate trades include the following:

1. Division 5 Section "Metal Fabrications" for equipment supports.
2. Division 6 Section “Interior Architectural Woodwork” for wood casework and plastic laminate substrates.

3. Refer to Division 23 Sections for supply and exhaust fans; exhaust ductwork; service roughing-ins; drain traps; atmospheric vents; valves, pipes, and fittings; fire extinguishing systems; and other materials required to complete food service equipment installation.

4. Refer to Division 26 & 28 Sections for connections to fire alarm systems, wiring, disconnects, and other electrical materials required to complete food service equipment installation.

C. All electric services including wiring to, and final connections to, the fixtures except, as specified differently in the specifications, drawings, or herein.

D. All water, waste and gas services to the fixtures including shut-off valves, trim, traps, etc., and final connections to the fixtures, except as specified differently in the specifications, drawings, or herein.

E. All hood or ventilator duct work above the connection position on such exhaust hoods or exhaust ventilators, except as specified differently in the specifications, drawings, or herein. Final welded connections at the junction point of exhaust hoods or exhausts ventilators, shall be part of the food service work.

F. Floors, quarry tile, concrete bases, walls, ceilings, finishes and related building work, except as specified differently in the specifications, drawings or herein.

1.03 DEFINITIONS

A. Terminology Standard: Refer to NSF 2, "Food Equipment", NSF 4, Heated Cabinets, NSF 7, Refrigerated Equipment, or other applicable NSF standards for definitions of food service equipment and installation terms not otherwise defined in this Section or in other referenced standards.

B. FSEC: Food Service Equipment Contractor

C. Owner-Furnished Equipment: Where indicated, Owner will furnish equipment items.

D. Vendor-Furnished Equipment: Where indicated the Owner's or operator's vendor will furnish equipment items.

E. NIFSEC: Not Included in Food Service Equipment Contract.

1.04 SUBMITTALS
A. Regardless of drawing formats provided it will remain the responsibility of equipment supplier to develop submittals in accordance with the Specific Conditions and assume all required responsibilities there to. The consultant is not to be liable for errors or omissions by the FSEC’s use of electronic data provided by the Consultant or the development of date used in the submittal approval process. Checking product data, rough-in drawings, wall backing drawings, shop drawings, and refrigeration drawings by Designer is for design concept only, and does not relieve the Food Service Equipment Contractor of responsibility for compliance with Contract Documents, verification of utilities with equipment requirements for conformity and location, verification of all dimensions of equipment and building conditions or reasonable adjustments due to deviations.

B. The Food Service Equipment Contractor shall review and provide an affidavit with each submittal that such review has been completed by an authorized agent of the contractor.

C. Product Data: For each type of food service equipment indicated. Include manufacturer's model number and accessories and requirements for access and maintenance clearances, water and drainage, power or fuel, and service-connections including roughing-in dimensions.

D. Shop Drawings: For food service equipment not manufactured as standard production and catalog items by manufacturers. Include plans, elevations, sections, material schedule, roughing-in dimensions, fabrication details, service requirements, and attachments to other work.

   1. Wiring Diagrams: Details of wiring for power, signal, and control systems and differentiating between manufacturer-installed and field-installed wiring.

   2. Piping Diagrams: Details of piping systems and differentiating between manufacturer-installed and field-installed piping.

E. Coordination Drawings: For locations of food service equipment and service utilities. Key equipment with item numbers and descriptions indicated in Contract Documents. Include plans and elevations of equipment, access- and maintenance-clearance requirements, details of concrete, masonry or metal bases and floor depressions, and service-utility characteristics. Ventilation requirements for refrigerated equipment shall be identified in these drawings.

F. Contract Document Drawings:

   1. Drawings furnished, constitute a part of these specifications and show locations of equipment and general arrangement of mechanical and electrical services. Necessary deviation from the illustrated arrangements to meet structural conditions, shall be
considered a part of the work of this section. Such deviations shall be made without expense to the owner. Equipment drawings are definitive only and should not be used as construction documents or shop details.

2. The drawings are for the assistance and guidance of the Food Service Equipment Contractor. Exact locations shall be governed by the building configuration. The Food Service Equipment Contractor shall accept his contract with this understanding.

3. Should there be a conflict between the drawings and the specifications, the specifications shall govern.

G. Utility Roughing-in Drawings:

1. The Food Service Equipment Contractor shall prepare and submit one electronic file or two bond or a valid prints, of all roughing-in drawings, showing information necessary for the roughing-in of refrigerant lines, syrup/beer lines, plumbing, steam, mechanical and electrical utility requirements. Drawings shall also include construction requirements necessary for all equipment including floor depressions, raised bases, wall blocking, wall recesses and any critical dimensions for specific equipment requirements. Acceptance will be made upon the electronic file or one print which will be returned to the Food Service Equipment Contractor for reproduction purposes. Drawings not properly submitted in this format, will not be reviewed. Drawings without an “Accepted” or an “Accepted as Noted” stamp, will not be reviewed. Drawings without an” Accepted as noted” stamp, will not be considered an authorized shop drawing and will not be allowed on the job site.

a. Furnish four (4) sets “Accepted” and/or “Accepted as Noted” shop drawings, for distribution to the field, as directed.

H. Shop Fabrication Drawings: The fabricator of the equipment shall prepare and submit through the Food Service Equipment Contractor one electronic file or two bond or original prints, of all shop drawings, showing all information necessary for fabrication and installation of the work of this section. Acceptance will be made upon the electronic file or one print which will be returned to the Food Service Equipment Contractor for reproduction purposes. Drawings not properly submitted in this format, will not be reviewed. Drawings without an “Accepted” or an “Accepted as Noted” stamp, will not be considered an authorized shop drawing and will not be allowed on the job site.

I. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available for exposed products with color finishes.
J. Samples for Verification: Of each type of exposed finish required, minimum 4-inch- (100-mm-) square or 6-inch- (150-mm-) long sections of linear shapes and of same thickness and material indicated for work. Where finishes involve normal color and texture variations, include Sample sets showing the full range of variations expected.

K. Product Certificates: Signed by manufacturers of refrigeration systems, refrigerated equipment or their authorized agents certifying that systems furnished comply with NSF 7 requirements and will maintain operating temperatures indicated in the areas or equipment that they will serve.

L. Maintenance Data: Operation, maintenance, and parts data for food service equipment to include in the maintenance manuals specified in Division 1. Include a product schedule as follows:

1. Product Schedule: For each food service equipment item, include item number and description indicated in Contract Documents, manufacturer's name and model number, and authorized service agencies' addresses and telephone numbers.

1.05 QUALITY ASSURANCE AND LAWS AND ORDINANCES

A. Installer Qualifications: Engage an experienced installer to perform work of this Section who has specialized in installing food service equipment, who has completed installations similar in design and extent to that indicated for this Project, and who has a record of successful in service performance.

B. Manufacturer Qualifications: Engage a firm experienced in manufacturing food service equipment similar to that indicated for this Project and with a record of successful in-service performance.

C. Source Limitations: Obtain each type of food service equipment through one source from a single manufacturer.

D. Product Options: Drawings indicate food service equipment based on the specific products indicated. Other manufacturers' equipment with equal size and performance characteristics may be considered. Refer to Division 1 Section "Substitutions."

E. Regulatory Requirements: Comply with the following National Fire Protection Association (NFPA) codes:

1. NFPA 17, "Dry Chemical Extinguishing Systems."
2. NFPA 17A, "Wet Chemical Extinguishing Systems."

4. NFPA 70, "National Electrical Code."


6. The FSEC shall certify that all work and materials comply with Federal, State and Local laws, ordinances, and regulations and is confirmed by the local inspector having jurisdiction.
   a. US PUBLIC HEALTH SERVICE
   b. LOCAL HEALTH DEPARTMENT
   c. NATIONAL BOARD OF FIRE UNDERWRITERS
   d. OSHA
   e. UL
   f. HACCP
   g. NFPA 96 – Current
   h. ADA
   i. OSHPD
   j. DSA

F. Listing and Labeling: Provide electrically operated equipment or components specified in this Section that are listed and labeled.

1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.

2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

G. AGA Certification: Provide gas-burning appliances certified by the American Gas Association (AGA).

H. ASME Compliance: Fabricate and label steam-generating and closed steam-heating equipment to comply with ASME Boiler and Pressure Vessel Code.

J. Food Service Equipment: Where provided, check-out aisles, sales counters, service counters, food service lines, queues, and waiting lines shall comply with CBC Sections 11B-227 and 11B-904. The top of tray slides shall be 28” minimum and 34” maximum above finish floor. Space and elements within food service employee work areas shall meet the requirements of CBC Section 11B-203.9. Food service equipment required to be accessible shall conform to all reach requirements in CBC Figures 2013, 11B-403.5.1, 11B-227.4, 11B-904.5, 11B-904.5.1, and 11B-904.5.2.

K. NSF Standards: Comply with applicable NSF International (NSF) standards and criteria and provide NSF Certification Mark on each equipment item, unless otherwise indicated.

L. ANSI Standards: Comply with applicable ANSI standards for electric-powered and gas-burning appliances; for piping to compressed-gas cylinders; and for plumbing fittings, including vacuum breakers and air gaps, to prevent siphonage in water piping.

M. SMACNA Standard: Where applicable, fabricate food service equipment to comply with the Sheet Metal and Air Conditioning Contractors National Association's (SMACNA) "Food Service Equipment Fabrication Guidelines," unless otherwise indicated.

N. Seismic Restraints: Provide seismic restraints for food service equipment according to the Sheet Metal and Air Conditioning Contractors National Association's (SMACNA) "Food Service Equipment Fabrication Guidelines," appendix 1, "Guidelines for Seismic Restraints of Kitchen Equipment," unless otherwise indicated.

O. Pre-installation Conference: Conduct conference at Project site to comply with requirements of Division 1 Section "Project Meetings."

P. Pre-installation Conference: Conduct conference at Project site to comply with requirements of Division 1 Section "Project Meetings." Review methods and procedures related to food service equipment including, but not limited to, the following:

1. Review access requirements for equipment delivery.
2. Review equipment storage and security requirements.
3. Inspect and discuss condition of substrate and other preparatory work performed by other trades.
4. Review structural loading limitations.
5. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

Q. Walk-in cooler and/or freezer shall comply with CBC Figures 2013, 11B-404.2.4, 11B-404.2.4.4, 11B-404.2.7 and 11B-309.4.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver food service equipment as factory-assembled units with protective crating and covering.

B. Store food service equipment in original protective crating and covering and in a dry location.

1.07 PROJECT CONDITIONS

A. Field Measurements: Verify dimensions of food service equipment installation areas by field measurements before equipment fabrication and indicate measurements on Shop Drawings and Coordination Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish required dimensions and proceed with fabricating equipment without field measurements. Coordinate construction to ensure actual dimensions correspond to established dimensions.

2. Food service aisles shall be a minimum 36” wide and tray slides shall be mounted at 34” maximum above the floor. CBC Section 1104B.5, item 5.

3. Pass-thru windows for food service shall conform to the reach and access requirements of CBC sections 1118B: 1122B.5; 1104B.3.12 and 1104B.4.2 for accessible transaction areas. Accessible pass-thru shelves shall not exceed 34-inch height above interior finished floor surface or exterior pavement.

1.08 COORDINATION

A. Coordinate equipment layout and installation with other work, including light fixtures, HVAC equipment, and fire-suppression system components.

B. Coordinate location and requirements of service-utility connections.
C. Coordinate size, location, and requirements of concrete bases, positive slopes to drains, floor depressions, and insulated floors. Concrete, reinforcement, and formwork requirements are specified in Division 3 Section "Cast-in-Place Concrete."

D. Coordinate installation of roof curbs, equipment supports, and roof penetrations. These items are specified in Division 7 Section "Roof Accessories."

1.09 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Warranty period: 1 year from date of completion.

B. Refrigeration Compressor Warranty: 5 years from date of completion. Submit a written warranty signed by manufacturer agreeing to repair or replace compressors that fail in materials or workmanship within the specified warranty period.

PART 2 - PRODUCTS

2.01 MATERIALS - METAL

A. Submit a certified copy of the mill analysis of materials if requested by the Architect.

B. Finish for exposed surfaces to be #4 polished, unless otherwise specified.

C. Protective covering shall be provided on all polished surfaces of stainless steel sheet work, and retained and maintained until time of final testing, cleaning, start-up and substantial completion.

D. Stainless-Steel Sheet, Strip, Plate, and Flat Bar: ASTM A 666, Type 304, stretcher leveled, and in finish specified in "Stainless-Steel Finishes" Article.

E. Stainless-Steel Tube: ASTM A 554, Grade MT-304, and in finish specified in "Stainless-Steel Finishes" Article.

F. Zinc-Coated Steel Sheet: ASTM A 653, G115 (ASTM A 653M, Z350) coating designation; commercial quality; cold rolled; stretcher leveled; and chemically treated.

G. Zinc-Coated Steel Shapes: ASTM A 36 (ASTM A 36M), zinc-coated according to ASTM A 123 requirements.
H. Sealant: ASTM C 920; Type S, Grade NS, Class 25, Use NT. Provide elastomeric sealant NSF certified for end-use application indicated. Provide sealant that, when cured and washed, meets requirements of Food and Drug Administration's 21 CFR, Section 177.2600 for use in areas that come in contact with food.

1. Color: As selected by Architect from manufacturer's full range of colors.

2. Backer Rod: Closed-cell polyethylene, in diameter larger than joint width.

I. Sound Dampening: NSF-certified, nonabsorbent, hard-drying, sound-deadening coating. Provide coating compounded for permanent adhesion to metal in 1/8-inch (3-mm) thickness that does not chip, flake, or blister.

J. Gaskets: NSF certified for end-use application indicated; of resilient rubber, neoprene, or PVC that is nontoxic, stable, odorless, nonabsorbent, and unaffected by exposure to foods and cleaning compounds.

K. Casters: NSF-certified, heavy duty, stainless-steel, swivel stem casters with 5-inch- (125-mm-) diameter wheels, polyurethane tires with 1-inch (25-mm) tread width, and 200-lb (90-kg) load capacity per caster. Provide brakes on 2 casters per unit.

2.02 MATERIALS – CASEWORK/MILLWORK

A. Cabinet Hardware: Provide NSF-certified, stainless-steel hardware for equipment items as indicated. Pulls, Handles and Catches to be included.

B. All wood to be thoroughly seasoned and kiln dried prior to being used for fabrication of custom casework. All wood to be free from knots, pitchy seams, or other imperfections. All exposed wood to be grade A pine.

C. All plywood to be thoroughly seasoned and kiln dried prior to being used. All plywood to be free from knots, pitchy seams, and other imperfections. All plywood to be glued with water resistant resin. Particle board may not be substituted for plywood panels. "W.I. - Custom Grade" marine grade plywood is required on all fixtures to be installed in high humidity environments.

D. All wood to have less than 12% moisture content and be a species listed by the national hardwood association.

E. Plastic laminates shall be 1/16th thick, general purpose grade GP-50 as manufactured by Wilson Art or equal. Patterns, textures, and colors as specified under individual items. Semi ex-posed and cabinet liners shall be CL-20. Countertops, backsplashes and edges shall be grade GP-50 on exposed and grade BK-20 on underside of tops. Exposed
vertical surfaces and cabinet liners shall be grade CL-20. Sides and edges of shelving shall be grade 50. Adhesive shall be waterproof and low VOC.

F. Hardware that is furnished and installed shall be of solid material unless specified otherwise. The hardware shall be provided with the necessary mechanisms for locking. All locks shall be furnished with two (2) keys.

G. Solid Surface Material (SSM) shall be Caesarstone, Silestone or approved equal and installed over 3/4" plywood per manufacturer's instructions. Provide air space, trim and/or insulation around any heat or cold producing equipment to guard against discoloration and cracking.

2.03 FABRICATION, GENERAL, METAL,

A. Fabricate food service equipment according to NSF (standards 2, 4 & 7) requirements. Factory assemble equipment to the greatest extent possible.

B. STAINLESS-STEEL EQUIPMENT: for all parts of custom tables, tops, benches, sinks, cabinets, etc., as drawn or as specified, shall be AICI type 304 (18-8 Austenitic). All gauges called for shall be U.S. Standard Gauges, “S/S” or “S.S.” as shown in the drawings or specifications, shall indicate stainless steel.

1. Edges and Backsplashes: Provide equipment edges and backsplashes indicated complying with referenced SMACNA standard, unless otherwise indicated.

2. Apply sound dampening to underside of metal work surfaces, including sinks and similar units. Provide coating with smooth surface and hold coating 1 inch (25 mm) back from open edges for cleaning.

3. Tables: Fabricate with reinforced tops, legs, and reinforced undershelves or cross bracing to comply with referenced SMACNA standard, unless otherwise indicated, and as follows:

   a. Tops: Minimum #14 gauge / 0.0781-inch- (1.984-mm-) thick stainless steel, unless otherwise indicated.

   b. Legs: 1-5/8 inch (41.3 mm) OD, minimum #16 gauge / 0.0625-inch- (1.588-mm-) thick stain-less steel with stainless-steel gusset and adjustable insert bullet-type feet with minimum adjustment of 1 inch (25 mm) up or down without exposing threads, unless otherwise indicated.

   c. Undershelves: Minimum #16 gauge / 0.625-inch- (1.588-mm-) thick stainless steel, unless otherwise indicated.
d. Top and Undershelf Reinforcement: Provide minimum #14 gauge / 0.0781-inch- (1.984-mm-) thick, stainless-steel reinforcing, unless otherwise indicated.

e. Cross Bracing: 1-1/4 inch (31.75 mm) OD, minimum #16 gauge / 0.0625-inch- (1.588-mm-) thick stainless steel, unless otherwise indicated.

4. Sinks: Fabricate of minimum #14 gauge / 0.0781-inch- (1.984-mm-) thick stainless steel with fully welded, 1-piece construction. Construct 2 sides and bottom of sink compartment from 1 stainless-steel sheet with ends welded integral and without overlapping joints or open spaces between compartments. Provide double-wall partitions between compartments with 1/2-inch- (13-mm-) radius rounded tops that are welded integral with sink body. Cove horizontal, vertical, and interior corners with 3/4-inch (19-mm) radius. Pitch and crease sinks to waste for drainage without pooling. Seat wastes in die-stamped depressions without solder, rivets, or welding.

a. Wastes: 2-inch (50-mm), stainless steel ball valve, rotary-handle waste assembly with stainless-steel strainer plate, nickel-plated brass body and connected overflow.

b. Drainboards: Minimum #14 gauge / 0.0781-inch- (1.984-mm-) thick stainless steel, pitched to sink at 1/8 inch/12 inches (3 mm/300 mm) of length. Reinforce drainboards with minimum #14 gauge / 0.0781-inch- (1.984-mm-) thick stainless steel, unless otherwise indicated.

c. Legs: 1-5/8 inch (41.3 mm) OD, minimum #16 gauge / 0.0625-inch- (1.588-mm-) thick stain-less steel with stainless-steel gusset welded to #12 gauge / 0.1094-inch- (2.779-mm-) thick, stainless-steel support plate. Provide adjustable insert bullet-type feet with minimum adjustment of 1 inch (25 mm) up or down without exposing threads, unless otherwise indicated.

d. Drainboard Braces: 1 inch (25 mm) OD, minimum #16 gauge / 0.0625-inch- (1.588-mm-) thick stainless steel, unless otherwise indicated.

e. Cross Bracing: 1-1/4 inch (31.75 mm) OD, minimum #16 gauge / 0.0625-inch- (1.588-mm-) thick stainless steel, unless otherwise indicated.

5. Wall Shelves and Overshelves: Fabricate to comply with referenced SMACNA standard, unless otherwise indicated, and with minimum #16 gauge / 0.0625-inch- (1.588-mm-) thick, stainless-steel shelf tops.
6. Drawers: Provide lift-out type, 1-piece, die-stamped drawer pan fabricated from #18 gauge / 0.050-inch- (1.27-mm-) thick stainless steel with inside corners radiused. Support drawer pan with #16 gauge / 0.0625-inch- (1.588-mm-) thick, stainless-steel channel frame welded to drawer front. Provide 1-inch- (25-mm) thick, double-wall front fabricated from #16 gauge / 0.0625-inch- (1.588-mm-) thick stainless steel and with integral recessed pull. Fill void in drawer front with semi rigid fiberglass sound dampening. Mount drawers on NSF-certified, full-extension, stainless-steel drawer slides that have minimum 100-lb (45-kg) load capacity per pair, ball-bearing rollers, and positive stop. Mount drawer slides for self-closing on drawer housing as indicated.

7. Refrigerated Bases: Unit to be all welded construction and fabricated in accordance with NSF Standard 7.
   a. Top: 18 gauge galvanized sub-top or 14 gauge stainless steel top.
   b. Exterior: Front and Sides to be 18 gauge number 4 finish type 304 stainless steel; bottom and back to be 18 gauge galvanized (unless otherwise noted).
   c. Interior liner: 20 gauge number 4 finish type 304 stainless steel with 3/8” radius corners.
   d. Insulation: Minimum 2” thick polyurethane foam in place insulation (CFC free).
   e. Doors: 18 gauge front and 20 gauge door pan number 4 finish type 304 stainless steel with 2” polyurethane foam in place insulation, long-life press in place gasket.
   f. Drawers: 300 lb. capacity with 14 gauge stainless steel track system, tandem 2” all stainless steel skate wheels, each drawer accommodates two 6” deep, 12” x 20” pans side by side.
   g. Shelving: Each door section shall have stainless steel wire racks.

8. Refrigerated Pan Rails: Unit to be all welded construction and fabricated in accordance with NSF Standard 7.
   a. Top: 16 gauge number 4 finish type 304 stainless steel top and inner liner.
   b. Outer liner: To be 18 gauge type 304 stainless steel; bottom and back to be 18 gauge galvanized (unless otherwise noted).
c. Insulation: Minimum 2” thick polyurethane foam in place insulation (CFC free).

d. Drain: Provide with 1” stainless steel drain

e. Control: Provide with on/off control to be filed installed.

C. Welding: Use welding rod of same composition as metal being welded. Use methods that minimize distortion and develop strength and corrosion resistance of base metal. Provide ductile welds free of mechanical imperfections such as gas holes, pits, or cracks.

1. Welded Butt Joints: Provide full-penetration welds for full-joint length. Make joints flat, continuous, and homogenous with sheet metal without relying on straps under seams, filling in with solder, or spot welding.

2. Grind exposed welded joints flush with adjoining material and polish to match adjoining surfaces.

3. Where fasteners are welded to underside of equipment, finish reverse side of weld smooth and underpressed.

4. Coat unexposed stainless-steel welded joints with suitable metallic-based paint to prevent corrosion.

5. After zinc-coated steel is welded, clean welds and abraded areas and apply SSPCPaint 20, high-zinc-dust-content, galvanizing repair paint to comply with ASTM A 780.

D. Fabricate field-assembled equipment prepared for field-joining methods indicated. For metal butt joints, comply with referenced SMACNA standard, unless otherwise indicated.

E. Where stainless steel is joined to a dissimilar metal, use stainless-steel welding material or fastening devices.

F. Form metal with break bends that are not flaky, scaly, or cracked in appearance; where breaks mar uniform surface appearance of material, remove marks by grinding, polishing, and finishing.

G. Sheared Metal Edges: Finish free of burrs, fins, and irregular projections.

H. Provide surfaces in food zone, as defined in NSF 2, free from exposed fasteners.

I. Cap exposed fastener threads, including those inside cabinets, with stainless-steel lock washers and stainless-steel cap (acorn) nuts.
J. Provide pipe slots on equipment with turned-up edges and sized to accommodate service and utility lines and mechanical connections.

K. Provide enclosures, including panels, housings, and skirts, to conceal service lines, operating components, and mechanical and electrical devices including those inside cabinets, unless otherwise indicated.

L. Seismic Restraints:

1. Fabricate to comply with referenced “SMACNA Guidelines for Seismic Restraint of Kitchen Equipment” in any State, province, or jurisdiction that has legislated this requirement as necessary for acceptance. This shall include:
   a. Identifying these items on his submittal drawings, Plans, Elevations, and Sections.
   b. Showing required SMACNA methods of restraint on his submittal drawings.
   c. Referencing the appropriate detail(s).
   d. Obtain regulatory approval for all seismic engineering details

2.04 FABRICATION, MILLWORK/CASEWORK

A. Fabricate food service equipment according to the "Manual of Millwork, current edition" of the Woodwork Institute, including all amended printed revisions, and NSF Standards. All composite wood products shall meet the latest California Air Resources Board (CARB) Composite Wood Products Regulations. Factory assemble equipment to greatest extent possible. All specially fabricated equipment must be by one manufacturer/fabricator per specialty acceptable to Consultant and the Owner.

B. Solid Surface Material (SSM) shall be Caesarstone, Silestone or approved equal and installed over 3/4” plywood per manufacturer's instructions. Provide air space, trim and/or insulation around any heat or cold producing equipment to guard against discoloration and cracking.

2.05 EXHAUST HOOD FABRICATION

A. Definitions:

1. Listed Hood: A hood, factory fabricated and tested for compliance with UL-710 by a testing agency acceptable to authorities having jurisdiction.

2. Type I Hood: A hood designated for grease exhaust applications.
3. Type II Hood: A hood designed for heat and steam removal and for other non-grease applications.

4. Non-listed Hoods are not acceptable for this project.

B. General: Provide listed hoods with dual wall construction and manufactured from minimum #18 gauge / 0.050-inch- (1.27-mm-) thick type 304 stainless steel, unless otherwise indicated. FSEC shall verify size and location of all connections required before fabrication.

1. Exhaust hood performance tests shall be in accordance with ASTM F1704-05. Manufacturer, upon request, shall be required to submit validation that full capture and containment of appliance thermal plume and smoke can be accomplished at specified/design air volumes without modifications to duct size, filter velocity or hood/system static pressure.

2. Hoods shall comply with current NFPA 96, NSF, ASHRAE 90.1, ASHRAE 154, CA-Title 24 (CA Based Projects Only), Local Applicable Codes and Manufactures Recommendations.

3. Product/system must meet the design, construction, performance and operational intent of the project. It is the responsibility of the FSEC to verify interface of the system with all associated trades including, but not limited to; electrical, mechanical, sheet metal, plumbing and controls per Division 23.

4. Design exhaust volume shall be based on hood manufacturers heat load based design calculations and not estimated CFM/linear foot or minimum UL-710 listed volume.

C. Grease Removal: Provide removable, stainless-steel, baffle-type grease. Provide minimum #18 gauge / 0.0781-inch- (1.984-mm-) thick, stainless steel filter frame and removable collection basins or troughs. Filters/baffles shall be UL 1046 Classified and tested according to ASTM Standard F 2519-05 “Standard Test Method for Grease Particle Capture Efficiency of Commercial Kitchen Filters and Extractors” by a nationally recognized testing laboratory acceptable to authorities having jurisdiction. The filters/baffles must be single stage and have a minimum extraction rate of 93% at 5 microns and 98% at 15 microns.

D. Sound Level Criteria: Isolated grease filter sound levels shall not exceed an NC rating of 55 at full design exhaust volume.
E. Light Fixtures: Provide NSF, UL, CSA AND CE-certified LED fixtures, vapor-tight sealed lenses, to provide 3500K with 50 foot candles at the cooking surface. Any exposed wiring shall be concealed in stainless-steel.

F. Appliance Interlock: Hoods to be provided with Appliance Interlock Temperature Sensor to comply with IMC 2006 requirement, section 507.2.1.1.

G. Exhaust-Duct Collars: Minimum #16 gauge / 0.0625-inch- (1.588-mm-) thick stainless steel, FSEC shall provide all stainless steel duct collars and make final connections to hood, welded 100% grooved smooth and painted.

H. Fires suppression system: Hoods to be provided with wet chemical fire suppression system, model R102 as manufactured by “Ansul” or equal in compliance with UL300 standards. System shall include factory pre-piping, all permits and test as required by the authority having jurisdiction.
   1. Automatic actuation shall be by means of fusible link with no visible conduit.
   2. System shall be furnished and installed by an Ansul certified distributor in accordance with manufacturer’s instructions and the authority having jurisdiction.
   3. Micro-switches shall be furnished as part of the fire protection system for “tie in” of building alarm and for the make-up air/fire/fuel shut down. Gas valve(s) shall be electric solenoid type and support simultaneous activation.
   4. Surface drop exposed piping shall be stainless steel.

2.06 STAINLESS-STEEL FINISHES

A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations relative to applying and designating finishes.
   1. Remove or blend tool and die marks and stretch lines into finish.
   2. Grind and polish surfaces to produce uniform, directional textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.

B. Concealed Surfaces: No. 2B finish (bright, cold-rolled, unpolished finish).

C. Exposed Surfaces: No. 4 finish (bright, directional polish).

D. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
E. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipment.

2.07 WALK-IN COOLERS/FREEZERS

A. Panel Construction:

1. Panels shall be pre-fabricated, sectional construction (minimum 4-inches thick for Coolers and Freezers), of tongue and groove design with foamed-in-place gaskets (not glued, stapled, or nailed) on the male side of all interior and exterior panels and rigid urethane frame. Every panel shall be NSF and UL factory approved and bear the certifying labels. Walk-in box height to be 108”; Interior Height, except freezers with pre-fab floor in combination with cooler without floor to be 104” or unless otherwise specified.

2. Gaskets shall be impervious to stains, greases, oils, and mildew and be resistant to chemical corrosion and ultraviolet radiation. Gasket operating temperature shall be -30 degrees F to 160 degrees F (-34 degrees C to +71 degrees C).

3. Corner panels shall be 90-degree angles with coved corners; interior partition walls shall utilize ‘T’ panels with coved corners. All panels shall be manufactured in accordance NSF approved standards.

4. Panels shall be completely filled with rigid 100% foamed-in-place non-CFC urethane between interior and exterior metal ‘skins’ which have been die-formed and gauged for uniformity in size. Rigid polyurethane blowing agents shall comply with current US EPA SNAP program listings. Slab urethane or polystyrene are not acceptable. In addition, wood shall not be acceptable in any panel including doors, walls, floor, and ceiling.

5. Insulation shall have a 95% closed cell structure with an average in-place density of 2.2 lbs. per cubic foot, and compression strength at yield point of 19 lbs. per square inch. The R-Values of the floor, ceiling and wall panels meet the requirements under the Energy Independence and Security Act of 2009 (EISA).

6. Floor panels: Floor panels shall be die stamped with 3/8-inch radius NSF coved corners. All plane intersections shall be drawn, not cut and welded. Panels shall be fabricated similar to other panels and designed to readily withstand uniformly distributed loads, point loads for stationary shelving, rolling loads from hand truck and mobile food racks. Where noted, pre-fabricated floors shall withstand rolling loads from either manual pallet jacks or electric pallet jacks.
B. Door Construction: Walk-in coolers and freezers shall have entry and exit door hardware that complies with all of the requirements of CBC Section 11B-404.2.8.1 and maneuvering clearances at the exterior side per CBC Section 11B-404.2.7 & 11B-309.4. Doors shall be flush (in-fitting) type, self-closing, 36-inches by minimum 80-inches high, 20-guage stainless steel interior and exterior.

1. Doors shall be mounted with three adjustable cam-lift hinges (Kason 1245) and hydraulic adjustable automatic hold-open (rack and pinion) door closers. Door hardware shall be chrome plated Kason model 27C. Mounting height of latching hardware shall be 34 to 48 inches above finish floor. All hardware shall meet the requirements of CBC 11B-404.2.7 & 11B-309.4.

2. Door latches shall lock and have a safety release to prevent entrapment (one quarter turn of the release handle unlocks the door from the inside).

3. All freezer door will be provided with a Department of Energy approved heater strip, heated sweep gaskets, and a heated pressure relief port.

4. Provide a solid-state electronic thermometer, pre-wired light fixtures switch and pilot lights switch on each door section. Thermometer shall have data connection capability. All door sections to have raised casings. All lights are to be vapor proof LED.

5. The doorjambs, frames, and thresholds shall be made of durable Fiberglass Reinforced Plastic (FRP) or polyvinyl chloride (PVC).

C. Assembly: Panels shall be assembled by Posi-Locs or equal which shall be foamed-in-place and activated by a hex wrench. Floor panels shall utilize post tension construction within the floor panels. Access ports to locking devices shall be covered by snap caps and shall be located in interior of walk-in.

D. Finishes: Refer to the finishes shown and the Foodservice Equipment Schedule paragraph 3.5.

1. Surfaces (walls, ceiling and closure panels):
   a. Exposed exterior 20-gauge Type 304 stainless steel, #4 finish, Rimex Windsor pattern.
   b. Unexposed exterior surfaces to be 20 gauge smooth embossed galvanized steel.
c. Interior finishes: minimum 26 gauge Antimicrobial finish steel, walls and ceiling.

d. Interior floor: verify on finish schedule and item specification, paragraph 3.5.

E. Accessories:

1. Provide and install 14 gauge (stainless steel) kickplates to 36-inches high on interior and exterior doors.

2. Provide (s/s) closure panels to interior ceiling and all adjacent walls, finished with 90-degree angles at the box and the ceiling/wall; no raw edges will be accepted.

3. Provide vinyl strip curtains.

4. Refrigerated compartments fabricated and standard, shall be fitted with flush mounted digital thermometers. Thermometers shall be adjustable and calibrated after installation. All thermometers shall have an accuracy of ± 2 degrees and shall have the capability to be connected to a remote monitoring system, i.e. Modularm 75LC

5. Per document drawings, provide 14-inches by 24-inches view port - unheated for cooler door, heated for freezer door.

6. Freezer Door Fan Switches (at ambient facing freezer door only)

7. When Anthony doors are specified: include Optimax Pro LED Lighting.

F. Insulated Floor Depressions: The FSEC shall provide styrofoam insulation for cooler and freezer floors. Insulation shall be a minimum of 2 layers 60 high load extruded polystyrene, 2-inch thick, with R-value, 75°F mean temperature, min 5.0/inch°F ft. square h/BTU; Compressive Strength: vertical, 60.0 lbs./inch square; Water Absorption maximum 0.1% by volume.

G. Approvals: Fire hazard classification according to ASTME-84 (UL723) shall be a flame spread rating of 25 or less with a certifying UL label attached to every panel showing the meeting of the fire code. Smoke development rating to be 450 or less; Factory Mutual approved; NSF-listed with an approved toxicity rating.

H. Walk-in coolers and freezers shall have level maneuvering clearances at the exterior side (CBC 118-404.2.4.1) and accessible entry and exit door hardware (CBC 11B-404.2.7, 11B-309.4 & 11B-404.2.8.1).

2.08 REMOTE REFRIGERATION SYSTEMS
A. Furnish and install mechanical refrigeration work as indicated and specified, complete and ready for use. Principal items of work include:

1. Mechanical refrigeration systems, including compressor units, condensers, refrigerant piping, evaporator coils, control valves, compressor racks, weather covers and required miscellaneous items. Refrigeration equipment shall consist of two major assemblies. One is the condensing unit assembly with all necessary components, factory installed and wired including single point electrical control panel, circuit breakers and contactors, OSHA approved fan guards, aluminum flexible conduit for internal wiring, suction filter, sight glass, drier, adjustable dual pressure control, flexible pressure hoses, Rotolock compressor adaptors and necessary tubing. The other is the refrigeration coil assembly/heat exchanger with expansion valve, electronic thermostat temperature control with electronic defrost time clock and on/off power switch, completely factory mounted and factory pressure tested with dry nitrogen.
   a. Utilize refrigerant with an ozone depleting potential of 0
   b. R-407A Low to Medium Temperatures
   c. Other refrigerant approved by the Department of Energy for use in remote systems after December 31, 2017.
   d. Glycol – Food Grade

2. Furnishing of motor starters and walk-in refrigerator/freezer thermostats for installation under Electrical Section.

3. Sleeves, inserts, hangers, supports and other incidental items necessary to complete the work.

4. Cutting and patching of non-structural and other incidental items necessary to complete the work on this section.

5. Testing, charging, adjusting, operational testing and cleaning of equipment. Conduct all tests as required by local inspecting agencies concerned with this project.

B. Compressors and Condensing Unit: Factory assembled, scroll compressors with air cooled condensers operating at such speed within recommended range of section and discharge pressures for economical operation and with required BTU rating per hour, sizes and capacities in accordance with specifications. Provide units of same manufacturer and type throughout, new standard cataloged, to operate with refrigerant R-407A. 100 degrees ambient air, capacities selected on 16 hour running time basis for
medium temperature fixtures and 18 hour running time basis for low temperature fixtures. For locations where the ambient exceeds 100 degrees Fahrenheit, the system is to be engineered for the maximum recorded ambient temperature. Additionally, all parallel systems shall include a minimum of one digital scroll compressor and be designed with 75% redundancy minimum.

C. Condensing units shall be scroll air cooled condensing unit with rigid structural bases, 20 gauge weather covers, OSHA-approved fan guards and shrouds and waterproof electrical systems. Include internal inherent motor protection, suction line, shut off valves, liquid line shut off valves, oil pressure safety switches when required, adjustable dual pressure control, crank case heaters and oil separators on systems with longer than 100 lin. ft. run from condensing unit to the evaporator coil. Any outdoor installation within 20 miles of the salt air environment shall be provided with coated condenser coils.

D. Medium temperature evaporators shall be equipped with Electronically Commutated Motors (ECM). Coils shall be low profile UL/NSF approved units with inline fans and cross fins staggered. Provide copper tubing, aluminum cased, permanently lubricated motors with thermal overload protection. Unit shall be provided with evaporator controller system capable of providing evaporator fan control, remote monitoring and diagnostics. Control system shall be interconnected to the local area network and be capable of sending alarm alerts via mobile telephone or e-mail. Water proof electrical system pre-wired to a single connection. Coils are designed to operate above 34 degrees Fahrenheit.

E. Low Temperature evaporators shall be equipped with Electronically Commutated Motors (ECM). Coils shall be low profile UL/NSF approved units with inline fans and cross fins staggered. Provide cooper tubing, aluminum cased, permanently lubricated motors with thermal overload protection. Unit shall be equipped with electric demand defrost controller system. Controller system shall provide on-demand defrost, remote monitoring and diagnostics and be interconnected to the local area network with the capability of sending alarm alerts via mobile telephone or e-mail. Water proof electrical system pre-wired to a single connection. Coils are designed to operate in a range from 30 degrees above Fahrenheit to -20 degrees Fahrenheit.

F. Refrigerant lines shall be type “L” ACR copper tubing with wrought copper fittings assembled by silver soldering joints.

G. Coil drains shall be 1” IPS copper. Route and pitch ½” per foot to drain. Provide electrical heaters on freezer drains.
H. Refrigeration lines insulation shall have a minimum ½ “Armstrong Armaflex AP Pipe insulation sealed with adhesive foam insulation. For glycol systems the minimum insulation shall be ¾”. Tape fittings to be sufficient thickness to prevent condensation. Lines ran externally shall include a hard white PVC cover.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Unless expressly stipulated, and in a timely manner, no additional allowances will be made for Contractors or Manufacturers for errors, omissions or ambiguities not reported at time of bidding. Carefully review and compare the Contract Documents and at once report to Owner and/or Designer any errors, ambiguities, inconsistencies or omissions. Unless expressly stipulated, and in a timely manner, Kitchen Equipment Contractor shall be liable to Owner or Designer for any damage resulting from such errors, inconsistencies or omissions in the Contract Documents. Work shall not be done without approved Drawings, Specifications and/or Modifications and without receiving prior written receiving authorizations from Owner or Designer. Drawings and equipment specifications are intended to complement each other. Therefore, neither should be considered complete without the others.

B. Examine areas and conditions, with Installer present, for compliance with requirements or installation tolerances, service-utility connections, and other conditions affecting installation and performance of food service equipment. Do not proceed with installation until unsatisfactory conditions have been corrected.

C. Examine roughing-in for piping, mechanical, and electrical systems to verify actual locations of connections before installation.

D. Verify all conditions at the building, particularly door openings and passageways for large equipment. Coordinate with General Contractor access to insure delivery of equipment to the required areas. Coordination shall include, but not be limited to, early delivery, hoisting, window removal and/or delay of wall construction. All special equipment, handling charges, window removal, etc. shall be paid for by the Food Service Equipment Contractor.

E. Any and all food service equipment and equipment systems noted as “by owner/operator”, “by purveyor”, or “existing” in the food service construction documents are presented for reference only. These representations must be verified in writing by the food service equipment contractor, owner, operator, and/or general contractor prior to the release of “for construction” documentation. It will be the general contractor’s responsibility to further verify and coordinate all necessary information pertaining to this equipment or systems.
making up, or relating to, this equipment including, but not limited to, local health department regulations, local sanitation code requirements, mechanical, structural, plumbing and electrical requirements prior to commencement of construction. Consultant or Architect take no responsibility for design, intent, function, performance, utility requirements, or code compliance of non-specified equipment.

3.02 INSTALLATION, GENERAL

A. Install food service equipment level and plumb, according to manufacturer's written instructions, original design, and referenced standards.

B. Complete equipment field assembly, where required, using methods indicated.
   1. Provide closed butt and contact joints that do not require a filler.
   2. Grind field welds on stainless-steel equipment smooth, and polish to match adjacent finish. Comply with welding requirements in "Fabrication, General" Article.

C. Install equipment with access and maintenance clearances according to manufacturer's written instructions and requirements of authorities having jurisdiction.

D. Provide cutouts in equipment, neatly formed, where required to run service lines through equipment to make final connections. Cut holes and provide sleeves for pipes on equipment, for drains, electrical, plumbing, etc., as required for proper installation. Verify sizes with Owner on the following items before ordering or fabrication: steam pans, sheet pans, trays, glass and cup racks.

E. Except for mobile and adjustable-leg equipment, securely anchor and attach items and accessories to walls, floors, or bases with stainless-steel fasteners, unless otherwise indicated.

F. Install cabinets and similar equipment on concrete or masonry bases in a bed of sealant.

G. Install hoods to comply with NFPA 96 requirements and to remain free from vibration when operating.

H. Install seismic restraints according to referenced SMACNA standard.

I. Install trim strips and similar items requiring fasteners in a bed of sealant. Fasten with stainless-steel fasteners at 48 inches (1200 mm) o.c. maximum.

J. Install sealant in joints between equipment and abutting surfaces with continuous joint backing, unless otherwise indicated. Provide airtight, watertight, vermin-proof, sanitary joints.
K. Prohibit cold storage rooms from being used by any other trade for storage or work areas. Repair or cause replacement to any damaged areas on the interior of the cold storage rooms, if the damage was caused due to the cold storage rooms being used for storage or work areas.

3.03 PROTECTING

A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer, that ensure food service equipment is without damage or deterioration at the time of Substantial Completion.

3.04 COMMISSIONING

A. Startup Services: Engage factory-authorized service representatives to perform startup services for all equipment. Factory trained representative shall demonstrate and train Owner's maintenance and operations personnel as specified below.

1. Coordinate food service equipment startup with service-utility testing, balancing, and adjustments. Do not operate steam lines before they have been cleaned and sanitized. Provide demonstrations for both operations and maintenance personnel.

2. Remove protective coverings and clean and sanitize equipment, both inside and out, and re-lamp equipment with integral lighting. Where applicable, comply with manufacturer's written cleaning instructions.

3. Test each equipment item for proper operation. Repair or replace equipment that is defective in operation, including units that operate below required capacity or that operate with excessive noise or vibration.

4. Provide maintenance and proper operations training to both the client maintenance and operations staff.

5. Provide service parts manuals as well as maintenance manuals.

6. Provide a list of service agencies authorized by the manufacturer to service its equipment. The list must include the name and telephone number of the person to contact.

3.05 FOOD SERVICE EQUIPMENT SCHEDULE

ITEM # 1 MOBILE SHELVING UNITS

Quantity: One (1)
Manufacturer: Cambro
Model: CAMSHELVING
SIS No.: W010

1. One (1) Model CAMSHELVING (LOT) 4 tier, 21” deep shelving units, posts to be 72” high, shelving units shall have a smooth surface without any welding or crevices. Posts and traverses shall be made of steel metal core with thick polypropylene covers. Shelf plates shall have a smooth surface without any welding or crevices, be of a structural web design and removable to be washed manually or in a commercial dishwasher. Shelf plates shall contain CamGuard, antimicrobial that inhibits the growth of mold, fungus and bacteria. Posts shall have dovetails that allow shelves to be adjusted in 4” increments. Provide with CSRDB donut bumper and CSCTL casters with brake. Verify sizes for shelves and posts by field measuring prior to ordering.

ITEM # 2 JANITORS MOP SINK (FLOOR MOUNTED)

Quantity: One (1)  
Manufacturer: Advance Tabco  
Model: 9-OP-28  
SIS No.: W010

1. One (1) Model 9-OP-28 Mop Sink, floor mounted, 33"W x 25"D x 10"H (overall), 28"W x 20" front-to-back x 6" deep (bowl size), free flow drain with 2" IPS outlet, stainless steel construction

ITEM # 3 JANITOR'S SINK FAUCET W/ VACUUM BREAKER

Quantity: One (1)  
Manufacturer: T&S Brass  
Model: B-0655-01  
SIS No.: W010

1. One (1) Model B-0655-01 Service Sink Faucet, vacuum breaker nozzle with 3/4" garden hose thread, 1/2" NPT female flanged adjustable inlet with screwdriver stops, 6" wrist action handles, pail hook, bottom support, wall brace  
2. One (1) 6" wrist action handle, standard, nc

ITEM # 4 JANITOR'S MOP RACK

Quantity: One (1)  
Manufacturer: Advance Tabco  
Model: K-242  
SIS No.: W010
1. One (1) Model K-242 Mop Hanger, 23", accommodates (3)

ITEM # 5 SPARE NO.

ITEM # 6 WALK-IN REFRIGERATOR

Quantity: One (1)
Manufacturer: Thermalrite
Model: CUSTOM
SIS No.: W010

1. One (1) Model CUSTOM Cooler/Freezer Combo Item #6 and #12 (4" Floor Insulation w/Visqueen and ASTM 15 Felt Paper and Asphalt Emulsion in Freezer Section Only in 8" Depression (15' 2" x 14' 9 1/4") - indoor UL Listed Class 1 Panel with NSF listed construction

1) 7' 9 1/4" x 14' 9 1/4" x 10' 0" foam rail walk-in Holding freezer without floor
2) 7' 4 3/4" x 14' 9 1/4" x 9' 4" foam rail walk-in Holding cooler without floor

1 Add for Stamped calculations/drawings to be performed, per site location. NOTE: Does Not include any additional material that may be required due to calculations - Freight allowed

Dimensions:
External (O.D.): 15' 2" x 14' 9 1/4" x 10' 0" - w x d x h
Internal (I.D.): 14' 6" x 14' 1 1/4" x 9' 8" - w x d x h
Volume: 1977 ft³

Finishes
Walls: Sanisteel White - 26 ga. Anti-Microbial (5mm) & St. Stl. Type 304 #4 finish - 20 Ga. - interior
Galvanized/Smooth - 20 Ga. & St. Stl. Type 304 #4 finish - 20 Ga. - exterior
Ceilings: Sanisteel White - 26 ga. Anti-Microbial (5mm) - interior
Galvanized/Smooth - 20 Ga. - exterior

Panel Thickness
Walls: 4" UL Listed Class 1 Foam
Ceilings: 4" UL Listed Class 1 Foam

Doors
D01:
1 Finished opening 36" x 80" hinged flush freezer door, 8" sill
1 Interior finish - St. Stl. Type 304 #4 finish - 20 Ga.
<table>
<thead>
<tr>
<th>Qty</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Exterior finish - St. Stl. Type 304 #4 finish - 20 Ga.</td>
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<td>1</td>
<td>Interior jamb finish - St. Stl. Type 304 #4 finish - 20 Ga.</td>
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<td>1</td>
<td>Exterior jamb finish - St. Stl. Type 304 #4 finish - 20 Ga.</td>
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<td>1</td>
<td>Viewport- 120v Heated 14&quot;x24&quot;</td>
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<td>Hinge- Kason 1245 Reversible Cam-Rise</td>
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<tr>
<td>1</td>
<td>Light- 1806LED000 (120v) Fixture(Mtd to Jamb) and Optic Globe (Ship Loose)</td>
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<tr>
<td>1</td>
<td>Door Closer - Calibre (hold open feature) 16503-AL</td>
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<td>Stub conduit through ceiling</td>
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<td>Door- Flush Mount</td>
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<td>Hinge (Additional)</td>
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<td>Temp Alarm- Modularm 75LC (120v) Multi-Monitor, Temperature Alarm, Door Ajar Alarm, Automatic Light Control, AC Failure Alarm, Panic Alarm (Low voltage 1P-1,120v F°/C°</td>
</tr>
<tr>
<td>1</td>
<td>Gasket- Magnetic</td>
</tr>
<tr>
<td>D02:</td>
<td>Finished opening 36&quot; x 80&quot; hinged flush cooler door</td>
</tr>
<tr>
<td>1</td>
<td>Interior finish - St. Stl. Type 304 #4 finish - 20 Ga.</td>
</tr>
<tr>
<td>1</td>
<td>Exterior finish - St. Stl. Type 304 #4 finish - 20 Ga.</td>
</tr>
<tr>
<td>1</td>
<td>Interior jamb finish - St. Stl. Type 304 #4 finish - 20 Ga.</td>
</tr>
<tr>
<td>1</td>
<td>Exterior jamb finish - St. Stl. Type 304 #4 finish - 20 Ga.</td>
</tr>
<tr>
<td>1</td>
<td>Viewport- Unheated 14&quot;x24&quot;</td>
</tr>
<tr>
<td>2</td>
<td>Hinge- Kason 1245 Reversible Cam-Rise</td>
</tr>
<tr>
<td>1</td>
<td>Light- 1806LED000 (120v) Fixture(Mtd to Jamb) and Optic Globe (Ship Loose)</td>
</tr>
<tr>
<td>1</td>
<td>Door Closer - Calibre (hold open feature) 16503-AL</td>
</tr>
<tr>
<td>1</td>
<td>Stub conduit through ceiling</td>
</tr>
<tr>
<td>1</td>
<td>Door- Flush Mount</td>
</tr>
<tr>
<td>1</td>
<td>Hinge (Additional)</td>
</tr>
<tr>
<td>1</td>
<td>Temp Alarm- Modularm 75LC (120v) Multi-Monitor, Temperature Alarm, Door Ajar Alarm, Automatic Light Control, AC Failure Alarm, Panic Alarm (Low voltage 1P-1,120v F°/C°</td>
</tr>
<tr>
<td>1</td>
<td>Gasket- Magnetic</td>
</tr>
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**Accessories**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Trim Metal - Wall Closure/Vertical - (Standard 1&quot; x 6&quot; x Height) (match panel finish)</td>
</tr>
</tbody>
</table>
| 4   | Light- (120v) LED 30 watt Vapor-Proof Fixture (4') - (bulbs included in
<table>
<thead>
<tr>
<th>Qty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Caulk - Butyl (Tubes)</td>
</tr>
<tr>
<td>40</td>
<td>Lock Wall Panels to Ceiling Panels (Factory Ceiling Caps - Standard)</td>
</tr>
<tr>
<td>6</td>
<td>Trim Metal - Removable Ceiling Closure Kit - Stainless Steel (Field Verified) See Plan/LF</td>
</tr>
<tr>
<td>3</td>
<td>Caulk - Silicone White (Tubes)</td>
</tr>
<tr>
<td>1</td>
<td>Vent - 115v Narrow Jamb Heated Pressure Relief Port (Kason 1825)</td>
</tr>
<tr>
<td>2</td>
<td>14 Ga 304 #4 S/S 36&quot; Kickplates Int/Ext @ Man Doors - Freight allowed</td>
</tr>
</tbody>
</table>

**Miscellaneous**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Raised Door Casing (Ambient Cooler Door Only)</td>
</tr>
<tr>
<td>2</td>
<td>Kason Vinyl Strip Curtain</td>
</tr>
<tr>
<td>115</td>
<td>Sq. Ft. 4&quot; Floor Insulation w/Visqueen and ASTM 15 Felt Paper and</td>
</tr>
<tr>
<td></td>
<td>Asphalt Emulsion in Freezer Section Only in 8&quot; Depression</td>
</tr>
<tr>
<td>80</td>
<td>6&quot;h Matching Cove Base @ Interior</td>
</tr>
<tr>
<td>1</td>
<td>6&quot;h S/S Cove Base @ Exposed Exterior</td>
</tr>
</tbody>
</table>

**ITEM # 7**  
**REFRIGERATOR SHELVING UNITS**

**Quantity:** Eight (8)  
**Manufacturer:** Cambro  
**Model:** CAMSHELVING  
**SIS No.:** W010

1. Eight (8) Model CAMSHELVING (LOT) 4 tier, 21” deep shelving units, posts to be 72” high, shelving units shall have a smooth surface without any welding or crevices. Posts and traverses shall be made of steel metal core with thick polypropylene covers. Shelf plates shall have a smooth surface without any welding or crevices, be of a structural web design and removable to be washed manually or in a commercial dishwasher. Shelf plates shall contain CamGuard, antimicrobial that inhibits the growth of mold, fungus and bacteria. Posts shall have dovetails that allow shelves to be adjusted in 4” increments. Provide dunnage stands for all traverses 54” or longer and at corners where corner connectors are used. Verify evaporator coil location, shelving units below coil to have 3 shelves. Provide in the configuration shown on plans, verify final sizes of shelves and posts by field measuring prior to ordering.

**ITEM # 8**  
**SPARE NO.**

**ITEM # 9**  
**SPARE NO.**
ITEM # 10 SPARE NO.

ITEM # 11 EVAPORATOR COIL  <Included>

Quantity: One (1)
Manufacturer: OmniTemp Refrigeration
Model: CUSTOM
SIS No.: W010

1. One (1) Model CUSTOM Evaporator coil provided as an integral part of the remote refrigeration system.

ITEM # 12 WALK-IN FREEZE R <Included>

Quantity: One (1)
Manufacturer: Thermalrite
Model: PART OF ITEM #6
SIS No.: W010

1. One (1) Model PART OF ITEM #6 Walk-in Freezer - Part of Item #6

ITEM # 13 FREEZER SHELVING UNITS

Quantity: Eight (8)
Manufacturer: Cambro
Model: CAMSHELVING
SIS No.: W010

1. Eight (8) Model CAMSHELVING (LOT) 4 tier, 21” deep shelving units, posts to be 72” high, shelving units shall have a smooth surface without any welding or crevices. Posts and traverses shall be made of steel metal core with thick polypropylene covers. Shelf plates shall have a smooth surface without any welding or crevices, be of a structural web design and removable to be washed manually or in a commercial dishwasher. Shelf plates shall contain CamGuard, antimicrobial that inhibits the growth of mold, fungus and bacteria. Posts shall have dovetails that allow shelves to be adjusted in 4” increments. Provide dunnage stands for all traverses 54” or longer and at corners where corner connectors are used. Verify evaporator coil location, shelving units below coil to have 3 shelves. Provide in the configuration shown on plans, verify final sizes of shelves and posts by field measuring prior to ordering.
### ITEM # 14  
**EVAPORATOR COIL**  
*<Included>*

<table>
<thead>
<tr>
<th><strong>Quantity:</strong></th>
<th>One (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturer:</strong></td>
<td>OmniTemp Refrigeration</td>
</tr>
<tr>
<td><strong>Model:</strong></td>
<td>CUSTOM</td>
</tr>
<tr>
<td><strong>SIS No.:</strong></td>
<td>W010</td>
</tr>
</tbody>
</table>

1. One (1) Model CUSTOM Evaporator coil provided as an integral part of the remote refrigeration system.

### ITEM # 15  
**CORNER GUARDS**

<table>
<thead>
<tr>
<th><strong>Quantity:</strong></th>
<th>Five (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturer:</strong></td>
<td>Custom</td>
</tr>
<tr>
<td><strong>Model:</strong></td>
<td>STAINLESS STEEL</td>
</tr>
<tr>
<td><strong>SIS No.:</strong></td>
<td>W010</td>
</tr>
</tbody>
</table>

1. Five (5) Model STAINLESS STEEL (LOT) Provide 14 ga. stainless steel corner guards at 6’-6” in height. Stainless steel shall have a #4 finish. Fabricate and install per complete drawings, schedules, elevations, and details.

### ITEM # 16  
**BUMPER RAILS**

<table>
<thead>
<tr>
<th><strong>Quantity:</strong></th>
<th>One (1) Lot</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturer:</strong></td>
<td>Custom</td>
</tr>
<tr>
<td><strong>Model:</strong></td>
<td>STAINLESS STEEL</td>
</tr>
<tr>
<td><strong>SIS No.:</strong></td>
<td>W010</td>
</tr>
</tbody>
</table>

1. One (1) LOT Model STAINLESS STEEL (LOT) Approximately 65'-0" l. Provide 14 ga. stainless steel bumper rails guards mounted at 34" above the finished floor. Stainless steel shall have a #4 finish. Fabricate and install per complete drawings, schedules, elevations, and details.

### ITEM # 17  
**AIR CURTAIN**

<table>
<thead>
<tr>
<th><strong>Quantity:</strong></th>
<th>One (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturer:</strong></td>
<td>Mars Air Systems</td>
</tr>
<tr>
<td><strong>Model:</strong></td>
<td>N236-1UA-TS</td>
</tr>
<tr>
<td><strong>SIS No.:</strong></td>
<td>W010</td>
</tr>
</tbody>
</table>

1. One (1) Model N236-1UA-TS Industrial NSF N2 Series Air Curtain, for 36" wide door,
Unheated, (1) 1/2 HP motor, 115v/60/1-ph, Titanium Silver powder coated cabinet (Custom Production Color), cETLus, CE, NSF

2. One (1) 5 year warranty, standard
3. One (1) Options WITHOUT control panel
4. One (1) Options WITHOUT time delay

ITEM # 18  SPARE NO.

ITEM # 19  SPARE NO.

ITEM # 20  SPARE NO.

ITEM # 21  SPARE NO.

ITEM # 22  MOBILE INGREDIENT BINS

Quantity: Three (3)
Manufacturer: EXISTING
Model: RELOCATE
SIS No.: W010

1. Three (3) Model RELOCATE Mobile Ingredient Bins - Existing, Relocate

ITEM # 23  WORK TABLE W/PREP SINK ASSEMBLY

Quantity: One (1)
Manufacturer: Custom
Model: STAINLESS STEEL
SIS No.: W010

1. One (1) Model STAINLESS STEEL Approximately 10'-11" l x 2'-6" w. Provide stainless steel work table with 1-5/8" legs with adjustable bullet feet, lower and/or mid shelves, 6" high back and end splash. Top shall be 14 ga stainless steel, and legs shall be 16 ga. Fabricate and install per complete drawings, schedules, elevations, and details.
2. Two (2) CSS Model PREP SINK Provide 16 ga stainless steel sink tub measuring approximately 24" w x 24" d x 12" h. Welded in place with polished seams.
3. One (1) Fisher Model 29033 DrainKing Waste Valve, flat strainer, overflow body, chrome finish
ITEM # 24  WALL / SPLASH MOUNT FAUCET

Quantity: One (1)
Manufacturer: T&S Brass
Model: B-0231-CR
SIS No.: W010

1. One (1) Model B-0231-CR Faucet, 12" swing nozzle, 8" wall mount base, 1/2" NPT female Inlets, Ceramas cartridges

ITEM # 25  HEATED HOLDING CABINET

Quantity: Seven (7)
Manufacturer: Metro
Model: C5T8-DSB
SIS No.: W010

1. Seven (7) Model C5T8-DSB C5™ T-Series Transport Armour™ heavy-duty insulated mobile heated cabinet, 5/6 Ht, adjustable bottom load slides-3.35" oc, top mount solid state digital controls with mobile power (14) 18" x 26" or (28) 12" x 20" x 2-1/2" pan capacity, 304 stainless steel, foamed-in-place polyurethane insulation, maximum temperature 200°F, 6" casters, 120V/60/1, 1400 watts, 12 amps, NEMA 5-15P, UL, CUL, NSF, ENERGY STAR®

ITEM # 26  DRY SHELVING UNITS

Quantity: Thirteen (13)
Manufacturer: Cambro
Model: CAMSHELVING
SIS No.: W010

1. Thirteen (13) Model CAMSHELVING (LOT) 4 tier, 21” deep shelving units, posts to be 72” high, shelving units shall have a smooth surface without any welding or crevices. Posts and traverses shall be made of steel metal core with thick polypropylene covers. Shelf plates shall have a smooth surface without any welding or crevices, be of a structural web design and removable to be washed manually or in a commercial dishwasher. Shelf plates shall contain CamGuard, antimicrobial that inhibits the growth of mold, fungus and bacteria. Posts shall have dovetails that allow shelves to be adjusted in 4” increments. Provide dunnage stands for all traverses 54” or longer and at corners where corner connectors are used. Verify evaporator coil location, shelving units below coil to have 3 shelves. Provide in the configuration shown on plans, verify final sizes of shelves and posts by field measuring prior to ordering.
ITEM # 27  MOBILE ROLL-IN RACK

Quantity:  Five (5)
Manufacturer:  Metro
Model:  RF13N
SIS No.:  W010

1. Five (5) Model RF13N Roll-In Refrigerator Rack, pass-thru, 21-1/4"W x 64"H, 26"D, open frame design, slides on 1-1/2" centers, holds (36) 18"x26" pans, sized to fit refrigerator, riveted extruded aluminum frame construction, natural finish, 5" swivel casters (2) with brakes, NSF
2. Five (5) Model A33RD Continuous Bumper for mobile tray rack, gray, adds 2" to overall width & depth of rack

ITEM # 28  SPARE NO.

ITEM # 29  SPARE NO.

ITEM # 30  SPARE NO.

ITEM # 31  HAND SINK

Quantity:  One (1)
Manufacturer:  IMC/Teddy
Model:  ADA-WSX
SIS No.:  W010

1. One (1) Model ADA-WSX ADA-WS Handicap Hand Sink, wall mounted, 19-1/4"W, 20-1/2" front-to-back, 16/304 stainless steel, integrated backsplash, non-drip marine edges, 14 gauge. stainless steel front apron w/rear flange & "Z" strip, ADA, NSF
2. One (1) Model TD Paper Towel Dispenser, 19-1/4"W x x 4"D x 14"H, holds (300) 9-1/2” multi-fold towels. 18 gauge 304 stainless steel, fully enclosed, corners fully welded, keyless access at front panel, NSF
3. One (1) Model ITD Integrated Towel Dispenser (built in to apron)
4. One (1) Model SD Soap Dispenser, stainless steel construction, 1 pint capacity

ITEM # 32  PANTRY FAUCET
Quantity: One (1)
Manufacturer: T&S Brass
Model: B-0325-CR
SIS No.: W010

1. One (1) Model B-0325-CR Pantry Faucet, double, 4" c/c, swivel gooseneck, lever handles, 00AA inlets & Ceramas

ITEM # 33  ACCESSIBLE MOBILE WORK TABLE

Quantity: One (1)
Manufacturer: Custom
Model: STAINLESS STEEL
SIS No.: W010

1. One (1) Model STAINLESS STEEL Approximately 4'-6" 1 x 2'-6" w. Provide stainless steel work table with 1-5/8" legs, and lower and/or mid shelves. Top shall be 14 ga stainless steel, and legs shall be 16 ga. Provide 5" dia. heavy-duty, non-marking casters, all with brakes. Fabricate and install per complete drawings, schedules, elevations, and details.

ITEM # 34  2 DOOR REACH-IN REFRIGERATOR

Quantity: Two (2)
Manufacturer: EXISTING
Model: RELOCATE
SIS No.: W010

1. Two (2) Model RELOCATE 2 Door Reach-in Refrigerator - Existing, Relocate.

ITEM # 35  2 DOOR REACH-IN FREEZER

Quantity: One (1)
Manufacturer: EXISTING
Model: RELOCATE
SIS No.: W010

1. One (1) Model RELOCATE 2 Door Reach-in Freezer - Existing, Relocate.

ITEM # 36  2-DOOR ROLL-IN REFRIGERATOR (REMOTE)
Quantity: Two (2)
Manufacturer: Traulsen
Model: RRI232H-FHS
SIS No.: W010

1. Two (2) Model RRI232H-FHS Spec-Line Refrigerator, Roll-in, two-section, designed for remote refrigeration, stainless steel exterior and interior, standard depth cabinet, full-height doors, accepts 72" high racks (by others) with INTELA-TRAUL™, cULus, NSF

2. Two (2) 115v/60/1ph, 3.0 amps, cord & plug not included, standard
3. Two (2) Warranty, 3 year parts/labor warranty, standard
4. Two (2) Left door hinged left/right hinged right, standard

ITEM # 37 SPARE NO.

ITEM # 38 SPARE NO.

ITEM # 39 SPARE NO.

ITEM # 40 SPARE NO.

ITEM # 41 FILLER PANELS AND TRIM

Quantity: Four (4)
Manufacturer: Custom
Model: STAINLESS STEEL
SIS No.: W010

1. Four (4) Model STAINLESS STEEL Provide 14 ga. stainless steel filler panel and trim with #4 finish. Provide all necessary closure, louvers and trim strips for a complete installation. Fabricate and install per complete drawings, schedules, elevations, and details.

ITEM # 42 WALL SHELF (CONCEALED BRACKETS)

Quantity: One (1)
Manufacturer: Custom
Model: STAINLESS STEEL
SIS No.: W010
1. One (1) Model STAINLESS STEEL Approximately 14'-3" l x 1"-0" w. Provide stainless steel wall shelf with concealed brackets. Wall shelf shall be: 18 ga stainless steel with #4 finish, bracket shall be 14 ga stainless steel. Fabricate and install per complete drawings, schedules, elevations, and details.

**ITEM # 43  WORK COUNTER**

| Quantity: | One (1) |
| Manufacturer: | Custom |
| Model: | STAINLESS STEEL |
| SIS No.: | W010 |

1. One (1) Model STAINLESS STEEL Approximately 14'-3" l x 2'-6" w. Provide stainless steel work counter with undershelf and/or mid shelf, galvanized metal base, and 6" high back and end splash. Top shall be 14 ga stainless steel, body to be 16 ga. Fabricate and install per complete drawings, schedules, elevations, and details.

**ITEM # 44  PANTRY FAUCET**

| Quantity: | One (1) |
| Manufacturer: | T&S Brass |
| Model: | B-0325-CR |
| SIS No.: | W010 |

1. One (1) Model B-0325-CR Pantry Faucet, double, 4" c/c, swivel gooseneck, lever handles, 00AA inlets & Ceramas

**ITEM # 45  HAND SINK**

| Quantity: | One (1) |
| Manufacturer: | IMC/Teddy |
| Model: | ADA-WSX |
| SIS No.: | W010 |

1. One (1) Model ADA-WSX ADA-WS Handicap Hand Sink, wall mounted, 19-1/4"W, 20-1/2” front-to-back, 16/304 stainless steel, integrated backsplash, non-drip marine edges, 14 gauge. stainless steel front apron w/rear flange & "Z" strip, ADA, NSF
2. One (1) Model TD Paper Towel Dispenser, 19-1/4"W x x 4"D x 14"H, holds (300) 9-1/2” multi-fold towels.18 gauge 304 stainless steel, fully enclosed, corners fully welded, keyless access at front panel, NSF
3. One (1) Model ITD Integrated Towel Dispenser (built in to apron)
4. One (1) Model SD Soap Dispenser, stainless steel construction, 1 pint capacity
ITEM # 46       WALL / SPLASH MOUNT FAUCET

Quantity: One (1)
Manufacturer: T&S Brass
Model: B-0231-CR
SIS No.: W010

1. One (1) Model B-0231-CR Faucet, 12" swing nozzle, 8" wall mount base, 1/2" NPT female Inlets, Ceramas cartridges

ITEM # 47       SPARE NO.

ITEM # 48       SPARE NO.

ITEM # 49       SPARE NO.

ITEM # 50       SPARE NO.

ITEM # 51       WALL SHELF (CONCEALED BRACKETS)

Quantity: One (1)
Manufacturer: Custom
Model: STAINLESS STEEL
SIS No.: W010

1. One (1) Model STAINLESS STEEL Approximately 13'-2" l x 1"-0" w. Provide stainless steel wall shelf with concealed brackets. Wall shelf shall be: 18 ga stainless steel with #4 finish, bracket shall be 14 ga stainless steel. Fabricate and install per complete drawings, schedules, elevations, and details.

ITEM # 52       WORK COUNTER W/ PREP SINK ASSEMBLY

Quantity: One (1)
Manufacturer: Custom
Model: STAINLESS STEEL
SIS No.: W010
1. One (1) Model STAINLESS STEEL Approximately 13'-2" l x 2'-6" w. Provide stainless steel work counter with undershelf and/or mid shelf, galvanized metal base, and 6" high back and end splash. Top shall be 14 ga stainless steel, body to be 16 ga. Fabricate and install per complete drawings, schedules, elevations, and details.

2. One (1) CSS Model PREP SINK Provide 16 ga stainless steel sink tub measuring approximately 18" w x 18" d x 12" h. Welded in place with polished seams.

3. One (1) Fisher Model 29033 DrainKing Waste Valve, flat strainer, overflow body, chrome finish

**ITEM # 53** SELF-SERVICE REFRIGERATED MERCHANDISER

- **Quantity:** Four (4)
- **Manufacturer:** Structural Concepts
- **Model:** B5932
- **SIS No.:** W010

1. Four (4) Model B5932 Oasis® Self-Service Refrigerated Merchandiser, 59-5/8"W, high profile, open front, (4) non-lighted shelves, top light, Breeze-E (Type II) with EnergyWise self-contained refrigeration system, Blue Fin coated coil, one piece formed ABS plastic tub, black interior, full end panels with mirror, cETLus, ETL-Sanitation

2. Four (4) NOTE: If GFCI is required, a GFCI breaker MUST be used in lieu of a GFCI receptacle

3. Four (4) 1 yr. parts & labor warranty, 5 yr. compressor warranty, standard

4. Four (4) Remote refrigeration with expansion valve, solenoid valve & thermostat (does not include condensing unit), requires floor drain

5. Four (4) Base Support: Seismic Levelers (Q4695)

6. Four (4) Interior: Stainless steel, in lieu of standard black

7. Four (4) Exterior: Stainless steel

8. Four (4) Lower front panel: Stainless steel (with stainless steel exterior only)

9. Four (4) Left end panel: Cutaway with insulated glass, metal edging

10. Four (4) Right end panel: Cutaway with insulated glass, metal edging

11. Four (4) Add Lights (LED 4200K) to standard shelves (4)

12. Four (4) Night curtain: Retractable, non-locking

13. Four (4) 6 ft cord, exit at base, standard

**ITEM # 54** CONDIMENT COUNTER

- **Quantity:** One (1)
- **Manufacturer:** Custom
- **Model:** MILLWORK
- **SIS No.:** W010

1. One (1) Model MILLWORK Approximately 11'-0" l x 2'-6" w. Provide millwork
undercounter, intermediate and/or lower shelves, base, die front with hardwood veneer or high pressure laminate finish, and stone top. See finish schedule for specific finish requirements. Fabricate and install per complete drawings, schedules, elevations, and details.

ITEM # 55  SERVICE COUNTER

Quantity: One (1)  
Manufacturer: Duke Manufacturing  
Model: INSIONIA  
SIS No.: W010

1. One (1) Model INSIGNIA to be provided as follows
   - Continuous piece semi-enclosed base style construction with utility chase within counter. All electrical conduit and plumbing to be located within utility chase as required. Utility chase to be fully accessible from operator side of counter with electrical and plumbing to be located removable stainless steel panels.
   - 2cm engineered stone counter top with 4" radius turn down, color selection by owner/architect.
   - Counter front to consist of removable plastic laminate clad millwork decor panels, stainless steel body reveal between panels. Color selection by owner/architect.
   - LED front panel down-lighting, remote on/off switch
   - Fully welded angle iron frame utilizing 1.5" x 1.5" x 1/8" galvanized angle. Welds to be ground smooth and sprayed with silver enamel paint. Angle Iron to be framed around each cutout for drop-in-equipment. Angle iron to run front-to-back and at each mullion. 1/2" sound deadening tape to be applied to top of angle iron frame prior to installation of countertop.
   - All stainless steel fabrication to be fully welded. Butt or knuckle joints will not be accepted.
   - Stainless steel internal shelving compartments, fully enclosed back, sides, and top. Removable rear access panels, removable top panel, coved corners All internal stainless steel fabrication to be fully welded.
   - One (1) lot custom Insignia breath guards, stainless steel posts with #8 high polish accents, posts extend through the top securing to angle iron frame within counter body, 3/8” tempered glass front panel and serving shelf, glass to have high polish profiled edges with rounded corners, single and two tier configuration, includes heat and LED lights as required, NSF compliant
   - One (1) each Model HF64-2-HFL-HFL HotFrost merchandiser, full function (hot/cold), drop-in, 64" Length, sized for two (2) each 18" x 26" sheet pan per serving tier, four (4) sheet pan total capacity, LED lighting, independent controls for each serving tier,
- Single power cord
- Breath guards Items 61 and 65 are included.
- KEC furnished Items 56, 57, 62, 63, 64, 66 are not included. All integral drop-in items are to be KEC furnished/Duke Insignia installed.
- All electrical to be interconnected to load center. Electrical to be located in electrical conduit pipe, flex conduit to be kept to a minimum. Exposed flex conduit will not be accepted. All wiring to be numbered at all junctions, per circuit. Wiring diagram to be provided at each load center door. All receptacles mounted in the counter to be recess mounted and labeled.
- One (1) lot plumbing and load center compartments. Plumbing lines are to be 3/4" copper. All copper lines to be coated to protect from corrosion. All hot food well drains are to be manifolded with unions for ease of maintenance. Unions to utilize compression fittings, no soldering is permissible. Manifolded drains lead to single 3/4" turn ball valve mounted in full stainless steel housing. Drain valve to be located on operator side for ease of access.
- Custom control panel containing remote mounted controls for drop-in equipment (i.e. hot food wells, cold pans, etc), custom Insignia labeling and switches
- Galvanized angle iron curb base.

**ITEM # 56**

**DISPLAY CASE, REFRIGERATED DELI, COUNTERTOP**

Quantity: Four (4)  
Manufacturer: RPI Industries  
Model: VICD2-20-R-SQ-RR-CT  
SIS No.: W010

1. Four (4) Model VICD2-20-R-SQ-RR-CT Vienna Countertop Display Case, countertop, 31-1/2"W, self-contained refrigeration, full service type air screen style, programmable digital refrigeration controller, square insulated glass front, top & side panels, (1) adjustable glass shelf with lights, stainless steel exterior, sliding rear see-thru access doors, 1/5 hp, ETL, NSF  
2. Four (4) 1 year limited warranty standard  
3. Four (4) Remote refrigeration with compressor by others, deduct  
4. Four (4) Integration modular counter  
5. Four (4) LED lighting, per shelf/per canopy

**ITEM # 57**

**DISPLAY MERCHANDISER, HEATED, FOR MULTI-PRODUCT**
Quantity: Four (4)
Manufacturer: Hatco
Model: GRSDS-60D
SIS No.: W010

1. Four (4) Model GRSDS-60D Glo-Ray® Merchandising Warmer, counter model, (24) rods, pass thru design, with (2) shelves, forward-slanted shelves, stainless/aluminum construction, 60" long, 3340 watts, 4" legs
2. Four (4) NOTE: Sale of this product must comply with Hatco's Minimum Resale Price Policy; consult order acknowledgement for details
3. Four (4) NOTE: Includes 24/7 parts & service assistance, call 800-558-0607
4. Four (4) 120/208v/60/1-ph, 4-wire, 14.3 amps, NEMA L14-20P
5. Four (4) Model BLACK Black, designer color (housing) (Not for retrofit)
6. Four (4) The color selected is not the default Glossy Gray and is considered custom and is NOT returnable
7. Four (4) Model ITC-D Indicating Temperature Control (LED), dual shelf (Not for retrofit)
8. Four (4) Open Customer Side, upper, standard
9. Four (4) Open Customer Side, lower, standard

ITEM # 58 SPARE NO.

ITEM # 59 SPARE NO.

ITEM # 60 SPARE NO.

ITEM # 61 SELF-SERVICE SNEEZEGUARD <Included>

Quantity: Two (2)
Manufacturer: Duke Manufacturing
Model: PART OF ITEM #55
SIS No.: W010

1. Two (2) Model PART OF ITEM #55 SELF-SERVICE SNEEZEGUARD - PART OF ITEM #55

ITEM # 62 TRASH RECEPTACLES (COUNTER)

Quantity: Seven (7)
Manufacturer: Rubbermaid
Model: FG295700BLA  
SIS No.: W010  

1. Seven (7) Model FG295700BLA Waste Basket, 41-1/4 qt., 15-1/4"W x 11"D x 19-7/8"H, medium, soft, rolled rims, all plastic, won't chip, rust or dent, black

ITEM # 63  DROP-IN FROST TOP  

Quantity: One (1)  
Manufacturer: Hatco  
Model: FTBR-3  
SIS No.: W010  

1. One (1) Model FTBR-3 Drop-In Frost Top, 57"L, accommodates (3) full size sheet pan, auto defrost, electronic adjustable temperature control can be mounted to either side of condensing unit or remotely up to 4' from unit, 1" NPT drain, remote refrigeration and control panel, cULus, Made in USA  
2. One (1) NOTE: Sale of this product must comply with Hatco's Minimum Resale Price Policy; consult order acknowledgement for details  
3. One (1) NOTE: Includes 24/7 parts & service assistance, call 800-558-0607  
4. One (1) One year parts only warranty, standard  
5. One (1) 120v/60/1-ph, 804 watts, 6.7 amps, NEMA 5-15P, standard

ITEM # 64  DROP-IN HOT WELL  

Quantity: One (1)  
Manufacturer: Vollrath  
Model: 3640670  
SIS No.: W010  

1. One (1) Model 3640670 Hot Food Well Unit, Drop-In, electric, (4) 12" x 20" individual 20 gauge stainless steel insulated wells, 54-3/4"W x 26"D x 21-1/2"H (overall), wet or dry operation, individual thermostatic controls mounted in panel with 3 ft cord, power indicator light, drip-free flange, 1" copper manifold drain with individual well shutoffs & manifold shutoff, 18 gauge stainless steel top, 18 gauge galvanized exterior housing, includes positioning clips, 625 watts per well, 120v/60/1-ph, 20.8 amps, 6 ft cord with NEMA 5-30P, NSF, cULus, Made in USA (54"W x 25-1/4"D cutout size, requires 7/8" corner radius)
2. One (1) No breath guard

ITEM # 65 SELF-SERVICE SNEEZEGUARD <Included>

| Quantity: | One (1) |
| Manufacturer: | Duke Manufacturing |
| Model: | PART OF ITEM #55 |
| SIS No.: | W010 |

1. One (1) Model PART OF ITEM #55 SELF-SERVICE SNEEZEGUARD - PART OF ITEM #55

ITEM # 66 DUAL TEMP FOOD WELL, DROP-IN

| Quantity: | One (1) |
| Manufacturer: | Vollrath |
| Model: | 3667402D |
| SIS No.: | W010 |

1. One (1) Model 3667402D Hot/Cold Well, Drop-In, top mount, (4) pan, remote mountable panel with on-off switch, hot/cold toggle with indicator lights for hot or cold, thermostatic temperature rotary knob control in hot mode, preset cold control, manual manifold drain, 300 series stainless well & flange, galvanized wrapper, 625 watts per well, 14 amp, 120/208-240V, 14-20P, cULus, NSF, NSF7, Made in USA (4-week lead time)

ITEM # 67 HEAT LAMP

| Quantity: | Two (2) |
| Manufacturer: | Hatco |
| Model: | GRA-48 |
| SIS No.: | W010 |

1. Two (2) Model GRA-48 Glo-Ray® Infrared Foodwarmer, standard wattage, tubular metal heater rod, single heater rod housing, aluminum construction, 800 watts, 48", NSF, cUL, UL

2. One (1) NOTE: Sale of this product must comply with Hatco's Minimum Resale Price Policy; consult order acknowledgement for details
3. One (1) NOTE: Includes 24/7 parts & service assistance, call 800-558-0607
4. Two (2) One year on-site parts and labor warranty, plus one additional year parts only warranty on all Glo-Ray metal sheathed elements
5. Two (2) 120v/60/1-ph
6. Two (2) Model BLT TOG-1 (1) Built-in toggle control (remote recommended) (Not for retrofit)
7. Two (2) Model IND.LGT-1 Indicator Light (not for retrofit) per circuit (remote control only on all tandem element units)
8. Two (2) No Tandem selection
9. Two (2) Model LEADS5 1'-5' Extended Electrical Leads (Not for retrofit)

ITEM # 68 SPARE NO.

ITEM # 69 SPARE NO.

ITEM # 70 SPARE NO.

ITEM # 71 SPARE NO.

ITEM # 72 SPARE NO.

ITEM # 73 CASH REGISTER <NIC>

Quantity: Three (3)
Manufacturer: NIFSEC
SIS No.: W010

1. Three (3) Cash Register - NIFSEC

ITEM # 74 SERVING COUNTER, UTILITY

Quantity: Three (3)
Manufacturer: Duke Manufacturing
Model: XP-3CC
SIS No.: W010
1. Three (3) Model XP-3CC Expressions Serving System 3 ft. Cashier Cart, custom modular counters per plan, consisting of:
2. Three (3) Model XP30CS Cashier Stand Unit, stainless steel body & interior shelf, and 3" adjustable height swivel casters
3. Three (3) Custom countertop, 2cm Silestone (or equal) quartz composite on wood backer, rounded edges, 34" high, 45" wide, and 36" long
4. Three (3) Countertop cutout & plastic grommet to pass cord & plug
5. Three (3) Removable Decor Panels, Formica plastic laminate (or approved equal) on wood backer panel, located on both sides & ends, and stainless steel edge trim
6. Three (3) Special body height & depth
7. Three (3) Electric outlets in base, receptacle & breakers in wire chase
8. Three (3) Single point connection to wire chase, 10 ft. cord set & 90 degree cap
9. Three (3) Kickplates, stainless steel, adjustable height & removable, recessed, and mounted on all sides

ITEM # 75        SERVING COUNTER, UTILITY

Quantity: Two (2)
Manufacturer: Duke Manufacturing
Model: XP-12CC
SIS No.: W010

1. Two (2) Model XP-12CC Expressions Serving System 12 ft. 4" Salad Bar, custom modular counters per plan, consisting of:
2. Two (2) Model XP88ST Solid Top Unit, utility counter, stainless steel body & interior shelf, wire chase, and 3" adjustable height swivel casters
3. Two (2) Model XP74ST Solid Top Unit, utility counter, stainless steel body & interior shelf, wire chase, and 3" adjustable height swivel casters
4. Two (2) Custom countertop, 2cm Silestone (or equal) quartz composite on wood backer, rounded edges, 34" high, 40" wide, and 148" long
5. Two (2) Countertop cutouts to fit both drop-in cold pans
6. Two (2) Removable Decor Panels, Formica plastic laminate (or approved equal) on wood backer panel, located on both sides & ends, and stainless steel edge trim
7. Two (2) Special body height & length, louvered grilles, and hinged doors
8. Two (2) Electric outlets in base, receptacle & breakers in wire chase
9. Two (2) Single point connection to wire chase, 10 ft. cord set & 90 degree cap
10. Two (2) Kickplates, stainless steel, adjustable height & removable, recessed, and
11. Four (4) Model COND-EVAP Condensate evaporator
12. Two (2) Model ADI-3MD-N7 Drop-In Cold Food Pan, refrigerated, 46-7/8"W x 25-1/2"D x 26"H, fits (3) 6" deep 12" x 20" pans, 300 series stainless steel top, 10" deep 300 series stainless steel interior liner, steel exterior housing, remote mounted on/off switch, air-cooled condensing unit, (2) adapter bars included, 1" brass drain & plug, R134a, 120v/60/1-ph, 4.2 amps, 1/5 HP, 6' cord & NEMA 5-15P, UL EPH, cULus, NSF 7
13. Two (2) Model ADI-4MD-N7 Drop-In Cold Food Pan, refrigerated, 60-7/8"W x 25-1/2"D x 26"H, fits (4) 6" deep 12" x 20" pans, 300 series stainless steel top, 10" deep 300 series stainless steel interior liner, steel exterior housing, remote mounted on/off switch, air-cooled condensing unit, (3) adapter bars included, 1" brass drain & plug, R134a, 120v/60/1-ph, 5.2 amps, 1/4 HP, 6' cord & NEMA 5-15P, UL EPH, cULus, NSF 7

ITEM # 76  SNEEZE GUARD, STATIONARY

Quantity: Two (2)
Manufacturer: Duke Manufacturing
SIS No.: W010

1. Two (2) Custom Food Shield, Self-service single shelf and guard both sides, stainless steel posts with #8 high polish accents, posts extend through the top secured within counter body, 3/8" glass over-shelf & guards, glass end enclosures, tempered glass has high polish profiled edges with rounded corners, Food Guard Lights, LED low voltage, mounted under shelf, and wired to on/off switch, NSF compliant

ITEM # 77  AIR CURTAINS

Quantity: Two (2)
Manufacturer: Mars Air Systems
Model: PH1272-2UA-PW
SIS No.: W010

1. Two (2) Model PH1272-2UA-PW Phantom 12 Series Air Door, for 72" wide door, Unheated, (2) 1 HP motors, 115V/60/1-ph, cETLus, Pearl White powder coated cabinet
2. Two (2) 5 year warranty, standard
3. Two (2) Pearl white, standard finish; contact factory for other colors
4. Two (2) NOTE: Control panel is required when door switch is selected (NOT included, standard)
ITEM # 78  AIR CURTAIN

Quantity: One (1)
Manufacturer: Mars Air Systems
Model: PH1036-1UA-PW
SIS No.: W010

1. One (1) Model PH1036-1UA-PW Phantom 10 Series Air Door, for 36” wide door, Unheated, (1) 1/2 HP motor, 115V/60/1-ph, cETLus, Pearl White powder coated cabinet
2. One (1) 5 year warranty, standard
3. One (1) Pearl white, standard finish; contact factory for other colors
4. One (1) Options WITHOUT control panel
5. One (1) Options WITHOUT time delay

ITEM # 79  SPARE NO.

ITEM # 80  SPARE NO.

ITEM # 81  REMOTE REFRIGERATION RACK AND SYSTEM

Quantity: One (1)
Manufacturer: OmniTemp Refrigeration
Model: OTC4-AC-V-8-0-3-4
SIS No.: W010

1. One (1) Model CUSTOM Refer to Section 114000, paragraph 2.8 and FS drawings.

ITEM # 82  TABLE

Quantity: Two (2)
Manufacturer: Custom – Contact District Construction Manager for more information.
SIS No.: W010

1. Two (2) Table, Five Feet From the Moon, the address is 1296 Fair Ave, Santa Cruz, CA 95060. Artist’s name is Dominic, phone number is (831) 234-7555 or (831) 345-5401. The table dimensions will be: 12’-0” L x 2’-6” W x 3’-6” H. *A2

* A2 Addendum 2: 3/22/17
END OF SECTION
GENERAL NOTES

1. REMOVE ALL PORTION OF TYPICAL CONCRETE CEILINGS AND DEMOLISH EXISTING CONCRETE WALLS OR PARTITIONSbles, EXCEPT AS NOTED. REMOVE ALL CONCRETE, CONCRETE BLOCK, AND CMU WALLS OR PARTITIONS TO REMAIN. AT PERIMETER / EXTERIOR WALLS, REMOVE WALL OR PARTITION TO BE REMOVED. AT PERIMETER / EXTERIOR WALLS, REMOVE WALL OR PARTITION TO REMAIN.

2. REMOVE EXISTING MESH GATE DURING CONSTRUCTION. SALVAGE AND REPLACE.

3. REMOVE FIXTURES, CASEWORK, PLUMBING, ETC. SHOWN DASHED TYP, U.O.N. REMOVE.

4. REMOVE PORTION OF CMU WALL FOR NEW DOOR. SAWCUT (E) CURB TO SLAB HEIGHT.

5. REMOVE PORTION OF CMU WALL FOR NEW DOOR OPENING. SEE 15/A4.21 FOR RETROFITTING (E) WALL TO 1-HR RATING.

6. (E) KITCHEN EQUIPMENT TO BE REMOVED AND REPLACED. REFER TO FOODSERVICE AREAS OF DEMOLITION. PROVIDE ADDITIONAL DEMOLITION TO COORDINATE WITH THE NEW WORK.

7. DEMOLISH DOOR, FRAME, AND HARDWARE.

8. DEMOLISH (E) CMU WALL TO REMAIN EXCEPT AS NOTED.

9. DEMOLISH BOOK ROOM BUILDING INCLUDING FOOTINGS, UTILITIES, AND ALL ASSOCIATED COMPONENTS.

10. DEMOLISH (E) TRANSFORMER ENCLOSURE.

11. DEMOLISH ALL FLOOR FINISHES INCLUDING CARPET, VCT, SHEET VINYL, AND EPOXY FLOORING TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED. GRIND EXISTING SLABS SMOOTH.

12. DEMOLISH EXISTING CONCRETE RAMP, STAIRS, PLINTHS, AND PLANTERS. SEE LANDSCAPE DRAWINGS.

13. REMOVE PORTION OF PARTITION WALL FOR NEW DOOR OPENING.

14. REMOVE FIXTURES, CASEWORK, PLUMBING, ETC. SHOWN DASHED TYP, U.O.N. REMOVE.

15. REMOVE FIXTURES, CASEWORK, PLUMBING, ETC. SHOWN DASHED TYP, U.O.N. REMOVE.

16. (E) CAN WASH SINK AND S.S. WALL PANELS TO BE RELOCATED.

17. REMOVE HAZARDOUS MATERIALS REPORT WHICH IS AVAILABLE FROM THE OWNER UPON REQUEST.

18. AT THIS SECTION OF LINE B, DEMO (E) CURB DOWN TO SLAB LEVEL, PREPARE SLAB FOR NEW WORK.

19. REMOVE EXISTING MESH GATE DURING CONSTRUCTION. SALVAGE AND REPLACE.

20. STRUCTURAL WALL ABOVE TO REMAIN SHALL BE TEMPORARILY SUPPORTED AND BRACED.

21. SEE 15/A4.21 FOR RETROFITTING (E) WALL TO 1-HR RATING.

22. DEMOLISH EXISTING CONCRETE RAMP, STAIRS, PLINTHS, AND PLANTERS. SEE LANDSCAPE DRAWINGS.

23. DEMOLISH BOILER.

24. DEMOLISH VENDING MACHINE AND SECURITY CAGE ELSEWHERE ON SITE AS DIRECTED BY DISTRICT.  ASSUME 2 MOVES EACH.

25. DEMOLISH (E) SLAB TO TRENCH FOR (N) PLUMBING, 18" WIDE MAX. TYP. S.P.D. FOR LOCATION.

26. DEMOLISH EXISTING CONCRETE RAMP, STAIRS, PLINTHS, AND PLANTERS. SEE LANDSCAPE DRAWINGS.

27. DEMOLISH EXISTING CONCRETE RAMP, STAIRS, PLINTHS, AND PLANTERS. SEE LANDSCAPE DRAWINGS.

28. DEMOLISH EXISTING CONCRETE RAMP, STAIRS, PLINTHS, AND PLANTERS. SEE LANDSCAPE DRAWINGS.

29. DEMOLISH EXISTING CONCRETE RAMP, STAIRS, PLINTHS, AND PLANTERS. SEE LANDSCAPE DRAWINGS.
KEYNOTES - DEMO ROOF

1. REMOVE & REPLACE SEISMIC JOINT WITH NEW.
2. OPENING FOR ROOF HATCH
3. REMOVE & INSTALL SEISMIC JOINT WHERE INDICATED.
4. 2" CONDUIT & PIPING REMOVED WHICH SERVES ACTIVE EQUIPMENT SHALL BE REPLACED UNDER MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION. ALL CONDUIT, EQUIPMENT, AND PIPING ON BUILDING 900 ROOF TO BE REMOVED U.O.N. SEE CIVIL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
5. FACE OF WALL BELOW
6. 3" CONDUITS: DEMO
7. REMOVE (E) PIPING AND INFILL UNUSED PENETRATIONS
8. (E) 4" GAS LINE
9. (E) 4" CONDUIT
10. (2) 2" CONDUIT
11. DEMO CONDENSING UNIT & PIPING.
12. (E) DATA CONDUIT
13. REMOVE BUILT OUT WALL SECTION & EXHAUST FAN. SEE DETAIL 6/A8.00
14. ABANDONED STEAM PIPES: DEMO
15. 3" CONDUITS: DEMO
16. (E) CURB & VENT TO BEMOVED, TYP. INFILL ROOFING / SHEATHING.
17. (E) MOUNTING FRAME TO BE REMOVED.
18. (E) MECHANICAL EQUIPMENT TO REMAIN. SEE MECHANICAL DRAWINGS.
19. (E) COMBUSTION AIR INTAKE & VENT ROOF CAP TO BE REMOVED & RELOCATED.
20. TEMPORARILY RE-ROUTE, RELOCATE, AND/OR REFEED UTILITIES IN THE AREA OF WORK WHICH ARE NOT SHOWN TO BE REMOVED, TYP. SEE MECHANICAL DRAWINGS.
21. DEMOLISH EAVE & ROOF AT BUILDING SECTIONS BEING REMOVED.
22. DEMOLISH FASCIA. EAVE FRAMING TO REMAIN EXISTING. MODIFY ROOF AND
23. EXISTING WALKWAY CANOPY.
24. DEMO OF EAVE ON HIGH ROOF: SEE 12/A8.00.
25. TEMPORARILY RE-ROUTE, RELOCATE, AND/OR REFEED UTILITIES IN THE AREA OF WORK WHICH ARE NOT SHOWN TO BE REMOVED, TYP. SEE MECHANICAL DRAWINGS.
26. RELOCATE (E) STORAGE CONTAINER AT OWNER'S DIRECTION.
27. DEMOLISH LOW WALL BETWEEN CANOPIES.
28. DEMOLISH LOW WALL BETWEEN CANOPIES. REMOVE 24" OF (E) ROOFING AWAY FROM LOW WALL.
29. DEMOLISH ROOFING AND FLASHING. EXISTING ROOF SHEATHING TO REMAIN.
30. (E) CONDUIT TO REMAIN U.O.N. (SEE KEYNOTES FOR SIZE)
GENERAL NOTES
- EGRESS SIGNS, DEVICES, DOORS, SERVICES, WIRE MAST AND DUCTS TO BE REMOVED FROM \(8' \text{ OF WALL)
- HALLWAY PERIMETER WALL TO REMAIN \(3' \text{ OF WALL)
- TILES TO REMAIN \(6' \text{ OF WALL)
- REMOVE ALL LIGHTING, FIXTURES, DEVICES, CONDUIT, WIRING, PIPING, AND ALL OTHER CEILING MOUNTED ITEMS, INCLUDING FASTENERS, AT ALL CEILING ZONES SCHEDULED TO BE DEMOLISHED.
- COORDINATE FULL EXTENT OF DEMOLITION WITH OTHER DEMOLITION DRAWINGS AND STRUCTURAL DRAWINGS. PROVIDE ADDITIONAL DEMOLITION AS REQUIRED TO PROPERLY IMPLEMENT ALL NEW WORK.

REFLECTED CEILING PLAN LEGEND
- EXISTING CEILING TO REMAIN
- EXISTING ROOF OR CEILING TO BE DEMOLISHED
- WALL OR PARTITION TO REMAIN
- WALL OR PARTITION TO BE REMOVED
- (E) CMU WALL TO REMAIN

KEYNOTES - DEMO REFLECTED CEILING PLAN
1. DEMOLISH ACOUSTICAL TILE CEILING, SUBSHEATHING, CEILING FRAMING, HANGER FASTENERS AND SUPPORTS. EXISTING ROOF PURLING AND BEAMS TO REMAIN. SEE STRUCTURAL DRAWINGS.
2. DEMOLISH GYP. BD. CEILING FINISH, CEILING FRAMING, AND ASSOCIATED ATTACHMENTS. SEE STRUCTURAL DRAWINGS FOR EXTENT OF ROOF STRUCTURAL FRAMING DEMOLITION.
3. DEMOLISH CEILING, FRAMING, AND ROOF.
4. DEMOLISH CANOPY, COLUMNS, AND FOOTINGS.
5. EDGE OF CANOPY TO REMAIN.
6. EXISTING CANOPY TO REMAIN.
7. DEMOLISH FASCIA. DEMOLISH ANY DAMAGED PLYWOOD. EXISTING PLYWOOD IN GOOD CONDITION TO REMAIN. EAVE FRAMING TO REMAIN EXISTING. MODIFY ROOF AND EAVE FRAMING PER STRUCTURAL DRAWINGS.
8. DEMOLISH EAVE & ROOF AT BUILDING SECTIONS BEING REMOVED. COORDINATE WITH ROOF DEMOLITION AND STRUCTURAL DRAWINGS.
9. DEMOLISH PORTION OF ROOF FRAMING AT ROOM INDICATED. DEMOLISH ANY ABANDONED HYDRONIC PIPING, CONDUIT, GAS LINE, OR OTHER ABANDONED BUILDING SYSTEMS. PROTECT ANY WORKING SYSTEMS.
10. DEMOLISH ANY ABANDONED HYDRONIC PIPING, CONDUIT, GAS LINE, OR OTHER ABANDONED BUILDING SYSTEMS. PROTECT ANY WORKING SYSTEMS.
11. 1-HOUR RATED, FIRE RESISTIVE CONSTRUCTION REQUIRED AT EAVE. REFER TO ROOF PLAN FOR DETAIL REFERENCES.
12. OPENING FOR ROOF HATCH.
13. PROTECT (E) KITCHEN HOOD AND SUPPORTING FRAMING TO REMAIN.
KEYNOTES - REFLECTED CEILING PLAN

- **C-1** AIR CURTAIN. REFER TO FOODSERVICE DRAWINGS.
- **C-2** INTERIOR TRELLIS CEILING. SEE 1/A9.52 FOR DETAILS.
- **C-3** 1-HOUR FIRE RATED EAVE WHERE INDICATED BY HATCH PATTERN.
- **C-4** ROOF HATCH
- **C-4A** FACE OF WALL ABOVE
- **C-4B** (E) HOOD: EXISTING ANSUL FIRE SUPPRESSION SYSTEM TO REMAIN IN PLACE. REFER TO 14/A9.50.
- **C-5** (E) EAVE
- **C-6** ACOUSTIC PANEL, REFER TO 8/A9.52
- **C-7** GUTTER. SEE 8/A8.51.
- **C-8** INTERIOR CEMENT PLASTER FINISH OVER NEW FRAMING, INCLUDING TRIM & ACCESSORIES: PAINT TO MATCH ADJACENT.
- **C-9** 24"X24" ACCESS PANEL: POSITION NEAR ADJACENT ABOVE CEILING SPRINKLER HEAD.
- **C-10** 24"X24" ACCESS PANEL: POSITION NEAR ADJACENT INTERIOR BOARDS.
- **C-11** WALL STRUCTURE AND OPEN TO ABOVE HIGH
- **C-12** SMOKE DETECTOR AND FIRE ALARM
- **C-13** RECESSED CEILING OUTLET
- **C-14** EXPOSED DUCT
- **C-15** LIGHTING, DUCT WORK, & DIFFUSERS SHOWN ARE NEW, U.O.N.
- **C-16** ULTRASONIC WALL-ICE DETECTOR
- **C-17** ACCESS PANEL WITH EXISTING EXHAUST DUCT
- **C-18** 24"X24" ACCESS PANEL: POSITION NEAR ADJACENT ABOVE CEILING SPRINKLER HEAD.
- **C-19** FOR SURFACE APPLIED WOOD SLAT CEILING SEE 19/A9.51
- **C-20** DISTRIBUTOR BOX
- **C-21** DUCT PENETRATIONS THROUGH SHEAR WALLS HAVE BEEN COORDINATED WITH STRUCTURAL DRAWINGS:
- **C-22** PROVIDE SEISMIC CROSS BRACING UP TO ROOF DECK AT EACH FIXTURE, TYPICAL THIS FIXTURE TYPE.
- **C-23** SUSPENDED LIGHT FIXTURES IN THIS AREA ARE SET AT 10'-0", 9'-6", AND 8'-9" IN ALTERNATING SEQUENCE. SEE
- **C-24** POWER AND LOW VOLTAGE CABLING FOR COLUMN-MOUNTED LIGHT FIXTURES ARE ROUTED THROUGH THE
- **C-25** PENDANT LIGHTS IN THIS AREA SHALL BE PLACED AS SHOWN AND SHALL BE ALLOWED TO SWING 45
- **C-26** SUSPENDED LIGHT FIXTURES IN THIS AREA ARE SET AT 10'-0", 9'-6", AND 8'-9" IN ALTERNATING SEQUENCE. SEE
- **C-27** CEMENT PLASTER FINISH OVER NEW FRAMING, INCLUDING TRIM & ACCESSORIES: PAINT TO MATCH ADJACENT.
- **C-28** PROVIDE SEISMIC CROSS BRACING UP TO ROOF DECK AT EACH FIXTURE, TYPICAL THIS FIXTURE TYPE.
- **C-29** FOR SURFACE APPLIED WOOD PLANK CEILING, SEE 6/A9.52.
- **C-30** CHECKED BY
- **C-31** DRAWN BY

GENERAL NOTES

1. All contact details are shown in bold text.
2. Refer to wall sections for details.
3. Refer to foodservice drawings for details.
4. Refer to ceiling plan for details.
5. Refer to architectural plans for details.
6. Refer to electrical plans for details.
7. Refer to mechanical plans for details.
8. Refer to structural plans for details.
9. Refer to civil engineering plans for details.
10. Refer to landscape architecture plans for details.
11. Refer to interior design plans for details.
12. Refer to finishes plans for details.
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96. Refer to keys for details.
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98. Refer to keys for details.
99. Refer to legends for details.
100. Refer to keys for details.
## General Notes

- Walls and ceilings are NOT TYP. FINISHED with a smooth finish. GWB to match the TYP. MATERIAL and finish.
- Not factory finished throughout, including ductwork, conduits, attachments, and other fasteners. Prepare for finish per manufacturer recommendations.
- All other applied or miscellaneous debris including gum, tape, and staples are to be removed.
- Clean all exposed wires, conduit, and附件. Recessed lights are to be installed in accordance with the manufacturer's instructions.
- All other applied or miscellaneous debris including gum, tape, and staples are to be removed.
- All existing flood, emergency, and area lights are to be coordinated with the electrical and fire alarm contractors. Patch holes in walls and ceilings prior to any wall patching, cleaning, or repair (interior or exterior).
- Following:
  - PRIOR TO ANY WALL PATCHING CLEANING OR REPAIR (INTERIOR OR EXTERIOR) REMOVE THE WALL AND SEAL.
  - SPRINKLER HEADS.
  - THROUGH WALLS. SEE REFLECTED CEILING PLANS (A2.08, A2.09).
  - BACK OF FIXTURE WHERE FIXTURE IS COLUMN MOUNTED.
  - AND OTHER FASTENERS.
  - THIS WORK WITH THE ELECTRICAL AND FIRE ALARM CONTRACTORS. PATCH HOLES IN WALLS AND CEILINGS PRIOR TO ANY WALL PATCHING, CLEANING, OR REPAIR (INTERIOR OR EXTERIOR). REMOVE THE WALL AND SEAL.
  - DUAL MOUNT BRACKETS TO THE TOP OF DEVELOPMENT.
  - INSTALLING NEW WORK OR PAINTING. PREP FOR PAINT PER SPECIFICATIONS.
  - PROVIDE GENERAL CLEANING OF ALL EXPOSED WALLS (INTERIOR AND EXTERIOR) PRIOR TO INSTALLING NEW WORK. INSTALLING NEW WORK OR PAINTING. PREP FOR PAINT PER SPECIFICATIONS.

## Table - Interior Elevations

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<thead>
<tr>
<th>No.</th>
<th>Material</th>
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<td>Wood slats</td>
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<td>5</td>
<td>Corner guard</td>
<td>Per 5/A9.52</td>
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<td>6</td>
<td>Mop sink</td>
<td>Per plumbing drawings</td>
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<td>Fan coil</td>
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<td>9</td>
<td>Upper cabinets</td>
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</table>

## Keynotes - Interior Elevations

- See foodservice drawings for additional information.
- All accessible mounting heights and clearances, see accessibility detail sheet.
- All countertops and casework surfaces are to be installed 34" max AFF. for ADA.
- Not used.
- Walls and ceilings are NOT TYP. FINISHED with a smooth finish. GWB to match the TYP. MATERIAL and finish.
KEYNOTES - INTERIOR ELEVATIONS

- WALLS
  - MATERIAL: PVC, CLAY TILE, LAMINATE, WOOD
  - FINISH: LAQUER, CLEAR COAT
- LEGEND - INTERIOR ELEVATIONS

- WALL INFILL: SMOOTH FINISH ACROSS (E) AND (N) WALL. GWB TO MATCH (E).
- WALL BASE: REFER TO FINISH SCHEDULE (A2.07).
- WALL / INFILL SECTION TO MATCH EXISTING ADJACENT
- KEYNOTES - INTERIOR ELEVATIONS

- GENERAL NOTES
  - AUCTION WORKS COUNTER TO INTERIOR AND EXTERIOR CURTAIN WALLS TO MATCH ADJACENT
  - CONTRACTOR SHALL PREP & PAINT ALL EXPOSED CONDUIT, DUCT, PIPE, FITTINGS, BOXES, CABLE, AND OTHER FASTENERS.
  - CONTRACTOR SHALL PREP AND PAINT ALL INTERIOR AND EXTERIOR SURFACES WHICH ARE NOT USED.
  - PROVIDE GENERAL CLEANING OF ALL EXPOSED WALLS (INTERIOR AND EXTERIOR) PRIOR TO INSTALLING NEW WORK, OR PAINTING. PREP FOR PAINT PER SPECIFICATIONS.
- LEGEND - INTERIOR ELEVATIONS

- WALLS
  - MATERIAL: PVC, CLAY TILE, LAMINATE, WOOD
  - FINISH: LAQUER, CLEAR COAT

- CONTACTORS AND CORNER MOLDS ARE TO BE USED WHERE REFLECTIVE ORverständlich disruption A2.07 FOR DETAILS.
A9.52

1X8 VGDF SLATS

3/8" MACHINE BOLTS

THROUGH MOUNTING PLATE:

DOUBLE ROW EACH END.

CUT THREADS FLUSH.

ANTI-SWAY BASEPLATE

WHERE OCCURS: S.S.D.

3"

7" X 3" STEEL PLATE: WELDED TO CHANNEL

3/8" MACHINE BOLTS WITH

ROUND WASHERS:

DAPPED-IN.

C8 PER STRUCTURAL

1X8 VGDF: CLEAR COAT FINISH

7 1/4"

CENTER SLATS ON CHANNEL

ANTI-SWAY POST BASE PLATE WELDED TO

CHANNEL PER STRUCTURAL

ALIGN EDGE OF PLATE WITH EDGE OF CHANNEL:

GRIND WELDS SMOOTH ALONG FACE.

HSS WELDED ANTI-SWAY AND SUPPORT

POST PER STRUCTURAL. SEE DETAIL 4/--.

NOTE: GRIND ALL WELDS SMOOTH: PAINT ALL

COMPONENTS: WOOD SLATS SHALL HAVE

POLYURETHANE CLEAR COATING, ALL SIDES/EDGES

PRIOR TO INSTALL

C8 PER STRUCTURAL BEYOND

LINE OF WALL SURFACE

1/4" PLATE STIFFENERS:

WELD TO CHANNEL

FRAME AND TO (E)

BEAM. SEE 5/A8.00.

LIGHT FIXTURES: SEE RCP

FOR SPACING. SEE SHEET

A8.60 FOR MOUNTING.

STEEL CHANNEL FRAME

WOOD SLATS

C2

12' - 6"

VARIES: SEE RCP

7 3/4"

ANTI-SWAY POST: SEE

STRUCTURAL FOR

LOCATIONS AND

ATTACHMENTS.
### WATER HEATER SCHEDULE

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<th>DESCRIPTION</th>
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### KITCHEN EQUIPMENT CROSSOVER SCHEDULE

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### HEAT TRACE

- Trace heating pipes to prevent freezing.

### PRESSURE EXPANSION JOINT METAL FLANGE METAL COUPLING

- Place metal coupling at 0.5 in the expansion joint.
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* See sheet FS-502 for additional requirements with supplier.