South El Monte High School Modernization
El Monte Unified High School District

Addendum 2

Project Reference: South El Monte High School Modernization  
Date: 11/18/2022

DLR Group Project: 75-20225-00  
DSA Application #: 03 – 1222081

Submitted By: Hernan Chavez, Project Manager

To: Prospective Bidders

Attention: Cost Estimator

This Addendum forms a part of the Contract Documents and modifies the original documents approved by the Division of the State Architect (DSA) on September 21, 2022. The following changes, deletions, additions and/or alterations in, on and to the documents shall apply to proposals made for the execution of the various parts of the work affected thereby. All clouded revisions on any attached Addendum documents shall be fully made a part of the contract documents and compliment what is being listed in the Addendum narrative.

Careful note of this addendum shall be taken by all parties of interest so that the proper allowance may be made in all computations, estimates, and contracts, and all trades affected shall be fully advised in the performance of the work which will be required of them.

Acknowledge receipt of this addendum in the space provided on the Bid Form. Failure to do so may subject the bidder to disqualification.

ITEM DESCRIPTION:

2.0 ADDENDUM 2 – SCOPE OF WORK ASSIGNMENT

2.1. Refer to the attached Addendum 2 scope of work assignments.

PROJECT MANUAL AND TECHNICAL SPECIFICATIONS

2.2. The following REVISED specification sections are hereby issued – remove and replace existing in their entirety:

2.2.1. 11 61 19 THEATRICAL LIGHTING CONTROL SYSTEM
2.2.2. 23 09 00 BUILDING MANAGEMENT AND CONTROL SYSTEMS
  2.2.2.1. Mechanical systems shall be tied into existing Carrier i-Vu controls as indicated in contract documents. Provide new controls to new air conditioning units, boilers and exhaust fans and tie into existing Carrier i-Vu control system. Reconnect controls to replacement towers.
  2.2.2.2. See revised drawing M0.05 Mechanical Piping and Controls diagrams.
2.2.2.3. Replace all disabled motorized dampers at OSA/Exhaust louvers at WSHP’s with backdraft dampers. Backdraft Dampers (BDD) shall be the same size as the duct connection.

2.3. The following NEW specification sections are hereby issued:

2.3.1. 32 31 19 – ORNAMENTAL METAL FENCES AND GATES

**DRAWINGS**

2.4. The following REVISED drawings are hereby issued – remove and replace the previous sheets in their entirety:

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2.5. EXPERIMENTAL GRAPHICS PRICING SET – Refer to the attached XGD pricing set for custom graphics and signage to be provided throughout the campus.

Sincerely,
Jesse Miller, AIA, Assoc. DBIA
DLR Group

Cc:
Norma Macias, Director of Facilities, Maintenance, Operations & Transportation – El Monte Union High School District
Mike Arnold - Erickson Hall
Jorge Cruz – Erickson Hall
Cecilia Galaviz – Erickson Hall
Addendum 2 – Scope of Work Assignment

The changes, deletions, additions and/or alterations shown on revised Addendum 2 plan sheets and specs shall be reflected on each trade contractors bid package and seen as supplemental to the assignments specifically listed on each bid package. This includes but is not limited to; all clouded revisions, additional, and/or modifications made to plan sheets/specs assigned to each contractor's bid package. For clarity, specific items within Addendum 2 have been addressed and assigned to bid packages as outlined below. These assignments are not all inclusive of the changes in Addendum 2. It is the bidder’s responsibility to review the addendum in its entirety and capture all appropriate scopes of work assignments.

- **Bid Package 01 (GC)**
  - Furnish and install new Bldg. E exterior signage as shown on the Experimental Graphics and Signage Supplementary sheets (Addendum 2).

- **Bid Package 02 (Steel and Metal Fabrication)**
  - Responsible for new Spec Section 32 31 19 Ornamental Metal Fences and Gates

- **Bid Package 03 Rough Carpentry and Architectural Woodwork**
  - Provide backing for Bldg. E exterior signage as shown on Experimental Graphics and Signage Supplementary sheets (Addendum 2).
  - Provide backing for new “SEM” sign in Bldg. A Admin Office as shown on Experimental Graphics and Signage Supplementary sheets (Addendum 2).

- **Bid Package 08 (Ceilings & Wall Systems)**
  - Furnish and install vinyl wall covering shown on Experimental Graphics and Signage Supplementary sheets (Addendum 2).

- **Bid Package 09 (Painting)**
  - Provide labor, material and equipment for exterior paint shown on Experimental Graphics and Signage Supplementary sheets (Addendum 2).

- **Bid Package 011 (Electrical)**
  - Provide electrical and low voltage tie-ins for new “Marquee” lighting at Bldg. E as shown on Sheet E0.03 and E2.E1.
  - Provide electrical to LED illuminated “SEM” sign shown on Experimental Graphics and Signage Supplementary sheets (Addendum 2).
  - Responsible for changes made to Spec Section 11 61 19 Theatrical Lighting Control System.

- **Bid Package 013 (HVAC)**
  - Responsible for changes made to Spec Section 23 09 00 Building Management and Control Systems.
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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes:

B. Theatrical lighting control system
   1. Feed-through relay panels, as indicated on drawings
   2. Ethernet control distribution system with Ethernet taps, network switches, and patch bays, and with interface to architectural control processor
   3. DMX-512 control distribution system and Ethernet-to-DMX gateways
   4. Rack and panel enclosures for equipment
   5. Stage lighting control console and accessories

C. Architectural lighting control system
   1. Lighting control network processor with interfaces to building automation system, fire alarm system, and related input/output interfaces
   2. Pushbutton and touch-screen architectural lighting control stations
   3. Occupancy / vacancy sensors and daylight sensors
   4. UL924 DMX Bypass controllers

D. It shall be the responsibility of the Lighting Control System Manufacturer to furnish equipment complete in all respects and to provide any additional equipment required to fulfill the intent of these drawings and specifications regardless of whether or not such items are herein specified or indicated.

1.3 MANUFACTURING STANDARDS

A. All work shall be manufactured in accordance with the Division 26 specifications, the latest editions of applicable publications, and standards of the following organizations:
   1. National Electric Code (NEC) and all prevailing local and state regulations including:
      a. ANSI/NFPA 70: National Electrical Code
   2. Entertainment Services and Technology Association (ESTA) including:
      b. ANSI/ESTA E1.11-2008 (R2018): USITT DMX512-A
      c. ANSI/ESTA E1.17-2015: Architecture for Control Networks (ACN)
      d. ANSI/ESTA I E1.20-2010: Remote Device Management over USITT DMX512
      e. ANSI/ESTA E1.27-1-2006 (R2016): Portable Control Cables for DMX512
      f. ANSI/ESTA E1.27-2-2009 (R2014): Permanently Installed Control Cables for DMX512
1.4 SUBMITTALS

A. Lighting Control System Manufacturer shall prepare and submit complete shop drawings according to the requirements set forth in the Contract Documents.

B. Product Data Sheets
   1. For Manufacturer standard panels, enclosures, modules, devices, and other equipment, with options and other variables clearly noted on data sheets.

C. Shop Drawings
   1. Shop drawings shall be reviewed by the Architect before fabrication shall begin.
      a. Such review does not relieve the Lighting Control System Manufacturer of the responsibility of providing equipment in accordance with this Specification.
   2. Shop drawings shall show optical or transformer isolation of all control data lines between dimmer racks, panels, and architectural lighting processor.
   3. Shop drawings shall show materials, finishes, metal gauges, overall and detail dimensions, sizes, electrical and mechanical connections, fasteners, welds, provisions for the work of others, and similar information.
   4. Shop drawings shall indicate complete details of equipment, including manufacturer's catalog numbers for components, and shall include complete wiring diagrams. Confirm weight for each device to show conformance with drawings.
   5. Any deviation from this Specification shall be "starred" and noted in letters a minimum 1/4" high.
      a. In order for a deviation to be considered, it shall upgrade the quality of the equipment or respond to a field condition.
   6. The reviewed shop drawings shall be updated to show any changes made during manufacturing and assembly and shall be sent to the Architect before the equipment is delivered.

D. Lighting Control System Manufacturer shall provide installation instructions for all equipment. These instructions shall include connection diagrams, termination designations, etc.

E. Coordination Drawings:
   1. Submit evidence that lighting controls are compatible with connected monitoring and control devices and systems specified in other Sections.
      a. Show interconnecting signal and control wiring and interfacing devices that prove compatibility of inputs and outputs.
      b. For networked controls, list network protocols and provide statements from manufacturers that input and output devices meet interoperability requirements of the network protocol.
      c. Coordinate zoning and fixture addressing with Electrical Contractor. Provide fixture address list for all architectural lighting fixtures controlled by system. Electrical Contractor to provide control riser for architectural lighting layout for review and coordination based on wire runs.

F. After the installation is complete, the Lighting Control System Manufacturer shall provide the Owner with Operations and Maintenance Manuals not more than fourteen (14) days after the checkout is completed.
   1. One (1) O&M manual shall be a printed “hard” copy and O&M manual shall also be provided in electronic format on two (2) flash drives.
2. Each O&M manual shall include, but not be limited to, the following:
   a. Copies of all “record” shop drawings.
   b. Detailed panel schedules and architectural fixture addresses / patch information.
   c. Catalog cuts of all equipment provided.
   d. Recommendations for periodic maintenance.
   e. Catalog numbers and manufacturer’s names and addresses for perishable items such as pilot lamps and fuses.
   f. Diagnostic procedures.
   g. Internet address for online access to manuals, product literature and troubleshooting guides.
   h. Emergency and normal repair telephone contact sheet for 7-day, 24-hour service.

3. Lighting Control System Manufacturer shall provide the Owner with three (3) instruction manuals for each control console type.
   a. Instruction manual shall be supplied to the Owner’s Representative on the day of the Lighting Control System checkout.
   b. Instruction manuals may be requested by the Owner’s Representative at a date prior to the system checkout.

1.5 SYSTEM INTEGRATORS

A. System Integrator shall be responsible for scope outlined in this Specification and for the following related Specification sections:
   1. 116113 – Theatrical Lighting Fixtures and Accessories
   2. 116116 – Theatrical Wiring Devices

B. System Integrator must have minimum five (5) years’ experience with supply, installation, commissioning, and integration of theatrical and architectural lighting control systems. System Integrator must have at least ten (10) recent projects of similar scope and characteristics to those specified herein.

C. System integrator shall be responsible for furnishing factory authorized personnel for system startup, programming, commissioning, and Owner training.
   1. System Integrators for the Work of this Section include:
      a. Holzmueller Corporation – San Francisco, CA – 415-826-8383
      b. LVH Entertainment Systems, Los Angeles, CA - 805-278-4584
      c. Musson Theatrical Inc. – Santa Clara, CA – 408-986-0210
      d. Sacramento Theatrical Lighting – Sacramento, CA – 916-447-3258

1.6 PROJECT CONDITIONS

A. Do not install equipment until following conditions can be maintained in spaces to receive equipment:
   1. Ambient temperature: 0 degrees to 40 degrees C (32 degrees to 104 degrees F).
   2. Relative humidity: Maximum 90 percent, non-condensing.
   3. Lighting Control System must be protected from dust during installation.

1.7 COORDINATION

A. Coordinate lighting control components to form an integrated interconnection of compatible components.
1. Match components and interconnections for optimum performance of lighting control functions.
2. Coordinate lighting controls with BAS if applicable. Design display graphics showing building areas controlled; include the status of lighting controls in each area.
3. Coordinate lighting controls with that in Sections specifying distribution components that are monitored or controlled by power monitoring and control equipment.

B. Coordinate lighting control loads specified in this Section with components providing overcurrent protection as specified in Division 26 Section "Panelboards."

1.8 LABELING

A. Ethernet Taps and DMX devices shall have Control Device Number (i.e. ‘ET-5’) clearly indicated with minimum 1/4” tall white on black characters on the faceplate. Label shall be centered above control port(s).

1. All faceplate labels shall be as shown on the QT-series Drawings and verified in Shop Drawings.

B. Furnish and install removable adhesive labels for each Theatrical Control Device back box and rear of faceplate, indicating the Control Device Number (i.e. ‘ET-5’) and serial code to facilitate programming and commissioning.

1.9 DELIVERY

A. The Lighting Control System Manufacturer shall coordinate delivery of all equipment with the Construction Manager and/or Electrical Contractor.

B. If required by the Construction Manager or Electrical Contractor, equipment shall be delivered in a minimum of three (3) separate shipments that shall include:

1. Shipment #1: All items in which conduit is terminated which includes dimmer racks, panels, control station back boxes, etc.
2. Shipment #2: All items in which wiring is terminated including control station faceplates, etc.
3. Shipment #3: All items that are not required until system activation by the Lighting Control System Manufacturer’s field service representative. This shall include dimmer modules, electronics modules, control consoles, gateways, monitors, cables, etc.

C. Lighting Control System Manufacturer shall deliver all material to the job site suitably crated, packed, and protected, and bearing the manufacturer’s identification label and the nomenclature of the product(s) found in each carton or crate.

D. If, through no fault of the Owner, the timely completion of the work of this Section is imperiled, the Lighting Control System Manufacturer shall prevent or minimize any delay by shipping the required product to the job site by air freight, at no additional cost to the Owner.

E. Bid price shall include full freight and insurance charges for all items to the job site.
1.10 QUALITY ASSURANCE

A. Manufacturer: Minimum 10 years' experience in manufacture of architectural and theatrical lighting controls.

B. Manufacturer's Quality System: Registered to ISO 9001:2000 Quality Standard, including in-house engineering for product design activities.

C. Source Limitations: Obtain lighting control and power distribution components through one source from a single manufacturer wherever possible. All components shall be furnished by the Integrator regardless of source.

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

E. Comply with 47 CFR, Subparts A and B, for Class A digital devices.

F. Comply with NFPA 70.

1.11 SOFTWARE SERVICE AGREEMENT

A. Technical Support: Beginning with Substantial Completion, provide software support for two (2) years. Support shall include 24-hour telephone support with guaranteed callback time of less than one hour.

B. Upgrade Service: Update software and firmware to latest version at Project completion. Install and program software upgrades that become available within two (2) years from date of Substantial Completion. Upgrading of software shall include operating systems where applicable. Upgrade shall include new or revised licenses for use of the software.
   1. Provide 30-day notice to Owner to allow scheduling and access to system and to allow Owner to upgrade computer equipment, if necessary.

1.12 WARRANTY

A. Lighting Control System Manufacturer agrees to make all repairs, including replacement of components and parts, made necessary due to defects in design, workmanship, and materials without additional cost to the Owner for a period of two (2) years from the date of acceptance of the completed system.

B. In the event of a system failure during the warranty period, manufacturer agrees to send to the job the necessary field service technician(s) within twenty-four (24) hours of notification.
   1. Technician(s) shall remain on the job until all necessary repairs have been made and the system is operational to the satisfaction of the Owner.
PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design
1. Subject to compliance with these specifications, the design basis networked lighting control system is Paradigm Control as manufactured by Electronic Theatre Controls of Middleton, Wisconsin. Contact:
   a. Randy Pybas, Western Sales Manager – ETC
      1) 323-461-0216
      2) Randy.pybas@etcconnect.com
2. Basis of design for other system components includes:
   a. Network Switches
      1) GigaCore 14R as manufactured by Luminex Network Intelligence of Hechtel-Eksel, Belgium.
   b. Rack UPS units
      1) 5P1500R series from Eaton Corporation of Cleveland, OH

B. Equal Manufacturers
1. Subject to Division 01 Specifications, other manufacturers may submit for consideration as equal to the design basis manufacturer products. Submittals for consideration must show conformance to project Specifications and system design requirements.
2. Final determination of suitability shall be at the discretion of the Specifier.
3. Manufacturers pre-approved to bid subject to the above requirements and to this Specification include the following:
   a. Philips Strand Lighting of Dallas, TX.
      1) Contact: Leonard Miller, North American Sales Manager
         2) 214 647 7985 – leonard.miller@philips.com
   b. American Power Conversion, Inc. – Kingston, RI (Rack UPS)

2.2 LIGHTING CONTROL RELAY PANELS (LRP-##)

A. General:
1. Each relay panel shall consist of up to (48) network-controlled relays. System shall be UL listed and labeled.
2. Relays shall be configured for single or dual pole load control as scheduled.
3. Relays shall be remotely operated by network communication link.
4. Relay panel shall have the capability to act as a standalone lighting control system with the following capabilities:
   a. Internal Astronomical Time Clock for programmed events.
   b. Accepts input from external button stations for recall of presets.
   c. Signal arbitration to prioritize inputs by source (sACN, DMX, Preset Stations, Time Clock, etc).
   d. Configurable loss-of-signal behavior including ‘hold last look’ and ‘activate preset’.
5. Relay panel shall be equipped with UL924 rated input for triggering emergency ‘panic’ preset.
6. USB port for upload of configuration files and firmware updates.

B. Physical:
1. Cabinets and Enclosures: NEMA 1 enclosure sized to accept required relays. Surface mounted cover as required with captive screws in a hinged, lockable configuration.
2. Interior: Interiors shall be provided with installed and tested relays and interface modules.
3. Panel side-mount enclosure shall provide low voltage control interface between network and relays, compliant with partitioning requirements for separation of line and low voltage.

4. Provide physical separators between relays fed by 120V and 277V circuits, as well as between relays fed by Normal and Emergency circuits, as noted on each panel’s associated Relay Panel Schedule on QT-series Drawings.

C. Electrical:
   1. Relays:
      a. Mechanically held latching relays, 20A or 30A tungsten and NEMA electronic ballast rated, as scheduled.
      b. Rated for 50,000 ON/OFF cycles at full load.
      c. Support #10 - #14 AWG solid or stranded wire.
      d. 120V and 277V rated.
      e. FCC approved for commercial use.

D. Control Electronics:
   1. Control electronics shall be integral to the panel side enclosure, providing network and user interface for individual control of relays in panelboard.
   2. Configuration of network addressing shall be by means of digital graphical display interface or by network port. Status LEDs shall indicate presence of Power and DMX signal.
   3. Control and communication signals shall be accommodated by means of system network and DMX512 interfaces.
      a. The system network interface shall serve as primary integrating means between the rack electronics and the lighting control network, and shall also support remote configuration, file storage, playback, and monitoring capabilities from other devices on the network.
      b. There shall be at least one (1) optically isolated DMX512 input and one (1) optically isolated DMX512 output per panel.
   4. Furnish ride-through power supply to permit electronics to remain energized during short duration loss of power, such as during transfer to backup generator.
   5. Furnish 0-10v control interface card in each panel.

E. Basis of Design
   1. Basis of Design for Lighting Control Relay Panels shall be:
      a. Echo Feedthrough, as manufactured by Electronic Theatre Controls

2.4 LIGHTING CONTROL NETWORK AND INTERFACE

A. General
   1. Furnish and install a complete lighting control network system, capable of supporting the specified dimming racks, lighting control panelboards and relay panels, stage lighting control console, architectural control stations, time and calendar schedules, and related network devices indicated on the drawings and in this Specification.
   2. The network shall use category 5e Ethernet distribution to communicate between control consoles, dimmer racks, nodes, and computers.
   3. Manufacturer specified wiring and topology shall be used to communicate with control stations, sensor devices and relay panels.

B. Network Components
   1. Control processors
THEATRICAL LIGHTING CONTROL SYSTEM

a. Furnish architectural processor as required to interface dimmer rack, lighting control relay panels, control stations, sensors, system I/O contacts, and any appurtenant devices or equipment required for system to function fully as intended. Processor shall provide necessary programming interface for setup and configuration of system and system components.

b. Furnish a second backup processor, which shall be configured as a redundant standby to the primary processor.

2. Ethernet switches and patch bays
   a. Switches shall have integral Power over Ethernet (PoE) following IEEE 802.3 standard.
   b. Furnish 10/100 Ethernet switches with port quantity as required for system, plus 25% spare for future expansion at each rack location.
   c. Patch bays in port quantities as required for devices in system, plus 25% spare for future expansion at each rack location.

3. DMX signal splitters
   a. ANSI/USITT E1.1-2008 compliant DMX512 opto-isolating splitters, in quantity and configuration of inputs and outputs as required for system.
   b. All DMX signal cables terminating at the splitter location shall be outfitted with 5-pin XLR connectors or RJ45 connectors as necessary to permit user patching where required. This includes signals to DMX node receptacles, dimmers, and relay panels.

4. Equipment racks
   a. Wall or floor mounted 19" equipment racks with mounting rails, hinged locking door, and sized to accommodate all required processing equipment including that indicated above. Furnish in quantities shown on drawings plus any additional required for complete system.
   b. Each rack shall have minimum of one four-space contiguous blank section with cover plate for future equipment addition.
   c. Each rack shall be furnished with a three-space pull out drawer for storage of manuals, patch cabling, and user notes.
   d. Racks shall be Middle Atlantic EWR series or equal.
   e. Coordinate electrical power connections for rack contents.

5. Ethernet cabling
   a. Ethernet cabling used in theatrical lighting control network shall have the following properties:
      1) Comply with NEMA WC-63.1 Category 5e, UL verified.
      2) Comply with TIA 568.C.2.
      3) Outer jacket shall be PURPLE in color.
   b. Furnish and install RJ45 category 5 patch cables as necessary to fully patch between all network switch ports and patch bay ports in each rack location, plus 20% spares.
   c. Furnish additional RJ45 category 5 patch cables to allow connection of distributed Ethernet taps to portable Ethernet-to-DMX gateways in the performance spaces. Refer to Theatrical Lighting Fixtures and Accessories Schedule on sheet QT5.06 for lengths and quantities to be furnished.

6. DMX network cabling
   a. Furnish and install 5-pin XLR M/F DMX jumper patch cables as necessary to fully patch between all DMX-512 splitter ports and DMX patch points, racks, or other DMX devices at equipment racks.
   b. Furnish additional 5-pin XLR M/F DMX jumper cables to allow connection of DMX node devices to portable dimmer bars, luminaires, and other devices in the performance spaces. Refer to Theatrical Lighting Fixtures and Accessories Schedule on sheet QT-502 for lengths and quantities to be furnished.

7. Ethernet taps

THEATRICAL LIGHTING CONTROL SYSTEM
a. Mounting type as shown on drawings
b. Each tap with two (2) RJ45 Ethernet connectors, discretely fed from patch panel, unless noted otherwise.

8. Ethernet-to-DMX gateways/nodes
a. Mounting as shown on drawings, furnish with necessary hardware.
b. Each gateway/node with one, two, or four each 5-pin XLR connectors configurable for DMX512 input or output, or for ESTA/ANSI E1.20 two-way communication. Each connector may be addressed to discrete universes. Gateway/node universes shall be programmed to not overlap architectural lighting and wiring device universes.
c. Surface mount gateways/nodes shall have Ethernet wire feed from patch panel to device.
d. Portable gateways/nodes shall have one (1) RJ45 Ethernet connection to permit patching into any Ethernet tap shown on drawings. Each shall be outfitted with 10'-0" black category cable, black Light Source MAB mega clamp or equal aluminum pipe clamp and black safety cable.
e. Refer to drawings and schedules for quantity of each gateway/node type to be furnished.

9. Emergency signal overrides
a. Furnish UL924 listed emergency signal override devices that shall drive selected DMX addresses to full output when triggered by loss of normal power or by contact closure from fire alarm control panel. Override device shall be an ETC model DEBC or equal. Quantity as necessary to serve each DMX universe and fixture group that is served from Emergency lighting branch.
b. Refer E-series drawings for emergency lighting requirements for architectural fixtures.

10. Input/Output devices for communication with other systems
a. Furnish RS-232 communication interface for connection with audio-visual network.
b. Furnish dry contact closures configurable as input or output signals, to connect with fire alarm system, effects controls, shading systems, and future interfaces. Confirm all system contacts in shop drawings.
c. Furnish BACnet-over-IP interface device to permit future communication between Building Automation System and Lighting Control System.

2.5 STAGE LIGHTING CONTROL CONSOLES

A. Black Box Theater lighting control console (LCC-1):
1. Consoles shall be the following:
   a. Electronic Theatre Controls – Ion 20 Xe series.
2. Consoles shall have the following minimum capabilities:
   a. 2,048 outputs
   b. Configurable encoders for intelligent lighting attributes
   c. DVI monitor output
   d. USB ports for data storage and accessory connections
   e. Remote focus connection
   f. Ethernet port for network connection
   g. DMX-512 ports for at least (2) universes
   h. Offline programming software for Macintosh or Windows.
3. The following accessories shall be furnished with the control console:
   a. (2) 21" multi-touch monitors with power supply and control cables.
   b. USB keyboard and mouse.
   c. (2) commercial grade USB flash drives for backup storage, minimum 1Gb each.
   d. (1) 25’ RJ45 Ethernet control cable for connection of console to network taps.
2.6 ARCHITECTURAL LIGHTING CONTROL STATIONS

A. Stations shall serve as user interface to recall and manipulate common room lighting presets via the lighting control network.

B. Pushbutton stations shall have quantity of buttons / faders as scheduled.

C. LCD Touch-screen stations
   1. Stations shall be minimum 16-bit color with resolution of minimum 600x360.
   2. Stations shall have auto-fade with adjustable time out and shall adjust brightness proportionally to room ambient light levels.
   3. Station programming shall support up to (10) discrete screen shots configurable for preset recall, virtual faders, clock and time scheduling functions, dynamic color wheel for LED fixture color selection, and group selection and assignment.
   4. Station shall be configured with code lockout on home page.

D. Stations shall operate on low voltage network bus as specified by Manufacturer, and shall be programmable via this network. Separate control device programming in Black Box Theater / Commons/Presentation Arena from control device programming in Broadcasting/TV Studio.

2.7 NETWORK OCCUPANCY / PHOTOCELL SENSORS

A. Sensors
   1. Sensor shall be low-voltage type with 24vdc normally closed contacts to permit series installation of sensors on a contact loop home-run to lighting control network panel. Refer Electrical for device locations and quantities.
   2. Sensors shall be powered by a power supply transformer approved by Manufacturer, with class 2 output not to exceed 24vdc and 1A current. Supply shall be located in accessible area near sensors, and fed from unswitched power source.
   3. Sensors shall be PIR passive infrared type, with rectangular corridor coverage pattern and sensitivity to half-step walking motion at minimum 25 foot distance from sensor. Sensor shall detect 6-inch movement of any portion of a body presenting a target of at least 48 square inches to the sensor at this distance.
   4. Sensors shall be mounted on junction box at elevation shown on drawings. Orient sensor head to provide maximum coverage of corridor.
   5. Coordinate sensor placement to avoid false detection from supply air diffusers in vicinity.
   6. Mask sensors as necessary to avoid nuisance detection from adjacent areas when doors are left open.
   7. Provide timed override for sensors at LCD Touch-screen architectural master stations so sensors do not activate lighting functions during performances. Override shall time out
PART 3 - EXECUTION

3.1 EXECUTION

A. Verify that surfaces are ready to receive work.

B. Verify field dimensions and coordinate physical size of all equipment with the architectural requirements of the spaces into which they are to be installed. Allow space for adequate ventilation and circulation of air.

C. Verify that required utilities are available, in proper location, and ready for use.

D. Beginning of installation means installer accepts existing conditions.

E. Install in accordance with manufacturer's instructions and approved shop drawings.

F. All wiring shall be installed in conduit.

G. All branch load circuits shall be live tested before connecting the loads to the lighting control panels.

3.2 SUPPORT SERVICES

A. System Startup
   1. Upon completion of installation, Contractor shall notify the Lighting Control System manufacturer that the system is ready for formal checkout and programming. No power shall be applied to the Lighting Control System unless specifically authorized by written instructions from the manufacturer.
   2. Manufacturer shall provide Factory-Authorized Technician to confirm proper installation and operation of all system components.

B. Testing
   1. System shall undergo complete functional testing by a Factory-Authorized Technician. All loads shall be tested live for continuity and freedom from defects and all control wiring shall be tested for continuity and connections prior to energizing the system components.
   2. Contractor shall be responsible for correction of any improper wiring or component installation as identified by the Factory-Authorized Technician during testing. Contractor shall be responsible for any return visits by Factory-Authorized Technician resulting from lack of system readiness for checkout or from any incomplete or incorrect wiring or installation.

C. Initial Programming
   1. Programming of initial button assignments, touch screen page layouts, normal and emergency presets, control priorities, sensor settings, time clock events, etc, shall be performed by a Factory-Authorized Technician. Consultant shall provide instructions for initial programming at request of Factory-Authorized Technician; however, all final decisions regarding programming shall be at the direction of the Owner.
2. Programming and addressing of architectural lighting fixtures by Electrical Contractor. Information on the addressing of architectural lighting fixtures shall be provided to Factory-Authorized Technician as coordination drawing at time of shop drawings.

3.3 OWNER TRAINING

A. General
1. Manufacturer’s authorized technician shall perform Owner Training.
2. Class size is limited to twelve (12) participants and shall include at minimum:
   a. Owner shall provide a list of participants by title. For example, ‘Technical Director, Master Carpenter, Master Electrician, etc.’ To facilitate scheduling, include only mandatory participants on this list. Attendees not on the list will still be permitted to attend.
3. The Lighting System Integrator shall schedule instruction with the Owner’s designated representatives. Agenda shall be sent in advance. All O&M materials, as designated in this Specification, shall be available at the time of training.
4. Instruction shall not necessarily follow immediately after the system check-out and activation.
5. Instruction shall be independent of the system check-out and activation. Length of engineering check-out and activation shall not affect the length of instruction time.
6. At Owner’s discretion, instruction may occur in multiple time blocks.
7. Written documentation of Owner training shall be provided to the Owner upon completion.
   a. Form to include:
      1) The date, time, and location of training.
      2) Name, title, company and signature of trainer.
      3) Name, title, and signature of all participants.
      4) Topics covered at training.
   b. If training is non-continuous, provide one form for each training segment.
8. Training may be video and audio recorded by the Owner at the Owner’s expense.

B. Up to twenty-four (24) hours of Owner training to include the following:
1. Minimum of three (3) separate training sessions with Owner, as follows:
   a. First session shall occur at conclusion of startup and system commissioning and shall include eight (8) hours training time with Owner representatives. This session shall include the following general subjects, but shall be tailored to Owner’s preference at time of training:
      1) General system overview.
      2) Routine care and maintenance.
      3) Operation of dimmer racks and relay panels.
      4) House Light Station operation and configuration, including review of initial programming provided by Consultant.
      5) Lighting Control Console introduction and basic programming
      6) Review of warranty and software updates
2. Second session shall occur no less than two weeks following substantial completion, but within one month of initial training. This session shall include up to an additional eight (8) hours training time with Owner representatives. This session shall include the following general subjects, but shall be tailored to Owner’s preference at time of training:
   a. In-depth Lighting Control Console operation and programming.
   b. House Light Station preset review and adjustment to reflect actual operational needs.
   c. Other review as requested by Owner.
3. Third session of additional eight (8) hours training time shall occur no less than one month after substantial completion, but within three months of initial training. Format and timeline shall be similar to the second session.

END OF SECTION 11 61 19
SECTION 23 09 00 – BUILDING MANAGEMENT AND CONTROL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. The Building Management and Control Systems (BMCS) specified herein shall include materials, operator workstation, building controllers, sensors, control valves, wiring, installation, start-up, testing, documentation and training for a complete operable system as required for this project.

B. Controls Engineering shall be provided by the local controls manufacture representative.

C. Work specified under this section shall be performed by, or under the direct supervision of the local controls manufacture representative, or by a contractor that is certified by the controls manufacture to perform all work within Section 23 09 00 Instrumentation and Control for HVAC and those sections of 23 09 00 that have been specified herein.

D. Alternate techniques, modifications or changes to any aspect of these specifications may be submitted as a voluntary alternate no later than (15) days prior to the bid date and with sufficient information for a complete evaluation. This information shall include product data sheets, a UL508A Standard for Industrial Control Panels statement of compliance for any locally manufactured control panels, a detailed sequence of operation and engineered shop drawing. Shop drawings shall include the following as a minimum. Point to point wiring diagrams for each piece of equipment to be controlled, a network riser diagram that will depict quantity and location of all operator workstation, controllers, routers and repeaters required for this project.

1.2 RELATED SECTIONS

A. Division 1: General Requirements

B. Division 23: Heating, Ventilating, and Air Conditioning (HVAC)

C. Division 26: Electrical

1.3 SUBMITTALS

A. Submit engineered shop drawings, sequences of operation, third party equipment and controls integration points and product data sheets covering all items of equipment for the proposed system prior to installation for approval. Any deviation from the contract documents shall be noted and the drawings signed and dated by the Contractor. Additionally, submit a UL508A Standard for Industrial Control Panels statement of compliance for any locally manufactured control panels.

B. After completion of the installation and commissioning, a full set of as-built documentation shall be turned over to the Owner. The as-built shall include operation and maintenance manuals, sequence of operation, shop drawings and digital copies of the following.

1. Complete BMCS System databases backup

2. Source files for all custom written controller applications

3. Source files for graphics if required for this project
1.4 WARRANTY

A. Components, system software, and parts shall be guaranteed against defects in materials, fabrication, and execution for (1) year from date of system acceptance. Provide labor and materials to repair, reprogram, or replace components at no charge to the Owner during the warranty period.

B. Provide a list of applicable warranties for components, this list shall include warranty information, names, addresses, telephone numbers, and procedures for filing a claim and obtaining warranty services.

C. Respond to the Owner’s request for warranty service within (24) hours during normal business hours. Submit records of the nature of the call, the work performed, and the parts replaced or service rendered.

D. Contractor shall request VPN access from owner and provide remote maintenance, software updates and repair service for the duration of the warranty period.

1.5 TRAINING

A. Provide a competent instructor who is factory trained and has comprehensive knowledge of system components and operations to provide full instructions to designated personnel in the system operation, maintenance, and programming. Training shall be specifically oriented to installed equipment and systems.

B. Provide (8) hours of onsite owner familiarization and training for the installed system. Training shall include system overview, time schedules, emergency operation, and programming and report generation.

C. Owner employees attending this training session shall be provided with the following documentation:
   1. System layout point to point connection diagram.
   2. System components cut sheets.
   3. Operations and maintenance data.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Do not store or install electronic hardware on the project until non-condensing environmental conditions have been established.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. BMCS Equipment: Carrier OPEN BACnet Controls. No substitutions will be accepted.

B. Controls installation will be by Carrier Controls Expert Dealer.

C. The local manufacture representative will operate a free 40 hour a week, toll free customer support hotline for additional user support services that are required.
2.2 SYSTEM LISTING COMPLIANCE

A. Locally manufactured control panels shall meet all requirements as outlined by UL 508A standard and shall be both approved and listed by Underwriters Laboratories, Inc.

2.3 COMMUNICATION

A. Controller and operator interface communication shall conform to ANSI/ASHRAE Standard 135, BACnet.

B. Each controller shall have a communication port for temporary connection to a laptop computer or other operator interface. Connection shall support memory downloads and other commissioning and troubleshooting operations.

C. Use owner provided Ethernet backbone for network segments.

2.4 OPERATOR INTERFACE

A. Description. The control system shall be as shown and consist of a high-speed, peer-to-peer network of BMCS controllers and a stand-alone web server operator interface. Depict each mechanical system and building floor plan by a point-and-click graphic. A web server shall gather data from this system and generate web pages accessible through a conventional web browser on each PC connected to the network. Operators with sufficient access level shall have an ability to make changes to all system and equipment graphics in the web server in addition to having full BMCS system access to make configuration changes to the control system. Any tools required for making graphic changes shall be provided with web server.

B. Operator Interface. (1) Existing Carrier I-Vu Pro Web server interface as shown on the system drawings.

1. With the use of an owner provided remote SMTP email server the operators interface web server shall notify personnel of an alarm and record information about an alarm in the BMCS system.

2. Any required installation or commissioning software shall be provided to the owner.

C. Operator Functions. Operator interface shall allow each authorized operator to execute the following functions as a minimum:

1. Log In and Log Out
2. Point-and-click Navigation
3. View and Adjust Equipment Properties
4. View and Adjust Operating Schedules
5. View and Respond to Alarms
6. View and Configure Trends
7. Manage Control System Hardware
8. Manage Operator Access

D. System Graphics. Operator interface shall be graphical and shall include at least one graphic per piece of equipment and graphics that summarize conditions on each floor of each building included in this contract. Indicate thermal comfort on floor plan summary graphics using dynamic colors to represent zone temperature relative to zone setpoint.
E. Trend Configuration. Operator shall be able to configure trend sample or change of value (COV) interval, start time, and stop time for each system data object and shall be able to retrieve data for use in spreadsheets and standard database programs.

F. Reports and Logs. Operator shall be able to select, to modify, to create, and to print reports and logs. Furnish the following standard system reports:

1. Alarm Reports
2. Schedule Reports
3. Security Reports
4. Commissioning Reports
5. Equipment Reports

G. Energy Conservation

1. Outside Air Lockout. Lock out heating or cooling modes based on configurable outside air temperature limits.

2. Demand Limiting
   a. System shall monitor building power consumption from building power meter pulse generator signals or from building feeder line watt transducer or current transformer.
   b. The system shall include all required hardware and software necessary to receive an Automated Demand Response (ADR) signal from the utilities Demand Response Automation Server (DRAS).
   c. When power consumption exceeds adjustable levels, or the system receives an ADR signal from the utility, the system shall automatically adjust set points, and take other programmatic actions to reduce demand.

3. Optimal Start. The system shall bring the conditioned space to within occupied set points prior to the occupied time period to ensure occupant comfort.

2.5 CONTROLLERS

A. General. The control system shall be available as a complete package with the required input sensors and devices readily available. Provide BACnet Building Controllers (BC), Advanced Application Controllers (AAC), Application Specific Controllers (ASC), and Sensors (SEN) as required.

B. Stand-Alone Operation. Each piece of equipment shall be controlled by a single controller to provide stand-alone control in the event of communication failure.

C. Serviceability. Controllers shall have diagnostic LEDs for power, communication, and processor.

D. Rooftop Unit Controller (RTC). Defined as Application Specific Controllers (ASC), shall be factory installed by the HVAC manufacturer and shall control all associated HVAC rooftop equipment functions in a single zone application or as part of a zoning system application.

1. Capacity control shall be based by the RTC internal time clock and setpoints (cooling and heating) coupled with a communicating room sensor. The controls shall provide separate occupied and unoccupied cooling and heating setpoints.
2. RTC shall utilize up to 2 speed of fan control, up to 3 stages of cooling, and up to 4 stages of heating.

3. RTC shall provide economizer control that has been certified for Fault Detection and Diagnostics (FDD) by California Energy Commission (CEC). The FDD system shall detect the following faults:
   a. Air temperature sensor failure/fault
   b. Not economizing when it should
   c. Economizing when it should not
   d. Damper not modulating
   e. Excess outdoor air

E. General Purpose Controller. Defined as Advanced Application Controller (AAC) shall be a solid state micro-controller with pre-tested and factory configured software designed for controlling building equipment using BMCS algorithms and facility management routines. The controller shall be capable of operating in either a stand-alone mode or as part of a network.

2.6 FIELD INSTALLED SENSORS

A. Space Temperature Sensors shall communicate to the controller over a 4-wire communication network and have setpoint adjustment, after hours override, LCD display and a communication service port.

B. Status indication for fans or pumps shall be provided by a split core design current sensing sensor. The sensor shall be installed at the motor starter or motor to provide load indication. The unit shall consist of a current transformer, a solid state current sensing circuit (with adjustable set point) and a solid state switch. A light emitting diode (LED) shall indicate the on off status of the unit.

2.7 CONTROL PANELS

A. Provide single-door, UL 508A Listed; Type 4, wall-mount enclosures for each system under automatic control. Mount relays, switches, and controllers in cabinet and indicators, pilot lights, push buttons and switches flush on enclosure exterior face as required.

B. Fabricate panels from 16 gauge steel with ANSI 61 gray finish and shall include (1) black padlock handle that will accommodate a padlock with up to a 5/16-in. locking bar for secure access to the enclosure contents. All additional latches shall be black non-locking handle type.

C. Provide engraved name plates that identify each control panel and for each component mounted to the exterior of the enclosure.

D. Provide a complete wiring diagram, bill of material for all components and markings with the following information:
   1. Manufacturer's name or trademark
   2. Supply voltage, number of phases, frequency, and full-load current for each incoming supply circuit
   3. Enclosure type number
2.8 SEQUENCE OF OPERATION

A. See Appendix A

PART 3 - EXECUTION

3.1 ELECTRICAL WIRING

A. This contractor is responsible for all low voltage electrical installation and wiring for a fully operational BMCS System as shown on the drawings and shall perform electrical installation in accordance with local and national electrical codes and in accordance with Division 26.

B. Install all HVAC control wiring, 24vdc or less, in electrical metallic tubing (EMT) when wire is concealed in walls and in exposed areas. Rigid metal conduit (RMC) will be used when conduit will be installed on roofs. Plenum wire may be used in ceilings where anchored support is provided every 10 feet.

C. Electrical Contractor is responsible for providing power from local electrical panels to the BMCS System control panels.

D. When transitioning between buildings above or below ground level, provide a pull box with necessary surge suppression hardware to transition exterior rated wiring to interior applications.

3.2 ACCEPTANCE PROCEDURE

A. Upon completion of the installation, the contractor shall start-up the system and perform all necessary calibration and testing to ensure the proper operation of the BMCS System.

B. After all calibration and testing have been completed, the contractor shall schedule a hardware demonstration and system acceptance test to be performed in the presence of the owner.

END OF SECTION 23 09 00
1.0 APPENDIX A

1.1 SEQUENCE OF OPERATION FOR EMUHSD SOUTH EL MONTE HS

1.1.1 GAS/ELECTRIC ROOFTOP UNIT CONTROLLER (AC-M1 THRU M4, AC-K1 AND AC-K2)

Indoor Fan
During Occupied periods, the fan shall operate continuously. During Unoccupied periods, the fan shall operate when the space temperature exceeds the unoccupied heating or cooling setpoints. The fan operates at a variable speed to meet the load conditions and SAT safety requirements to provide maximum energy savings by minimizing fan horsepower consumption. Fan speed is NOT controlled by static pressure.

Heating Mode
When space temperature is below the occupied heating setpoint, unit shall operate in the heating mode. Unit shall stage available heat stages to satisfy demand in the occupied space.

Cooling Mode
When space temperature is above occupied cooling setpoint, unit shall operate in the cooling mode. Unit shall enable available cooling stages to satisfy demand in the occupied space.

Economizer
Economizer shall close when fan is off or during a loss of power. During occupied hours when fan is energized, the economizer shall open to adjustable minimum position. When outside air temperature is below 71° and occupied space requires cooling, economizer shall open. If economizer air is not sufficient to meet the demand in the occupied space, unit shall enable available mechanical cooling stages to satisfy demand in the occupied space.

CO2 Control
Unit shall monitor space CO2 when the supply fan is energized. When CO2 is above setpoint of 1000 PPM, economizer shall modulate open toward an adjustable maximum CO2 position. As the CO2 level in the space increases above the setpoint, the minimum positions of the dampers will be increased proportionally, until the maximum ventilation setting is reached. As the space CO2 level decreases because of the increase in fresh air, the outdoor-damper will follow the higher demand condition from the DCV mode or from the free-cooling mode.

Power Exhaust
The exhaust fan shall modulate to maintain the room pressure setpoint (as determined by air balancer). Not controlled through EMS.

1.1.2 EXHAUST FAN CONTROLLER (CP-1 THRU CP-3)

Exhaust Fans
EF-D1 thru EF-D5, D7, D8, EF-M1, M1, M2, and EF-L1 shall run based on an occupied time schedule (configurable)
Exhaust fan status will be monitored through a current sensing switch. If the current switch does not detect fan status after a start command has been sent to the associated exhaust fan, an alarm will be generated to the i-Vu web server.
1.1.3 PLANT CONTROLLER (CP-4 THRU CP-5)

**Single Stage Boiler Loop Water Temperature Control**
The controller will measure the loop water supply temperature and stage the boiler, its circulation pump and heating stage on in sequence to maintain setpoints. The boiler system will run subject to its own internal safeties and controls. To prevent short cycling, there will be a user definable (adj.) delay between stages, and each stage will have a user definable (adj.) minimum runtime.

**Cooling Tower - Run Conditions**
The cooling tower condenser water control will stage its components (spray pump, fan, etc.) in sequence to maintain condenser water supply temperature setpoint. The following setpoints are recommended values. All setpoints will be field adjusted during the commissioning period to meet the requirements of actual field conditions. When the cooling tower is running the boiler shall be locked out.

**Cooling Tower Fan - Loop Water Supply Temperature Control**
The controller will measure the loop water supply temperature and stage the fans on in sequence to maintain setpoints. The following setpoints are recommended values. All setpoints will be field adjusted during the commissioning period to meet the requirements of actual field conditions. On rising loop water supply temperature, the fan speeds will stage on at the setpoints given below. When the condenser water supply temperature drops back below the setpoints by the differentials listed below, the fan speeds will stage off.

To prevent short cycling and back-emf in the fan motors, there will be a minimum user adjustable delay between each stage.

**Condenser Water Pump Lead/Standby Operation**
The condenser water pumps will run anytime the boiler is called to run.

The lead pump will start prior to the boiler being enabled and will stop only after the boiler is disabled. The pumps will therefore have:
- A user adjustable delay on start.
- AND a user adjustable delay on stop.

The delay times will be set appropriately to allow for orderly chilled water system start-up, shutdown and sequencing.

The condenser water pumps will operate in a lead/standby fashion.
- The lead pump will run first.
- On failure of the lead pump, the standby pump will run and the lead pump will turn off.

The designated lead pump will rotate upon one of the following conditions (user selectable):
- manually through a software switch
- if pump runtime (adj.) is exceeded
  - daily
  - weekly
  - monthly

**Condenser Water Return Temperature Monitoring**
The condenser water return temperature will be monitored.

**Condenser Water Supply Temperature Reset**
The Condenser Water Supply Temperature (CWST) reset will be based on linearly outside wet bulb temperature (calculated from OAT and OARH) and heating/cooling demands.

**Condenser Water Supply Flow Monitoring**
The condenser water flow will be monitored.

**Pumps Flow Monitoring**
The pumps water flow will be monitored.

**Chemical Return Monitoring**
The chemicals in the return will be monitored.

**Alarms**
See the alarms below:
- High Condenser Water Return Temp: If the condenser water return temperature is greater than 100°F (adj).
- Low Condenser Water Return Temp: If the condenser water return temperature is less than 75°F (adj).
- Pump Failure: Commanded on, but the status is off.
- Pump Running in Hand: Commanded off, but the status is on.
- CT Fan Failure: Commanded on, but the status is off.
- CT Fan Running in Hand: Commanded off, but the status is on.
- Boiler Alarm

**Trends**
The following points shall be trended at 15 minute (adj) intervals:
- CWR Temperature
- CWS Temperature
- Outside Air Temperature
- Outside Air Relative Humidity
- Pump Enable
- Boiler Enable
- Cooling Tower Fan Low Enable
- Cooling Tower Fan High Enable
- CW Flow
SECTION 32 31 19 – ORNAMENTAL METAL FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Custom fabricated Ornamental Metal Fencing
   2. Rough and finish hardware, fasteners, and related accessories

B. Related Requirements:
   1. Section 32 13 13, Sitework Concrete.

1.3 REFERENCE STANDARDS

A. Conform to current adopted reference standards by date of issue of the current code cycle and the date of the Contract Documents.

B. ASTM International
   1. ASTM A36 - Carbon Structural Steel
   2. ASTM A123 - Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products
   3. ASTM A307 - Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength
   4. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
   5. ASTM A513 - Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing
   6. ASTM A513 - Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing
   7. ASTM A653 - Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
   8. ASTM A658/A658M - General Requirements for Steel, Sheet, Carbon, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled.
   10. ASTM B117 - Test Method of Salt Spray (Fog) Testing
   12. ASTM C1107 - Packaged Dry, Hydraulic - Cement Grout (Non-Shrink)
   13. ASTM D2247 - Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
   15. ASTM D3359 - Test Method for Measuring Adhesion by Tape Test
C. American Welding Society (AWS)
   1. AWS D1.1 - Structural Welding Code, Steel
   2. AWS A5.1 - Carbon Steel Electrodes for Shielded Metal Arc Welding
   3. AWS 5.5 - Low Alloy Steel Covered Arc Welding Electrodes.

D. American Institute of Steel Construction (AISC)
   1. AISC Specifications - Manual of Steel Construction

E. CBC - 2019 California Building Code
   1. Chapter 10, Means of Egress
   3. Chapter 19A, Concrete

F. National Ornamental and Miscellaneous Metals Association (NOMMA)
   1. NOMMA Guidelines - Guideline 1 Joint Finishes

1.4 QUALITY ASSURANCE

A. Welding Qualifications: qualify procedures and personnel according to AWS D1.1.

B. Mock-ups:
   1. One (1) complete fencing panel from post to post, and
   2. One (1) complete accessible pedestrian gate assembly
   3. Approved mock-ups, in undisturbed condition at time of Certified Completion, may remain as part of the finished work.

1.5 ACTION SUBMITTALS

A. Product Data for each fencing system component and accessory item.

B. Shop Drawings, showing materials, construction and fabrication details, layout and erection diagrams as required, finish of materials and methods of anchorage to adjacent construction. Indicate welding by AWS code symbols.

C. Samples
   1. Color Selection Samples for each specified pre-finished item
   2. Record Samples of selected finishes
   3. Material Samples. If requested, submit samples of materials. Samples of finials, caps, and accessories shall be whole pieces.

D. Welding Certifications

1.6 DELIVERY, STORAGE AND HANDLING

A. Stack, store, and handle fencing sections and components to prevent damage during transit and storage at the site. Follow manufacturer’s instructions.
1.7 PROJECT CONDITIONS

A. Verify Existing Conditions. Verify conditions, affecting work of this Section, by taking accurate measurements at site of dimensions, elevations, and grades. Fabricate work to fit measured dimensions.

1.8 WARRANTY

A. Manufacturer and installer shall jointly warrant that the installed fencing and gates are and will remain free from defects in material and workmanship including cracking, peeling, blistering and corroding of finish for a period of at least 5 years from the date of Substantial Completion. Upon written notice from Owner, they shall promptly, without cost, and with the least practicable inconvenience to Owner correct such defects.

PART 2 - PRODUCTS

2.1 REGULATORY REQUIREMENTS

A. Gates that are part of the accessible route shall meet all the requirements of an accessible door in compliance with CBC Section 11B-404.

B. The levers of lever actuated latches or locks for accessible gates shall be curved with a return to within 1/2" of the gate surfaces to prevent catching on the clothing or persons.

C. Swing doors and gate surfaces within 10" of the finish floor or ground shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16" of the same plane as the other and be free of sharp or abrasive edges. Cavities created by added kick plate shall be capped. CBC Section 11B-404.2.10.

2.2 MATERIALS

A. Steel Material: ASTM A924, A123 and ASTM A653, hot-dipped galvanized, G-90 for sheet steel, cold-rolled, butt welded, square or rectangular, minimum 50,000 psi.

   1. Custom Fence: as indicated on drawings and the following:
      a. Fence Pickets: 1" square x 15 Ga. HSS Tubing at 6" o.c., welded each end; four sides.
      b. Rails: 3/16" x 2" square HSS.
      c. Posts: 1/4" x 4" square HSS.
      d. Gate frame: HSS 3" x 2" x 1/8".
      e. Swing Gate posts: 2-1/2 inches square x 12-gauge steel for up to 6' gate opening.
      f. Gate frame and pickets: same material as fence materials.

   2. Miscellaneous Materials:
      a. Welding Rods and Bare Electrodes: Select according to AWS Specifications for metal alloy welded.

B. Screws: stainless steel, self-drilling hex-head screws. Type 304 or 316 stainless-steel fasteners.

D. Accessories: Internal retaining rod, panel brackets, post and picket cap, rubber grommets picket to rail.

E. Touch Up Material for Galvanized Coatings: Anodic zinc-rich coating or hot applied repair compound.

F. Concrete for Footings: Specified in Section 32 13 13, Sitework Concrete.

G. Non-Shrink Grout: ASTM C1107, premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 5,000 pounds per square inch in 24 hours and 8,000 pounds per square inch in 7 days; of consistency suitable for application and 30-minute working time.

2.3 FABRICATION

A. Provide new stock of standard sizes specified or detailed. Fabricate materials in shop to produce high-grade metal work. Form and fabricate to meet required conditions.

B. Pickets, rails and posts shall be pre-cut to specified lengths. Rails pre-punched to accept rails.

C. Include bolts, screws and other fastenings necessary to secure work.

D. Conform applicable work to latest edition of AISC Specifications and AWS D1.1.

E. Accurately make and tightly fit joints and intersections in true planes with adequate fastenings.

F. Coordinate Work with work of other sections. Provide punching and drillings indicated or required for attachment of Work to other Sections.

G. Welding: weld joints, unless otherwise indicated or specified, using shielded electric arc method. Use coated welding rods, not fluxed or type recommended by manufacturer for use with parent metal.

H. Grinding: Grind welds to smooth flush joints.

I. EXIT Gates: Fabricate posts and lintels to height indicated on drawing but no less than 6'-8", and ready to receive closer and gate hardware.

J. General:
1. Fences and Gates shall be all-welded construction.
2. Fabricate in shop in largest possible sections; minimize field welding.
3. Finish exposed welds to comply with NOMMA Guideline 1, Finish #2 - completely sanded joint, some undercutting and pinholes okay.
4. Provide custom fabricated fences and gates as indicated on Drawings.
2.4 FINISHES

A. Galvanized finish for steel products, ASTM A123 and sheet steel ASTM A653.
   1. Clean surfaces of rust, scale, grease and foreign matter prior to finishing. Prepare in accordance with SSPC SP-2.
   2. Galvanize steel items to zinc coating thickness in accordance with ASTM A123, minimum Coating Grade 80 (1.9 oz/sq. ft.) and ASTM A653 for sheet steel G60 (0.60 oz/ft square). Surfaces shall be free of icicles, spangles and puddling. Provide venting holes at all enclosed sections, "V" notch, and drilled holes are acceptable. Locate to prevent rainwater from entering enclosed sections at exterior galvanized items. Galvanize after fabrication.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify existing conditions are ready the work of this Section. Do not begin erection of fencing until unsatisfactory conditions are corrected.

3.2 INSTALLATION

A. Post spacing: Line posts shall be spaced in line maximum of 96 inches on center.
B. Post Footings: Set posts in concrete footings 12 inches in diameter and 36 inches deep. Tops of footings: Crowned to shed water. Concrete mix: Minimum 3000 pounds per square inch.
C. Post Tops: Line posts shall be fitted with pressed steel caps. Gate post top: Welded flush and ground smooth.
D. Install in largest practicable sections and field weld all connections.
   1. Finish exposed welds to comply with NOMMA Guideline 1, Finish # 2 - completely sanded joint, some undercutting and pinholes okay.
   2. Clean welds, mechanical connections, and abraded areas and repair galvanizing to comply with ASTM A780.

END OF SECTION 32 31 13
EXISTING COLUMN TO REMAIN. PROTECT IN PLACE.

SHADE STRUCTURE PER ARCHITECTURAL PLANS

4" PCC SIDEWALK W/NO. 3 BARS @ 18" O.C. EACH WAY, AT CENTER OF SLAB, OVER 12" NATIVE COMPACTED TO 95% RELATIVE COMPACTION.

CONCRETE STRENGTH PER PROJECT SPECIFICATIONS. JOINT DETAILS PER ARCHITECTURAL PLANS

3" AC OVER 6" AB MIN. OVER 12" NATIVE COMPACTED TO 95% RELATIVE COMPACTION OR PER SOILS ENGINEER'S RECOMMENDATIONS. FINAL PAVEMENT SECTIONS SHOULD BE DETERMINED ONCE SUBGRADE ELEVATIONS HAVE BEEN ATTAINED AND R-VALUE TESTING ON SUBGRADE SAMPLES IS PERFORMED.

EXISTING UTILITY TO REMAIN, PROTECT IN PLACE

EXISTING UTILITY, ADJUST TO GRADE

EXISTING CURB OR CURB & GUTTER TO REMAIN, PROTECT IN PLACE

CONCRETE CURB & GUTTER PER DETAIL 5 SHEET C4.0 (HEIGHT PER PLAN)

CONCRETE CURB PER DETAIL 4 SHEET C4.0 (HEIGHT PER PLAN)

CURB RAMP AND TRUNCATED DOMES PER ARCHITECTURAL PLANS

DEMOLISH EXISTING STORM DRAIN INLET

CONNECT EXISTING DOWNSPOUTS TO UNDERGROUND STORM DRAIN SYSTEM

AREA DRAIN - 6" RISER WITH GRATE - USE ATRIUM GRATE (NDS80) IN LANDSCAPE AREAS AND FLAT GRATE (NDS50) IN TURF AREAS

12"x12" PRECAST CONCRETE CATCH BASIN WITH PARKWAY GRATE

24"x24" PRECAST CONCRETE CATCH BASIN WITH PARKWAY GRATE

24"x24" PRECAST CONCRETE CATCH BASIN WITH ADA/HEEL-PROOF GRATE. SEE DETAIL 10 SHEET C4.0

RIBBON GUTTER PER DETAIL 6 SHEET C4.0

12"x12" PRECAST CONCRETE CATCH BASIN WITH ADA/HEEL-PROOF GRATE. SEE DETAIL 11 SHEET C4.0

EXISTING LIGHT POLE TO REMAIN. PROTECT IN PLACE.

NOTE:

A SOILS REPORT HAS NOT BEEN PREPARED FOR THIS PROJECT. PAVEMENT SECTIONS ARE BASED ON PREVIOUSLY CONSTRUCTED PROJECTS NEAR THIS SITE. A GEOTECHNICAL ENGINEER SHOULD PERFORM R-VALUE TESTING PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SECTIONS.
ROOF PLAN GENERAL NOTES
- J. All spot elevations of existing conditions are for contractor.
- To determine proper taper in insulation.
- See traffic drawings for elevations of the high and low points.
- Drawings for penetrations not shown on this section must be checked and noted.
- No roof penetrations allowed within 4'-0" each side.
- Flash drains, curbs, vents, and stacks per detail sheets.
- Bldg B - Roof.
- 1/2" / 1'-0" ridge +15'-6".
- 1/2" / 1'-0" at parapet.
- 4'-0" foot of slope to roof drain, unless noted.
- 22'-0" (E) skylight to remain.
- 02'-72" demo (E) roofing to substrate. Prepare for (N) tapered insulation. Attach 100% CDs.
- RTE-1.
- Demolish Bldg B - roof.
- All spot elevations of existing conditions are for contractor.
- To determine proper taper in insulation.
- See traffic drawings for elevations of the high and low points.
- Drawings for penetrations not shown on this section must be checked and noted.
- No roof penetrations allowed within 4'-0" each side.
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- Demolish Bldg B - roof.
- All spot elevations of existing conditions are for contractor.
- To determine proper taper in insulation.
- See traffic drawings for elevations of the high and low points.
- Drawings for penetrations not shown on this section must be checked and noted.
- No roof penetrations allowed within 4'-0" each side.
- Flash drains, curbs, vents, and stacks per detail sheets.
ROOF PLAN GENERAL NOTES

A. ROOF PLAN GENERAL NOTES APPLY TO ALL ROOF PLAN ASSEMBLY. ALL EXISTING ROOF DECKS TO BE FIELD VERIFIED TO DETERMINE PROPER TAPER IN INSULATION.

B. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR PENETRATIONS FOR MECHANICAL AND ELECTRICAL ACCESSORIES IN PREPARATION FOR NEW ROOF U.N.O.

C. RT-2(C) INDICATES AREAS OF EXPECTED ZONOLITE BUILD-UP AND EXTEND CURBS TO REQUIRED HEIGHT.

D. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.

E. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.

F. SEE STRUCTURAL DRAWINGS FOR ELEVATIONS OF THE HIGH AND LOW POINTS OF FIREWALL. SEE CODE PLAN FOR FIRE WALL LOCATIONS.

G. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.

H. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.

I. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.

J. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.

K. RF-2(C) INDICATES AREAS OF EXPECTED ZONOLITE BUILD-UP AND EXTEND CURBS TO REQUIRED HEIGHT.

L. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.

M. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.

N. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.

O. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.

P. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.

Q. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.

R. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.

S. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.

T. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.

U. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.

V. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.

W. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.

X. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.

Y. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.

Z. FLASH DRAINS, CURBS, VENTS AND STACKS PER STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.
**ROOF PLAN GENERAL NOTES**

- **A.** ROOF PLAN GENERAL NOTES APPLY TO ALL ROOF PLAN ASSEMBLY. ALL EXISTING ROOF DECKS TO BE FIELD VERIFIED TO DETERMINE PROPER TAPER IN INSULATION.
- **B.** ALPHAGUARD FLUID APPLIED ROOF SYSTEM, COLOR: MEDIUM GRAY. MFR: TREMCO (REPUBLIC RESTORATION SYSTEMS).
- **C.** MEMBRANE ROOFING. SIZE: 8'-0" TALL, FONT: ARIAL, ASSEMBLY. ALL EXISTING ROOF DECKS TO BE FIELD VERIFIED TO DETERMINE PROPER TAPER IN INSULATION.
- **D.** BUILD-UP AND EXTEND CURBS TO REQUIRED HEIGHT.
- **E.** SEE STRUCTURAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING. SEE STRUCTURAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING. SEE STRUCTURAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.
- **F.** FLASH DRAINS, CURBS, VENTS AND STACKS PER MANUFACTURER’S RECOMMENDATIONS IF DETAIL NOT SHOWN ON DRAWINGS.
- **G.** ALL SPOT ELEVATIONS OF EXISTING CONDITIONS ARE FOR STRUCTURE UNLESS NOTED OTHERWISE. SEE CODE PLAN FOR FIRE WALL LOCATIONS.
- **H.** SEE STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF.
- **I.** NO ROOF PENETRATIONS ALLOWED WITHIN 4'-0" EACH SIDE.
- **J.** ALL SPOT ELEVATIONS OF EXISTING CONDITIONS ARE FOR STRUCTURE UNLESS NOTED OTHERWISE. SEE CODE PLAN FOR FIRE WALL LOCATIONS.
- **K.** TAPERED INSULATION SHALL PROVIDE A MINIMUM OF 1/4-INCH.
- **L.** ALL ROOF CURBS TO BE A MINIMUM OF 8 INCHES ABOVE ROOFING LEVELS. FIELD VERIFY HEIGHT OF EXISTING ROOF CONCRETE FILL ABOVE STEEL DECK AS EXISTING ROOFING REFERENCE ONLY AND ARE TO BE VERIFIED IN FIELD.
- **M.** ROOF WALKWAY PADS TO REMAIN U.N.O. (E) METAL ROOFING. PAINTED PER OTHER BUILDINGS G, H AND J. (E) ROOF DRAINS ARE TO REMAIN, BY CONTRACTOR.
- **N.** METAL ROOFING. PAINTED PER OTHER BUILDINGS G, H AND J. (E) ROOF DRAINS ARE TO REMAIN, BY CONTRACTOR.
- **O.** ROOF NV TOP MECHANICAL UNIT TO REMAIN. (E) ROOF TOP MECHANICAL IS TO REMAIN U.N.O.
- **P.** ROOF HATCH TO REMAIN (E) METAL ROOFING. PAINTED PER OTHER BUILDINGS G, H AND J. (E) ROOF DRAINS ARE TO REMAIN, BY CONTRACTOR.
- **Q.** ROOF DRAIN AND OVERFLOW ROOF DRAIN, SEE DETAIL. DEMO ROOF PLAN LEGEND
- **R.** NO ROOF PENETRATIONS ALLOWED WITHIN 4'-0" EACH SIDE.
- **S.** ROOF DRAIN AND OVERFLOW CURBS TO PROVIDE DRAINAGE AROUND CURB. BUILD-UP AND EXTEND CURBS TO REQUIRED HEIGHT.
- **T.** ALL SPOT ELEVATIONS OF EXISTING CONDITIONS ARE FOR STRUCTURE UNLESS NOTED OTHERWISE. SEE CODE PLAN FOR FIRE WALL LOCATIONS.
- **U.** ROOF WALKWAY PADS TO REMAIN U.N.O. (E) METAL ROOFING. PAINTED PER OTHER BUILDINGS G, H AND J. (E) ROOF DRAINS ARE TO REMAIN, BY CONTRACTOR.
- **V.** METAL ROOFING. PAINTED PER OTHER BUILDINGS G, H AND J. (E) ROOF DRAINS ARE TO REMAIN, BY CONTRACTOR.
- **W.** ROOF NV TOP MECHANICAL UNIT TO REMAIN. (E) ROOF TOP MECHANICAL IS TO REMAIN U.N.O.
- **X.** ROOF HATCH TO REMAIN (E) METAL ROOFING. PAINTED PER OTHER BUILDINGS G, H AND J. (E) ROOF DRAINS ARE TO REMAIN, BY CONTRACTOR.
- **Y.** ROOF DRAIN AND OVERFLOW ROOF DRAIN, SEE DETAIL. DEMO ROOF PLAN LEGEND
- **Z.** NO ROOF PENETRATIONS ALLOWED WITHIN 4'-0" EACH SIDE.
- **AA.** ROOF DRAIN AND OVERFLOW Curbs to provide drainage around curb. Build-up and extend curbs to required height.
A. Coordinate all demolition and phasing efforts with the demolition notes. Apply to all demolition sheets.

B. Maintain a secure, weather-tight enclosure at all existing building locations as deemed necessary by the owner.

C. Verify all existing conditions, dimensions and architects and owner's representative. Every effort approved and coordinated with the owner's operations. Excessive noise or vibration shall be prevented.

D. The owner shall reserve the right to salvage any materials from damage due to any demolition or construction-related incident performed under this contract. Patch floor, wall and ceiling penetrations resulting from removal or re-routing of new or existing piping, and/or condition. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions.

E. Verify and maintain the location of existing power, and/or condition. Provide protection for all existing building materials and equipment from damage due to any demolition or construction work from isolation any demolition/construction work from the existing building which offers a one-hour enclosure to isolate any demolition/construction work from the general public and as deemed necessary by the owner.

F. Where CMU walls are indicated to be removed, prepare adjacent walls to receive new patch/finish by removing CMU in toto pattern both sides of demolition for saucutting adjacent plaster finishes a minimum of 1'-0" Schedule of 5 that are not shown on documents; work will not be allowed for any items otherwise or as authorized by architect and owner.

G. The owner shall reserve the right to salvage any materials from damage due to any demolition or construction-related incident performed under this contract. Patch floor, wall and ceiling penetrations resulting from removal or re-routing of new or existing piping, and/or condition. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions.

H. Provide protection for all existing building materials and equipment from damage due to any demolition or construction-related incident performed under this contract. Patch floor, wall and ceiling penetrations resulting from removal or re-routing of new or existing piping, and/or condition. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions.

I. Verify and maintain the location of existing power, and/or condition. Provide protection for all existing building materials and equipment from damage due to any demolition or construction-related incident performed under this contract. Patch floor, wall and ceiling penetrations resulting from removal or re-routing of new or existing piping, and/or condition. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions.

J. Patch floor, wall and ceiling penetrations resulting from removal or re-routing of new or existing piping, and/or condition. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions.

K. Verify and maintain the location of existing power, and/or condition. Provide protection for all existing building materials and equipment from damage due to any demolition or construction-related incident performed under this contract. Patch floor, wall and ceiling penetrations resulting from removal or re-routing of new or existing piping, and/or condition. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions.

L. Patch floor, wall and ceiling penetrations resulting from removal or re-routing of new or existing piping, and/or condition. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions. Finish as required for new or existing conditions.

M. Cap all disconnected mechanical piping lines within the construction area. Constructed in accordance with the construction area. Constructed in accordance with the construction area. Constructed in accordance with the construction area. Constructed in accordance with the construction area. Constructed in accordance with the construction area. Constructed in accordance with the construction area.

N. See structural, mechanical and electrical drawings among sub-contractors. Said space or area. Contractor must bid that are not shown on documents; work will not be allowed for any items otherwise or as authorized by architect and owner.

O. Avoid any disturbance of soils within the zone of otherwise or as authorized by architect and owner.
08 34 NEW/REPLACED DOOR AND FRAME, SEE PLANS AND DOOR/FRAME SCHEDULE ON SHEETS A8.2 & A8.3
09 41 NEW PAINT AT (E) SIDING, SEE EXTERIOR ELEVATION FINISH LEGEND FOR COLORS
10 04A SIGNAGE, SEE SIGNAGE PLANS FOR DETAIL
23 38 (E) ROOF TOP EXHAUST FAN AND CURB TO REMAIN. REROOF PER DETAIL 32/A10.1
PORTABLE SIDING REPLACEMENT

INTERIOR

EXTERIOR

NOTES:
- PORTABLE SIDING REPLACEMENT
- EXTERIOR FINISH TO MATCH EXTERIOR ELEVATIONS
- Lap to make Field Occur - Replace as Required
- No. C-32306
- MET-Rx B-2190
- Exposure Metal, Painted

- MFR: ABCD
- Exposed Metal, Painted

- MFR: Dunn Edwards, Black River Falls DEA189

- MFR: Dunn Edwards, Stieglitz Silver DET612

- SIDING COLOR LEGEND:
  - A. NAVY BLUE Dunn Edwards, Black River Falls DEA189
  - B. YELLOW Dunn Edwards, Tuscan Sun DE5341
  - C. WHITE Dunn Edwards, Coconut Grove DEHW03

- PLASTER COLOR LEGEND:
  - A. DARK BLUE, Dunn Edwards, Black River Falls DEA189
  - B. YELLOW, Dunn Edwards, Tuscan Sun DE5341
  - C. WHITE Dunn Edwards, Coconut Grove DEHW03

- EXTERIOR ELEVATIONS - ADJACENT. SEE DETAIL 11/A4.H1

- EXTERIOR ELEVATIONS - PORTABLE DEMO LEGEND
  - X = COLOR, SEE SIDING COLOR LEGEND
  - X = COLOR, SEE PLASTER COLOR LEGEND

- EXTERIOR ELEVATION FINISH LEGEND
  - X = COLOR, SEE COLOR LEGEND
  - EXTERIOR PLASTER, BASE COLOR = (LIGHT GRAY) - MFR: ABCD
  - EXTERIOR PLASTER - ACCENT COLORS
  - MET-AL ROOF

- KEYNOTES
  - REPAIR BLDG PAPER AS REQUIRED. PAINT TO MATCH DOOR/FRAME SCHEDULE ON SHEETS A8.2 & A8.3
  - PORTION OF DAMAGED SIDING TO BE REPAIRED.
  - PORTION OF DAMAGED SIDING TO BE REPLACED.
  - NEW/REPLACED DOOR AND FRAME, SEE PLANS AND FINISH LEGEND
  - FILE #19
  - DSA APPL. #03
  - PROJECT #75
  - Date
  - Revisions
  - 18

- KE Y PLAN
  - X = COLOR, SEE SIDING COLOR LEGEND
  - X= COLOR, SEE PLASTER COLOR LEGEND

- 100% CDs

- 1001 Durfee Ave, South El Monte, CA 91733

- JESSE MILLER

- 122081

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- SOUTH EL MONTE HS MODERNIZATION

- South El Monte Union High School District
SCALE: 1/8" = 1'-0" A4.K1

BLOG K - SOUTH ELEVATION

SCALE: 1/8" = 1'-0" A4.K1

BLOG K - EAST ELEVATION

SCALE: 1/8" = 1'-0" A4.K1

BLOG K - NORTH ELEVATION

SCALE: 1/8" = 1'-0" A4.K1

BLOG K - WEST ELEVATION

SCALE: 1/8" = 1'-0" A4.K1

BLOG K - PARTIAL EAST ELEV 1

SCALE: 1/8" = 1'-0" A4.K1

BLOG K - PARTIAL EAST ELEV 2

SCALE: 1/8" = 1'-0" A4.K1

BLOG K - PARTIAL WEST ELEV 1

SCALE: 1/8" = 1'-0" A4.K1

BLOG K - PARTIAL WEST ELEV 2

SCALE: 1/8" = 1'-0" A4.K1
DEMOLITION GENERAL NOTES

A. DEMOLITION WORK IS TO BE PERFORMED UNDER THIS CONTRACT.

B. REMOVE ALL EXISTING WALLS, DOORS, AND FRAMEWORK.

C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITH IN A NOWHERE STRONGER THAN 3/4" CMU WALLS.

D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.

E. REMOVE IN THEIR TOTALITY AND NOT SPLIT SAID SPACE OR AREA. CONTRACTOR MUST BID THAT ARE NOT SHOWN ON DOCUMENTS;

F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, AND FRAMEWORK.

G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DISCREPANCIES.

H. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM THE GENERAL PUBLIC AND AS DEEMED NEEDED FOR NEW ELECTRIFIED DOOR HARDWARE PER SCHEDULE.

I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT AND OWNER.

J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED TO BE DEMOLISHED AND ANY ADDITIONAL DEMO PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.

K. THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY COMMUNICATION AND DATA CABLES TO PREVENT PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.

L. PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.

M. THE CONTRACTOR SHALL NOT PERFORM WORK NOT SHOWN ON DOCUMENTS, OR ANY WORK NOT SHOWN ON DOCUMENTS.

N. SHEATHING

O. STUD WALL TO REMAIN

P. CMU WALLS ARE INDICATED TO BE REMOVED.

Q. WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, CMU WALLS ARE INDICATED TO BE REMOVED,

R. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITH IN A NOWHERE STRONGER THAN 3/4" CMU WALLS.

S. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITH IN A NOWHERE STRONGER THAN 3/4" CMU WALLS.

T. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITH IN A NOWHERE STRONGER THAN 3/4" CMU WALLS.

U. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITH IN A NOWHERE STRONGER THAN 3/4" CMU WALLS.
**DEMO GENERAL NOTES:**

- **M.** Cap all disconnected mechanical piping lines within the zone of influence around existing footings and floor slabs required for new or existing adjacent surfaces.
- **N.** Patch/finish by sawcutting adjacent plaster finish above the line of removal of Demon Removing Egress throughout the work.
- **O.** AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.

**DEMO ROOF PLAN LEGEND:**

- A: Area of last designed and/or surveyed for construction.
- C: Area to be removed, including all materials and equipment from damage due to any work.
- D: Area to be prepared adjacent walls to receive new patch/finish in separations or previous conditions. Finish as necessary by the owner and DSA. Coordinate with the architect and owner's representative. Every effort shall be made to minimize disruption of the existing building which offer a one-hour fire separation.
- E: Area to be prepared adjacent walls to receive new patch/finish in separations or previous conditions. Finish as necessary by the owner and DSA. Coordinate with the architect and owner's representative. Every effort shall be made to minimize disruption of the existing building which offer a one-hour fire separation.
- F: Area to be pre-approved/progressed with the contractor and architect/engineer.
- G: Area to be prepared adjacent walls to receive new patch/finish in separations or previous conditions. Finish as necessary by the owner and DSA. Coordinate with the architect and owner's representative. Every effort shall be made to minimize disruption of the existing building which offer a one-hour fire separation.
- H: Area to be prepared adjacent walls to receive new patch/finish in separations or previous conditions. Finish as necessary by the owner and DSA. Coordinate with the architect and owner's representative. Every effort shall be made to minimize disruption of the existing building which offer a one-hour fire separation.
- I: Area to be prepared adjacent walls to receive new patch/finish in separations or previous conditions. Finish as necessary by the owner and DSA. Coordinate with the architect and owner's representative. Every effort shall be made to minimize disruption of the existing building which offer a one-hour fire separation.
- J: Area to be prepared adjacent walls to receive new patch/finish in separations or previous conditions. Finish as necessary by the owner and DSA. Coordinate with the architect and owner's representative. Every effort shall be made to minimize disruption of the existing building which offer a one-hour fire separation.
- K: Area to be prepared adjacent walls to receive new patch/finish in separations or previous conditions. Finish as necessary by the owner and DSA. Coordinate with the architect and owner's representative. Every effort shall be made to minimize disruption of the existing building which offer a one-hour fire separation.
DEMO GENERAL NOTES

A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH P. WHERE CMU WALLS ARE INDICATED TO BE REMOVED,
B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH
C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN
D. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND
E. REMOVE ALL MATERIALS FROM THE SITE;
F. REMOVE ALL MATERIALS FROM ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION
G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY
H. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT
I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT
J. KEEP ALL FIELD WORK FROM THE GENERAL PUBLIC AND AS DEEMED
K. SCHEDULE NECESSARY FOR NEW ELECTRIFIED DOOR HARDWARE
L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING
M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN
N. SEE STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS
O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF
P. WHERE CMU WALLS ARE INDICATED TO BE REMOVED,
Q. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF
R. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF
S. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF
T. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF
U. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF
V. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF
W. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF
X. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF
Y. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF
Z. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF

DEMO CEILING PLAN LEGEND

(A) Exposed Joists & Beams
(B) Exposed Joists & Beams
(C) Exposed Joists & Beams
(D) Exposed Joists & Beams
(E) Exposed Joists & Beams
(F) Exposed Joists & Beams
(G) Exposed Joists & Beams
(H) Exposed Joists & Beams
(I) Exposed Joists & Beams
(J) Exposed Joists & Beams
(K) Exposed Joists & Beams
(L) Exposed Joists & Beams
(M) Exposed Joists & Beams
(N) Exposed Joists & Beams
(O) Exposed Joists & Beams
(P) Exposed Joists & Beams
(Q) Exposed Joists & Beams
(R) Exposed Joists & Beams
(S) Exposed Joists & Beams
(T) Exposed Joists & Beams
(U) Exposed Joists & Beams
(V) Exposed Joists & Beams
(W) Exposed Joists & Beams
(X) Exposed Joists & Beams
(Y) Exposed Joists & Beams
(Z) Exposed Joists & Beams

DEMO CEILING PLAN LEGEND

(A) Exposed Joists & Beams
(B) Exposed Joists & Beams
(C) Exposed Joists & Beams
(D) Exposed Joists & Beams
(E) Exposed Joists & Beams
(F) Exposed Joists & Beams
(G) Exposed Joists & Beams
(H) Exposed Joists & Beams
(I) Exposed Joists & Beams
(J) Exposed Joists & Beams
(K) Exposed Joists & Beams
(L) Exposed Joists & Beams
(M) Exposed Joists & Beams
(N) Exposed Joists & Beams
(O) Exposed Joists & Beams
(P) Exposed Joists & Beams
(Q) Exposed Joists & Beams
(R) Exposed Joists & Beams
(S) Exposed Joists & Beams
(T) Exposed Joists & Beams
(U) Exposed Joists & Beams
(V) Exposed Joists & Beams
(W) Exposed Joists & Beams
(X) Exposed Joists & Beams
(Y) Exposed Joists & Beams
(Z) Exposed Joists & Beams

KEY PLAN

1.00 DEMOLITION PLAN DRAWN TO SCALE WITH EXISTING CONSTRUCTION.
2.00 SCALE IS TO BE DETERMINED BY THE ARCHITECT AND OWNER.
3.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
4.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
5.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
6.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
7.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
8.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
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12.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
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15.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
16.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
17.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
18.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
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21.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
22.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
23.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
24.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
25.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
26.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
27.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
28.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
29.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
30.00 ALL DIMENSIONS ARE SHOWN IN FEET AND INCHES.
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**DOOR PANEL TYPES**

**INTERIOR DOOR FRAME ELEVATIONS**
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<th>THICKNESS</th>
<th>MATERIAL</th>
<th>GLASS TYPE</th>
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<td>1 3/4&quot;</td>
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**DOOR PANEL TYPES**

**INTERIOR DOOR FRAME ELEVATIONS**
1. DETAIL IS REQUIRED ON ALL RIDGE/PEAKS WHEN THERE IS A JOINT IN THE STRUCTURAL DECK BELOW, SINGLE PLY ROOFING FASTENER & PEEL STOP BY TAPERED INSULATION FASTENER & PEEL STOP BY 54 SIM. OVER NEW WP MEMBRANE.

2. SEE 2/S1.A1 NAIL, TYP. AT M - E 12".

3. (E) ROOF DECK AND ROOF SYSTEM TERM BAR, (E) CMU PARAPET, COATED WITH "KYNAR" COATED SM SUBSTRATE, TYP. 3" DIA. SARNAPLATE WITH #12 COAT (E) WALL WITH 1/4" COVER BOARD OVER EDGE.

4. SEE 26/31 A10.1 INTERIOR SCREWS @ 24" O.C.

5. TAPERED EDGE STRIP AT 1 1/2" MIN CONTINUOUS WELD SUMP.

6. SUBSTRATE BOARD AT DRAIN MEMBRANE AT LEAST THE SAME (E) ROOF DRAIN.

7. PVC FLASHING STRIP, (E) STRUCTURE, SUBSTRATE & DOWN FACE 2" MIN. PROTECT IN PLACE AND PROVIDE INFILL BOARD, OVER EDGE.

8. SINGLE PLY ROOFING EXTEND OVER EDGE FACE 2" MIN. FOR SPLICE CONNECTION (E) STRUCTURE, SUBSTRATE AND INSULATION TO REMAIN (E) ROOF HATCH MATCH EXISTING ROOFING, 2" MIN., OVER (E) STRUCTURE TO REMAIN. PROTECT IN PLACE AND PROVIDE INFILL BOARD, OVER EDGE.

9. HOT AIR WELD SINGLE PLY ROOFING EXTEND OVER EDGE FACE 2" MIN. FOR SPLICE CONNECTION (E) STRUCTURE, SUBSTRATE AND INSULATION TO REMAIN (E) ROOF HATCH MATCH EXISTING ROOFING, 2" MIN., OVER (E) STRUCTURE TO REMAIN. PROTECT IN PLACE AND PROVIDE INFILL BOARD, OVER EDGE.
A. ACCESSIBLE URINAL SHALL PROVIDE CLEAR SPACE PER CBC 2019 - 11B-604

H. SEE SHEET CP2.1 FOR ADDITIONAL ACCESSIBILITY NOTES AND

G. EXPOSED PIPES AND SURFACES UNDER LAVATORIES AND

B. ACCESSIBLE WATER CLOSETS SHALL PROVIDE CLEAR SPACE

10 12 CANE DETECTION RAILING, SEE DET 31/CP2.1

09 43 48" H F.R.P. WALL FINISH AROUND MOP SINK

02 79 (E) MIRRORS AND FRAMES TO BE REMOVED

02 63 (E) SOAP DISPENSER TO BE REMOVED

02 62 (E) SOAP DISPENSER TO BE RELOCATED.

02 50 (E) WATER CLOSET TO BE RELOCATED, SEE ENLARGED

SEE SHEET CP2.1 FOR MOUNTING HEIGHT INFO

2019 - 11B-604

SPACE PER CBC 2019 - 11B-606

XX XX KEYNOTE TAG

XXXX SPECIALTY EQUIPMENT TAG

X GENERAL NOTES FOR

INTERIOR ELEVATION

XX XX

ALIGNMENT SYMBOL

JESSE MILLER

10/31/2023

DR GROUP

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South El Monte HS Modernization

Moreau Union High School District

ENLARGED PLANS & INTERIOR ELEVATIONS - BLDG K

GENERAL NOTES FOR

ACCESSIBILITY

INTERIOR ELEVATION

ABBREVIATIONS

KEYNOTES

INTERIOR ELEVATION

LEGEND

GENERAL NOTES FOR

ACCESSIBILITY

TOILET ACCESSORIES

ABBREVIATIONS

KEY PLAN
TYPICAL BOOK CASE DETAIL

CABINET PULL LOCATION DIAGRAM, TYP.

TALL CABINET - OPEN

OPEN TALL CABINET WITH PHONE CHARGING STATION

TALL CABINET

TEACHING WALL STORAGE UNIT

BASE CABINET - PULL-OUT TRASH DRAWER

LOWER CABINET - INACCESSIBLE SINK / LAVATORY

BASE CABINET ANCHORAGE AT TOP, TYP.

UPPER CABINET ANCHORAGE AT TOP, TYP.

LOWER CABINET - IVORY DRAWER & DOOR

BASE CABINET ANCHORAGE AT BASE, TYP.

UPPER CABINET ANCHOR, @ BOTTOM, TYP.

SECTION AT APPLIANCE AT BASE CABINET
**WALL TILE/EDGE PROTECTION DETAILS**

- **Reinforce 4" tile per E2.**
- **Staple with 1/2" staples to plywood.**
- **Ensure metal corners and edges are protected.**

**Curtain Track Attachment Detail**

- **Attach to backer with (4) #12 SMS, (2) #10 x 2.5" long.**
- **Use MFR. provided chart to adjust distance from wall.**

**Typical Markerboard Fabric Wrapped Panel Mounting Detail**

- **Marked out panel: top panel type for plan.**
- **Use panel screws for additional fastening.**

**Typical Wallcovering to Tackable Panel Transition**

- **Consult MFR. recommended panel type.**
- **Use panel screws for additional fastening.**

**Typical Tackable Panel Section**

- **Use panel screws for additional fastening.**
- **Use metal edge strip.**

**Typical Floor Transition Details**

- **Use metal edge strip.**
- **Use panel screws for additional fastening.**

**Interior Details**

- **South El Monte HS Modernization**
- **El Monte, CA 91731**
- **10/31/2023**

**Project # 75**

- **Designated by AS
di.png

**Dates:**
- **11/01/2022**
- **11/02/2022**
- **11/03/2022**
- **11/04/2022**
- **11/05/2022**
- **11/06/2022**
- **11/07/2022**
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- **12/28/2022**
- **12/29/2022**
- **12/30/2022**
- **12/31/2022**

**Kewatt Engineering Services Inc.**

**A-11.5**
SIGNAGE GENERAL NOTES

1. SEE CODE PLAN SHEETS CP1.10 AND CP1.11 FOR MORE DETAIL.

2. REFER TO CFC 2703.5 & 2703.6 FOR HARZARDOUS MATERIALS.

3. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

4. ANY ROOM HAVING AN OCCUPANT LOAD OF 50 OR MORE PERSON, WHERE FIXED SEATS ARE NOT INSTALLED, AND WHICH ARE USED FOR ASSEMBLY, SHALL HAVE THE CAPACITY IDENTIFICATION SIGNAGE REQUIREMENTS.

5. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

6. MAIN EXIT PER CCR TITLE 19, SECTION 3.30, OF THE ROOM POSTED IN A CONSPICUOUS PLACE NEAR THE EXIT STAIR. WHICH ARE USED FOR ASSEMBLY, SHALL HAVE THE CAPACITY IDENTIFICATION SIGNAGE REQUIREMENTS.

7. A. SEE CODE PLAN SHEETS CP1.10 AND CP1.11 FOR MORE DETAIL.

8. B. REFER TO CFC 2703.5 & 2703.6 FOR HARZARDOUS MATERIALS.

9. C. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

10. D. REFER TO CFC 2703.5 & 2703.6 FOR HARZARDOUS MATERIALS.

11. E. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

12. F. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

13. G. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

14. H. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

15. I. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

16. J. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

17. K. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

18. L. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

19. M. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

20. N. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

21. O. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

22. P. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

23. Q. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

24. R. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

25. S. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

26. T. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

27. U. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

28. V. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

29. W. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

30. X. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

31. Y. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

32. Z. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

33. AA. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

34. BB. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

35. CC. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

36. DD. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

37. EE. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

38. FF. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

39. GG. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

40. HH. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

41. II. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

42. JJ. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

43. KK. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

44. LL. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

45. MM. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

46. NN. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

47. OO. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

48. PP. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

49. QQ. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

50. RR. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

51. SS. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

52. TT. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

53. UU. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

54.VV. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

55. WW. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

56. XX. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

57. YY. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.

58. ZZ. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE SIGNAGE INFORMATION.

59. AAA. USE OF FIRE-RESISTANT WALLS SPECIFIED IN SECTION 1101.9.6.1 OF THE CCR.

60. BBB. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE PARTITIONS, OR ANY OTHER WALL PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC REQUIRED TO HAVE PROTECTED OPENINGS OR ISOLATED OPENINGS.
Bldg M - Level 01 - Signage

Key Plan

Signage General Notes

- A. Refer to CFC 605.3.1 for ELEC Room Requirements &
- B. Refer to CFC 2703.5 & 2703.6 for Hazardous Materials
- C. For Signage Mounting on Walls and Glass, See
- D. For Signage General Notes

South El Monte HS Modernization
El Monte Union High School District

Construction Schedule - Bldg M - Level 1

11/10/22 Addendum 2

Jesse Miller
3537 Johnson Ave.

10/31/2023

18

11/2022

18
SIGNAGE GENERAL NOTES

A. SEE CODE PLAN SHEETS CP1.10 AND CP1.11 FOR MORE SIGNAGE INFORMATION.

B. PROVIDE BACKING TO SIGNAGE AS REQUIRED

C. REFER TO CFC 605.3.1 FOR ELECTRIC ROOM REQUIREMENTS & SIGNAGE

D. REFER TO CFC 2703.5 & 2703.6 FOR HAZARDOUS MATERIALS IDENTIFICATION SIGNAGE REQUIREMENTS

E. ANY ROOM HAVING AN OCCUPANT LOAD OF 50 OR MORE PERSON, WHERE FIXED SEATS ARE NOT INSTALLED, AND WHICH ARE USED FOR ASSEMBLY, SHALL HAVE THE CAPACITY OF THE ROOM POSTED IN A CONSPICUOUS PLACE NEAR THE MAIN EXIT PER CCR TITLE 19, SECTION 3.30

F. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS, AND SMOKE PARTITIONS, OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS, SHALL FOLLOW PROVISIONS UNDER CBC 703.6

G. FOR SIGNAGE MOUNTING ON WALLS AND GLASS, SEE DETS. &

KEYNOTES

Revisions

KEY PLAN

NORTH

SCALE: 1/8" = 1'-0"

BLDG M - LEVEL 02 - SIGNAGE

SEE A14.M1 FOR SIGNAGE AT STAIRS AND ELEVATORS BUILDING M

SIGN SCHEDULE - BLDG M LEVEL 02

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SIGNAGE PLAN - BLDG M - LEVEL 2

South El Monte HS Modernization
El Monte Union High School District

NOVEMBER 2022

PROJECT #75-20225-00

South El Monte HS Modernization
100% CDs

DSA APPL. #03-122081
DSA FILE #19-H10

Addendum 2

ADDENDUM 2

11/10/22

11/22/2022

18

18

11/22/2022

18

11/22/2022

18
### LABORATORY SAFETY SYSTEM SCHEDULE

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### PLUMBING FIXTURE SCHEDULE

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### ELECTRIC WATER HEATER SCHEDULE

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### EXPANSION TANK SCHEDULE

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### CIRCULATING PUMP SCHEDULE

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### INTERCEPTOR SCHEDULE

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1. Remove and dispose of fixture. Modify, extend, rework existing utility piping as required to accommodate replacement fixture.

2. Remove and dispose of fixture. Remove piping back to/within wall, modify, extend, rework existing utility piping as required for reconnection to new fixture location.

3. Remove and dispose of fixture and floor drain. Remove piping back to/within wall, modify, extend, rework existing utility piping as required for connection to new fixtures.
SHEET NOTES

1 CONNECT FIXTURE TO EXISTING UTILITIES AS REQUIRED AND MAKE FULLY FUNCTIONAL. REFER TO ARCH PLANS FOR ADA REQUIREMENTS.

4"W DOWN, 2"V UP IN WALL. CONNECT TO UTILITIES BELOW FLOOR AND/OR IN WALL. CONTRACTOR SHALL FIELD VERIFY POC LOCATION.

1 1/2"CW DOWN IN WALL WITH SOV AND WHA-1 INSTALL BOTH BEHIND ACCESS PANEL. CONTRACTOR SHALL FIELD VERIFY POC LOCATION.

2"W DOWN, 1 1/2"V UP IN WALL. CONNECT TO EXISTING UTILITIES BELOW FLOOR AND/OR IN WALL. CONTRACTOR SHALL FIELD VERIFY.

3/4"HW AND/OR CW UTILITY PIPING DOWN IN WALL. CONTRACTOR SHALL FIELD VERIFY.

2"W DOWN, 1 1/2"V UP, OFFSET AND ROUTED TIGHT TO UNDER SIDE OF COUNTER TOP AND UP IN WALL TO ABOVE CEILING.

3/4"CW DOWN IN WALL AND ROUTED TIGHT TO UNDER SIDE OF COUNTER TOP.

1/2"CW DOWN IN WALL AND CONNECT TO REFRIGERATOR CONNECTION.

EXTEND UTILITIES TO EXISTING ABOVE CEILING, CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION, PIPE SIZE AND CONNECT.

2"W DOWN, 1 1/2"V UP THRU ROOF, 3/4"CW UP FROM BELOW GRADE TO FIXTURE.

1/2"CW ROUTED BELOW FLOOR AND EXTEND TO CONNECTION AT REFRIGERATOR.

CONNECT WATER HEATER TO WASHER.
Multiple drawings and technical specifications are shown, including detailed circuit diagrams with various electrical components and notes. The text is too small to transcribe accurately. The drawings likely detail electrical systems for a school or similar facility, with specific emphasis on switchboards, transformers, and other electrical infrastructure. The diagrams are labeled and annotated with technical details, such as voltage ratings, conductor types, and installation requirements. The text notes also mention the provision of new circuit breakers, grounding requirements, and installation of branch metering capabilities.
1. Disconnect and remove existing light fixture and associated conduit and conductors back to nearest J-box for re-use in connecting new fixtures.

2. Disconnect and remove existing light switch. Provide blank cover plate at existing location.

3. Disconnect and remove existing fire alarm device and associated wiring and raceways back to source. Provide stainless steel cover plate at J-box.

4. Disconnect and remove receptacle and associated conduit and conductors back to nearest J-box for re-use in connecting new receptacles. Refer to power remodel plan for additional information.

5. Disconnect and remove PA cabling, backboard and equipment. Ring out system.

Sheet Notes:
- Disconnect and remove existing light fixture and associated conduit and conductors back to nearest J-box for re-use in connecting new fixtures.
- Disconnect and remove existing light switch. Provide blank cover plate at existing location.
- Disconnect and remove existing fire alarm device and associated wiring and raceways back to source. Provide stainless steel cover plate at J-box.
- Disconnect and remove receptacle and associated conduit and conductors back to nearest J-box for re-use in connecting new receptacles. Refer to power remodel plan for additional information.
- Disconnect and remove PA cabling, backboard and equipment. Ring out system.
Intercept existing circuit and extend to new receptacle as shown. Verify intercept point prior to construction. Ring out circuits as required.

Provide and install new 20A-1P circuit breaker and mounting hardware to match existing manufacturer and AIC rating in existing panel for new receptacles. Update panel schedule accordingly.

Mount devices within casework. Conduit shall be routed within casework. Coordinate routing with casework manufacturer and architect prior to rough-in.
INTERCEPT EXISTING LIGHTING CIRCUIT AND EXTEND

LIGHTING PLAN - BLDG B - LEVEL 1

LIGHTING PLAN - BLDG B - LEVEL 2

SHEET NOTES

4750 E. Ontario Mills Pkwy Fax 909.980.7023 Ph.909.987.0017 Ontario, Ca. 91764

LIGHTING PLAN - BLDG B

KEY PLAN

Consulting Mechanical and Electrical Engineers
ACCESS CONTROL SYSTEM NOTE:
ALL LOW VOLTAGE CABLES SHALL BE RUN CONTINUOUS FROM ACCESS
CONTROL PANEL/CONTROLLERS TO DOORS WITH ACCESS CONTROL
HARDWARE WITH NO SPLICES VIA CONDUIT AND/OR J-HOOKS. REFER
TO ARCHITECTURAL DRAWINGS FOR LOCATIONS.

SHEET NOTES
1 TEACHER STATION. VERIFY EXACT LOCATION WITH
ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
SHORT THROW PROJECTOR. VERIFY EXACT
LOCATION WITH ARCHITECT AND OWNER PRIOR TO
ROUGH-IN.
COORDINATE LOCATION AND MOUNTING HEIGHTS OF
ALL AUDIO/VISUAL BACKBOXES WITH ARCHITECT
AND OWNER PRIOR TO ROUGH-IN.
ACCESS CONTROL SYSTEM NOTE:
ALL LOW VOLTAGE CABLES SHALL BE RUN CONTINUOUS FROM ACCESS CONTROL PANEL/CONTROLLERS TO DOORS WITH ACCESS CONTROL HARDWARE WITH NO SPLICES VIA CONDUIT AND/OR J-HOOKS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS.

1 TEACHER STATION. VERIFY EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
SHORT THROW PROJECTOR. VERIFY EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
COORDINATE LOCATION AND MOUNTING HEIGHTS OF ALL AUDIO/VISUAL BACKBOXES WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
LIGHTING FIXTURES SHOWN WITH SHADED CENTER SHALL BE HE1-6,8, HE1-9, HE1-2, HE1-1, HE1-5.

COORDINATE ELEVATION WITH ARCHITECT.

POINTS OF INTERSECTING EXISTING LIGHTING CIRCUIT (TYP) JWAD #21049 TO NEW LIGHT FIXTURES. VERIFY INTERCEPT POINT.

South El Monte HS Modernization

D.R. Group

Architecture Engineering Planning Interiors

South El Monte Union High School District

DCGA ENGINEERS

15" @ ELEV +8'-0"
ACCESS CONTROL SYSTEM NOTE:
ALL LOW VOLTAGE CABLES SHALL BE RUN CONTINUOUS FROM ACCESS
CONTROL PANEL/CONTROLLERS TO DOORS WITH ACCESS CONTROL
HARDWARE WITH NO SPLICES VIA CONDUIT AND/OR J-HOOKS. REFER
TO ARCHITECTURAL DRAWINGS FOR LOCATIONS.
DISCONNECT AND REMOVE EXISTING LIGHT FIXTURE.

LOCATION.

AND ASSOCIATED CONDUIT AND CONDUCTORS BACK TO SOURCE. PROVIDE STAINLESS STEEL COVER PLATE AT EXISTING J-BOX.

TO NEAREST J-BOX FOR RE-USE IN CONNECTING TO NEW FIXTURES.

NEW FIXTURES.

COVERPLATE AT (E)J-BOX.
PROVIDE AND INSTALL (2) NEW 20A-1P CIRCUIT BREAKERS AND MOUNTING HARDWARE TO MATCH EXISTING MANUFACTURER AND AIC RATING IN EXISTING PANEL FOR NEW DEVICES. UPDATE PANEL SCHEDULE ACCORDINGLY. ALTERNATE CIRCUITS TO DEVICES.

INTERCEPT EXISTING LIGHTING CIRCUIT AND EXTEND TO NEW LIGHT FIXTURES. VERIFY INTERCEPT POINT PRIOR TO CONSTRUCTION. REFER TO LIGHTING PLAN ON THIS SHEET FOR ADDITIONAL INFORMATION.

PROVIDE AND INSTALL A NEW 30A-2P CIRCUIT BREAKER AND MOUNTING HARDWARE TO MATCH EXISTING MANUFACTURER AND AIC RATING IN EXISTING PANEL FOR NEW DRYER. UPDATE PANEL SCHEDULE ACCORDINGLY.

PROVIDE AND INSTALL A NEW 40A-2P CIRCUIT BREAKER AND MOUNTING HARDWARE TO MATCH EXISTING MANUFACTURER AND AIC RATING IN EXISTING PANEL FOR NEW ELECTRIC WATER HEATER. UPDATE PANEL SCHEDULE ACCORDINGLY.
ACCESS CONTROL SYSTEM NOTE:
ALL LOW VOLTAGE CABLES SHALL BE RUN CONTINUOUS FROM ACCESS CONTROL PANEL/CONTROLLERS TO DOORS WITH ACCESS CONTROL HARDWARE WITH NO SPLICES VIA CONDUIT AND/OR J-HOOKS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS.
ACCESS CONTROL SYSTEM NOTE:
ALL LOW VOLTAGE CABLES SHALL BE RUN CONTINUOUS FROM ACCESS CONTROL PANEL/CONTROLLERS TO DOORS WITH ACCESS CONTROL HARDWARE WITH NO SPLICES VIA CONDUIT AND/OR J-HOOKS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS.
ACCESS CONTROL SYSTEM NOTE:

ALL LOW VOLTAGE CABLES SHALL BE RUN CONTINUOUS FROM ACCESS CONTROL PANEL/CONTROLLERS TO DOORS WITH ACCESS CONTROL HARDWARE WITH NO SPLICES VIA CONDUIT AND/OR J-HOOKS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS.
NOTES:
ROUTE MINIMUM OF (1) CATEGORY 6 RATED 23 GA. 4 PAIR UTP CABLE TO EACH DATA JACK/TELEPHONE JACK AND TERMINATE ON CATEGORY 6 RATED JACK. SEE DRAWINGS FOR QUANTITIES AND LOCATIONS AND SPECIFICATIONS FOR REQUIREMENTS. ALL CABLE SHALL BE RUN CONTINUOUS FROM JACK TO IDF WITH NO SPLICES VIA CONDUITS AND J-HOOKS. CATEGORY 6 RATED PATCH PANELS WITH NUMBERS OF PORTS AND 6'-0" PATCH CORDS REQUIRED TO TERMINATE ALL CABLES INDICATED ON DRAWINGS PLUS 25% SPARE CAPACITY.

NOTES:
ROUTE MINIMUM OF (1) CATEGORY 6 RATED 23 GA. 4 PAIR UTP CABLE TO EACH SPEAKER JACK AND TERMINATE ON CATEGORY 6 RATED JACK. SEE DRAWINGS FOR QUANTITIES AND LOCATIONS AND SPECIFICATIONS FOR REQUIREMENTS. ALL CABLE SHALL BE RUN CONTINUOUS FROM JACK TO IDF WITH NO SPLICES VIA CONDUIT AND J-HOOKS.

NOTES:
PUBLIC ADDRESS SPEAKER AND FEEDER PER PLANS. SEE DRAWINGS FOR QUANTITIES AND LOCATIONS. REFER TO THE SPECIFICATION FOR SPEAKER AND CABLE TYPE. EXISTING PA SYSTEM RACK. PROVIDE ADDITIONAL COMPONENTS (MODULES, CONTROLLERS, ETC.) AND PROGRAMMING AS REQUIRED TO ACCOMMODATE ADDITIONAL SPEAKERS. COMMUNICATION TERMINAL CABINETS FOR PUNCH DOWN OF CABLES. PULL QUANTITY OF SPEAKER CABLES IN CONDUIT AS REQUIRED TO ALLOW EACH SPEAKER TO OPERATE AS A ZONE.

NOTES:
INTRUSION DETECTION DEVICES AND FEEDER. SEE DRAWINGS FOR EXACT LOCATIONS AND QUANTITIES. ROUTE CABLES VIA CONDUIT AND J-HOOKS. REFER TO THE SPECIFICATION AS REQUIRED. INTRUSION SYSTEM KEYPAD PER SPECIFICATIONS. COORDINATE EXACT KEYPAD LOCATION WITH THE SCHOOL DISTRICT IN THE FIELD PRIOR TO ROUGH-IN. PULL QUANTITIES OF CABLES IN CONDUIT INDICATED TO ALLOW FOR ZONE IDENTIFICATION PER ROOM. SEE DRAWINGS FOR QUANTITY OF SPACES TO BE IDENTIFIED AND SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

NOTES:
COORDINATE ARMING SEQUENCE AND CONTROL ZONES OF ALL KEYPADS WITH THE SCHOOL DISTRICT PRIOR TO INSTALLATION.

NOTES:
COORDINATE ARMING SEQUENCE AND CONTROL ZONES OF ALL KEYPADS WITH THE SCHOOL DISTRICT PRIOR TO INSTALLATION.
ADDENDUM 2

THEATRICAL LIGHTING SYMBOLS

THEATRICAL LIGHTING TAGS

THEATRICAL NOTES

STAGE LEGEND

THEATRICAL ABBREVIATIONS

THEATRICAL SHEET INDEX

APPLICABLE SPECIFICATION SECTIONS

APPLICABLE STANDARDS

1. The object of these drawings is for the convenience of the architects, engineers and contractors, and should not be used as the basis for estimating materials.
2. The calculations of the number of fixtures and equipment are approximate and should not be used for the purpose of tendering.
3. Lighting control device programming shown in these drawings is preliminary.
4. WPRL changes required for updated building codes.

1.1 150, 151 THEATRICAL LIGHTING SYMBOLS
1.2 150, 151 THEATRICAL LIGHTING TAGS
1.3 150, 151 THEATRICAL NOTES
1.4 150, 151 STAGE LEGEND
1.5 150, 151 THEATRICAL ABBREVIATIONS
1.6 150, 151 THEATRICAL SHEET INDEX

1.1 150, 151 THEATRICAL LIGHTING SYMBOLS

1.2 150, 151 THEATRICAL LIGHTING TAGS

1.3 150, 151 THEATRICAL NOTES

1.4 150, 151 STAGE LEGEND

1.5 150, 151 THEATRICAL ABBREVIATIONS

1.6 150, 151 THEATRICAL SHEET INDEX
PIPE GRID HANGERS SHALL HAVE A MINIMUM WORKING LOAD LIMIT OF 600# OR THE TRIBUTARY LOAD, WHICHEVER IS GREATER.

1. PIPE GRID SHALL HANG FROM BUILDING STRUCTURE IN LOCATIONS SHOWN ON DRAWINGS AND AS DETAILED ON QT5.31.

NOTES:

TYPICAL PIPE GRID 7 PLF 35 PLF GRAVITY
DEAD LOAD LIVE LOAD

PIPE GRID LOADING

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ADDENDUM

11/11/2022
SOUTH EL MONTE HIGH SCHOOL
El Monte, CA
EXPERIENTIAL GRAPHICS
PRICING SET
July 21, 2022
Notes

Bidders Qualifications

Interested parties must provide the following information for evaluation. Submittal must be limited to a single PDF file. Bidders must demonstrate that their company has the experience to build and install signage, environmental graphics and displays similar to the project being built. Responsive proposals will be used for scoring during the evaluation and selection process.

Failure to provide the requested qualifications will be grounds for disqualification if determined by the selection committee.

01 - Company Profile
- Brief history of the company
- List of market sectors
- List of notable clients
- Describe production facilities and special equipment available
- List of services that can be provided in-house
- List services that would be subbed out to a 3rd party vendor
- Describe respondents bond capability
- Describe any open litigation that the respondent may have

02 - Team
- List of key members of the project team: role, years of experience, years with current company
- Resume for key team members, specifically for the Project Manager Field Supervisor and Production Manager
- Demonstrate that the company/staff is actively involved with SEGD (Society of Experiential Graphic Design)

03 - Experience
- List of relevant projects: name, location, client
- Minimum of 5 projects examples that are comparable to the job being bid
- Type, scale, scope, materials, date completed and budget. Images must be included.

04 - References
- Minimum of 3 references from clients, architects or engineers: project name, scope of work, client name, contact person, phone number and email address

05 - Capacity
- Demonstrate that the fabricator has the capacity and capability to undertake the project. Provide a list of current active projects and projects.

06 - Project Fee
- Outline the proposed fee for the project.

07 - Project Schedule
- Outline the proposed schedule for the project. Indicate key milestone dates and critical meetings.

08 - Appendix (Optional)
- Additional information that may highlight ability to complete the project in a successful manner

Fabrication and Installation

Fabricator is responsible for the complete fabrication and installation of sign types described in this document, in conjunction with quantities and other details indicated in the or other documentation. Fabricator is responsible for all materials, equipment, labor, shipping, cranes, hoisting equipment, scaffolding, and clean-up of the site. Vendor is responsible for completion of all sub-contracted services.

All on-site work will be coordinated through Client (Owner), General Contractor, or Architect and must be approved before delivery of signage, materials or installation equipment.

Fabricator to develop structural, architectural, and M.E.P. drawings or site conditions to verify sizes and locations of signage related elements that are to be provided by the General Contractor. Any discrepancies and/or conflicts shall be reported to the Owner’s representative in writing before proceeding with fabrication or ordering materials.

Fabricator shall submit fully-detailed working (shop) drawings of all signs and graphics contained in this package. Drawings shall be reviewed and have signed approval prior to fabricator’s ordering of materials.

All signs are to be fabricated from materials specified unless otherwise approved in writing by Client and Experiential Graphic Designer. No exceptions.

Fabricator is responsible for determining proper mounting, fastening and anchoring methods for all signs unless otherwise specified. Sign Fabricator to coordinate need and location of blocking with General Contractor or other affected trades. Blocking to be coordinated between sign fabricator and Design Build Contractor and will be provided by cold form metal framing subcontractor.

Power will be available within an a) box within 5 feet of applicable sign locations.

Fabricator responsible for providing electrical connection to all illuminated and powered signs per local codes. Exposed hardware (i.e. conduits, boxes, etc.) will not be accepted.

Drawings contained in this package are for aesthetic and functional design intent only. No instructions for structural appropriateness have been made. It is the responsibility of the fabricator to provide engineered, stamped shop drawings for those elements noted and to ensure that all elements are fabricated for a stable and durable installation while adhering to the aesthetic details indicated.

Fabricator is responsible for determining proper mounting methods for all signs unless otherwise specified. Determination to account for surface material sign is being mounted to.

Fabricator to coordinate installation of site signage and associated footings with General Contractor’s installation of surrounding hard-scape.

All fasteners are toe to be concealed unless noted otherwise.

All text shown in this document is for reference only, unless noted otherwise. Reference Message Schedule for exact text on each sign.

For sign types requiring concrete footings, fabricator is responsible for reviewing all drawings and pertinent information for each sign location in order to understand the conditions in which they will be placed. The information is to be utilized as appropriate for preparing engineering shop drawings. Sign fabricator to engineer all sign fastenings and supports.

Installation of specific signs may vary within each group to accommodate construction schedules of other project items. All installation tasks will be coordinated with Owner before delivery, staging or installation labor begins. Fabricator may be provided a small staging area for sign installation. No long-term storage of sign components and/or installation equipment will be allowed on the project site.

Permits and Regulations

Fabricator will procure all permits, licenses and governmental approval necessary for the execution of the project. Fabricator will comply with all laws, ordinances, rules, order and regulations relating to the performance of the work, the protection of the adjacent property, and the maintenance of passageways, guard fences or other protective facilities. Fabricator will follow without delay all instructions and orders given by Owner with consultation from DLR Group, in the performance of the work.

Guarantee

All work will be guaranteed against defects in materials and workmanship for a minimum of 1 year from date of substantial completion.

The guarantee will include structural performance, materials, adhesives and fasteners of all items, supplied and installed, and that finishes will not peel, fade, craze, deteriorate or release during the guarantee period.

Other guarantees or warranties provided by equipment, hardware, material or subcontracted services will be provided to the Owner.

During either construction or product (LED’s) warranty period, Owner notifies installing sign vendor who will investigate, assess and remediate issue on behalf of Owner to Owner’s satisfaction.

Taxes

Fabricator is responsible for any required employment related taxes. Owner will be charged for all required sales taxes and they have been included in the respective contract costs in their bids.
SOUTH EL MONTE HIGH SCHOOL
El Monte, CA

1.1 - SUMMARY
This Section includes engineering, fabrication, and installation of the following signage and support systems:

• Primary Identification Signs
• Secondary Identification Signs
• Directional / Regulatory Signs

Types of specialty signs are indicated on the Drawings and Graphics Message Schedule included at the end of this Section. All drawings in this booklet illustrate general sign configuration, materials, typography, and graphic layout. The rendering and intent of layout and placement drawings are to indicate positioning and relationships. Do not enlarge these layout and placement drawings for artwork. Electronic artwork and templates for each sign type will be supplied by DLR Group.

1.2 - PERFORMANCE REQUIREMENTS

Structural Performance: Provide signs capable of withstanding the effects of gravity, wind, earth and seismic loads and stresses, determined according to the local building codes and authorities having jurisdiction. Fixing of sign and supports in vertical and horizontal direction is limited to 1/36 of clear span or 3/4 inch (19mm), whichever is smaller.

Thermal Movements: Provide point and panel signs that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperature by preventing buckling, opening of joints, over stressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime sky heat loss. Temperature change (Range): 120 deg (67 deg C), ambient; 180 deg (100 deg C). Material surfaces.

Lighting: Vendor is responsible for review of the project site before completion of shop drawings for artwork. Send fabricator or installer to determine all final installation conditions and requirements and to verify all dimensions in the Details Drawings. Coordinate delivery and storage of sign materials with Owner. Furnish schedule power locations and any special conditions that may apply. Blocking and permit requirements are the responsibility of sign vendor.

1.3 - SUBMITTALS

Product Data: Manufacturer's technical data and installation instructions relative to materials, dimensions of individual components, profiles, and finishes for each sign type required.

Shop Drawings: Comprehensive vector art shop drawings, to match Details Drawings and illustrated in this booklet, will be submitted for all sign components from Vendor to Owner. Site number provided is to be included on each sign type with full layout of each sign. Submit new drawings for fabrication and erection of signs (reproductions of Architect's drawings are not acceptable), supports and mounting which include:

• Plan, section, and elevation views
• Enlarged scaled details of typical sign members and other components
• Sign layout provides a scaled layout for each single sign, including: character spacing, line spacing, Kerning copy, composition and bleeds. When projects are in California, provide California compliant braille translations (CA Braille).
• Fabricator notes, fasteners, and connection details
• Anchors, grounds, reinforcement, access openings, and installation details
• All necessary materials, including structural loads and forces to subject to damage from high winds or other conditions will require a signed and sealed structural drawings performed by a qualified structural engineer.
• Provide "Message Schedule," for each sign required.
• Engineering, fabrication, and construction soilwork.
• For signs supported or anchored to permanent construction, provide mounting details drawings, full scale mounting templates, and directions for installation of anchors bolts and other appropriate anchors to be installed.
• Submit scaled drawings in 11x17 in 11x17 inch format.
• Follow all Branding and Signage standards.
• Submit data simultaneously for overall review and approval prior to fabrication.

No Exclusions allowed in materials or lighting samples unless VE substitutes have been approved.

Schedule: Vendor will provide a detailed work schedule, which includes contract execution, shop drawings, engineering, material procurement, prototype fabrication and approval, fixing, assembly, installation, punch list review of the project. Schedule will also include key dates by approval of Client and Owner to meet requested timeline. Final contract and schedule submission.

Shop drawings for signs to be installed on existing or under construction walls, floors, or other building site or site structures will be reviewed by the project engineer for verification of adequate support, strength and attachment methods. Stamped engineered drawings to be included on proposal for required sign types.

1.4 - QUALITY ASSURANCE

Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where the project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for design and installations of signs, and miscellaneous support that are similar to those indicated for this project in material, design and extent. All structural engineering is the responsibility of the Vendor.

Manufacturing: Sign fabrication shall be performed by a manufacturer, with a minimum of five (5) years experience producing architectural signs, and a minimum of five (5) years experience producing compliant signs as specified in ANSI 171.1 (1986), Minimum Guidelines and Requirements for Accessible Design (MORA), Uniform Federal Accessibility Standards (UFAS) and Americans with Disabilities Act Accessibility Guidelines (ADAAG). Manufacturer's Qualifications: Vendor will provide electronic copy of Vendor's Facility Guidelines along with approved Owner's logo lock ups artwork. Drawings and specifications include shop drawings of materials, sign shapes, dimensions, translations, materials and design fabrication requirements for the signs. Requests for deviations from indicated dimensions and profiles will be considered provided that the intended aesthetic effect is not modified, as judged and approved solely by Architect. If modifications are proposed, submit comprehensive explanatory data to Architect for review in accordance with Section 01 60 00. Exhibitions of Manufacturer: For each separate type of sign and graphic image included in the second version of the contract, the Manufacturer's name, trademark shall not appear on any visible surface, except for UL, and service stickers on return side of exterior electric sign. Writing Standards: Qualify procedures and personnel according to the following:

• AWS D1.1, "Structural Welding Code-Steel."
• AWS D1.2, "Structural Welding Code-Aluminum."
• AWS D1.3, "Structural Welding Code-Shakehouse."

Braille Requirements: Provide copy with straight and true edgewise; tightly spaced characters as indicated, reproduce type style accurately with square corners and even curves, provide uniform letters and symbols, and provide smooth finish without visible imperfections.

ADA Accessibility Guidelines: Signage shall comply with the ADA Accessibility Guidelines where applicable. Characters and graphics, including but not limited to, print height, letter stroke, symbols, materials, and finishes, indicated in the Drawings are intended as guidelines for compliance. Implement each applicable ADA-Guideline. Should conflicts arise, notify Architect before proceeding.

Inspections: Owner reserves the right to visit the vendor to inspect the fabrication process.

1.5 - PROJECT CONDITIONS

Sign Locations: Where sizes of signs are determined by dimensions of surfaces where they exist, verify dimensions by field measurement before fabrication and include measurements on Shop drawings.

Installation Dimension: Where field measurements cannot be made without delaying the Work, establish sign dimensions and proceed with fabrication without field measurements. Coordinate fabrication with construction progress to avoid delay.

1.6 - COORDINATION AND SCHEDULE

Installation: Coordinate installation with Owner. For signs supported by or anchored to permanent construction, coordinate specific requirements for types and placement of anchorage devices and similar items to be used for attaching signs. For signs supported by or anchored to construction, furnish templates for installation of blocking, anchorage devices, and electrical conduits. Prepare a schedule indicating engineering, fabrication, delivery, installation, and final inspection of the Work. Submit this schedule to the Architect and Owner for approval and coordination with other work at the Project Site.

Coordinate location of remote transformers with building electronics. Ensure that transformers are accessible after completion of Work.

1.7 - DELIVERIES, STORAGE AND HANDLING

Package Material in like groups and label accordingly.

Protect items during transit, delivery, and storage to prevent damage, spiking, and deterioration. Minor damage to finishes may be repaired by Vendor before final inspection of the Work. Final inspections are visually the original finishes and are acceptable to Owner if not acceptable, remove and replace damaged items with new signs.

Coordinate delivery and storage of sign materials with Owner. Schedule delivery to minimize storage requirements. Materials stored at the Project Site without prior approval of Owner, may have to be relocated at the sign contractor's expense.

1.8 - MAINTENANCE

Vendor Owner with a list of cleaning materials appropriate for maintenance of signs. Provide written instructions for proper maintenance, electrical access, and character and lighting replacement procedures. Include recommended methods for removal of non-adhesive adheres from wall surfaces after removal of adhesive signs.

1.9 - PROTOTYPES / SAMPLES

Provide prototype signs, or section of, for the styles indicated in the schedule below. If accepted, Owner will modify it for inclusion in the contract.

Submit to the Owner and designed the following samples and prototypes:

<table>
<thead>
<tr>
<th>PROTOTYPES / SAMPLES</th>
<th>TYPE</th>
<th>DESCRIPTION</th>
<th>SIZE</th>
<th>QTY</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint</td>
<td>Pant</td>
<td>1/16&quot; Black aluminum w/ paint finish</td>
<td>6&quot; × 6&quot;</td>
<td>2 per pack</td>
<td></td>
</tr>
<tr>
<td>Vinyl</td>
<td>Vinyl</td>
<td>Digitally printed vinyl</td>
<td>10&quot; × 12&quot;</td>
<td>2 per location</td>
<td></td>
</tr>
</tbody>
</table>

1.02

GENERAL SPECIFICATIONS

PART I - GENERAL

SOUTH EL MONTE HIGH SCHOOL
El Monte, CA

1675-2023-00
July 27, 2023
PRICING SET
2.1 - MATERIALS, GENERAL
Use materials of size and thickness indicated or, if not indicated as required to produce strength and durability in finished product for use intended. To dimensions shown or as accepted on shop drawings, using proven details of fabrication and supports. Use type of materials shown or specified for various components of work.

All materials shall be new stock, free from defects impairing strength, durability, and appurtenance. No fabrication or installation terminates unless procedures shall be followed or otherwise noted. All materials must be free from defects on existing materials and surfaces. All materials will be of sufficient strength as to prevent warping, or curling in other undesirable directions.

Graphic Content and Style: Provide sign copy that complies with requirements indicated in the Graphics and Message Schedule, drawings, and as on artwork supplied on electronic media. Owner for size, style, spacing, content, mounting height and location, material, finishes, and colors of sign.

Requests for substitutions will only be considered in accordance with the following conditions: Refer to CSI – Section 61 00 00 for requirements. All requests must be in writing and submitted to Architect and must be indicated on the Drawings. Substitutions must indicate complete product documentation, MSDS, product specification, samples of proposed product and include costs of substitution for related work. Requests will not be returned.

2.2 - METALS
For the fabrication of exposed metal work, use only materials which are smooth and free of surface imperfections including pitting, roughness, swarf marks, roller marks, and trade names. Do not use materials which have stains or discolorations. Provide stretcher leveled standard of flatness. Aluminum Sheet and Plate: ASTM B 209 (ASTM B 209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with as least the strength and durability properties of alloy 5052-H32. Thickness: Provide aluminum sheets and plates in sizes specified or indicated on the Drawings.

Aluminum/Alloys: ASTM B 221 (ASTM B 221M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of alloy 6063-T5.

2.3 - TYPOGRAPHIC REQUIREMENTS

General: Type style shall be as indicated on the Drawings. Typeface and numerals not to be computer digitized by one manufacturer and used for all applicable sign types. Characters indicated on the Drawings are intended as guidelines for layouts and font size only, and are based on scale calculations of the message heights written in given and selected sign areas. Drawings and schedules indicate the copy size required on individual signs. The spelling appears questionable, notify Owner before proceeding. Spelling and punctuation shall be correct. Should an error in spelling or punctuation be found, or the spelling appears questionable, notify Owner before proceeding. Align letterforms to maintain aseismatic parallel to the sign format, unless otherwise indicated. Maintain uniform margins in sign layouts.

Same identification signs: Owner will determine names of each individual suite onto be included.

Silkscreen: Silk screens shall be executed from photoscreens or negatives. Pattern cut screens may be used where required. Copy screen shall be equal to or better than those detailed. Characters shall be equal to or better than those detailed. Characters will be cut to typeface with no burns or imperfections of any kind.

2.4 - PLASTIC
Plastics, acryls, and polycarbonates will be free of imperfections from forming or fabrication. All such faces will be free from scratches and will be cleaned and polished per manufacturer’s instructions at completion of installation. Edges will be laser cut or routed and free of saw marks and chips, and be eased, unless otherwise noted.

Typesetter Letter faces:
• 1/4" thick Acrylic Sign Grade WRT30 White acrylic (Evonik Ind.) (Available in ‘75 x 125 max sheet size)

Vinyl Letter faces:
• 1/7" thick In thin white acrylic (Evonik Ind.) (Available in ‘75 x 125 max sheet size)

2.5 - GRAPHIC FILM

General: Provide vinyl graphic film suitable for interior and exterior applications of the project.

Vinyl Thickness: 2 mil (0.05 mm), minimum.

Adhesives:
• Clear, pressure sensitive, permanent adhesive. Acceptable Vinyl Films No. 3M Custom Envision Translucent Film
• 3M Custom Scotchcast Translucent Film
• 3M Ecotranslucent Film

30 day outdoor on painted surfaces required, paint used on surface by others must first be approved by 3M representative.

Heat Applied Vinyl:
• Full surface must be washed with soap (if necessary). Do not use any products that contain chlorinated or fluorinated solvents. A new 3M film / Premier Clear (water based), or 3M Clear Polyurethane (solvent based) may be used over the top of all painted walls for optimal vinyl adhesion.
• Aluminum and metal structures. None of these materials shall be masked with integral neoprene washers.
• Paint/Primer MUST outgas for a minimum of 30 days
• Primed temperature of surfaces to 50 degrees
• A pull test must be performed and passed after all of these conditions have been met (must use a 3M approved kit)
• Installation must be by 3M approved installer

2.6 - HARDWARE, FASTENERS, AND ADHESIVES

Fasten and install all mounting and anchoring hardware and devices as required to completely install all work.

Mounting hardware must be approved by Owner. Unless otherwise indicated, use concealed fasteners fabricated from materials that are non-conductive to either the sign material or the mounting surface. If concealed fasteners are not practical or possible, provide vandal-resistant fasteners. All visible hardware will match both color and finish to which it is attached, or as specified in design specifications.

Awards signed and given to provide engineered seismic hardware and fasteners when required.

Fabricate brackets and fittings for bracket-mounted signs from materials compatible with panel sign construction and mounting conditions indicated. Factory-paint brackets of color matching background color of panel sign, unless otherwise indicated on the sign type detail.

Steel Tubing: Cold-formed steel tubing complying with ASTM A500, Grade B. Structural Steel Shapes, Plates, and bars: Cold-formed steel fabrications complying with ASTM A572, Grade 50 or lighter are specified for sign use.

Angled anchors: Use non-fusible metal or hot-dipped galvanized anchors and anchors for concrete installations and elsewhere as required for corrosion resistance. Use hot-dip lead or lead expansion bolt devices for all flat-in-place anchors. Furnish inserts, as required, to be set in concrete or masonrywork. For attachment to metal panels, use #12 stainless steel, Type 410, self-tapping screws and inserts with integral neoprene washers.

Adhesives: Provide products equal to “Disp 330” as manufactured by the Loctite Corporation. Use Type 410 stainless steel screws, 3/16" diameter. Provide epoxy cement for all metal to metal bonding, or as otherwise noted. Provide foam adhesives as indicated on the Drawings.

2.7 - FABRICATION, GENERAL

Fabricate signs to comply with requirements indicated on designs, shapes, sizes, and details of construction.

Form exposed faces and sides of signs to produce surfaces free from warp and distortion and free of “oil of caming.”

Include internal bracing for stability and attachment of mounting accessories as required. Cut metal edges on a cincinuous line and sand smooth. Smooths will be straight and symmetrical. Form exposed connections with hairline and with sharp angles, surfaces, and edges. Ease exposed edges to an accuracy of approximately 1/32 inch unless otherwise indicated. For printed metal corners to smallest radius possible without causing grain separation or cracking.

Welding, when necessary, will be of the approximate type to minimize protrusions on surfaces. Remove welding flux, crudes and discolorations by pickling or grinding so that these areas match the finish of the adjacent areas. Repair damage caused by the fabrication by grinding, polishing or buffing. Weld corners and seams continually complying with AWS recommendations. At connections, grind exposed welded edges and flush to match and blend with adjacent faces. Provide masking tape or similar material as indicated to receive finish hardware and similar items. Produce smooth, even, level sign panel surfaces, constructed to remain flat under installed conditions with a maximum tolerance of plus or minus one percent measured diagonally from corner to corner.

Fabricate brackets and fittings for signs to suit sign panel construction and mounting conditions indicated. Connectors, angles, shapes and details shown are suggestive and are to be sized, reinforced and detailed as required. Details not shown are to be equal in quality to those detailed. Factory paint brackets in color matching background color of sign panel.

Provide concealed access to internally illuminated signs for the lighting and service. Service access will be waterproof and secured against vandalism. Conceal union, fabricator, or other labels.

For sign panels in exterior applications provide standard Weatherproofing construction, including weather stripping, waterproofing, and weathering provisions for condensation control. Metal joints facing and cladding will be aluminum unless otherwise indicated on the Drawings.

Where galvanized steel and aluminum meet, the material will be materially isolated from one another to prevent electrolytic action. Aluminum panels and connections will be heather-walled and flush, true, ground, and polished smooth and with no visible imperfections in finish.

Character forms will be cut to typeface with no burns or imperfections of any kind.

Provide completely hidden, internal supports for structure and anchorage, unless otherwise indicated on the Drawings. Primary support structure will be chromed, galvanized steel or aluminum.

Vendor shall be responsible for all LED Modules and other electrical components and associated wiring of individual signs. Vendor will provide minimum amount of points necessary for electrical connection. Electrical wiring and conduit from building to sign location is the responsibility of Owner. Final electrical hook up is the responsibility of Owner. Illuminated signs include switches, rheostats, transformers and other devices necessary for proper operation. Vendor is responsible for providing all electrical information and requirements regarding signs to Owner.

Changes and Alterations: All modifications or changes from Design Specifications will be noted and documented. Changes from the Design Specifications Document, not specifically prior approved, will be corrected at Vendor’s additional expense. Owner may request modifications to this contract for additional or replacement key work. All modifications requested shall result in additional or replacement key work. All modifications requested shall result in additional or replacement key work. Modifications of this contract for additional or replacement key work. All modifications requested shall result in additional or replacement key work. Modifications of this contract for additional or replacement key work. All modifications requested shall result in additional or replacement key work. Modifications of this contract for additional or replacement key work. All modifications requested shall result in additional or replacement key work. Modifications of this contract for additional or replacement key work. Allen Group is responsible for the cost of fabrication and/or installation of the project will be submitted to Owner for approval prior to execution of work.
PART II – PRODUCTS CONTINUED

2.8 - PANEL SIGNS
Exterior Plaque Signs: Provide products fabricated from 0.125-inch aluminum plate with integral framing, double face tape mounting and silicone adhesive. Sign copy shall be raised 1/32 inch from plaque first surface by manufacturer's standard thermofrom monolith sign process. Provide epoxy graphics and be integral to the plaque. Provide metal graphics for support to face sign. Provide color to match color of adjacent materials. Provide opaque colors to comply with building code and ADA regulations. Provide applied apothecary, bead braille or 3M embossed colors. Graphics and braille must comply with building code and ADA regulations. Interior Plaque Signs: All ADA and tactile products must be fabricated using manufacturer's standard thermoform monolith sign process or equal. Provide opaque graphics for support to face sign. Provide color to match color of adjacent materials. Graphics and braille must comply with building code and ADA regulations.

2.10 - ILLUMINATION
Exterior signs must illuminate the entire face evenly. There must be no obvious dark areas or hot spots. LEDs or lamps specified to be mounted at a distance less than the specified depth or return of a fabricated cabinet. Vendor will include an intermediate level to support light source and maintain desired sign depth. All illumination standards: Provide LED illuminated sign systems for exterior applications as indicated on the drawings. Include LED's, transformers, and other components necessary for complete systems. Entire face of sign must be illuminated. Lighting systems shall be equipped with proper voltage and current provisions for servicing and connecting connections to building electrical system. Coordinate electrical character with those of power supply provided. Lighting shall be verified by following the testing procedures recommended by the LED systems manufacturer.

2.12 - ALUMINUM FINISHES
Aluminum: Finish designations prefixed by AA conform to the system established by The Aluminum Association for AA-5052/H3214 (Mechanical finish: medium satin, Chemical Finish; etched, medium matte, Anodic Coating, Architectural Class 1, clear coating (0.018 mm or thicker), complying with AAMA 611.

2.13 - PAINT MATERIALS
All paint materials are to be applied per paint manufacturer's recommendations including surface preparation, priming, number of coats required, sanding in-between coats, and top coat finish. Primer: High build, two-part polysiloxane epoxy. Topcoat: Finish Coat; Satin finish, two-part satin finish acrylic polyurethane paint. Products producing Ball Matthews Paint Company's "low VOC; Satin-Mah – Acrylic Polyurethane", custom colors with gloss between 11 and 19 units @ 60 degrees.推介产品:用耐水性好、耐候性好、耐干燥性好的双组分聚氨酯面漆。Texture: High gloss, satin or matte color not limited to manufacturer's standard colors.

1.04
PART III – EXECUTION

3.1 - PREPARATION

General: Examine areas, surfaces and conditions under which the work is to be performed. Notify the Owner of all conditions detrimental to the proper and timely completion of the work. Starting work implies acceptable surfaces and conditions.

3.2 - INSTALLATION

Installation will be done by Vendor or under the supervision of authorized agents of Vendor. Any questions or discrepancies will be resolved by Owner. A pre-installation meeting will be scheduled by Vendor between Owner and Vendor to review and finalize all details involving the installation of this project. Vendor will coordinate delivery and installation schedule with Owner. Vendor will clear, remove protective coatings, or polish as required by manufacturer’s or Owner’s instructions. Remove all crating, debris and previous signs from project site.

General: Locate signs and accessories where shown on Schedule and/or Sign Reference Plans, attaching signs to substrates in accordance with manufacturer’s recommendations, and all applicable state and local codes. Ensure signs are properly levelled, and all signs are securely anchored, with sign surface free from distortion or other defects in appearance. Ensure surfaces under adhesive applied units shall be smooth, clean, and free of dust, grease, fingerprints, or other foreign matter. All adhesives required shall be used in accordance with recommendations made by manufacturer of the material to be laminated or adhered. All visible joints shall be free from air bubbles or distortions. No adhesives that will fade, discolor or detach as a result of ultraviolet light or heat shall be used. Adhesives shall not change the color of or deteriorate the materials to which they are to be applied. The adhesives shall be of non-staining, non-yellowing quality. All visible joints shall be free from air bubbles and other defects. All points to a tight, weather-tight fit. Form joints exposed to the weather to exclude water penetration.

3.3 - FIELD QUALITY CONTROL

3.3.1 - Field Inspection

• Flush-Mounting: Mount panel signs with lineals in contact with wall surface.
• Vinyl Tape-Mounting: Use double-sided foam tape to mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.
• Hook and Loop Tapes: Use hook and loop tapes to mount signs to smooth, nonporous surfaces.
• Magnetic Tape: Use magnetic tape to mount signs to smooth, nonporous surfaces.
• Silicone-Adhesive Mounting: Use liquid silicone adhesive recommended in writing by sign manufacturer to attach signs to irregular, porous, or vinyl covered surface. Use double-sided vinyl tape where recommended in writing by sign manufacturer to hold sign in place until adhesive has fully cured.
• Silicon-Paste Mounting: Provide 1/8 inch (3.2 mm) thick, compressed aluminum trim plates with predrilled and countersunk holes, at locations indicated, and where other mounting methods are not practicable. Attach plate with fasteners and anchors suitable for secure attachment to substrate. Attach panel signs to plate using methods specified above.
• Mechanical Fasteners: Use non-removable mechanical fasteners placed through predrilled holes. Attach signs with fasteners and anchors suitable for secure attachment to substrates as recommended in writing by sign manufacturer.
• Inverse panel signs are suggested or indicated to be mounted on glass, provide matching plate on opposite side of glass to conceal mounting materials.

Glass Mounted Signs: Pressure sensitive adhesive film as recommended by manufacturer in standard 3M vinyl colors. Use Message schedule for quantity of signs requiring Class Mounted Backers (SMB).
• Dimensional Characters: Mount characters using standard fastening methods detailed in the drawings for character form, type of mounting, wall construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and locator holes for fasteners. Mount characters from ironed-on (1/16 inch [16 mm]) to 1/8 inch long (3.2 mm) maximum width to back or bottom of character with no distortions or distortions to sign face. Appropriately increase size of studs according to weight of character.
• Flush Mounting: Mount characters with tie rods where used with wall surfaces.
• Projected Mounting: Mount characters at projection distance from wall surface indicated. With painted surfaces, brackets Mounting on Suspended Units: Use custom Fabricated brackets, fittings and hardware as appropriate for mounting signs where present at right angles from supporting elements or suspended from structural members. Attach brackets and fittings with concealed fasteners and anchoring devices, unless otherwise indicated, to comply with the manufacturer’s directions.

Illuminated Characters: Run wires into wall construction through conduit. Use insulators as necessary for neon lighting wiring. Exposed to view wiring or conduit on wall surface, lengthen conduit to connect electrically to power source.
• Foundations: Foundations are the responsibility of Vendor unless otherwise noted. Foundations are to be engineered to support weight and load of signs and be installed below the local frost line to prevent shifting and heaving. All concrete will be rated sufficiently for the task and include steel reinforcement. Concrete slabs and exposed foundations will be finished to match nearby sidewalks, curbs or driveways.

3.3.2 - FIELD QUALITY Control

Punch List: Within two weeks of scheduled completion of installation, prepare a punch list noting the following:
• Improper alignment of letters on sign panel.
• Improper alignment of signs.
• Chipped corners.
• Unpainted exposed fasteners.
• Fabricated mounting not as specified.
• Improper cleaning of sign surfaces or surrounding wall areas.
• Damage to surrounding surfaces.
• Missing signs.
• Incorrect Messages.
• Repair or replace damaged units as required after owner’s final inspection.

3.3.3 - FIELD QUALITY Control

3.4 - PATCH AND ADJUST

Patch existing surfaces damaged as a result of work under this section. Patch with same materials as existing. Sign vendor shall paint and harmonize to blend and conform all repairs to match adjoining conditions. Touch up any marks or nicks in painted finishes of all signs and adjoining structures.

3.5 - CLEANING AND PROTECTION

At completion of installation, clean exposed sign surfaces in accordance with the manufacturer’s instructions. Signs shall be free of glue, fingerprints, dirt, grease or any other imperfections. Evidence of installation work for damages incurred on other surfaces shall be repaired by Vendor at no additional cost to Owner. Repair or replace damaged units as noted by Owner at no additional cost to Owner. Properly prepare final message schedule with all as-installed information will be provided by Vendor. Owner shall be responsible for the correct operation and maintenance of all signs and sign components. Pursuit of workmanship, including any additional cost to the Owner, unless item is beyond the original scope of work. A punch list shall be the same paint product as used for this Sign finish.

3.6 - SCHEDULE OF PROTOTYPES

Prototypes - full size or otherwise specified of required sign types to be provided for owner approval. As paint vinyl color samples to be submitted to owner and client for review and approval. Prototypes submitted to designer during fabrication on a weekly basis or otherwise requested.

Prototypes of similar construction are required to ensure that all fabrication specifications and materials are followed per the guideline shop drawings and 10-140 specifications. Prototypes of similar construction will be due 2-3 weeks from acceptance of preliminary Shop Drawings and may be used for the final scope of work if approved.

3.7 - MONUMENT SIGN

Please refer to the architectural spec for the specifications that covers concrete, brick, metal flashtight and composite metal panels. The materials used on the monument sign will be similar to what is being used on the building.
SECTION 2

GRAPHIC/BRAND STANDARDS
All artwork is for design intent only. Artwork shall not be used for production. All dimensions and locations are to be field verified.

**COLORS**

- **P1** SEMHS Yellow
  - PMS 101 C (matte)
- **P2** SEMHS Navy
  - PMS 289 C (matte)
- **P3** Dark Turquoise
  - PMS 7475 C (matte)
- **P4** Light Turquoise
  - PMS 80% 7471 C (matte)
- **P5** White
  - (matte)
- **P6** Black
  - (matte)

**TYPEFACES**

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm
Nn Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz
0123456789

(Neue Haas Grotesk Display Pro 65 Medium)
SECTION 3

DESIGN DRAWINGS
1. 8" thick fabricated translucent acrylic letters with masked and painted returns. Letter returns have a 4" unpainted portion to provide illuminated returns from premium white LEDS. Logo is flush mounted to wall with hardwares and screws from the back. (minimum 5 pins required per letter). No visible screws or hardwares allowed. All power connections to be concealed behind logo.

2. 8" thick fabricated and powder coated aluminum letters. Logo is flush mounted to wall with hardwares and screws from the back. (minimum 5 pins required per letter). No visible screws or hardwares allowed.

A. SignMaker to field verify mounting locations and adjust mounting per location as needed to accommodate variations in conditions.

SAMPLES
Submit two (2) painted samples for each color for review and approval.
DRAWING NOTES

1. Masked and painted graphic. Paint to be free of air bubbles, creases and drips. Project designer will supply final artwork files for printing prior to shop drawings.

A. Sign Mfr. to field verify mounting locations and adjust mounting per location as needed to accommodate variations in conditions.
DRAWING NOTES
1  2” thick fabricated acrylic, dimensional logo backer. Logo backer is painted on all faces as noted. Logo is flush mounted to wall with hardware and screws from the back. No visible hardware or screws allowed.

2  1” thick fabricated translucent, dimensional logo. Logo is internal-illuminated with premium yellow LEDs. Logo is flush mounted to navy logo backer. All power connections to be concealed behind logo.

A  Sign Mfr. to field verify mounting locations and adjust mounting per location as needed to accommodate variations in conditions.

SAMPLES
Submit two (2) painted color samples on acrylic for review and approval with shop drawings. Submit LED options for review and approval.
Digitally HD printed full wall coverage vinyl heat applied to brick wall. Vinyl to be applied free of air bubbles, tears, creases and folds. Project designer will supply final artwork files for printing prior to shop drawings.

A. Sign Mfr. to field verify mounting locations and adjust mounting per location as needed to accommodate variations in conditions.

SAMPLES
Submit two (2) samples of 10" squares, printed vinyl material applied to 1/4" thick piece of acrylic for review and approval with shop drawings.

All artwork is for design intent only. Artwork shall not be used for production. All dimensions and locations are to be field verified.
1. Digitally HD printed full wall coverage vinyl heat applied to brick wall. Vinyl to be applied free of air bubbles, tears, creases and folds. Project designer will supply final artwork files for printing prior to shop drawings.

A. Sign Mfr. to field verify mounting locations and adjust mounting per location as needed to accommodate variations in conditions.

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DRAWING NOTES

1. Digitally HD printed full wall coverage vinyl heat applied to brick wall. Vinyl to be applied free of air bubbles, tears, creases and folds. Project designer will supply final artwork files for printing prior to shop drawings.

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ELEVATION: BLDG K - K101 MANUFACTURE LAB

SCALE: 1/4" = 1'-0"

SOUTH EL MONTE HIGH SCHOOL
El Monte, CA

PRICING SET
75-20225-10
July 21, 2022

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