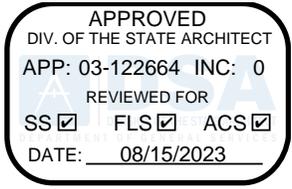


APPLICATION FOR SUBMITTAL OF POST-APPROVAL DOCUMENT

This application is for submittal of documents, after the initial approval of the project (post-approval documents), that require Division of the State Architect (DSA) review and approval. This form shall be completed by the Design Professional in General Responsible Charge of the project, in accordance with California Code of Regulations, Title 24, Part 1, Sections 4-317, 4-323 and 4-338 and in compliance with DSA IR A-6: Construction Change Document Submittal and Approval Process.

DSA documents referenced within this form are available on the [DSA Forms](#) or [DSA Publications](#) webpages.

1. SUBMITTAL TYPE: (Is this a resubmittal? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>)			
Deferred Submittal <input type="checkbox"/>	Addendum Number: <u>02</u>	Revision Number:	CCD Number: _____ Category A <input type="checkbox"/> or B <input type="checkbox"/>
2. PROJECT INFORMATION:			
School District/Owner: <u>Kern High School District</u>		DSA File Number: <u>15 H3</u>	
Project Name/School: <u>Highland High School 50M Pool & Aquatics Center</u>		DSA Application Number <u>03 122664</u>	
3. APPLICANT INFORMATION:			
Date Submitted: <u>05/30/23</u>		Attached Pages? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Number of pages? <u>59</u>	
Firm Name: <u>PJHM Architects, Inc.</u>		Contact Name: <u>Derek Stemrich</u>	
Work Email: <u>derek@pjhm.com</u>		Work Phone: <u>(949) 540-8642</u>	
Firm Address: <u>24461 Ridge Route Dr., Suite 100</u>		City: <u>Laguna Hills</u>	State: <u>CA</u> Zip Code: <u>92653</u>
4. REASON FOR SUBMITTAL: (Check applicable boxes)			
<input checked="" type="checkbox"/> For revision or addendum prior to construction.		<input type="checkbox"/> For a project currently under construction.	
<input type="checkbox"/> For a project that has a form DSA 301-N: Notification of Requirement for Certification, DSA 301-P: Posted Notification of Requirement for Certification or a 90-Day Letter issued.			
<input type="checkbox"/> To obtain DSA approval of an existing uncertified building or buildings.			
<input type="checkbox"/> For Category B CCD this is: <input type="checkbox"/> a voluntary submittal, <input type="checkbox"/> a DSA required submittal (attach DSA notice requiring submission).			
5. DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE:			
Name of the Design Professional In General Responsible Charge: <u>Thomas W. Kruse</u>			
Professional License Number: <u>C15585</u>		Discipline: <u>ARCHITECT</u>	
Design Professional in General Responsible Charge Statement: The attached post-approval documents have been examined by me for design intent and appear to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications. They are acceptable for incorporation into the construction of the project.			
Signature: 			
DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE			
6. CONFIRMATION, DESCRIPTION AND LISTING OF DOCUMENTS:			
For addenda, revisions, or CCDs: CHECK THIS BOX <input checked="" type="checkbox"/> to confirm that <i>all</i> post-approval documents have been stamped and signed by the Responsible Design Professional listed on form DSA 1: Application for Approval of Plans and Specifications for this project. (For Deferred Submittals, refer to IR A-18: Use of Construction Documents Prepared by Other Professionals, and IR A-19: Design Professional's Signature and Seal (Stamp) on Construction Documents, when applicable, for signature and seal requirements.)			
Provide a brief description of construction scope for this post-approval document (attach additional sheets if needed): <u>See attached Narrative.</u>			
List of DSA-approved drawings affected by this post-approval document: <u>See attached Narrative.</u>			

DSA USE ONLY		Returned	DSA STAMP
SSS <u>KK</u> Date <u>08/15/23</u> <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved <input type="checkbox"/> Not Required	Comments: _____	Date: _____	
FLS <u>ZM</u> Date <u>06/22/2023</u> <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved <input type="checkbox"/> Not Required	Comments: _____	By: _____	
ACS <u>N.Niktab</u> Date <u>08/07/23</u> <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved <input type="checkbox"/> Not Required	Comments: _____		



KERN HIGH SCHOOL DISTRICT

Business Services Department
Richard J. Ruiz, Director

5801 Sundale Avenue
Bakersfield, California 93309-2924
(661) 827-3122
FAX (661) 827-3309

ADDENDUM NO. TWO

DATE: May 30, 2023

BID TITLE: **Bid No. 5571 – Highland High School: 50-Meter Pool & Aquatics Center**

BID DATE: Friday, June 2, 2023, at 2:00 p.m.

Notice to all contractors submitting bids for the above-referenced item:

1. REVISIONS TO THE PROJECT MANUAL

Please see attached REVISIONS provided by the Architect.

2. All other terms, conditions and specifications are to remain the same.

Approved:

DocuSigned by:

4D4F00EEF520477...
Jenny Hannah Brown
Director, Facilities Planning

DocuSigned by:

5239BA3440A749E...
Michael Zulfa, Ed.D.,
Associate Superintendent, Business

Please sign below and **return this page with bid** to acknowledge receipt of this addendum.

Signature

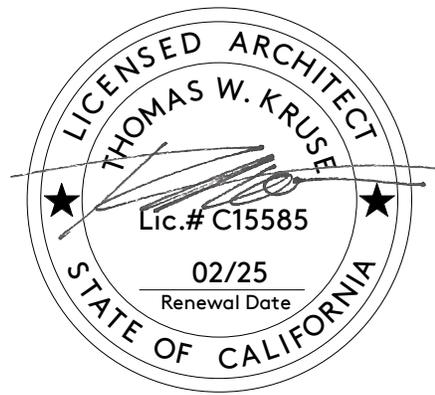
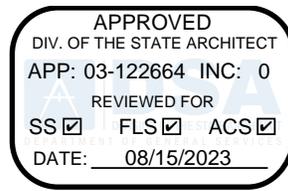
Company Name

Print

Date

Title

addendum



ADDENDUM NO: 02 (TWO)
DATE: May 30, 2023
PROJECT No.: KHSD 2201
DSA No.: A 03-122664, FILE 15-H3

DISTRICT: KERN HIGH SCHOOL DISTRICT
PROJECT: HIGHLAND HIGH SCHOOL – 50M POOL & AQUATICS CENTER
PROJECT ADDRESS: 2900 ROYAL SCOTS WAY, BAKERSFIELD, CA 93306

NOTICE TO BIDDERS

This Addendum forms a part of the Contract and modifies the original bidding documents. It is intended that all work affected by the following modifications shall conform with related provisions and general conditions of the Contract of the original drawings and specifications. Modify the following items wherever appearing in any drawings or sections of the specifications. Acknowledge receipt of ADDENDUM NO. 02 (TWO) in the space provided on the Bid Form. Failure to do so may subject to disqualification.

REVISIONS TO THE PROJECT MANUAL

ITEM No. 001 SECTION 01 20 00 PRICE AND PAYMENT PROCEDURES

A. REVISE Part 1, Article 1.05, Paragraph D, Sub-Paragraph 1, Sub-Paragraph d to read:

- “d. Separate schedules shall be required for each building and as follows:
 1. Building ‘A’
 2. Building ‘B’
 3. Building ‘B’ - Ticket/Concession Structure
 4. Building ‘C’
 5. Pool Deck (As identified on Sheet DP.1)
 6. Pool (As identified on Sheet SP.1)”

ITEM No. 002 SECTION 01 23 00 ALTERNATES

A. REVISE Part 3, Article 3.15, Paragraph A to read:

- “A. Alternate Bid No. 1 – Addition of High-Volume Low-Speed (HVLS) Propeller Fans
 1. Base Bid Condition: Eliminate HVLS Propeller Fans
 2. Alternate Bid Condition: Provide as detailed/specified.

The following items shall be included in Base Bid amount regardless of Alternate No. 1:

- a. Installation of signal pathways for HVLS fans
- b. Installation of power pathways for HVLS fans
- c. Installation of structural steel members supporting HVLS Propeller Fans

addendum

ITEM No. 003 SECTION 08 51 13 ALUMINIUM WINDOWS
 A. REPLACE specification in its entirety per attachment.

 See attachment: SECTION 08 51 13 ALUMINUM WINDOWS ADD-02

ITEM No. 004 SECTION 08 80 00 GLAZING
 A. REVISE Part 2, Article 2.04, Paragraph C. to read:

 "C. TYPE C
 (Vitro) Insulating Glass Unit
 1. Type: SOLARBAN 70XL (2) + Clear
 2. Thickness: 1-inch insulating glass unit
 a. Outer Lite: ¼-inch
 b. Airspace: ½-inch
 c. Inner Lite: ¼-inch
 3. Tint: Clear
 4. Heat Treatment: Tempered, Herculite Brand
 5. Surface Designations:
 a. Surface 1: -
 b. Surface 2: Low E
 c. Surface 3: -
 d. Surface 4: - "

ITEM No. 005 SECTION 09 30 00 TILING
 A. REPLACE specification in its entirety per attachment.

 See attachment: SECTION 09 30 00 TILING ADD-02

ITEM No. 006 SECTION 12 36 16 STAINLESS STEEL COUNTERTOPS
 A. DELETE section in its entirety.

ITEM No. 007 SECTION 12 36 61 SOLID SURFACING COUNTERTOPS
 A. ADD specification in its entirety.

 See attachment: SECTION 12 36 61 SOLD SURFACING COUNTERTOPS ADD-02

ITEM No. 008 SECTION 28 16 00 INTRUSION ALARM SYSTEM
 A. REPLACE specification in its entirety per attachment.

 See attachment: SECTION 28 16 00 INTRUSION ALARM SYSTEM ADD-02

addendum

ITEM No. 009 SECTION 32 84 00 IRRIGATION SYSTEMS

A. REVISE Part 2, Article 2.9, Paragraph A. to read:

“A. Isolation Gate Valve for use on mainline pipe 1” thru 2” in size: Bronze, screw-in bonnet, non-rising stem, solid wedge, with bronze cross operating handle used in conjunction with a remote operating wrench and threaded connection valve as manufactured by Nibco model T-113-k, or equal.”

ITEM No. 010 SECTION 32 90 00 PLANTING

A. REVISE Part 3, Article 3.11, Paragraph B. to read:

“B. Mulch backfilled surfaces of all planting areas and other areas indicated on the plans, unless no mulch is indicated:
 1. Organic Mulch in Planting Areas: Apply 3-inch average thickness of organic mulch extending 12 inches beyond edge of individual planting pit or trench and over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within 2-inches of shrub stems and 6-inches of tree trunk(s).”

B. REVISE Part 3, Article 3.16, Paragraph A. to read:

“A. Install root barrier where trees are planted within 72 inches of paving or other hardscape elements, such as walls, curbs, and walkways unless otherwise shown on Drawings.”

C. REVISE Part 3, Article 3.16, Paragraph C to read:

“C. Install root barrier continuously in each direction from the tree trunk. If trees are spaced closer, use a single continuous piece of root barrier:
 1. Position top of root barrier per manufacturer’s recommendations.
 2. Chisel or jack hammer out any over-pour or other obstructions that inhibit flush smooth installation.
 3. Do not distort or bend root barrier during construction activities.
 4. Do not install root barrier surrounding the root ball of tree.”

REVISIONS TO THE DRAWINGS

ITEM No. 011 SHEET LI.1 LANDSCAPE IRRIGATION PLAN - ENLARGED

A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 1. REVISE Distribution Components Legend.

See attachment: SHEET LI.1 LANDSCAPE IRRIGATION PLAN – ENLARGED ADD-02

addendum

ITEM No. 012 SHEET LID.1 LANDSCAPE IRRIGATION DETAIL SHEET 1

- A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 - 1. REVISE detail 'A'.
 - 2. REVISE detail 'E'.

See attachment: SHEET LID.1 LANDSCAPE IRRIGATION DETAIL SHEET 1 ADD-02

ITEM No. 013 SHEET LID.2 LANDSCAPE IRRIGATION DETAIL SHEET 2 – NOTES AND CALCS.

- A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 - 1. REVISE detail 'T'.

See attachment:
SHEET LID.2 LANDSCAPE IRRIGATION DETAIL SHEET 2 – NOTES AND CALCS. ADD-02

ITEM No. 014 SHEET LP.1 LANDSCAPE PLANTING PLAN

- A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 - 1. REVISE Planting Legend.

See attachment: SHEET LP.1 LANDSCAPE PLANTING PLAN ADD-02

ITEM No. 015 SHEET LPD.1 LANDSCAPE PLANTING DETAILS

- A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 - 1. REVISE detail 'F'.

See attachment: SHEET LPD.1 LANDSCAPE PLANTING DETAILS ADD-02

ITEM No. 016 SHEET A-1.13 SITE DETAILS -HARDSCAPE

- A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 - 1. REVISE detail 4.

See attachment: SHEET A-1.13 SITE DETAILS – HARDSCAPE ADD-02

ITEM No. 017 SHEET A-2.2 SLAB PLAN

- A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 - 1. REVISE detail 1, masonry opening dimensions at Tickets/Concession window openings.

See attachment: SHEET A-2.2 SLAB PLAN ADD-02

addendum

ITEM No. 018 SHEET A-3.2 FLOOR PLAN

- A. REVISE detail 1 as follows:
 - 1. DELETE Tactile Sign 'S' located adjacent to opening B-09.1.
 - 2. DELETE annotation 'EMPLOYEE ONLY WORK AREA' located at room B-09.

ITEM No. 019 SHEET A-6.6 EXTERIOR ELEVATIONS DETAILS

- A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 - 1. ADD detail '4' - FIELD TILE LAYOUT.
Note! FIELD TILE LAYOUT shall apply to ALL EXTERIOR areas scheduled to receive an Exterior Ceramic Tile finish, except as indicated in below paragraph 'B'.
 - 2. ADD detail '8' - FIELD TILE LAYOUT.
Note! FIELD TILE LAYOUT shall apply to Building 'A' east entry area scheduled to receive an Exterior Ceramic Tile finish. Exterior Ceramic Tile finish areas are identified on details 2/A-6.0, 5/A-6.0, and 6/A-6.0.

See attachment: SHEET A-6.6 EXTERIOR ELEVATION DETAILS ADD-02

ITEM No. 020 SHEET A-9.0 INTERIOR ELEVATIONS

- A. REVISE 'KEYNOTES', note 14 to read:
 - '14. SOLID SURFACE COUNTERTOP'
- B. REVISE 'KEYNOTES', note 19 to read:
 - '19. NOT USED'

ITEM No. 021 SHEET A-9.1 INTERIOR ELEVATIONS

- A. REVISE 'KEYNOTES', note 14 to read:
 - '14. SOLID SURFACE COUNTERTOP'
- B. REVISE 'KEYNOTES', note 19 to read:
 - '19. NOT USED'

ITEM No. 022 SHEET A-9.2 INTERIOR ELEVATIONS

- A. REVISE 'KEYNOTES', note 14 to read:
 - '14. SOLID SURFACE COUNTERTOP'
- B. REVISE 'KEYNOTES', note 19 to read:
 - '19. NOT USED'

addendum

ITEM No. 023 SHEET A-9.3 INTERIOR ELEVATIONS DETAILS

- A. CLARIFICATION: Detail 4 -FIELD TILE LAYOUT, shall apply to ALL interior areas scheduled to receive a Ceramic Tile finish.

ITEM No. 024 SHEET A-10.0 OPENING SCHEDULES/TYPES

- A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 - 1. Revise frame type 'F'.

See attachment: SHEET A-10.0 OPENING SCHEUDLES/TYPES ADD-02

ITEM No. 025 SHEET A-10.2 OPENING DETAILS

- A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 - 1. Revise detail 12.
 - 2. Revise detail 13.
 - 3. Revise detail 14.

See attachment: SHEET A-10.2 OPENING DETAILS ADD-02

ITEM No. 026 SHEET A-13.0 COUNTERTOP DETAILS

- A. REPLACE sheet in its entirety. Revisions indicated by revision cloud and delta.
 - 1. Revise detail 1.
 - 2. Revise detail 2.
 - 3. Revise detail 4.
 - 4. Revise detail 5.
 - 5. Revise detail 9.
 - 6. Revise detail 10.
 - 7. Revise detail 11.
 - 8. Revise detail 12.
 - 9. Revise detail 13.
 - 10. Revise detail 14.
 - 11. Revise detail 15.
 - 12. Revise detail 16.

See attachment: SHEET A-13.0 COUNTERTOP DETAILS ADD-02

GENERAL INFORMATION/CLARIFICATIONS

ITEM No. 027 ARCHITECTURALLY EXPOSED STRUCTURAL STEEL

- A. All A.E.S.S. designations shall be in accordance with AISC 303-10, Section 10 and Exhibit 1 AESS Steel.

See attachment: **EXHIBIT 1 – AESS Steel**

(NOTE! Attachment redacted for DSA review)

addendum

ITEM No. 028 SURFACE PREPARATION STANDARDS

- A. All SSPC designations shall be in accordance with the Society for Protective Coatings (SSPC) and the National Association of Corrosion Engineers International (NACE) Surface Preparation Standards and Exhibit 2 Surface Preparation Standards.

See attachment: **EXHIBIT 2 – Surface Preparation Standards**
(NOTE! Attachment redacted for DSA review)

ITEM No. 029 PRE-BID REQUEST FOR INFORMATION (RFI) RESPONSES

- A. **AVAILABLE INFORMATION:** This project contains Pre-Bid RFI's. Responses have been provided.

See attachment: **03-122664_Pre-Bid RFI Responses ADD-02**
(NOTE! Attachment redacted for DSA review)

END OF ADDENDUM

**SECTION 08 51 13
ALUMINUM WINDOWS – ADDENDUM NO. 2**



PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Aluminum Window, Side Sliding-Self Closing Transaction Window
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
 - 1. 08 80 00 Glazing
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates

1.02 REFERENCES

- A. American Architectural Manufacturers Association (AAMA)
- B. American Society for Testing and Materials (ASTM)
- C. Aluminum Association (AA)

1.03 DEFINITIONS

1.04 SYSTEM DESCRIPTIONS

- A. Design Requirements, Performance Requirements
 - 1. Windows shall be self-closing type.
 - 2. Windows shall be designed for exterior use.

1.05 SUBMITTALS

- A. Product Data
 - 1. Submit manufacturer's data sheets on each product to be used, including:
 - a. Preparation instructions and recommendations
 - b. Storage and handling requirements and recommendations
 - c. Installation methods
 - d. Manufacturers' technical data manual
- B. Shop Drawings
 - 1. Show all openings in the opening schedule and/or the Drawings.
 - 2. Provide details of design, construction details and methods of assembling sections, hardware locations, anchorage and fastening methods, frame types and details, anchor types and spacing, and finish requirements.
 - 3. Provide frame, and hardware schedule
- C. Samples
 - 1. Submit manufacturer's finish samples, selection and verification samples.
- D. Quality Assurance/Control Submittals
 - 1. Design Data, Test Reports, Certificates, Manufacturers' Instructions, Manufacturers' Field Reports, Qualification Statements
 - a. Provide manufacturer's certification that products comply with referenced standards as applicable.

E. Closeout Submittals

1.06 QUALITY ASSURANCE

A. Qualifications

1. Obtain aluminum windows through one source from a single manufacturer.

B. Regulatory Requirements

1. Operable parts and controls at unobstructed forward and side approach located at 44" to top of device: For reach requirements at other conditions, comply with 11B-308 as they apply. Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum. Operable parts shall also comply with CBC sections 11B-308.2, 11B-308.3, and 11B-309.4.

C. Certifications

D. Field Samples

E. Mock-ups

F. Pre-installation Meetings

1.07 DELIVERY, STORAGE, AND HANDLING

1.08 PROJECT CONDITIONS

1.09 SEQUENCING

1.10 SCHEDULING

1.11 WARRANTY

- A. System shall be warranted against failure and/or deterioration of metals due to manufacturing process for a period of one (1) years

1.12 SYSTEM STARTUP

1.13 OWNER'S INSTRUCTIONS

1.14 COMMISSIONING

1.15 MAINTENANCE

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. QuikServ, Inc., 11441 Brittmoore Park Drive, Houston, TX 77041 or Equal.

2.02 EXISTING PRODUCTS

2.03 MATERIALS

- A. Framing members, transition members, mullions, adaptors, and mounting: Extruded 6063-T6 aluminum alloy (ASTM B221) and stainless steel (ASTM A240, type 304).
- B. Screws, fastening devices, and internal components: Aluminum, stainless steel, or zinc-plated steel in accordance with ASTM.A-164. Perimeter anchors shall be stainless steel.
- C. Glazing Gasket (Silicone Compatible)
1. Compression-type design, replaceable, molded or extruded santoprene, polyvinyl chloride (PVC), or ethylene propylene diene monomer (EPDM).
 2. Shall be of type that locks securely into the glazing reglet to prevent glazing gaskets from disengaging.

2.04 MANUFACTURED UNITS

- A. Aluminum Window, Side Sliding-Self Closing Transaction Window
 - 1. (QuikServe) SC-CUSTOM
 - a. Size: 36-inch W x 24-inch H nominal
 - b. Service Opening Size: 216 sq.in. max.
 - c. Frame Profile: 4-1/2-inch
 - d. Glass Thickness: 1-inch IGU, See 08 80 00 Glazing and Opening Schedule
 - e. Glazing Location: Center Glazed
 - f. Hardware:
 - 1. Latch, Manufacturer's standard spring latch with manual pull and thumb release which automatically locks on closing.

2.05 EQUIPMENT

2.06 COMPONENTS

2.07 ACCESSORIES

2.08 MIXES

2.09 FABRICATION

- A. Shop Assembly
 - 1. Fabrication Tolerances
 - a. Diverters shall be provided to collect water infiltration and divert from the interior of the system.
 - b. Framing members shall be internally reinforced and secured at head and sill as necessary for structural performance requirements, for hardware attachment, and as indicated.
 - c. Fasteners shall be so located as to ensure concealment from view in the final assembly.

2.10 FINISHES

- A. Shop Priming, Shop Finishing
 - 1. Powder Coating: AAMA 2603.
 - a. Color: As selected by Architect from RAL color chart. Custom color selection.

2.11 SOURCE QUALITY CONTROL

PART 3 EXECUTION

3.01 INSTALLERS

3.02 EXAMINATION

- A. Site Verification of Conditions
 - 1. Examine conditions and verify substrate conditions are acceptable for product installation.

3.03 PREPARATION

3.04 ERECTION

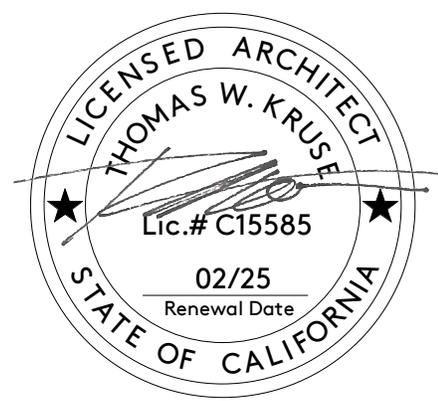
3.05 INSTALLATION

- A. Install in accordance with Manufacturer's instructions, approved submittals, and Contract Documents.
- B. Window shall be installed in a continuous bed of sealant.

- 3.06 APPLICATION
- 3.07 CONSTRUCTION
- 3.08 REPAIR/RESTORATION
- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
 - A. Site Tests, Inspection
 - 1. Test the window for water leaks in accordance with AAMA 501.2-03. Conduct test in the presence of the IOR. Correct deficiencies observed as a result of this test.
 - B. Manufacturers' Field Services
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

END OF SECTION

SECTION 09 30 00
TILING – ADDENDUM NO. 02



PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Tile
 - 2. Trim and Accessories
 - 3. Setting Materials
 - 4. Waterproof Membranes and Uncoupling Membranes
 - 5. Glass-Mat Faced Gypsum Backing Boards
 - 6. Cement Backer Boards
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
 - 1. 07 92 00 Joint Sealants
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates

1.02 REFERENCES

- A. ANSI A108.1A - Specifications for Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar.
- B. ANSI A108.1B - Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex Portland Cement Mortar.
- C. ANSI A108.1C - Specifications for Contractors Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar -or- Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex Portland Cement Mortar.
- D. ANSI A108.4 - Specifications for Ceramic Tile Installed with Organic Adhesives or Water-Cleanable Tile Setting Epoxy Adhesive.
- E. ANSI A108.5 - Specifications for Ceramic Tile Installed with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar.
- F. ANSI A108.6 - Specifications for Ceramic Tile Installed with Chemical-Resistant, Water-Cleanable Tile-Setting and -Grouting Epoxy.
- G. ANSI A108.8 - Specifications for Ceramic Tile Installed with Chemical-Resistant Furan Mortar and Grout.
- H. ANSI A108.9 - Specifications for Ceramic Tile Installed with Modified Epoxy Emulsion Mortar/Grout.
- I. ANSI A108.10 - Specifications for Installation of Grout in Tilework.
- J. ANSI A118.1 - Standard Specification for Dry-Set Portland Cement Mortar.
- K. ANSI A118.3 - Chemical-Resistant, Water-Cleanable, Tile-Setting and -Grouting Epoxy and Water-Cleanable Tile-Setting Epoxy Adhesive.
- L. ANSI A118.4 - Latex-Portland Cement Mortar.
- M. ANSI A118.5 - Chemical-Resistant Furan Mortar and Grout.
- N. ANSI A118.6 - Standard Ceramic Tile Grouts.
- O. ANSI A118.7 - Polymer Modified Cement Grouts
- P. ANSI A118.8 - Modified Epoxy Emulsion Mortar/Grout.

- Q. ANSI A118.9 - Test Methods and Specifications for Cementitious Backer Units
- R. ANSI A118.10 - Load bearing, Bonded, Waterproof Membranes for Thinset Ceramic Tile and Dimensional Stone.
- S. ANSI A118.11 - Exterior Grade Plywood (EGP) Latex-Portland Cement Mortar.
- T. ANSI A136.1 - Organic Adhesives for Installation of Ceramic Tile.
- U. ANSI A137.1 - Specifications for Ceramic Tile.
- V. ASTM C 50 - Standard Practice for Sampling, Sample Preparation, Packaging, and Marking of Lime and Limestone Products.
- W. ASTM C 144 - Standard Specification for Aggregate for Masonry Mortar.
- X. ASTM C 207 - Standard Specification for Hydrated Lime for Masonry Purposes.
- Y. ASTM C 241 - Standard Test Method For Abrasion Resistance of Stone Subjected to Foot Traffic.
- Z. ASTM C 503 - Standard Specification for Marble Dimension Stone.
- AA. ASTM C 615 - Standard Specification for Granite Dimension Stone.
- BB. ASTM C 629 - Standard Specification for Slate Dimension Stone.
- CC. ASTM C 847 - Standard Specification for Metal Lath.
- DD. ASTM C 1028 - Standard Test method for Determining the Static Coefficient of Friction or Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull Meter Method.
- EE. ASTM D 4397 - Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications.
- FF. Tile Council of North America (TCNA): TCA Handbook for Ceramic Tile Installation, current edition.

1.03 DEFINITIONS

1.04 SYSTEM DESCRIPTIONS

- A. Design Requirements, Performance Requirements
 - 1. Static Coefficient of Friction
 - a. Tile on walkway surfaces shall be provided with the following values as determined by testing in conformance with ASTM C 1028.
 - 1. Level Surfaces: Minimum of 0.6 (Wet).
 - 2. Step Treads: Minimum of 0.6 (Wet).
 - 3. Ramp Surfaces: Minimum of 0.8 (Wet).

1.05 SUBMITTALS

- A. Product Data
 - 1. Submit manufacturer's data sheets on each product to be used
- B. Shop Drawings
 - 1. Submit scaled drawings indicating tile layout, pattern, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.
- C. Samples
 - 1. Submit color charts illustrating full range of colors and patterns.
- D. Quality Assurance/Control Submittals
 - 1. Design Data, Test Reports, Certificates, Manufacturers' Instructions, Manufacturers' Field Reports, Qualification Statements
 - a. Submit manufacturer's preparation instructions and recommendations

- b. Submit manufacturer's storage and handling requirements and recommendations.
 - c. Submit manufacturer's installation methods
 - d. Submit manufacturer's certificate that products meet or exceed specified requirements.
 - E. Closeout Submittals
 - 1. Submit maintenance data that includes recommended cleaning methods, cleaning materials, stain removal methods, and polishes and waxes.
- 1.06 QUALITY ASSURANCE
 - A. Qualifications
 - 1. Installer shall specialize in performing the work of this section with minimum two years' experience.
 - 2. Obtain each type and color of tile from a single source. Obtain each type and color of mortar, adhesive and grout from a single source.
 - B. Regulatory Requirements
 - 1. Ceramic Tile Flooring shall be stable, firm, and slip resistant. **CBC Section 11B-302.1.**
 - C. Certifications
 - D. Field Samples
 - E. Mock-ups
 - 1. Mount tile and apply grout on two 4-foot x 4-foot plywood panels, illustrating pattern, color variations, and grout joint size variations.
 - F. Pre-installation Meetings
- 1.07 DELIVERY, STORAGE, AND HANDLING
 - A. Packing, Shipping, Handling, and Unloading
 - 1. Deliver and store products in manufacturer's unopened packaging until ready for installation.
 - B. Acceptance at Site
 - C. Storage and Protection
 - 1. Protect adhesives and liquid additives from freezing or overheating in accordance with manufacturer's instructions.
 - 2. Store tile and setting materials on elevated platforms, under cover and in a dry location and protect from contamination, dampness, freezing or overheating.
 - D. Waste Management and Disposal
- 1.08 PROJECT CONDITIONS
 - A. Project Environmental Requirements
 - 1. Do not install adhesives in an unventilated environment.
 - 2. Maintain ambient and substrate temperature of 50 degrees F during tiling and for a minimum of 7 days after completion.
 - B. Existing Conditions
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

- A. Extra Materials
 - 1. Provide for Owner's use a minimum of 2 percent of all sizes and colors of tile specified, boxed and clearly labeled.
- B. Maintenance Service

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Ceramic Tile
 - 1. Daltile Corporation, 7834 C.F. Hawn Fey. P.O. Box 170130, Dallas, TX 75217, or Equal.
- B. Non-Ceramic Trim
 - 1. Schluter Systems, L.P., 194 Pleasant Ridge Road, Plattsburgh, NY 12901, or Equal.
- C. Adhesives, Mortar Bed Materials, Mortar Bond Coat Materials, Grout
 - 1. Laticrete International, Inc., 22550 Temescal Canyon Road, Corona, CA 92883, or Equal.
 - 2. Custom Building Products, 7711 Center Ave. Ste 500, Huntington Beach, CA 92647
 - 3. Bostik, Inc., 11320 W. Watertown Plank Road, Wauwatosa, WI 53226
 - 4. Schluter Systems, L.P., 194 Pleasant Ridge Road, Plattsburgh, NY 12901
- D. Waterproof Membranes and Uncoupling Membranes
 - 1. Schluter Systems, L.P., 194 Pleasant Ridge Road, Plattsburgh, NY 12901, or Equal.
- E. Glass-Mat Faced Gypsum Backing Boards
 - 1. Georgia-Pacific Gypsum, 133 Peachtree Street, Atlanta GA 30303, or Equal.
 - 2. United States Gypsum Company, 550 West Adams Street, Chicago, IL 60661
- F. Cement Backing Boards
 - 1. Reference Standard: ANSI A118.9 or ASTM C1325, Type A
 - 2. PermaBASE Building Products, LLC, 2001 Rexford Rd., Charlotte, NC 28211 or equal.
 - 3. United States Gypsum Company, 550 West Adams Street, Chicago, IL 60661

2.02 EXISTING PRODUCTS

2.03 MATERIALS

- A. Tile
 - 1. Ceramic Floor Tile
 - a. (Daltile) Natural Hues
 - 1. Thickness: 5/16-inch
 - 2. Joints: 1/8-inch
 - 3. Size and Shape: 2"x2"
 - 4. Surface Finish: To be selected from manufacturer's available range
 - 5. Colors: Price groups 1 and 2
 - 6. Pattern: To be issued by Architect prior to installation.
 - 7. Trim Units: n/a

2. Ceramic Base Tile
 - a. (Daltile) Natural Hues
 1. Thickness: 5/16-inch
 2. Joints: 1/8-inch
 3. Size and Shape: 2"x8"
 4. Surface Finish: To be selected from manufacturer's available range
 5. Colors: Price groups 1 and 2
 6. Pattern: To be issued by Architect prior to installation
 7. Trim Units: n/a
3. Ceramic Wall Tile 1
 - a. (Daltile) Natural Hues
 1. Thickness: 5/16-inch
 2. Joints: 1/8-inch
 3. Size and Shape: 2"x8"
 4. Surface Finish: To be selected from manufacturer's standard range
 5. Colors: Price groups 1 and 2
 6. Pattern: To be issued by Architect prior to installation
 7. Trim Units: n/a
4. Ceramic Wall Tile 2
 - a. (Daltile) Natural Hues
 1. Thickness: 5/16-inch
 2. Joints: 1/8-inch
 3. Size and Shape: 2"x8"
 4. Surface Finish: To be selected from manufacturer's standard range
 5. Colors: Price groups 1 and 2
 6. Pattern: To be issued by Architect prior to installation
 7. Trim Units: n/a
5. Ceramic Wall Tile A
 - a. (Daltile) Natural Hues
 1. Thickness: 5/16-inch
 2. Joints: 1/8-inch
 3. Size and Shape: 2"x8"
 4. Surface Finish: To be selected from manufacturer's standard range
 5. Colors: Price groups 1 and 2
 6. Pattern: To be issued by Architect prior to installation
 7. Trim Units: n/a
6. Ceramic Wall Tile B
 - a. (Daltile) Natural Hues
 1. Thickness: 5/16-inch
 2. Joints: 1/8-inch
 3. Size and Shape: 2"x8"
 4. Surface Finish: To be selected from manufacturer's standard range
 5. Colors: Price groups 1 and 2

6. Pattern: To be issued by Architect prior to installation
7. Trim Units: n/a
7. Ceramic Wall Tile C
 - a. (Daltile) Natural Hues
 1. Thickness: 5/16-inch
 2. Joints: 1/8-inch
 3. Size and Shape: 2"x8"
 4. Surface Finish: To be selected from manufacturer's standard range
 5. Colors: Price groups 1 and 2
 6. Pattern: To be issued by Architect prior to installation
 7. Trim Units: n/a
8. Ceramic Wall Tile D
 - a. (Daltile) Natural Hues
 1. Thickness: 5/16-inch
 2. Joints: 1/8-inch
 3. Size and Shape: 2"x8"
 4. Surface Finish: To be selected from manufacturer's standard range
 5. Colors: Price groups 1 and 2
 6. Pattern: To be issued by Architect prior to installation
 7. Trim Units: n/a
- B. Trim and Accessories
 1. Non-Ceramic Trim
 - a. Finishing, Edge Protection, and Transition Profiles
 1. (Schluter) As detailed
 - b. Movement Joints and Cove-Shaped Profiles
 1. (Schluter) As detailed
 2. Stone Thresholds
 - a. Natural Stone Slab (Marble Dimension Stone)
 1. Size: Custom length, Custom width x 5/8-inch thick
 2. Material: Marble, complying with ASTM C 503 for exterior use and with a minimum abrasive hardness of 10 when tested in accordance with ASTM C 241.
 3. Color/Finish: As selected by architect.
 4. Edge: 2:1 bevel edges.
- C. Setting Materials
 1. Cementitious Bond Coat
 - a. ANSI 118.15 or better
 2. Cementitious Bond Coat (When waterproof membrane is used)
 - a. ANSI 118.1 Premium Unmodified as manufactured by:
 1. (Bostik) Ditra-Set
 2. (Schluter) ALL-SET
 3. Mortar Bed, Metal Lath, and Cleavage Membrane: ANSI A108.1A
 4. Grout
 - a. (CBP) Prism Ultimate Performance Grout
 5. Joint Sealant:
 - a. 100% Silicone Sealant, ASTM C-920, Type S, Grade NS, Class 25

- D. Waterproof Membranes and Uncoupling Membranes
 - 1. Uncoupling Membranes: ANSI A118.10
 - a. (Schluter) DITRA with all preformed corners and manufacturer's recommended accessories.
 - 2. Waterproofing Membrane at Floors: ANSI A118.10
 - a. (Schluter) DITRA with all preformed corners and manufacturer's recommended accessories.
 - b. (Schluter) KERDI with all preformed corners and manufacturer's accessories.
 - 3. Waterproofing Membrane at Walls and Shower Floors: ANSI A118.10
 - a. (Schluter) KERDI with all preformed corners and manufacturer's accessories.
- E. Glass-Mat Faced Gypsum Backing Boards
 - 1. (GP) DensShield Fireguard Tile Backer
 - a. Thickness: 5/8-inch, Type X
 - b. Width: 4-feet
 - c. Length: 5-feet or 8-feet
 - d. Edges: Square
 - 2. (USG) DUROCK Brand Glass-Mat Tile Backerboard
 - a. Thickness: 5/8-inch, Type X
 - b. Width: 4-feet
 - c. Length: 5-feet or 8-feet min.
 - d. Edges: Square
- F. Cement Backing Boards
 - 1. ANSI A118.9 or ASTM C1325, Type A
 - a. Thickness: 1/2-inch
 - b. Width: 4-feet
 - c. Length: 5-feet or 8-feet
 - d. Edges: Round or Square

- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

PART 3 EXECUTION

- 3.01 INSTALLERS
- 3.02 EXAMINATION
 - A. Site Verification of Conditions
 - 1. Verify that wall surfaces are free of substances which would impair bonding of setting materials, smooth and flat within tolerances specified in ANSI A137.1, and are ready to receive tile.
 - 2. Verify that sub-floor surfaces are dust-free, and free of substances which would impair bonding of setting materials to sub-floor surfaces, and are smooth and flat within tolerances specified in ANSI A137.1.

3. Verify that concrete sub-floor surfaces are ready for tile installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by tile manufacturer and setting materials manufacturer.
4. Verify that required floor-mounted utilities are in correct location.

3.03 PREPARATION

A. Protection

1. Protect surrounding work from damage.

B. Surface Preparation

1. Remove any curing compounds or other contaminants.
2. Vacuum clean surfaces and damp clean.
3. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.
4. Install cementitious backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of dry-set mortar to a feather edge.
5. Prepare substrate surfaces for adhesive installation in accordance with adhesive manufacturer's instructions.

3.04 ERECTION

3.05 INSTALLATION

A. General

1. Install tile and grout in accordance with applicable requirements of ANSI A108.1 through A108.13, manufacturer's instructions, and TCA Handbook design numbers indicated on drawings.
2. Lay tile to pattern indicated. Arrange pattern so that a full tile or joint is centered on each wall and that no tile less than 1/2 width is used. Do not interrupt tile pattern through openings.
3. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.
4. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
5. Form internal angles square and external angles bullnosed.
6. Install ceramic accessories rigidly in prepared openings.
7. Install non-ceramic trim in accordance with manufacturer's instructions.
8. Install thresholds where indicated.
9. Sound tile after setting. Replace hollow sounding units.
10. Keep expansion joints free of adhesive or grout. Apply sealant to joints.
11. Allow tile to set for a minimum of 48 hours prior to grouting.
12. Grout tile joints. Use standard grout unless otherwise indicated.
13. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

3.06 APPLICATION

3.07 CONSTRUCTION

3.08 REPAIR/RESTORATION

3.09 RE-INSTALLATION

3.10 FIELD QUALITY CONTROL

3.11 ADJUSTING

3.12 CLEANING

- A. Clean tile and grout surfaces after installation is complete.

3.13 DEMONSTRATION

3.14 PROTECTION

- A. Do not permit traffic over finished floor surface for 72 hours after installation.
- B. Cover floors with Kraft paper and protect from dirt and residue from other trades.
- C. Where floor will be exposed for prolonged periods cover with plywood or other similar type walkways

3.15 SCHEDULES

END OF SECTION

SECTION 12 36 61
SOLID SURFACING COUNTERTOPS – ADDENDUM NO. 02



PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Solid Surfacing Countertops
 - 2. Solid Surfacing Countertop Back Splash, End Splash, Apron
 - 3. Sub-Top Substrate
 - 4. Setting materials
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
 - 1. 22 05 00 General Plumbing Requirements
 - 2. 22 05 10 General Plumbing Materials
 - 3. 22 40 00 Plumbing Fixtures
 - 4. 22 70 00 Plumbing Systems
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates

1.02 REFERENCES

1.03 DEFINITIONS

1.04 SYSTEM DESCRIPTIONS

1.05 SUBMITTALS

- A. Product Data
 - 1. Submit manufacturer's data sheets on each product to be used.
 - 2. Submit manufacturer's preparation instructions and recommendations.
 - 3. Submit manufacturer's storage and handling requirements and recommendations.
 - 4. Submit manufacturer's installation methods.
 - 5. Submit manufacturer's product data for adhesives and finishes that indicate VOC limits for each product.
- B. Shop Drawings
 - 1. Submit shop drawings of countertops indicating materials and hardware, details for construction, dimensions, fastening and installation details. Shop drawings shall indicate grounds, backing, blocking, sleepers, countertop configurations, edge details, splash details, and configuration options.
- C. Samples
 - 1. Submit selection samples for each finish product specified, submit complete set of color chips representing manufacturer's full range of standard colors.
 - 2. Submit verification samples for each finish product specified, submit samples representing actual product color.
- D. Quality Assurance/Control Submittals
 - 1. Design Data, Test Reports, Certificates, Manufacturers' Instructions, Manufacturers' Field Reports, Qualification Statements

- E. Closeout Submittals
 - 1. Submit maintenance, cleaning, and life cycle information, including recommended cleaning materials and procedures, and list of materials detrimental to epoxy resin.
- 1.06 QUALITY ASSURANCE
- A. Qualifications
 - 1. Products shall be furnished by single manufacturer with minimum 5 years documented experience in work of this Section.
 - 2. Installer shall have a minimum 5 years documented experience in work of this Section.
 - B. Regulatory Requirements
 - C. Certifications
 - D. Field Samples
 - E. Mock-ups
 - 1. Construct worksurface mockup, min. 6 feet wide x full depth, including worksurface, and trim.
 - 2. Approved mockup may not remain as part of the Work.
 - F. Pre-installation Meetings
- 1.07 DELIVERY, STORAGE, AND HANDLING
- A. Packing, Shipping, Handling, and Unloading
 - 1. Use pallets larger than sheets during transportation.
 - 2. Package materials to prevent damage during shipping and handling.
 - 3. If protective film is provided, do not remove until panel has been installed.
 - 4. Handle sheets to prevent damage.
 - 5. Remove stickers immediately after installation.
 - B. Acceptance at Site
 - C. Storage and Protection
 - 1. Store products in enclosed area protected from ultraviolet light.
 - 2. Store products in manufacturer's unopened packaging until ready for installation.
 - 3. Store panels using protective dividers to avoid damage to surfaces.
 - 4. For horizontal storage, store sheets on pallets of equal or greater size than sheets with protective layer between pallet and sheet and on top of uppermost sheet.
 - 5. Do not store sheets or fabricated panels vertically.
 - 6. Provide protective covers coverings to prevent physical damage or staining following installation for duration of project.
 - D. Waste Management and Disposal
- 1.08 PROJECT CONDITIONS
- A. Project Environmental Requirements
 - 1. Do not install products under environmental conditions outside of manufacturer's published limits.
 - 2. Do not use worksurfaces as a bench, ladder, or seating.
 - B. Existing Conditions
- 1.09 SEQUENCING
- A. Coordinate fabrication, delivery, and installation with the contractor and other applicable trades.

- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Solid Surfacing Products
 - 1. Corian Design (Dupont) 974 Centre Road, Wilmington, DE 19805 or Equal.

2.02 EXISTING PRODUCTS

2.03 MATERIALS

- A. Solid Surfacing Countertops
 - 1. (Corian) Endura
 - a. Thickness: 20mm (3/4" nominal)
 - b. Edge: 1/8-inch beveled and as detailed on drawings.
 - c. Color Portfolio: As selected by Architect from Cement and Monochromatic portfolios.
 - d. Color: Full range of colors within Color Portfolio.
 - e. Finish: Full range of options with Color Portfolio
 - f. Sink Cutouts: Routed for undermount style sink
 - g. Seam Width: 3mm (1/8" nominal) silicone adhesive with 2mm chamfer.
- B. Solid Surfacing Countertop Back Splash, End Splash, Aprons
 - 1. (Corian) Endura
 - a. Thickness: 12 mm (1/2" nominal)
 - b. Edge: 1/8-inch beveled
 - c. Height: As indicated on drawings
 - d. Backsplash Joint: Applied
 - e. Color/Finish: Match countertop
 - f. Seam Width: 3mm (1/8" nominal) silicone adhesive with 2mm chamfer.
- C. Sub-top Substrate
 - 1. As detailed on drawings.
- D. Setting materials
 - 1. Mounting Adhesives: 100% silicone adhesive as recommended by manufacturer.
 - 2. Seam Adhesives: Manufacturer's joint adhesive (interior joints), 100% silicone adhesive as recommended by manufacturer (exterior joints).

- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION

- A. Fabricate components to the greatest extent practical to sizes and shapes indicated, in accordance with approved submittals, manufacturer's instructions, and Contract Documents.
- B. Form interior joints between components using manufacturer's standard joint adhesive
 - 1. Reinforce as required.
 - 2. Provide factory cutouts for plumbing fittings and accessories as indicated on drawings.
 - 3. Rout and finish component edges with clean, sharp returns.
 - 4. Rout cutouts, radii and contours to template.

2.10 FINISHES

2.11 SOURCE QUALITY CONTROL

PART 3 EXECUTION

3.01 INSTALLERS

3.02 EXAMINATION

- A. Site Verification of Conditions
 - 1. Do not begin installation until casework and or mounting hardware has been installed.
 - 2. Verify that surfaces to receive worksurfaces are plumb and level, with a maximum deflection of 1/4-inch in 20-feet.
 - 3. Verify that mechanical, electrical, plumbing, and other building components affecting work in this section are in place.

3.03 PREPARATION

- A. Protection
- B. Surface Preparation
 - 1. Clean surfaces just prior to installation
 - 2. Prepare surfaces using methods recommended by manufacturer.

3.04 ERECTION

3.05 INSTALLATION

- A. Install in accordance with manufacturer's instructions and technical bulletins and approved submittals and Contract Documents.
- B. Install worksurfaces shall be secured in place, square, plumb, and level.
- C. Scribe to adjacent surfaces in accordance with manufacturer's recommendations.
- D. Fasten worksurfaces to supporting construction with adhesives appropriate for use with adjoining construction and as recommended by the manufacturer.
- E. Form field joints using manufacturer's recommended adhesive. Form joints to be inconspicuous and nonporous.
- F. Confirm all equipment cutouts shown on plans with Architect prior to cutting.
- G. All cutouts shall be cut by the countertop installer.

3.06 APPLICATION

3.07 CONSTRUCTION

3.08 REPAIR/RESTORATION

3.09 RE-INSTALLATION

3.10 FIELD QUALITY CONTROL

- 3.11 ADJUSTING
 - A. Before completion of the installation, the installer shall adjust all moving operating parts to function smoothly and correctly.
 - B. All nicks, chips, and scratches in the finish shall be filled and retouched. Damaged items that cannot be repaired shall be replaced.
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
 - A. Protect installed products until completion of Project
 - B. Touch up, repair, or replace damaged products.
- 3.15 SCHEDULES

END OF SECTION



SECTION 28 16 00 - INTRUSION ALARM SYSTEM

ADDENDUM NO. 02

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. The work under this section includes all final design, all labor, material, equipment, supplies, labor, testing, and accessories required to furnish and install a complete Intrusion Detection / Burglar Alarm System (referred to as intrusion alarm) as indicated on the drawings and as specified herein.
- B. It is the intent of the Drawings and Specifications for the Contractor to design, provide and install a complete, fully operational, and tested system.
- C. All miscellaneous system components including, but not limited to, cables, termination equipment, punch blocks, patch panels, backboards, and any other related items shall be furnished and installed complete under this section. All miscellaneous items and accessories required for such installation, whether or not each such item or accessory is shown on the plans or mentioned in these specifications.
- D. It shall be the responsibility of each Bidder to examine the plans and specifications carefully before submitting his bid. Any questions or discrepancies discovered shall be brought to the attention of the Architect/Engineer, prior to bid, and resolved by way of addendum.
- E. All materials, equipment and apparatus provided shall be new and of the latest design or model offered for sale by the manufacturer.

1.2 RELATED WORK

- A. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and sections of Divisions 1 and 26 of these specifications.
- B. All applicable portions of Section 26 10 00 and Section 27 10 00 shall apply to this section as though written herein completely.

1.3 GENERAL REQUIREMENTS

- A. Equipment
 - 1. The District Standard for Intrusion Detection Equipment is Sonitrol.
 - 2. All equipment shall conform to applicable codes and local ordinances.
 - 3. All equipment shall bear the label of a Nationally Recognized Testing Laboratory (NRTL) such as Intertek Testing Services NA, Inc. (ITSNA - formerly ETL) or Underwriters Laboratories Inc. (UL) and be listed by their re-examination service.

- B. Contractor: The term "Contractor" shall be defined as the company, or group of companies, that actually provides the products per Section 2 and installs the products per Section 3 of this document. The Contractor selected to provide the installation of this system shall be certified by the manufacturer in all aspects of design, installation and testing of the products described herein.
1. The Contractor shall hold a valid State of California C-7 Low-Voltage, and a valid Department of Consumer Affairs Bureau of Security and Investigative Services (BSIS) "Alarm Company Operator's" License. The Contractor shall have completed at least twenty (20) projects of equal scope, shall have been in business of furnishing and installing systems of this scope and magnitude for at least five (5) years, and capable of being bonded to assure the Owner of performance and satisfactory service during the guarantee period.
 2. All work shall be performed under the supervision of a company accredited and trained by the manufacturer and such accreditation must be presented with the bid submittal. Contractor must be accredited a minimum of 180 days prior to bid submittal date.
 3. The Contractor shall be a manufacturer's Authorized Installer and Warranty Station for the equipment offered and shall maintain a fully equipped service organization capable of furnishing adequate repair service to the equipment.
 4. The Contractor selected for this Project shall adhere to the engineering, installation and testing procedures and utilize the authorized manufacturer components and distribution channels in provisioning this Project.
 5. The Contractor shall hold all other licenses required by the legally constituted authorities having jurisdiction (AHJ) over the work.
 6. The Contractor shall maintain and provide appropriate liability and worker's compensation insurance coverage.

1.4 PRODUCT SUBSTITUTION / EQUAL

- A. District standard for intrusion alarm system is Sonitrol. Substitutions are not permitted.

1.5 PRE-AWARD SUBMITTAL REQUIREMENT

- A. In the Contractor's bid package, the Contractor shall submit all items required in Division 1 of the bid package.

1.6 PRE-INSTALLATION SUBMITTAL REQUIREMENTS

- A. Within fifteen (15) calendar days after the date of award of the Contract, the Contractor shall submit the following:
1. Submittal Binder: Submit one (1) digital electronic copy of the complete Submittal package for review. The binder shall consist of five (5) major sections.
 - a. The FIRST section shall include a COVER SHEET on the Contractors Company letter head including, Contractor's name, Contractor's license number, Project name, Specification number and description, Date documentation was submitted.
 - b. The SECOND section shall include the Bill of Materials spreadsheet with a full material list of products and equipment included in the Contractor's bid price. This spreadsheet shall provide columns with the following information, manufacturer's name, part number, short description, quantity to be installed, corresponding specification subsection or drawing sheet number where product is referenced.
 - c. The THIRD section shall include manufacturer cut sheets for all listed in the Contractor's Bill of Materials spreadsheet. The cut sheets shall be placed in the same order and listed on the spreadsheet. Cut sheets shall represent the latest version, part number, and revision of the product. Where multiple products or part numbers appear on a page, a bold arrow or circle shall indicate which product or part numbers are to be used as part of the installation.
 - d. The FORTH section shall include the following items:
 - 1) A copy of the low voltage Contractor's valid State of California C-7 Low-Voltage license and BSIS alarm company license.
 - 2) Proof (written documentation) that the low voltage Contractor has been regularly engaged in the business of low voltage contracting consisting of, but not limited to, engineering, fabrication, installation, and servicing of communication systems of the type specified herein for at least the past five (5) consecutive years.
 - 3) Provide a statement summarizing any pending litigation involving any officer or principal of/or the company, the nature of the litigation and what effect the litigation may carry as it relates to this work in the worst-case scenario. Non-disclosure of this item, if later discovered, may result, at the Owner's discretion, in the Contractor bearing all costs and any cost related to the associated delays in the progress of the work.
 - 4) Copy of low voltage Contractor's current liability insurance, workers compensation, and state industrial insurance certificates in conformance with the contract documents.

- 5) A project list containing at least ten (10) California installations completed within the last five (5) years by the low voltage Contractor that are comparable in scope and nature to that specified in the contract document. Provide up-to-date contact information for each project listed including contact's name, title, email address and phone number.
 - 6) Documentation indicating in detail that the low voltage Contractor has competent engineering, installation, service personnel and facilities with reasonable stock of service parts within 75 air-miles of the job site. Do not submit a sales brochure as documentation.
 - 7) Letter(s) from the low voltage equipment manufacturer on the manufacturer's letterhead stating that the bidding Contractor is a Factory Authorized Distributor/Installer, and is trained and certified for the equipment he proposes to use on this project, and is licensed to purchase and install software required to provide the specified functions.
 - 8) Provide manufacturer-issued training certifications for the Project Foreman, and at least 50% of the installation crew that will be assigned to this project. Provide a statement that these personnel are in the local facility, and will be maintained at that facility throughout the project and the warranty period.
 - 9) A fingerprint check must be provided for all personnel working on school sites, performed by the Department of Justice, pursuant to California Education Code Section 45125.1. Fingerprinting shall be performed prior to start of project. All costs associated with DOJ fingerprinting and background checks shall be the full responsibility of the Contractor.
- e. The FIFTH section shall include a sample for each product and component label to be installed on this project.
- B. When submitting multiple specifications sections, the Contractor must provide digital bookmarks in their submittal for ease of review. Bookmarks must be provided for major section divisions and product changes.
- C. Failure to comply with any of the requirements listed above may result in the rejection of the entire submittal package.

1.7 SYSTEM WARRANTY

- A. Prior to Owner acceptance, the Contractor shall provide to Owner, a manufacturers product and performance warranty. This will require a submittal of the required pre-job certification registration forms as well as the required project closing information. The Owner will only acknowledge acceptance upon submittal of a valid manufacturer's warranty.

- B. The warranty shall commence from the date of final written acceptance by the Owner.
- C. All conditions for obtaining the manufacturers warranty shall be the sole responsibility of the Contractor.
- D. The Contractor shall maintain a competent service organization and shall, if requested, submit a service maintenance agreement to the Owner after the end of the guarantee period.
- E. A typewritten notice shall be posted at the equipment rack that shall indicate the firm, address and telephone number to call when service is necessary. The notice shall be mounted in a neatly finished metal frame with a clear plastic window and securely attached to the inside of the door.
- F. The entire system shall be warranted free of mechanical or electrical defects for a period of one (1) year after final acceptance of the installation. Any material showing mechanical or electrical defects shall be replaced promptly at no expense to the Owner.

1.8 MANUFACTURER

- A. Manufacturer of control panel and associated equipment shall be: Digital Monitoring Products to match District Standards.
- B. Its is the responsibility of the bidder to insure that the proposed product meets or exceeds every standard set forth in these specifications and the equipment's technical data sheets.
- C. The functions and features specified are vital to the operation of this facility. Therefore, inclusion of a component's manufacturer in the list of acceptable manufacturers does not release the Contractor from strict compliance with the requirements of this specification.
- D. All basic electronic equipment (not including cable) specified herein shall be produced by a single manufacturer of established reputation and experience who shall have produced similar apparatus for at least three (3) or more years and who shall be able to refer to similar installations rendering satisfactory service.

PART 2 - PRODUCTS

2.1 SYSTEM REQUIREMENTS

- A. Electronic Components
 - 1. All system electronic components shall be solid-state type, mounted on printed circuit boards. Light duty relays and similar switching devices shall be solid-state type or electromechanical.

2. The panel shall have an over-current notification LED that lights when devices connected to the Keypad Bus and LX-Bus(es) draw more current than for which the panel is rated. When the over-current LED lights, the LX-Bus(es) and Keypad bus are shut down.
3. Security system shall not in any way limit or compromise exiting through all required exit access and exit discharge systems. Any security system penetration through rated assemblies shall be properly protected with a UL listed fire-stop installation matching the rating of the assembly.

B. Control Unit

1. panel shall provide the following capabilities:
 - a. Expansion to a total of at least 10,000 user codes with 99 user profile definitions.
 - b. Sixteen (16) independent door/keypad addresses, each with four zones.
 - c. Twenty (20) Holiday Dates for custom holiday scheduling by area.
 - d. A total door access granted event buffer of at least 10,000 events.
 - e. Anti-passback access control selectable by area and user.
 - f. Four (4) shift schedules per area.
 - g. A total of at least 100 programmable output relay schedules.
 - h. Thirty-two (32) individual reporting areas.
 - i. Built-in bell and telephone line supervision.
 - j. Require two-man access code or credentials.
 - k. Support programming to require the same or different access code entered within a programmed delay time of 1 to 15 minutes after disarming before activating a silent ambush alarm.
 - l. Support area programming that disables schedule and time-of-day changes while system is armed so that area can only be disarmed during scheduled times.
2. Control unit shall be capable of operating and supervising notification appliance devices as well as addressable initiating detection devices and an integrated supervised dual line digital communicator.
3. Control unit must be "Flash ROM" updatable, and program must be held in non-volatile RAM. The panel shall be able to function while the update is in process.

4. Control unit shall be capable of sending information to and receiving instructions from the existing District Wide Security Management Software via the District's Wide Area Network (WAN).
5. Control unit shall be capable of operating using an optional built in Encrypted Alarm Router for SCIF (Sensitive Compartmented Information Facility) applications that is certified by NIST (National Institute of Standards and Technology) for 128 Bit AES Rijndael Encryption communications.
6. The optional built-in Encrypted Alarm Router shall be capable of compliance with DCID 6/9 and UL 2050 standards.

C. Control Designations

1. Controls shall be provided to ensure ease of operation of all specified characteristics. Where applicable, clockwise rotation of controls shall result in an increasing function. Controls, switches, visual signals and indicating devices, input and output connectors, terminals and test points shall be clearly marked or labeled on the hardware to permit quick identification of intended use and location.

D. Test Modes

1. The system shall include a provision that permits testing from any alphanumeric keypad. The test shall include standby battery, alarm bell or siren.
2. The system shall include a provision for an automatic, daily, weekly, thirty (30) day, or up to sixty (60) day communication link test from the control panel installation site to the central station.
3. The system shall include a provision for displaying the internal system power and wiring conditions. Internal monitors shall include the bell circuit, AC power, battery voltage level, charging voltage, panel box tamper, phone trouble line 1, phone trouble line 2, transmit trouble, and network trouble.

E. Serial Interface

1. The control panel shall be capable of a serial interface to output information to a standard serial printer or serial interface to a communication port on a standard computer. Through control panel programming the system shall include a provision to allow the selection of which reports are to be output.

F. Power Supplies

1. Power supplies for the control unit shall operate from 120 VAC, supplied at the respective protected areas. Standby batteries shall be supplied to power the system in the event of a utility power failure. Batteries shall be

sized to provide 105% capacity for eight hours. Standby batteries shall be sealed lead-acid. Power supplies shall be all Solid State.

2. Controls shall be designed to maintain full battery charge when alternating current is available. Batteries shall be recharged to 85% capacity within 24 hours from battery use. The system shall be automatically transferred to battery power upon loss of alternating current power and return to alternating current power upon restoration. Intrusion alarms shall not be initiated during switch over; a signal shall be initiated upon failure of battery or alternating current power.

G. Software

1. The system shall have the capability to interface with computer software with the capability to fully program the panel by connecting to the panel through:
 - a. Direct cable connection interface card
 - b. Receiver phone line connection
 - c. Standard phone line connection
 - d. Ethernet network connection
 - e. Network connection across the Internet
2. The system shall interface with the existing District Wide Security Management Software via the District Wide Area Network (WAN).
3. The system shall interface with computer software capable of exporting reports in the following file formats:
 - a. Excel spreadsheet (*.xls)
 - b. Rich Text (*.rtf)
 - c. Windows Metafile (*.wmf)
 - d. QuickReport (*.qrp)
 - e. Text (*.txt)
 - f. Comma-separated (*.csv)
 - g. HTML document (*.htm)
4. The system shall interface with computer software capable of printing custom, filtered reports including:
 - a. All Events

- b. Zone Action
- c. Arming/Disarming
- d. Area Late to Close
- e. User Code Changes
- f. Door Access Granted
- g. Door Access Denied
- h. Opening/Closing Schedule Changes
- i. System Monitors
- j. System Events

H. INTEGRATED INTRUSION ALARM AND ACCESS CONTROL OPERATION

1. Access Authority Levels

- a. The system shall be capable of programming access credentials authority levels to check whether the user has access to a specific area and also has the authority to disarm or arm the area. If the user access credential has access and disarm/arm authority the system shall provide the user the option to disarm the area simultaneously upon opening the door, or to open the door and begin an entry delay timer. With the timer option the user then disarms the area using an intrusion control keypad inside the area. If the user only has access authority to the area and the area is in an armed condition, the user is denied access to the area.

2. Door Open Schedule Override

- a. The system shall be capable of programming certain area doors to be scheduled to unlock and lock at specific times of the day or night. The lock/unlock function shall be capable of an override option depending upon the area armed/disarmed status. If the area remains in an armed status at the scheduled unlock time the armed status overrides the unlock schedule ensuring the doors remain locked and armed in situations where the business might open late, close early, is affected by inclement weather, or another emergency.

3. Common Area

- a. The system shall be capable of programming a common area to be armed when the last area in the system is armed and disarmed when the first area in the system is disarmed. To ensure the

common area works properly it shall not have any user codes assigned to the common area. The system shall also be capable of programming multiple common areas.

4. Early Morning Ambush

- a. The system shall be capable of programming an area to require two user codes be entered within a programmed number of minutes to prevent an ambush message from being sent to the Central Station Receiver. If both user codes are not entered within the time an ambush message is sent to the central station receiver.
- b. Both user codes shall have the authority to disarm the specific area and must be entered at the same keypad or reader. The keypad shall not display any indication that the ambush timer is running.
- c. The system shall be capable of programming an output to provide an external indicator that an ambush situation is taking place.

5. Two-Man Rule

- a. The system shall be capable of programming an area to require two separate user codes be entered in order to disarm and/or allow access to a specific area. Both required codes shall have at least the same or greater authority level. Both required codes shall be entered within 30 seconds or an alarm shall activate.

6. UL Bank Safe & Vault Operation

- a. The system shall be capable of being programmed to only be disarmed during scheduled times regardless of the authority level of any user code or user profile in the system. The schedule and time and date set for this area shall not be capable of being changed while the area is armed. Zones assigned to Bank Safe & Vault areas shall not be able to be bypassed or force armed.

7. Panic Button Summary Test

- a. The system shall have the ability to test panic buttons without sending a panic alarm to the Central Station Receiver.
- b. The system shall also have the ability to send panic zone test verification and failure results to the Central Station Receiver.
- c. During the test, each time a panic zone trips, the display number shall increment and the keypad buzzer sound for two (2) seconds.
- d. The number of panic zones tripped shall constantly display until the test ends or no panic zone activity has occurred for 20

minutes.

- e. When the Panic Zone Test ends and a zone failed (did not trip) during the test, the keypad shall be able to display the zone name and number and have the buzzer sounds for one (1) second. Additional zone failed zones shall display when a button is pressed.

I. FALSE ALARM REDUCTION FEATURES

1. The system shall be capable of providing false alarm reduction features, functions, capabilities, or processes that either require alarms be verified or potential alarms be corrected before a system or zone can be placed into an armed state.
2. Exit Error Alert and Reporting
 - a. The panel shall be able to provide an automatic function to prevent a false alarm from occurring if an exit door does not properly close after the system is armed.
3. Entry and Exit Delay Annunciation
 - a. When arming, the system shall provide clear annunciation indicators to the user about the need to exit the premises prior to the exit delay time expiring.
 - b. When disarming, the system shall notify the user the need to disarm the system prior to the entry delay time expiring.
4. Remote Annunciation
 - a. The system shall be able to provide entry and exit delay time period notification. This notification can be from Sonitrol keypads, remote annunciators, or bell tests.
5. Abort Reporting
 - a. The system shall be capable of sending an Abort report to the central station if the system is disarmed while the alarm is still sounding. The Abort report shall be sent after the alarm report to notify the central station that an authorized user has cancelled the alarm.
6. System Testing
 - a. The system shall offer testing features that are simple, quick, and complete and provide the highest measure of safety by ensuring that alarm conditions are detected and communicated to the proper authorities in a timely manner and on a regularly scheduled basis.

7. Ambush Code
 - a. The system shall offer ambush codes for those dangerous encounters where the user is instructed to either arm or disarm the system under threat of harm. The duress code shall disarm the system without giving local indication of an alarm that might put the user well-being in jeopardy.
8. Two-Button Panic Feature
 - a. The system shall support Sonitrol keypads that provide the option to use only two-button panic codes. The user shall be required to press and hold two designated keys for approximately two seconds before the system generates a panic alarm.
9. Fire Verify Zones
 - a. The system shall support Fire Verify zones to help the panel verify the existence of an actual fire condition before it sends an alarm report to the central station. The Fire Verify zone shall require the panel to perform a Sensor Reset whenever a device connected to a Fire Verify zone initiates an alarm. This shall begin a verification period during which the panel waits for a second alarm initiation. If the original zone or any other Fire Verify zone on the panel initiates an alarm within the next 120 seconds, the panel shall recognize this as an actual alarm and send an alarm report to the central station.
10. Cross-Zoning Protection
 - a. The system shall support cross-zoning as a means of requiring two device trips to occur within a short period of time before sounding an alarm and sending an alarm report to the central station. Supported device trips shall be from one device that trips two times, or from two devices that each trip once.
11. Swinger Zone Bypassing
 - a. The system shall be capable of automatically bypassing a zone if it goes into an alarm or trouble condition a specified number of times within a one-hour period. The panel shall be able to track the number of times the zone trips while armed and compare that against a programmed number. When that number is reached, the panel shall be able to automatically bypass the zone. The panel shall be capable of resetting the zone when the area to which it is assigned disarms, is manually reset from the keypad or remotely, or remains normal for one hour.
12. Recently Armed Report
 - a. The system shall be capable sending a System Recently Armed

report, along with a zone alarm report, to the central station any time an alarm occurs within five minutes of the system arming. The System Recently Armed report allows the central station operator to follow a "call the subscriber first" procedure instead of immediately dispatching the police to what could be a false alarm.

13. Transmit Delay

- a. The system shall be capable of programming the panel to wait up to 60 seconds before sending burglary alarm reports to the central station. If an alarm is accidental, the user shall be able to disarm the system within the programmed Transmit Delay time. An Abort report shall be sent in place of an alarm report after the system disarms. During the alarm, sirens and panel relay outputs shall not be delayed and shall still provide local condition annunciation.

14. Call Waiting Cancel

- a. The system shall be capable of being programmed to cancel call waiting any time the panel dials the receiver number to send a report.

2.2 SYSTEM CAPABILITIES

A. System Description

1. The system user shall be capable of selectively arming and disarming any one (1) or more of thirty-two (32) areas within the intrusion detection system based on the user PIN code and/or keypad used. Each of the 574 zones shall be able to be assigned to any of the 32 available areas. The system shall be capable of having up to a 16-character length name programmed for each area.
2. The system user shall be capable of assigning an opening and closing schedule to all areas or to each of the 32 areas separately. Each area shall be able to arm or disarm automatically by a schedule. The system shall have the capacity for common areas that automatically disarm when any other area disarms and that automatically arm when all others areas arm.
3. The networked system shall have the ability to comply with Bank Safe & Vault application. The networked system shall also have the ability to use a two-man rule for disarming or allowing door access to an area. The system shall have the ability to operate a Common Area application.
4. The system shall have a minimum of eight (8) grounded burglary zones available from the control panel.
5. The system areas and zones shall be programmable, and the system shall store, log, display, and transmit specific custom designations for

system areas, zones, and user names.

6. To ensure continued, one-call support, the system shall be constructed of sensing components provided directly by the system manufacturer, such as power supplies, motion detectors, door and window position switches, glass break detectors, or other sensing devices that the manufacturer offers.
7. The system controller, user interfaces, zone input devices, relay output devices, and the system signal receiving equipment shall be engineered, manufactured, assembled, and must be distributed from a location within the United States of America.
8. The system shall support user interaction by way of a keypad, web browser, system software, key switch, or radio frequency wireless control, using integrated or auxiliary devices provided by the system manufacturer.
9. The system shall support controller zone input connections, system keypads, system zone expansion modules, and wireless zone input modules, and must support zone input connections by way of at least two (2) competitive products. The system shall offer a seamless integrated compatibility with hard-wire and/or wireless zone expansion equipment for at least 200 wireless zones and/ or a maximum of 574 hardwired zones.
10. The system shall be capable of offering at least five zone expansion buses, each of which can support the connection of up to 15,000 feet of four-wire cable. Zone expansion and keypad data buses that exceed 2,500 feet of cable must include splitter/repeater modules to boost data voltage and maintain data integrity.
11. The system shall provide a seamless capability to provide a minimum of 500 addressable relays, which can be located at any connection location upon a zone expansion bus.
12. System relay outputs shall have the capability of being triggered as a result of a command from the user interface, changes in system status, changes in zone status, or by a programmable schedule.
13. System relay output states shall be programmable for momentary, maintained, pulsed, or must follow the state of an associated system zone input.
14. The system shall be completely programmable either locally from a keypad or remotely through a standard dial-up, and network connections by way of a LAN, WAN, and/or by way of the Internet.
15. The control unit shall be completely programmable remotely using remote annunciators, and/or using upload/download software that communicates using SDLC 300 baud, 2400 baud, or IP-addressed data network. On-site

programming from a personal computer shall also be permitted.

16. The control unit shall be equipped with an anti-reversing circuit breaker to prevent damage due to accidental reversal of battery leads.

B. Input/Output Capacity

1. This system shall be capable of monitoring a maximum of 574 individual zones and controlling a maximum of 502 output relays.
2. The control panel shall have, as an integral part of the assembly, 2 SPDT Form C relays rated at 1 Amp at 30 VDC and four open collector 12 VDC outputs rated at 50mA each. It shall also have the capacity of a maximum of 125 output expander modules with 500 switched ground, open collector outputs, 50mA maximum and 502 auxiliary relays (Form C rated at 1.0 Amp at 30 VDC).
3. The panel shall also provide 100 programmable output schedules, and include an integral bell alarm circuit providing at least 1.5 Amps of steady, pulsed, or temporal bell output. Output type shall be programmable by zone type. Relays and voltage outputs shall be capable of being independently programmed to turn on and/or off at selected times each day.

C. User/Authorization Level Capacity

1. The system shall be capable of operation by 10,000 unique Personal Identification Number (PIN) codes with each code having one (1) of ninety-nine (99) custom user profiles. This allows for limitation of certain functions to authorized users. The operation of all keypads shall be limited to authorized users.

D. Keypads

1. The system shall support a maximum of sixteen (16) keypads with alphanumeric display. Each keypad shall be capable of arming and disarming any system area based on a pass code or Proximity key authorization. The keypad alphanumeric display shall provide complete prompt messages during all stages of operation and system programming and display all relevant operating and test data.
2. Communication between the control panel and all keypads and zone expanders shall be multiplexed over a non-shielded multi-conductor cable, as recommended by the manufacturer. This cable shall also provide the power to all keypads, zone expanders, output expanders, and other power consuming detection devices.
3. If at any time a keypad does not detect polling, the alphanumeric display shall indicate "SYSTEM TROUBLE". If at any time two (2) devices are programmed for the same address, the alphanumeric keypad shall display "4 WIRE BUS TROUBLE". If at any time a keypad detects polling

but not for its particular address, the alphanumeric display shall indicate "NON POLLED ADDR". The system shall display all system troubles at selected keypads with distinct alphanumeric messages.

4. The keypad shall include self-test diagnostics enabling the installer to test all keypad functions: display test, key test, zone test, LED test, relay test, tone test, and address test.
5. The keypad shall provide an easy-to-read English text display. The text shall exactly match the text seen in all software reports, keypad displays, and central station reports.
6. The keypad user interface shall be a simple-to-use, menu-driven help system that is completely user friendly.
7. The control panel shall support a keypad interface accessible on the World Wide Web in a browser window. The web-accessible keypad interface shall provide at least five (5) programmable hyperlinks for camera access or other use.
8. The system shall support sub-control keypads with four (4) built-in zones and capable of functioning in the following modes:
 - a. Panel monitors all four (4) keypad zones independently with a maximum of 125 keypads attached to the control panel
 - b. Panel assigns one (1) zone to each keypad and monitors all keypad zones as a single zone with a maximum of 500 keypads attached to the control panel
 - c. Stand-alone mode allowing keypad to operate as a self-contained security system independent of the control panel

E. Zone Configuration

1. A minimum of 4 Class B ungrounded zones shall be available at each keypad or zone expander on the system. The system shall have the capacity for a maximum of sixteen (16) keypads and a maximum of 125 four (4) zone expanders or 500 single zone expanders. It shall also have the capacity of a maximum of 125 supervised relay output expanders.
2. Each zone shall function in any of the following configurations: Night, Day, Exit, Fire, Supervisory, Emergency, Panic, Auxiliary 1, Auxiliary 2, Fire Verification, Cross Zone, Priority, and Key Switch Arming.
3. The LX bus and the keypad bus shall be able to operate at a maximum wiring distance of 2500 feet from the control panel on unshielded, non-twisted cable. This distance may be extended to a total of 15,000 feet when bus splitter/repeater modules are installed.
4. The system shall have the capability to incorporate up to 500 addressable

zone expander points.

5. Each zone shall function in any of the following configurations:
 - a. Night
 - b. Day
 - c. Exit
 - d. Fire
 - e. Supervisory
 - f. Emergency
 - g. Panic
 - h. Auxiliary 1
 - i. Auxiliary 2
 - j. Fire Verification
 - k. Cross-Zone
 - l. Priority
 - m. Arming

F.Communication

1. The system shall be capable of signaling to two (2) remote monitoring station receivers, four (4) telephone numbers of 32 digits each using two (2) separate switched telephone network lines such that if two unsuccessful attempts are made on the first line to the first number, the system shall make two attempts on first line to the second number. If these two attempts are unsuccessful, the system shall make two further attempts on the first line of the first number. After the tenth unsuccessful attempt, dialing shall stop and the alphanumeric keypad shall display trouble. Should another event occur that requires a report to be transmitted, the dialing process shall be repeated. The system shall have a programmable option to dial a second set of telephone numbers after the first ten attempts using the same sequence.
2. The system shall be capable of communication using the IBM Synchronous Data Link Control format, and at least two (2) other standard industry formats.
3. The system shall be capable of supporting Network communication with digital dialer backup, existing Ethernet or token ring data networks, satellite communication, fiber optic networks, local area networks, wide

area networks, cellular communication, and retail data networks.

G. Network Communication

1. The control panel shall be capable of asynchronous network communication with a retry time between 3 and 15 seconds for a total of one (1) minute. If communication is unsuccessful the control panel shall be capable of attempting backup communication through any of the available communication methods to the same receiver or a backup receiver.
2. Network communication between the control panel and the receiver shall be in a proprietary communication format.
3. The control panel shall be capable of supporting Dynamic Host Communication Protocol (DHCP) Internet Protocol (IP) addressing.
4. Underwriters Laboratories (UL) shall list network communication by the control panel for Grade AA High-Line Security.
5. The control panel shall be capable of two-way network communication using standard Ethernet 10BaseT in a LAN, WAN, or Internet configuration.
6. The control panel shall be capable of communication by means of a 128 Bit AES Rijndael Encryption process certified by NIST (National Institute of Standards and Technology) to an SCS-1R receiver with a built-in Encryption Alarm Router.
7. The control panel shall be capable of meeting DCID 6/9 and UL 2050 standards.

H. TCP/IP Network Trapping

1. The control panel shall be capable of having communication set to Network operation. When a trap is set in Remote Link, the software shall be capable of sending a panel trap message with the panel account number to the iCOM or iCOM-E installed in an SCS-1R receiver.
2. The receiver iCOM or iCOM-E shall store the trap and monitor the panel for the next message. When the panel sends its next message, the receiver iCOM or iCOM-E shall then send a message to the panel to contact Remote Link at the IP address contained in the original trap message.
3. The trap message shall be stored in the receiver iCOM or iCOM-E for up to four hours. If the trap message is not sent to the panel within the four-hour window, the panel trap message shall be discarded and a new trap message must be sent from Remote Link.
4. The user shall be able to view the trap status in the receiver iCOM or

iCOM-E in Remote Link using the Trap Query function.

I. NAC Circuit Configuration

1. The system shall be capable of additional Class B NAC circuits utilizing the Model 867 Notification Module. Each module shall be controlled and supervised via the SLC loop and monitor for short circuits, open circuits, and ground faults. The NAC circuits shall monitor for external NAC trouble conditions.
2. The system shall be capable of providing Class A NAC circuits utilizing the Model 865 Notification Module. Each module shall monitor for short circuits, open circuits, and ground faults. The NAC circuits shall monitor for external NAC trouble conditions and have a manual bell silence switch.

2.3 SYSTEM COMPONENT

PART 3 - Contractor to match existing Sonitrol intrusion system to area of work. Expand existing system as necessary.**EXECUTION**

3.1 GENERAL INSTALLATION REQUIREMENTS

- A. Motion detectors shall be "on" at all times, unless noted otherwise. Main security key switch turns zone alarms on and off and reports to the central station. Alarms are annunciated at all times in the site annunciator when the switch is either in the "ON" or "OFF" position, but will not report to the central station when the switch is in the "OFF" position.
- B. 90 degree motion detector shall be located at the corner of a room, facing away from sunlight, heating elements, HVAC outlets and any turbulent air movements. 360 degree motion detectors shall be located in the center of the room. The District Inspector shall confirm these on site. Verify final location of all devices prior to rough-in.
- C. Provide lock-on device on all circuit breakers serving security equipment.
- D. The wiring of the system shall be executed in accordance with the drawings and the equipment manufacturer's wiring diagrams. Should any variations in these requirements occur, the Contractor shall notify the Architect before making any changes. It shall be the responsibility of the factory-authorized distributor of the approved equipment to install the equipment and guarantee the system to operate as per plans and specifications.
- E. Furnish all conduit, junction boxes, conductors, equipment plugs, terminal strips, etcetera, and labor to install a complete and fully operable system.
- F. The cables within racks or cabinets shall be carefully cabled and laced with nylon

tie-raps. All cables shall be numbered for identification with machine generated labels. Hand written labels are prohibited.

- G. Splices of conductors is not permitted.
- H. The labor employed by the Contractor shall be regularly employed in the installation and repair of the specified systems and shall be acceptable to the Owner and Architect to engage in the installation and service of this system.
- I. The Contractor shall thoroughly clean all equipment and materials. All exposed parts of the equipment, cabinets, and other equipment shall be left in a clean condition, unblemished and free of all dirt, dust, smudges, spots, fingerprints, etcetera, The Contractor shall remove all debris and rubbish occasioned by the electronic systems work from the site. The Contractor shall thoroughly clean all buildings of any dirt, debris, rubbish, marks, etcetera, caused by the performance of this work.
- J. The system must meet all local and other prevailing codes.
- K. All cabling installations shall be performed by qualified technicians.
- L. Prior to installing cable in conduit, the Contractor shall verify the acceptability of the lubricant to be used with the cable manufacturer, prior to using such a lubricant.
- M. Twisted or shielded cable shall not be utilized for this system. No exceptions.
- N. Plenum-rated cable may be run exposed above ceilings, provided the cabling is supported independent of other utilities such as conduits, pipes, and the ceiling support systems. The cables shall not be laid directly on the ceiling panels. The use of cable ties shall be done in accordance with the cable manufacturer's requirements. The cable jacket composition must meet local and all other prevailing fire and safety codes.
- O. All firewalls penetrated by system cabling shall be sealed by use a non-permanent fire blanket or other method in compliance with the current edition of National Fire Protection Association (NFPA) and the California Electric Code (CEC) or other prevailing code. The Contractor must not use concrete or other non-removable substance for fire stopping on cable trays, wireways or conduits. Contractors who use this method will be required to replace all cables affected and provide the original specified access to each effected area.
- P. Materials shall be installed in strict compliance with local building codes. All work shall be performed in accordance with the Sonitrol instructions and in a manner satisfactory to the Owner's representative.
- Q. The installer shall be fully qualified and factory trained by Sonitrol in the installation, operation, and programming of the system.
- R. System shall be, with out exception, be installed in a individual exact point identification fashion. This means that each and every point to be announced

and reported as to its exact device.

3.2 SYSTEM START-UP

- A. All start-up programming and system commissioning shall be performed by manufacturer's trained and certified technicians.

3.3 SYSTEM VERIFICATION

- A. Subsequent to system start-up the system installer shall perform a pre-test to verify that the following features are functioning properly.
 - 1. All initiation devices
 - 2. All monitor modules
 - 3. Local audible devices
 - 4. Network connection and communication link to School District security staff and/or a Central Monitoring Station.

3.4 TESTING AND ACCEPTANCE

- A. The system installer shall, in the presence of the Inspector of Record (IOR), perform 100% testing as noted in System Verification above.
- B. The system shall not be deemed accepted without the approval of the Inspector of Record (IOR) and the Owner's representative.

3.5 IN SERVICE TRAINING

- A. The Contractor shall instruct personnel designated by the Owner in the proper use, basic care and maintenance of the system beyond the warranty period. Contractor shall provide up to eight (8) hours of in-service training with this system.

3.6 FACTORY TRAINING & CERTIFICATION

- A. The manufacturer shall provide factory-certified training to two (2) technicians from the District. These technicians shall be trained and certified as manufacturer's certified technicians capable of performing any work on the system after the installation of the system.
- B. All cost for training including travel, lodging, meals and per diem shall be included in the Contractor's base bid.

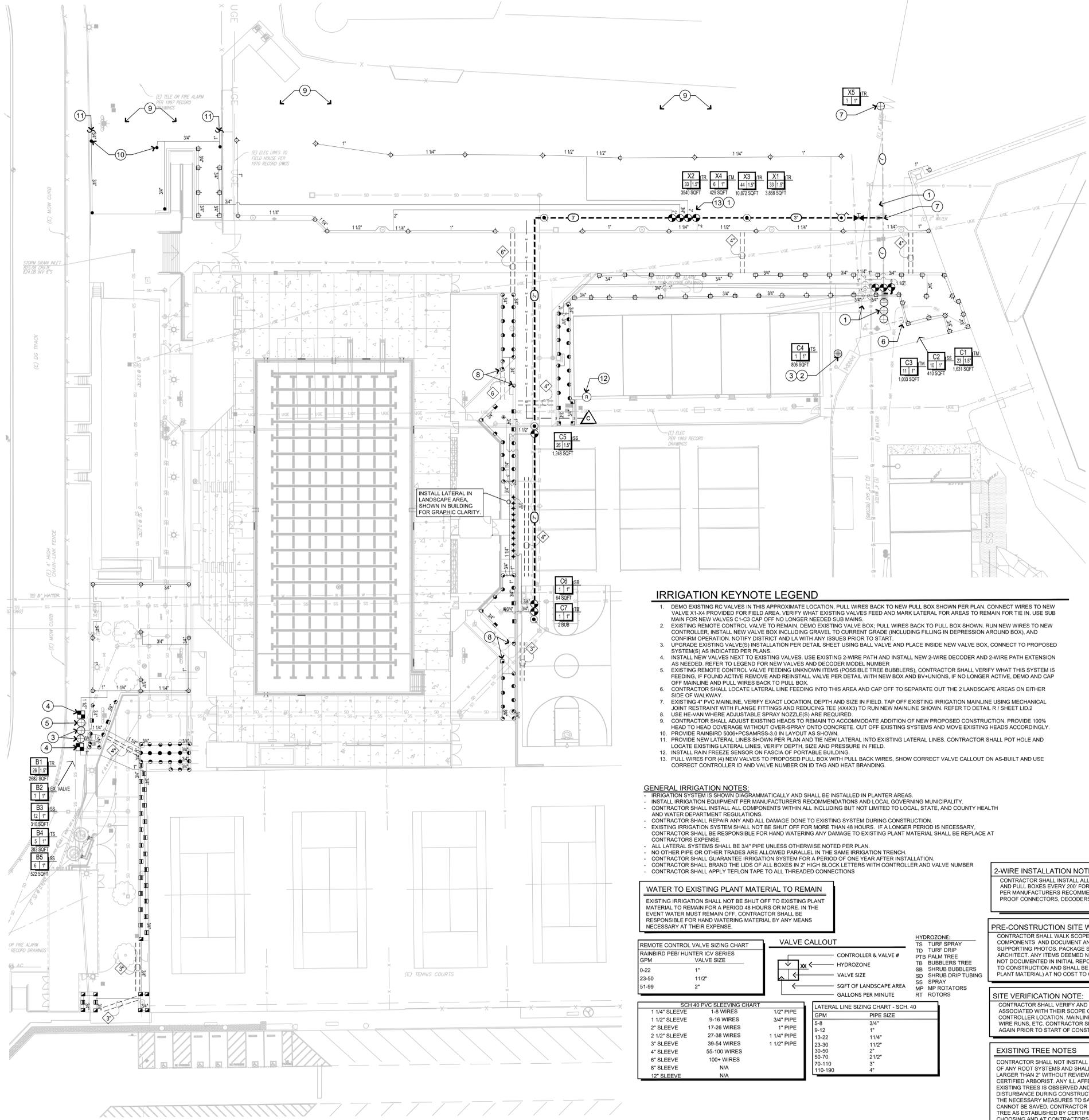
3.7 CONTRACT CLOSE-OUT DOCUMENTATION

- A. Contractor shall provide the following:
1. Two (2) reproducible hard copies of project record drawings in 30" x 42" bond paper.
 2. Two (2) copies of manufacturer's maintenance and operation manuals.
 3. Two (2) copies of system warranty

3.8 WARRANTY

- A. The Contractor shall warrant the equipment to be new and free from defects in material and workmanship, and will, within one (1) year from the date of installation, repair or replace any equipment found to be defective. This warranty shall not apply to any equipment that has been subject to misuse, abuse, negligence or unauthorized modification.

END OF SECTION



IRRIGATION MATERIAL LEGEND

EMISSION DEVICES		MODEL	DEGREES	TYPE	GPM	PSI	RADIUS	DTL. REF.
BUBBLERS								
○	SALCO	SLV-PSTM-CV-2	360	LV BUBBLER	2 GPH	30	N/A	L-M - SHEET LID.1
●	INSTALL 2 BUBBLER PER SYMBOL, 2 PER SHRUB	PROS-06-PRS30-CV-SQ-HALF	360	T. BUBBLER	1 GPH*6	30	N/A	J-K - SHEET LID.1
SPRAY HEADS								
■	HUNTER RAINBIRD	PROS-06-PRS30-CV-SQ-QTR	90	POP-UP	.12	30	4"	H - SHEET LID.1
■	HUNTER RAINBIRD	PROS-06-PRS30-CV-SQ-HALF	180	POP-UP	.20	30	4"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-BQ	90	POP-UP	.26	30	6"-8"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-SH	180	POP-UP	.32	30	6"-8"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-8F	360	POP-UP	1.05	30	6"-8"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-10Q	90	POP-UP	.39	30	8'-10"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-10H	180	POP-UP	.79	30	8'-10"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-10F	360	POP-UP	1.58	30	8'-10"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-12Q	90	POP-UP	.65	30	10'-12"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-12H	180	POP-UP	1.30	30	10'-12"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-12F	360	POP-UP	2.60	30	10'-12"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-15Q	90	POP-UP	.92	30	12'-15"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-15H	180	POP-UP	1.85	30	12'-15"	H - SHEET LID.1
○	HUNTER RAINBIRD	PROS-06-PRS30-CV-15F	360	POP-UP	3.70	30	12'-15"	H - SHEET LID.1
MP ROTORS								
⊖	HUNTER	PROS-06-PRS40-CV-MPCORNER	360	POP-UP	.39	40	14'-0"	H - SHEET LID.1
⊖	HUNTER	PROS-06-PRSXX-CV-MP815-90-180	ADJ	POP-UP	49 / 93	40	10'-15"	H - SHEET LID.1
⊖	HUNTER	PROS-06-PRSXX-MP815-360	360	POP-UP	1.87	40	10'-15"	H - SHEET LID.1
XX: CONTRACTOR SHALL USE 30 PSI REGULATED FOR 10'-13" AND 40 PSI REGULATED FOR 12'-15"								
⊖	HUNTER	PROS-06-PRSXX-MP2000-90-180	ADJ	POP-UP	43 / 77	40	13'-20"	H - SHEET LID.1
⊖	HUNTER	PROS-06-PRSXX-MP2000-360	360	POP-UP	1.48	40	13'-20"	H - SHEET LID.1
XX: CONTRACTOR SHALL USE 30 PSI REGULATED FOR 13'-17" AND 40 PSI REGULATED FOR 18'-20"								
⊖	HUNTER	PROS-06-PRSXX-MP3000-90-180	ADJ	POP-UP	86 / 182	40	22'-30"	H - SHEET LID.1
⊖	HUNTER	PROS-06-PRSXX-MP3000-360	360	POP-UP	3.64	40	22'-30"	H - SHEET LID.1
XX: CONTRACTOR SHALL USE 30 PSI REGULATED FOR 22'-25" AND 40 PSI REGULATED FOR 26'-30"								
ROTORS								
⊖	HUNTER	1-20-06-SS-MPR30-Q	ADJ	ROTOR	1.40	45	30"	I - SHEET LID.1
⊖	HUNTER	1-20-06-SS-MPR30-H	ADJ	ROTOR	2.96	45	30"	I - SHEET LID.1
⊖	HUNTER	1-20-06-SS-MPR30-F	360	ROTOR	5.78	45	30"	I - SHEET LID.1
⊖	RAINBIRD	6504-PC-SS-6	ADJ	ROTOR	5.5	50	45"	I - SHEET LID.1
⊖	RAINBIRD	6504-FC-SS-6	360	ROTOR	5.5	50	45"	I - SHEET LID.1

NOTE:
 -CONTRACTOR SHALL USE RAINBIRD PCS SCREENS FOR REDUCTION OF RADII GREATER THAN 10%
 -VARIABLE ARC NOZZLES ARE PERMISSIBLE IN OBSCURE AREAS IF RAINBIRD HE-VANS / HUNTER ADJUSTABLE NOZZLES ARE UTILIZED ONLY.

DISTRIBUTION COMPONENTS		DESCRIPTION	DTL. REF.	
⊖	RAIN	ARV-2	2" COMBINATION AIR VALVE	C - SHEET LID.1
⊖	NIBCO	T-113-K (1"-2") F-619-RWS-SON (2.5")	BRONZE NON-RISING STEM / SOLID WEDGE GATE VALVE - THREADED DUCTILE IRON GATE VALVE - RESILIENT WEDGE, SQUARE OPERATING NUT	D-E - SHEET LID.1
⊖	HUNTER	ICV-XXX-FS	REMOTE CONTROL VALVE WITH ALL PURPOSE SOLENOID AND COMPATIBLE 2-WIRE DECODER. INSTALL ON 2-WIRE PATH WITH HUNTER ICD-100 SINGLE STATION DECODER.	G - SHEET LID.1
⊖	RAINBIRD	XXX-PEB	REMOTE CONTROL VALVE WITH ALL PURPOSE SOLENOID. WIRE TO CONVENTIONAL CONTROLLER. PULL NEW WIRES FROM EXISTING WIRE BUNDLES. DO NOT REPLACE EXISTING VALVES. ADDITION TO ONES REPLACING EXISTING VALVES.	F - SHEET LID.1
⊖	RAINBIRD	44 LRC	QUICK COUPLER W/ YELLOW RUBBER LOCK COVER	T - SHEET LID.2
---	P.V.C.	SCH 40 MIN PIPE SIZE 3/4"	NON-PRESSURE LATERAL LINE WITH SCH 40 FITTINGS. THREADED FITTINGS SHALL BE SCH. 80 (SIZE PER PLAN)	B - SHEET LID.1
---	P.V.C.	SCH 40 MIN PIPE SIZE 1" CLASS 315	PRESSURE MAINLINE 1" THRU 1 1/2" THREADED FITTINGS SHALL BE SCH. 80 (SIZE PER PLAN)	A&B - SHEET LID.1
---	P.V.C.	SCH 40 CONDUIT	PRESSURE MAINLINE 2" THRU 3" THREADED FITTINGS SHALL BE SCH. 80 (SIZE PER PLAN)	R - SHEET LID.2
---	P.V.C.	SCH 40	PRESSURE MAINLINE 4" FITTINGS SHALL BE LEEMCO JOINT RESTRAINT'S SELF RESTRAINED FITTINGS (RF SERIES, LPP, ETC.)	A - SHEET LID.1
---	P.V.C.	SCH 40	SLEEVE FOR PRESSURE MAINLINE, LATERAL OR WIRE BUNDLE. ALL PIPE(S) WIRE BUNDLES REGARDLESS OF SYMBOL BEING SHOWN SHALL BE SLEEVED WHEN INSTALLED UNDER HARDSCAPE. (2X DIA. OF PIPE OR WIRE BUNDLE)	A - SHEET LID.1
⊖	P		PULL BOX FOR FUTURE VALVE WIRES. INSTALL IN PLANTER AREAS WHENEVER POSSIBLE. CONCRETE BOXES TO BE USED IN HARDSCAPE AREAS. IN ADDITION TO BOXES SHOWN ON PLANS CONTRACTOR SHALL INSTALL ADDITIONAL BOXES AS NOTED PER W/RE/CONDUIT NOTE.	Q - SHEET LID.2
⊖	C		RAINBIRD ESP-MES CONTROLLER IN A LIGHT DUTY FRONT ENTRY PEDESTAL MOUNT CONTROLLER WITH FLOW SENSING, WIFI, SMART AUTO ETC ADJUST, ONSITE WEATHER STATION AND REMOTE CONTROL. ITS MODEL#: IC A13-RB7-13/SP/W/RFS/IFS-100C	N-P / SHEET LID.1

IRRIGATION KEYNOTE LEGEND

- DEMO EXISTING RC VALVES IN THIS APPROXIMATE LOCATION. PULL WIRES BACK TO NEW PULL BOX SHOWN PER PLAN. CONNECT WIRES TO NEW VALVE X1-X4 PROVIDED FOR FIELD AREA. VERIFY WHAT EXISTING VALVES FEED AND MARK LATERAL FOR AREAS TO REMAIN FOR THE N. USE SUB MAIN FOR NEW VALVES C1-C3 CAP OFF NO LONGER NEEDED SUB MAINS.
- EXISTING REMOTE CONTROL VALVE TO REMAIN. DEMO EXISTING VALVE BOX; PULL WIRES BACK TO PULL BOX SHOWN. RUN NEW WIRES TO NEW CONTROLLER. INSTALL NEW VALVE BOX INCLUDING GRAVEL TO CURRENT GRADE (INCLUDING FILLING IN DEPRESSION AROUND BOX), AND CONFIRM OPERATION. NOTIFY DISTRICT AND LA WITH ANY ISSUES PRIOR TO START.
- UPGRADE EXISTING VALVE(S) INSTALLATION PER DETAIL SHEET USING BALL VALVE AND PLACE INSIDE NEW VALVE BOX. CONNECT TO PROPOSED SYSTEM(S) AS INDICATED PER PLANS.
- INSTALL NEW VALVES NEXT TO EXISTING VALVES. USE EXISTING 2-WIRE PATH AND INSTALL NEW 2-WIRE DECODER AND 2-WIRE PATH SYSTEM AS NEEDED. REFER TO LEGEND FOR NEW VALVES AND DECODER MODEL NUMBER.
- EXISTING REMOTE CONTROL VALVE FEEDING UNKNOWN ITEMS (POSSIBLE TREE BUBBLERS). CONTRACTOR SHALL VERIFY WHAT THIS SYSTEM IS FEEDING. IF FOUND ACTIVE REMOVE AND REINSTALL VALVE PER DETAIL WITH NEW BOX AND 2-WIRE BUNDLES. IF NO LONGER ACTIVE, DEMO AND CAP OFF MAINLINE AND PULL WIRES BACK TO PULL BOX.
- CONTRACTOR SHALL LOCATE LATERAL LINE FEEDING INTO THIS AREA AND CAP OFF TO SEPARATE OUT THE 2 LANDSCAPE AREAS ON EITHER SIDE OF WALKWAY.
- EXISTING 4" PVC MAINLINE. VERIFY EXACT LOCATION, DEPTH AND SIZE IN FIELD. TAP OFF EXISTING IRRIGATION MAINLINE USING MECHANICAL JOINT RESTRAINT WITH FLANGE FITTINGS AND REDUCING TEE (4X4X3) TO RUN NEW MAINLINE SHOWN. REFER TO DETAIL R / SHEET LID.2
- USE HE-VAN WHERE ADJUSTABLE SPRAY NOZZLE(S) ARE REQUIRED.
- CONTRACTOR SHALL ADJUST EXISTING HEADS TO REMAIN TO ACCOMMODATE ADDITION OF NEW PROPOSED CONSTRUCTION. PROVIDE 100% HEAD TO HEAD COVERAGE WITHOUT OVER-SPRAY ONTO CONCRETE. CUT OFF EXISTING SYSTEMS AND MOVE EXISTING HEADS ACCORDINGLY.
- PROVIDE RAINBIRD 5006-PCS-MR30-3.0 IN LAYOUT AS SHOWN.
- PROVIDE NEW LATERAL LINES SHOWN PER PLAN AND TIE NEW LATERAL INTO EXISTING LATERAL LINES. CONTRACTOR SHALL POT HOLE AND LOCATE EXISTING LATERAL LINES. VERIFY DEPTH, SIZE AND PRESSURE IN FIELD.
- INSTALL RAIN FREEZE SENSOR ON FACIA OF PORTABLE BUILDING.
- PULL WIRES FOR (4) NEW VALVES TO PROPOSED PULL BOX WITH PULL BACK WIRES. SHOW CORRECT VALVE CALLOUT ON AS-BUILT AND USE CORRECT CONTROLLER ID AND VALVE NUMBER ON ID TAG AND HEAT BRANDING.

GENERAL IRRIGATION NOTES:

- IRRIGATION SYSTEM IS SHOWN DIAGRAMMATICALLY AND SHALL BE INSTALLED IN PLANTER AREAS.
- INSTALL IRRIGATION EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND LOCAL GOVERNING MUNICIPALITY.
- CONTRACTOR SHALL INSTALL ALL COMPONENTS WITHIN ALL INCLUDING BUT NOT LIMITED TO LOCAL, STATE, AND COUNTY HEALTH AND WATER DEPARTMENT REGULATIONS.
- CONTRACTOR SHALL REPAIR ANY AND ALL DAMAGE DONE TO EXISTING SYSTEM DURING CONSTRUCTION.
- EXISTING IRRIGATION SYSTEM SHALL NOT BE SHUT OFF FOR MORE THAN 48 HOURS. IF A LONGER PERIOD IS NECESSARY, CONTRACTOR SHALL BE RESPONSIBLE FOR HAND WATERING ANY DAMAGE TO EXISTING PLANT MATERIAL SHALL BE REPLACE AT CONTRACTORS EXPENSE.
- ALL LATERAL SYSTEMS SHALL BE 3/4" PIPE UNLESS OTHERWISE NOTED PER PLAN.
- NO OTHER PIPE OR OTHER TRACES ARE ALLOWED PARALLEL IN THE SAME IRRIGATION TRENCH.
- CONTRACTOR SHALL GUARANTEE IRRIGATION SYSTEM FOR A PERIOD OF ONE YEAR AFTER INSTALLATION.
- CONTRACTOR SHALL BRAND THE LIDS OF ALL BOXES IN 2" HIGH BLOCK LETTERS WITH CONTROLLER AND VALVE NUMBER
- CONTRACTOR SHALL APPLY TEFLON TAPE TO ALL THREADED CONNECTIONS

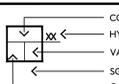
WATER TO EXISTING PLANT MATERIAL TO REMAIN

EXISTING IRRIGATION SHALL NOT BE SHUT OFF TO EXISTING PLANT MATERIAL. TO REMAIN FOR A PERIOD 48 HOURS OR MORE. IN THE EVENT WATER MUST REMAIN OFF, CONTRACTOR SHALL BE RESPONSIBLE FOR HAND WATERING MATERIAL BY ANY MEANS NECESSARY AT THEIR EXPENSE.

REMOTE CONTROL VALVE SIZING CHART

RAINBIRD PEB/ HUNTER ICV SERIES	VALVE SIZE
0-22	1"
23-50	1 1/2"
51-99	2"

VALVE CALLOUT



HYDROZONE:

- TS TURF SPRAY
- TD TURF DRIP
- PTB PALM TREE
- TB BUBBLERS TREE
- SB SHRUB BUBBLERS
- SD SHRUB DRIP TUBING
- SS SPRAY
- MP MP ROTATORS
- RT ROTORS

SCH 40 PVC SLEEVING CHART

SLEEVE	1-8 WIRES	1/2" PIPE
1 1/4" SLEEVE	9-16 WIRES	3/4" PIPE
1 1/2" SLEEVE	17-26 WIRES	1" PIPE
2" SLEEVE	27-38 WIRES	1 1/4" PIPE
2 1/2" SLEEVE	39-54 WIRES	1 1/2" PIPE
3" SLEEVE	55-100 WIRES	2" PIPE
4" SLEEVE	100+ WIRES	2 1/2" PIPE
6" SLEEVE	N/A	3" PIPE
8" SLEEVE	N/A	4" PIPE
12" SLEEVE	N/A	6" PIPE

LATERAL LINE SIZING CHART - SCH. 40

GPM	PIPE SIZE
5-8	3/4"
9-12	1"
13-22	1 1/4"
23-30	1 1/2"
31-50	2"
50-70	2 1/2"
70-110	3"
110-190	4"

2-WIRE INSTALLATION NOTE:

CONTRACTOR SHALL INSTALL ALL 2-WIRE WIRE IN 1 1/2" MIN CONDUIT WITH SWEEPS AND PULL BOXES EVERY 200' FOR GASE OF ACCESS. ALL COMPONENTS SHALL BE PER MANUFACTURERS RECOMMENDATIONS INCLUDING BUT NOT LIMITED TO WATER PROOF CONNECTORS, DECODERS, SURGE PROTECTORS, ETC.

PRE-CONSTRUCTION SITE WALK AND DOCUMENTATION:

CONTRACTOR SHALL WALK SCOPE AND AREAS JUST BEYOND. OPERATE ALL COMPONENTS AND DOCUMENT ANY DEFICIENCIES OBSERVED IN WRITING AND WITH SUPPORTING PHOTOS. PACKAGE SHALL BE PROVIDED TO OWNER AND LANDSCAPE ARCHITECT. ANY ITEMS DEEMED NON-OPERATIONAL AT TURN OVER WALK THAT WAS NOT DOCUMENTED IN INITIAL REPORT, SHALL BE DEEMED TO HAVE OCCURRED DUE TO CONSTRUCTION AND SHALL BE REPAIRED OR REPLACED (INCLUDING AFFECTED PLANT MATERIAL) AT NO COST TO OWNER.

SITE VERIFICATION NOTE:

CONTRACTOR SHALL VERIFY AND BECOME FAMILIAR WITH THE SITE AND THE ITEMS ASSOCIATED WITH THEIR SCOPE OF WORK INCLUDING BUT NOT LIMITED TO CONTROLLER LOCATION, MAINLINE LOCATION, OPEN STATIONS ON CONTROLLER, WIRE RUNS, ETC. CONTRACTOR SHALL PROCEED AS STATED PRIOR TO BIDDING AND AGAIN PRIOR TO START OF CONSTRUCTION.

EXISTING TREE NOTES

CONTRACTOR SHALL NOT INSTALL ANY PLANT MATERIAL WITHIN 12" OF ANY ROOT SYSTEMS AND SHALL NOT CUT OR DAMAGE ANY ROOT LARGER THAN 2" WITHOUT REVIEW AND WRITTEN APPROVAL BY A CERTIFIED ARBORIST. ANY ILL AFFECTS ON THE HEALTH OF THE EXISTING TREES IS OBSERVED AND WAS A DIRECT RESULT OF THE DISTURBANCE DURING CONSTRUCTION, CONTRACTOR SHALL TAKE THE NECESSARY MEASURES TO SAVE THE TREE. IF THE TREE CANNOT BE SAVED, CONTRACTOR SHALL PROVIDE CREDIT FOR TREE AS ESTABLISHED BY CERTIFIED ARBORIST OF OWNERS CHOOSING AND AT CONTRACTORS EXPENSE.

POT HOLE AND SITE PREP. NOTE:

CONTRACTOR SHALL POT HOLE, LOCATE AND IDENTIFY THE SIZE AND LOCATION OF ALL EXISTING ITEMS INCLUDING BUT NOT LIMITED TO MAINLINE, VALVES, SLEEVES, AND LATERALS PRIOR TO START OF DEMOLITION. ALL AFFECTED SYSTEMS ARE TO BE CUT BACK, ISOLATED AND CAPPED TO MINIMIZE IMPACT TO ADJACENT EXISTING LANDSCAPE AREAS DURING THE DEMOLITION AND CONSTRUCTION PROCESS.

IRRIGATION DEMO NOTE:

CONTRACTOR TO DEMO ALL IRRIGATION COMPONENTS WITHIN FIELD AREA NOTED TO BE REPLACED WITH NEW INCLUDING BUT NOT LIMITED TO VALVES (TURN OVER TO DISTRICT), HEADS AND SWING JOINTS (TURN OVER TO DISTRICT), LATERALS (TO BE ABANDONED IN PLACE), ETC. CONTRACTOR SHALL KEEP ALL SYSTEMS ON OUTSIDE OF SCOPE OPERATIONAL AND SHALL NOT LEAVE SITE WITHOUT WATER LONGER THAN A 48 HOUR PERIOD.

WATER EFFICIENT LANDSCAPE COMPLIANCE NOTE

I HAVE COMPLIED WITH THE CRITERIA OF THE WATER EFFICIENT LANDSCAPE ORDINANCE (STATE OF CALIFORNIA TITLE 23, DIVISION 2, CHAPTER 2.7) AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN.

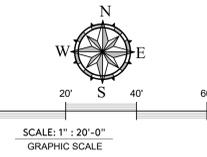
BRANDON PETRINIO, RLA 5894 _____ DATE: _____

IRRIGATION LEGEND AND NOTE REFERENCE:

- REFER TO SHEET LID.2 FOR IRRIGATION NOTES.
- REFER TO SHEET LID.1 FOR IRRIGATION LEGEND.

IRRIGATION PLAN

SCALE: 1" = 20'-0"



APPROVED DIV. OF THE STATE ARCHITECT APP: 03-122664 INC: 0 REVIEWED FOR SS FLS ACS DATE: 08/15/2023

pjhm architects

LICENSED ARCHITECT
 NICHOLAS W. KRUE
 Lic. # C15585
 02/25
 State of California

BRANDON PETRINIO & ASSOCIATES, INC.
 2013/2025
 05/25/2023
 State of California

BPA LANDSCAPE ARCHITECTS

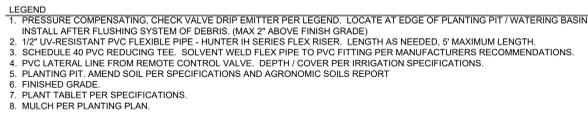
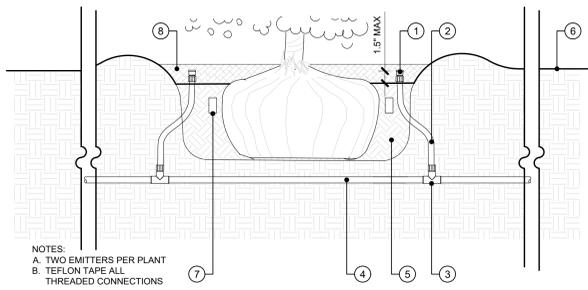
Highland High School
 50M Pool & Aquatics Center
 Kern High School District

ADDENDUM NO. 2

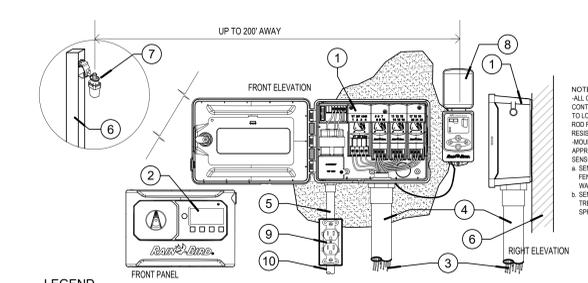
LANDSCAPE IRRIGATION PLAN - ENLARGED

SITE

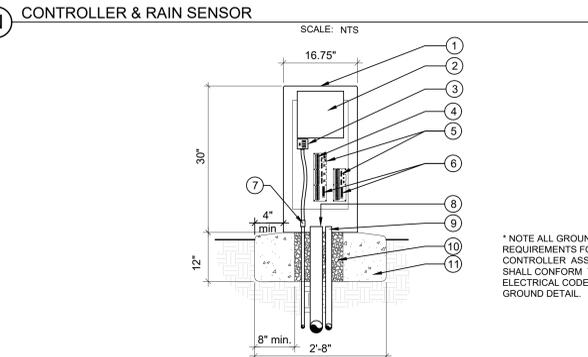
OC Office: 24461 Ridge Route Drive #100, Laguna Hills, CA 92653
 OC Phone: 949.496.6191
 SD Office: 804 Pier View Way #103, Oceanside, CA 92054
 SD Phone: 760.730.5527
 LA Office: 837 Traceton Avenue, #410, Los Angeles, CA 90013
 LA Phone: 213.278.0172
 Web: pjhm.com



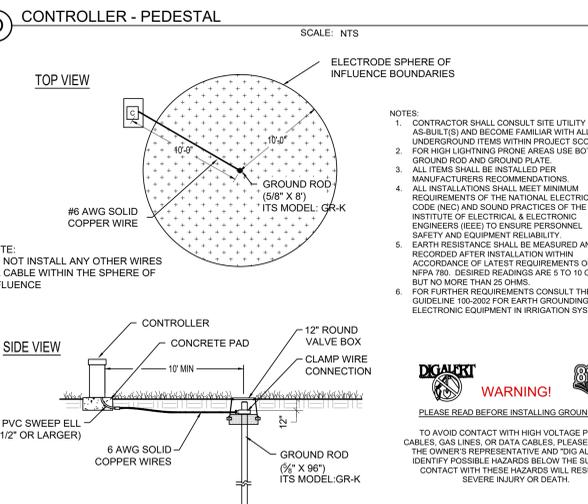
M POINT SOURCE BUBBLERS - SECTION SCALE: NTS



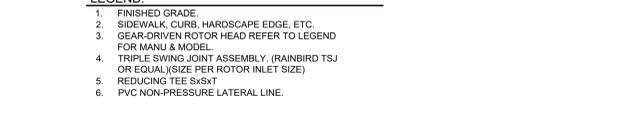
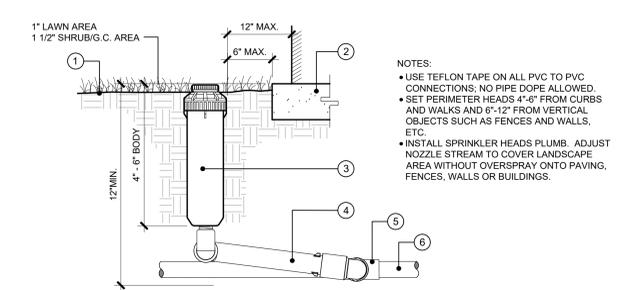
N CONTROLLER & RAIN SENSOR SCALE: NTS



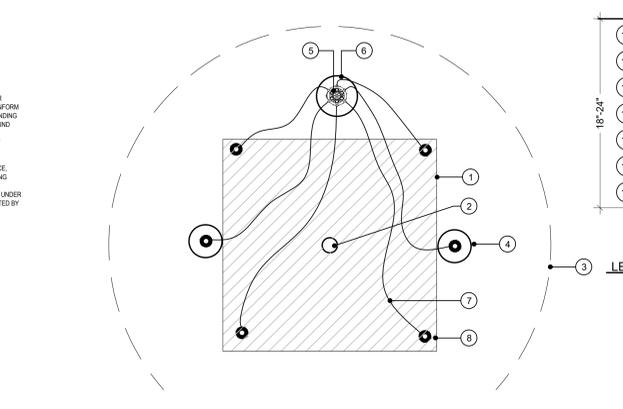
O CONTROLLER - PEDESTAL SCALE: NTS



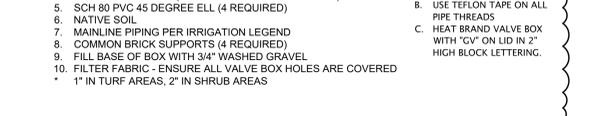
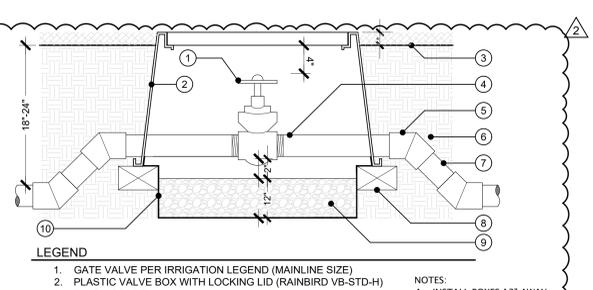
P CONTROLLER GROUNDING SCALE: NTS



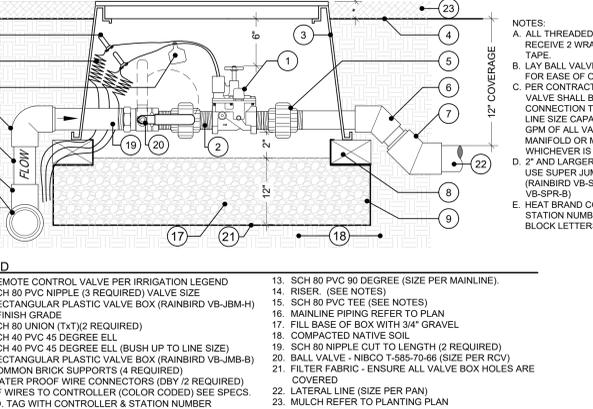
J MULTI-OUTLET EMISSION DEVICE - TREE BUBBLER - PLAN VIEW SCALE: NTS



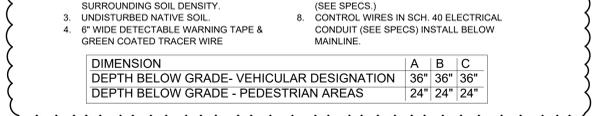
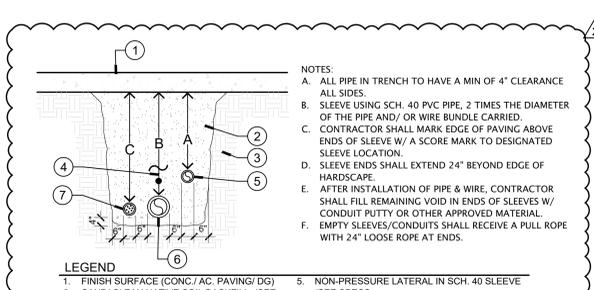
L POINT SOURCE BUBBLERS - PLAN VIEW SCALE: NTS



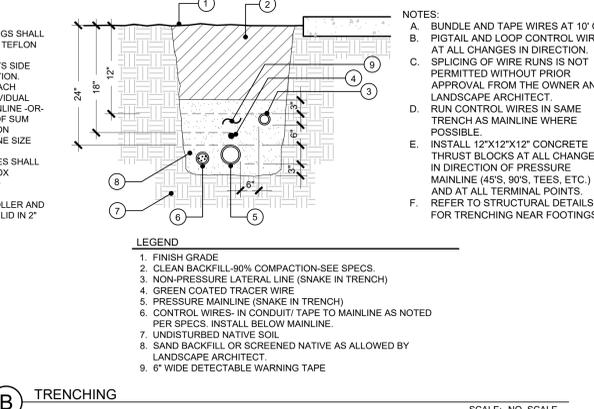
E GATE VALVE - 2" MINUS SCALE: NO_SCALE



G REMOTE CONTROL VALVE W/ BALL VALVE - 2-WIRE DECODER SCALE: NO_SCALE



A SLEEVING SCALE: NO_SCALE



C COMBINATION AIR VACUUM RELIEF SCALE: NO_SCALE

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 03-122664 INC: D
REVIEWED FOR
SS [] FLS [] ACS []
DATE: 08/15/2023

pjhm
architects

LICENSED ARCHITECT
NICHOLAS W. KRUE
Lic. # C15585
02/25
RENEWED DATE
STATE OF CALIFORNIA

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SD Office: 804 Per View Way #103, Oceanside, CA 92054
SD Office: 24640 Ridge Route Drive #100, Laguna Hills, CA 92653

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Web: pjhm.com

LICENSED LANDSCAPE ARCHITECT
NICHOLAS W. KRUE
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02/25
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BPA
LANDSCAPE ARCHITECTS

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LICENSED LANDSCAPE ARCHITECT
Signature
01/31/2025
05/25/2023
DATE
STATE OF CALIFORNIA

HIGHLAND HIGH SCHOOL
50M POOL & AQUATICS CENTER

KERN HIGH SCHOOL DISTRICT

LANDSCAPE IRRIGATION DETAIL
SHEET 1

ADDENDUM NO. 2

LANDSCAPE IRRIGATION DETAIL
SHEET 1

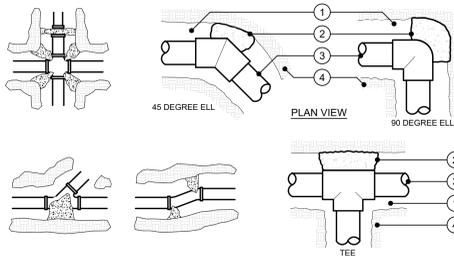
SITE

EXISTING IRRIGATION NOTES

- THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE EXISTING IRRIGATION AND PLANTING ON PROPERTY. ANY DAMAGE OR ADJUSTMENTS REQUIRED INCLUDING REPLACING OR RELOCATING IRRIGATION LINES, HEADS, VALVES, WIRES OR ANY UTILITY THAT OCCURS ON THE PARCEL DUE TO THE CONSTRUCTION OF THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. THE OWNER'S REPRESENTATIVE MUST REVIEW ANY REQUIRED MODIFICATIONS TO THESE AREAS PRIOR TO COMMENCING WORK. THE CONTRACTOR MUST NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE OF THESE CONDITIONS OR ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS, PROPERTY LINES, DIMENSIONS, ETC. PRIOR TO COMMENCING WORK. ALL EXISTING IRRIGATION SYSTEMS SHALL BE VERIFIED IN THE FIELD AT START OF CONSTRUCTION. ALL EXISTING MAINLINES, RCVS, BACKFLOW DEVICES, CONTROLLERS, METERS, SERVICE LINES, ETC. SHALL BE VERIFIED IN FIELD. ALL EXISTING IRRIGATION EQUIPMENT SHALL BE CLEARLY INDICATED INCLUDING SIZES AND MODEL NUMBERS TO SCALE ON AN ACCURATE BASE DRAWING AND SUBMITTED AS A SHOP DRAWING. SAID SHOP DRAWING SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT, AND OWNER'S AUTHORIZED REPRESENTATIVE FOR REVIEW AND APPROVAL. NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND. NO WORK SHALL PROCEED WITHOUT APPROVAL OF SAID SHOP DRAWINGS.
- ALL EQUIPMENT LOCATIONS AND PIPE ROUTING SHALL BE STAKED IN FIELD FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. ALL LAYOUT SHALL BE AS APPROVED BY LANDSCAPE ARCHITECT, AND OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION. NO EQUIPMENT SHALL BE INSTALLED WITHOUT APPROVAL OF LAYOUT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE INSTALLATION OF PROPOSED IRRIGATION EQUIPMENT AND RELATED EQUIPMENT, INCLUDING BUT NOT LIMITED TO R.C.V. CONTROL WIRES, ELECTRICAL WIRES, CONDUIT, REMOTE CONTROL VALVES, ETC. ALL LAYOUT AND LOCATIONS SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE PROPOSED IRRIGATION IMPROVEMENTS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION OF ALL ADJACENT IRRIGATION SYSTEM EQUIPMENT THAT IS AFFECTED BY PROPOSED IRRIGATION IMPROVEMENTS. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING COMPLETE 100% HEAD TO HEAD COVERAGE IN ALL AREAS WITH SYSTEM LAYOUT AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL ADJUST AND CAP OFF EXISTING ADJACENT IRRIGATION SYSTEM AS REQUIRED. SYSTEM SHALL PROVIDE COMPLETE 100% HEAD TO HEAD COVERAGE IN ALL AREAS AS APPROVED BY OWNER'S AUTHORIZED REPRESENTATIVE. ALL LAYOUT SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL REFER TO CORRESPONDING ON-SITE WATER AND SEWER PLAN FOR UNDERLYING WATERLINES, EASMENTS, AND OTHER RELATED EQUIPMENT. CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS TO EXISTING IRRIGATION, LANDSCAPE AND HARDSCAPE DAMAGED BY NEW CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL MEET WITH THE OWNER PRIOR TO BEGINNING DEMOLITION OR ANY OTHER WORK, AND WALK SITE TO LOCATE EXISTING CONTROLLER AND LINES AND OTHER IRRIGATION TO BE PROTECTED IN PLACE.
- CONTRACTOR SHALL PROVIDE FOR THE IRRIGATION OF EXISTING PLANT MATERIAL THROUGHOUT THE CONSTRUCTION PROCESS. ANY DAMAGE DUE TO CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY TO PREVENT ANY LAPSE IN IRRIGATION OF THE EXISTING PLANT MATERIAL. ANY PLANT MATERIAL AND/OR IRRIGATION DAMAGED AS PART OF CONSTRUCTION SHALL BE REPAIRED TO A LIKE NEW CONDITION AS PART OF CONTRACT.
- ANY EXISTING IRRIGATION CONTROL VALVES CONNECTED TO THE EXISTING CONTROLLER SHALL BE RECONNECTED TO THE NEW CONTROLLER. CONFIRM PROPER CONTROLLER OPERATION AND INSTALLATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK AND UPON COMPLETION OF WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE ADJUSTMENT/MODIFICATION OF EXISTING IRRIGATION SYSTEM WITHIN THIS AND OTHER AREAS AFFECTED BY THE PROPOSED IMPROVEMENTS. ALL LAYOUT SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.
- NO DISRUPTION OF THE EXISTING IRRIGATION SYSTEMS WATERING WILL BE ALLOWED DURING CONSTRUCTION. ALL ADJACENT SYSTEM SHALL MAINTAIN AUTOMATIC PROGRAMMED WATERING SCHEDULES THROUGHOUT CONSTRUCTION.
- CONTRACTOR SHALL OBTAIN EXISTING IRRIGATION AS-BUILT RECORD DRAWINGS FOR ADJACENT IRRIGATED AREAS PRIOR TO STARTING WORK. ALL EXISTING IRRIGATION EQUIPMENT LOCATION, SIZES, AND CONDITIONS SHALL BE VERIFIED IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE AT START OF WORK.
- WHENEVER ROOTS OF EXISTING TREES ARE ENCOUNTERED DURING TRENCHING OPERATIONS, THE CONTRACTOR SHALL REROUTE MAIN LINE TRENCHES. DO NOT CUT ROOTS OVER 1" IN DIAMETER. ALL CUTS SHALL BE A CLEAN SHARP CUT. IF TRENCHING IS REQUIRED, THE CONTRACTOR SHALL HAND DIG THE TRENCHES TAKING CARE NOT TO DAMAGE ROOTS. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. PROTECT ALL ROOTS EXPOSED TO SUNLIGHT WITH MOIST BURLAP UNTIL COVERED WITH SOIL.

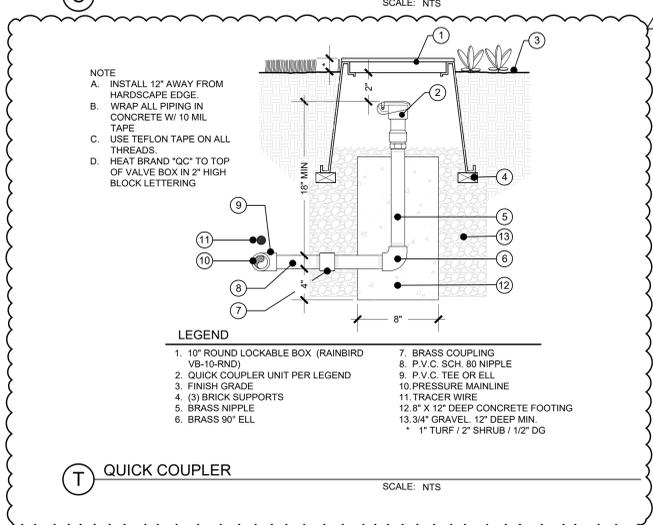
GENERAL IRRIGATION NOTES

- NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE AND THE CITY/COUNTY INSPECTORS (PLANNING, BUILDING, WATER HEALTH, ETC.) 48 HOURS BEFORE START OF CONSTRUCTION WORK TO COORDINATE PROJECT INSPECTION SCHEDULES, AND CONFIRM ANY OUTSTANDING PERMITS OR SUBMITTALS. COORDINATE WITH OWNERS REP AND LANDSCAPE ARCHITECT ANY OUTSTANDING ITEMS.
- ALL DIMENSIONS & CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON THE JOB SITE. ANY DISCREPANCIES OR OMISSIONS SHALL BE BROUGHT TO THE LANDSCAPE ARCHITECTS AND OWNERS REPRESENTATIVE ATTENTION PRIOR TO COMMENCEMENT OF WORK.
- IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, SLOPES, LOCATION OF WALLS, CURBS, ETC. COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR LOCATION OF PIPE SLEEVES THROUGH WALLS AND FOOTINGS, UNDER ROADS, PAVING AND STRUCTURES.
- THE IRRIGATION DESIGN SHOWN IN THESE DOCUMENTS ARE INTENDED TO BE GENERALLY DIAGRAMMATIC. ALL IRRIGATION EQUIPMENT (PIPE, VALVES, ETC. SHOWN WITHIN PAVED AREAS ARE FOR PLAN CLARIFICATION ONLY AND SHALL BE INSTALLED WITHIN PLANTING AREAS WHEREVER POSSIBLE UNLESS WRITTEN AUTHORIZATION IS RECEIVED PRIOR TO PLACEMENT. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING AND ARCHITECTURAL FEATURES. MAIN LINE AND LATERAL LINES MAY BE PLACED IN THE SAME TRENCH, PROVIDE MINIMUM HORIZONTAL CLEARANCE OF 4" BETWEEN PARALLEL PIPES.
- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS INDICATED ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES OR FIELD/PLAN DIMENSIONS EXIST AND SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR MUST ASSUME FULL RESPONSIBILITY FOR REVISIONS NECESSARY AND ALL COSTS FOR REVISIONS NECESSARY FOR A COMPLETE INDUSTRY ACCEPTABLE WORKING SYSTEM.
- THE IRRIGATION SYSTEM DESIGN IS BASED UPON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT EACH POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION SHALL BE REPORTED IN WRITING TO THE OWNER'S AUTHORIZED REPRESENTATIVE AND LANDSCAPE ARCHITECT PRIOR TO START OF CONSTRUCTION. IF THE PRESSURE IS NOT IMMEDIATELY REPORTED PRIOR TO BEGINNING CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL REVISIONS TO THE IRRIGATION SYSTEM DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE AND ALL COSTS ASSOCIATED WITH SAID REVISIONS.
- THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND MAINTENANCE REQUIRED TO INSTALL A COMPLETE IRRIGATION SYSTEM, THAT IS OPERABLE IN AN EFFICIENT AND SATISFACTORY MANNER PROVIDING COMPLETE AND EVEN COVERAGE @ MIN 100% HEAD TO HEAD COVERAGE.
- THE IRRIGATION CONTRACTOR MUST PERFORM AND DOCUMENT IN WRITING A PRE-JOB/ KICK-OFF MEETING WITH THE MANUFACTURER REPRESENTATIVES OF SPECIAL EQUIPMENT INCLUDING BUT NOT LIMITED TO DRIP TUBING, CONTROLLER & BOOSTER PUMP MANUFACTURER TO GO OVER SITE SPECIFIC ITEMS, LAYOUT AND RECEIVE PROPER TRAINING. IF IRRIGATION CONTRACTOR FAILS TO PERFORM REQUIRED MEETING, CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL REVISIONS TO THE IRRIGATION SYSTEM DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE AND ALL COSTS ASSOCIATED WITH SAID REVISIONS.
- MAINLINE PIPING BETWEEN THE POINT OF CONNECTION, METER AND BACKFLOW PREVENTER TO BE OF MATERIAL AS REQUIRED BY GOVERNING WATER DISTRICT.
- ALL PIPES AND WIRES THAT RUN UNDER HARDSCAPE ARE TO BE SLEEVED IN SCH. 40 PVC SLEEVES ACCORDING TO PURVEYING (DISTRICT, CITY, ETC.) STANDARDS. SIZES AND AS INDICATED IN THE SLEEVING CHART UNLESS WRITTEN AUTHORIZATION IS RECEIVED PRIOR TO ELIMINATING ANY SECTIONS.
- CONTRACTOR SHALL USE HEAVY BODY GRAY GLUE (WELD-ON 711 OR EQUAL) WITH PVC PRIMER (P-70 OR EQUAL) ON ALL GLUED JOINTS. NO RED HOT BLUE GLUE ALLOWED. TEFLON TAPE SHALL BE APPLIED TO ALL MALE THREADS AS REQUIRED BY MANUFACTURER. NO PIPE DOPE ALLOWED.
- ALL MAINLINES SHALL BE CAPPED AND TESTED AT 150 PSI FOR SIX (6) HOURS; ALLOW 10% LOSS. UPON COMPLETION OF PLANTING AND IRRIGATION FOR SUBSTANTIAL COMPLETION ISSUANCE.
- CONTRACTOR SHALL BE LIABLE FOR REMOVING AND RE-INSTALLING IRRIGATION EQUIPMENT, AND REPLANTING AREAS WHICH ARE DEEMED IN NON-COMPLIANCE WITH CONSTRUCTION DOCUMENT PLANS AND SPECIFICATIONS.
- THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR FLUSHING ALL LINES AND ADJUSTING ALL HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER-SPRAY ONTO UN-INTENDED AREAS (WALKS, & BUILDINGS). ADJUSTMENT SHALL INCLUDE BUT NOT LIMITED TO THE ADDITION OF "PRS" SCREENS, ADJUSTABLE ARC NOZZLES (HE VERSIONS ONLY), ADJUSTING PRESSURE REGULATOR AT THE VALVE TO BE NO GREATER THAN 5PSI ABOVE THE INDICATED HEAD PRESSURE AT THE FARTHEST HEAD. FOR ADDITIONAL HEADS WHERE VERTICAL ELEMENTS IN FIELD BLOCK SPRAY PATTERN AND ADDING IN-LINE CHECK VALVES WHERE LOW HEAD DRAINAGE OCCURS AT NO EXTRA COST TO THE OWNER.
- IRRIGATION CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT/ OWNERS REPRESENTATIVE MINIMUM 72 HOURS PRIOR TO ANY REQUEST OF FIELD OBSERVATIONS. FIELD OBSERVATIONS SHALL OCCUR AT THE FOLLOWING MILESTONES:
 - COVERAGE TEST ONCE ALL IRRIGATION IS INSTALLED. NO PLANTING MAY OCCUR UNTIL REVIEW HAS BEEN COMPLETED AND IRRIGATION SYSTEM APPROVED.
 - UPON COMPLETION OF PLANTING AND IRRIGATION FOR SUBSTANTIAL COMPLETION ISSUANCE.
 - UPON COMPLETION OF MAINTENANCE PERIOD FOR FINAL WALK AND RELEASE OF MAINTENANCE.

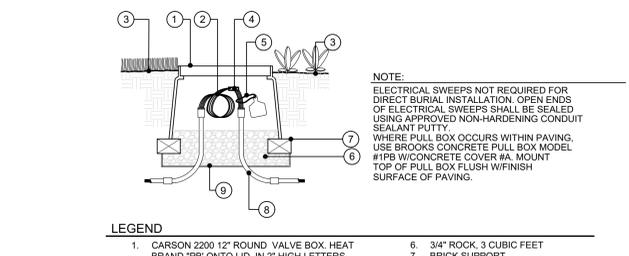


- LEGEND**
- CARSON 2200 12" ROUND VALVE BOX, HEAT BRAND #PB ONTO LID, IN 2" HIGH LETTERS
 - 36" WIRE EXPANSION LOOP TYP.
 - FINISH GRADE, PER PLAN
 - WIRE CONNECTORS
 - CONTROL WIRE LABEL, SEE SPECS
 - 3/4" ROCK, 3 CUBIC FEET
 - BRICK SUPPORT
 - PVC ELECTRICAL SWEEP IF INSTALLED IN CONDUIT
 - BIOBARRIER ROOT CONTROL FABRIC

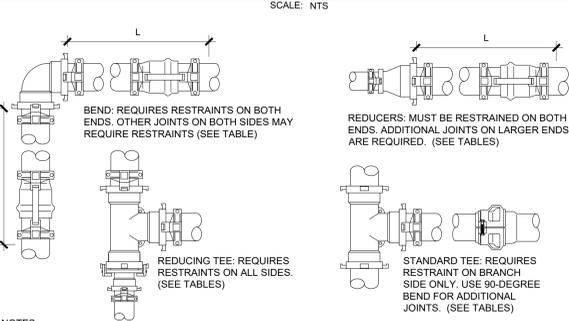
(S) THRUST BLOCK



(T) QUICK COUPLER



(Q) PULL BOX



- NOTE:**
- CONTRACTOR SHALL BEVEL PIPE END PRIOR TO ASSEMBLY TO PREVENT DAMAGING RUBBER GASKET.
 - CONTRACTOR SHALL APPLY SUITABLE PUSH-ON JOINT LUBRICANT I.E. SEAL LUBE BY IPS WELDON OR EQUAL.
 - CONTRACTOR SHALL USE WD-40 OR EQUAL LUBRICANT TO PREVENT THE POSSIBILITY OF GALLING OR SEIZING OF STEEL THREADS.
 - REFER TO MANU. HARDWARE SIZE AND TORQUE CHART AND PIPE-PIPE RESTRAINT CHART FOR REQUIREMENTS.
 - USE LEEMCO LB OR LPP SERIES RESTRAINTS FOR BELL AND GASKET PIPE-TO-PIPE CONNECTIONS.
 - USE LEEMCO LH SERIES RESTRAINTS FOR PVC PIPE TO DUCTILE IRON PUSH-ON FITTINGS, INCLUDING ELLS, TEES, AND VALVE TO MAINLINE CONNECTIONS (SERVICE TEES).
 - ANY FLANGED CONNECTION TO BELL AND GASKET PIPE SHALL BE MADE USING LEEMCO SR-FB SERIES SELF RESTRAINING FLANGE ADAPTERS.
 - REFER TO MANUFACTURERS RECOMMENDATIONS. MANU. RECOMMENDATIONS SUPERCEDE DETAILS.

DISTANCE CHART

REFER TO THE FOLLOWING TABLE THAT LISTS THE LENGTH (IN FEET) FOR EACH SIZE/TYPE FITTING WITHIN WHICH ALL JOINTS JUST BE RESTRAINED. ALL FITTINGS AND JOINT RESTRAINTS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS & SPECIFICATIONS.

AS AN EXAMPLE, IF YOU ARE INSTALLING A 3" MAINLINE WITH A DIRECTIONAL CHANGE OF 90°, REFER TO CHART UNDER PIPE SIZE TO 3" AND UNDER BENDS 90° YOU WILL SEE THE DISTANCE OF 11". IF THERE IS ANY JOINT (VALVE, BELL, ETC.) YOU MUST INSTALL A JOINT RESTRAINT WITHIN 11" OF THE 90° MAINLINE DIRECTIONAL CHANGE.

PIPE SIZE	BENDS			REDUCERS			DEAD END	
	11"	22"	45"	1 STEP	2 STEP	3 STEP	BLIND	SERV. B.
2"	1'	2'	4'	-	-	-	19"	8"
2.5"	1'	2'	4'	4"	-	-	23"	10"
3"	2'	3'	6'	8"	10"	-	30"	15"
4"	2'	4'	8'	20"	14"	20"	31"	45"
6"	2'	6'	12'	29"	30"	40"	53"	65"
8"	4'	8'	15'	38"	55"	63"	75"	70"
10"	6'	12'	21'	53"	80"	96"	96"	90"
12"	8'	16'	27'	69"	100"	112"	112"	110"

QUICK SELECTION GUIDE- PIPE-PIPE

TABLE SHOWS THE NUMBER OF ADJACENT JOINTS TO RESTRAIN, BASED ON 20' LENGTH

PIPE SIZE	BENDS			REDUCERS			DEAD END	
	45°	90°	1 STEP	2 STEP	3 STEP	BLIND	SERV. B.	
2"	-	-	-	-	-	1	-	-
2.5"	-	-	-	-	-	1	-	-
3"	-	-	-	-	-	1	2	1
4"	1	1	1	1	2	3	1	1
6"	1	1	1	2	3	3	2	2
8"	1	2	1	3	4	4	2	2
12"	1	2	2	3	4	5	2	2

INSTALLATION CHART

REFER TO THE FOLLOWING TABLE WHICH LISTS THE NUMBER OF BOLTS, SIZE, AND TORQUE FOR EACH BOLT IN REFERENCE TO THE SIZE OF PIPE WHICH IS BEING RESTRAINED.

AS AN EXAMPLE, IF YOU HAVE A 3" PIPE, YOU WILL NEED 2 BOLTS THAT ARE 3/8 X 2.5" AND TIGHTEN THEM WITH A TORQUE WRENCH TO 20 FT-LBS.

PIPE SIZE	NO. BOLTS	BOLT TORQUE	
		SIZE	FT-LBS.
2"	2	3/8" x 2.5"	20
2.5"	2	3/8" x 2.5"	20
3"	2	3/8" x 2.5"	20
4"	2	1/2" x 3"	50
6"	2	1/2" x 3.5"	50
8"	4	1/2" x 4"	90
10"	4	5/8" x 5.5"	100
12"	4	5/8" x 5.5"	100

CONTACT STEVEN KIM @ 951.461.0942, THE LEEMCO REPRESENTATIVE, FOR ALL QUESTIONS CONCERNING LEEMCO PRODUCTS. COORDINATE AN INSTALLATION CLINIC WITH STEVEN KIM PRIOR TO INSTALLING THE MAINLINE.

(R) MECHANICAL JOINT RESTRAINT



California Water Efficient Landscape Worksheet									
Reference Evapotranspiration (ET _e)	52.4	Project Type		ETAF	ETAF	ETAF	ETAF	ETAF	0.45
Hydrozone #	Planting Description	Plant Factor (PF)	Irrigation Method	Efficiency (IE)	(PF/IE)	Landscape Area (Sq. Ft.)	ETAF x Area	Estimated Total Water Use (ETWU)	
Regular Landscape Areas									
	Station B1 / Turf	0.5	Overhead	0.75	0.67	2,682	1,788	58,089	
	Station B2 / Low	0.3	Drip	0.81	0.37	-	-	-	
	Station B3 / Low	0.3	Overhead	0.75	0.40	310	124	4,029	
	Station B4 / Turf	0.5	Overhead	0.75	0.67	283	189	6,129	
	Station B5 / Low	0.3	Overhead	0.75	0.40	522	209	6,783	
	-	0.3	Drip	0.81	0.37	-	-	-	
	Station C1 / Turf	0.5	Overhead	0.75	0.67	1,631	1,087	35,325	
	Station C2 / Shrub	0.3	Overhead	0.75	0.40	410	164	5,328	
	Station C3 / Turf	0.5	Overhead	0.75	0.67	1,033	689	22,373	
	Station C4 / Turf	0.5	Overhead	0.75	0.67	806	537	17,457	
	Station C5 / Shrub	0.3	Overhead	0.75	0.40	1,248	499	16,218	
	Station C6 / Shrub B	0.5	Drip	0.81	0.62	64	40	1,283	
	Station C7 / Trees	0.5	Drip	0.81	0.62	50	31	1,003	
	-	0.5	Overhead	0.75	0.67	-	-	-	
	Totals					9,039	5,356	174,018	
Special Landscape Areas									
					1.0	-	-	-	
	Totals				-	-	-	-	
							ETWU Total	174,018	
							Maximum Allowed Water Allowance (MAWA) Gallons	132,147	
ETAF Calculations									
Regular Landscape Areas					All Landscape Areas				
	Total ETAF x Area	5,356	Total ETAF x Area	5,356					
	Total Area	9,039	Total Area	9,039					
	Average ETAF	0.59	Average ETAF	0.59					



BRANDON PETRINO & ASSOCIATES, INC.
 LANDSCAPE ARCHITECTS
 15000 E. 15th Ave., Suite 200, Denver, CO 80232
 Phone: (303) 751-1111
 Fax: (303) 751-1112
 Email: info@bpa.com



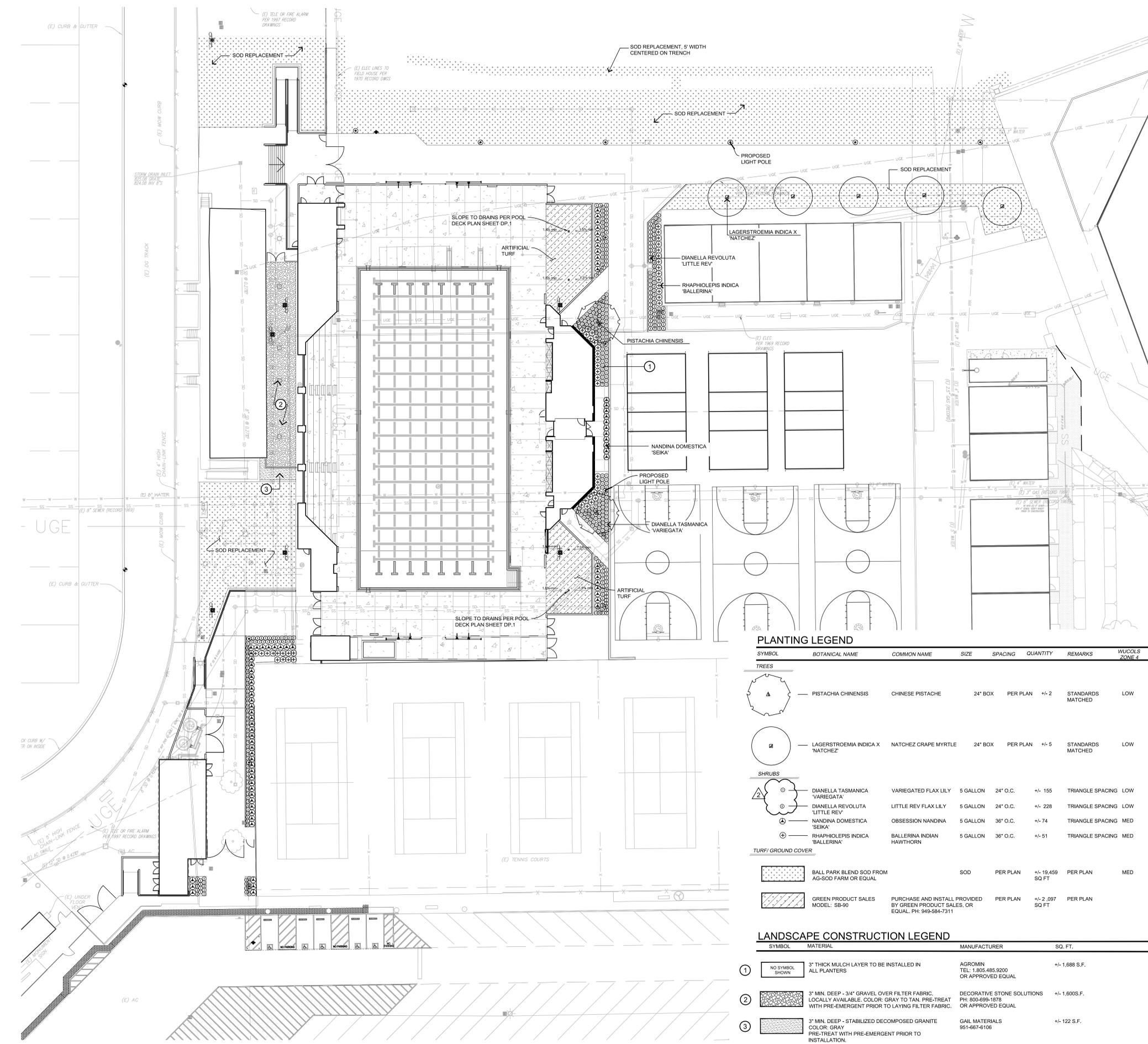
**HIGHLAND HIGH SCHOOL
 50M POOL & AQUATICS CENTER
 KERN HIGH SCHOOL DISTRICT**

ADDENDUM NO. 2

**LANDSCAPE IRRIGATION DETAIL
 SHEET 2 - NOTES AND CALCS.**

LID.2

OC Office: 24461 Ridge Route Drive #100, Laguna Hills, CA 92653
 SD Office: 804 Pier View Way #103, Oceanside, CA 92054
 SD Phone: 949.496.6191
 LA Office: 837 Tracton Avenue, #410, Los Angeles, CA 90013
 LA Phone: 213.278.0172
 Web: pihm.com



PLAN VIEW

SCALE 1" = 20'-0"

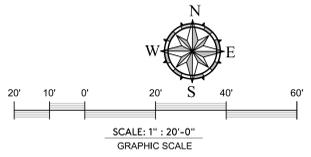
PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QUANTITY	REMARKS	WUCOLS ZONE #	DETAIL
TREES								
	PISTACHIA CHINENSIS	CHINESE PISTACHE	24" BOX	PER PLAN	+/- 2	STANDARDS MATCHED	LOW	A-E / LPD.1
	LAGERSTROEMIA INDICA X 'NATCHEZ'	NATCHEZ CRAPE MYRTLE	24" BOX	PER PLAN	+/- 5	STANDARDS MATCHED	LOW	A-E / LPD.1
SHRUBS								
	DIANELLA TASMANICA 'VARIEGATA'	VARIEGATED FLAX LILY	5 GALLON	24" O.C.	+/- 155	TRIANGLE SPACING	LOW	B / LPD.1
	DIANELLA REVOLUTA 'LITTLE REV'	LITTLE REV FLAX LILY	5 GALLON	24" O.C.	+/- 228	TRIANGLE SPACING	LOW	B / LPD.1
	NANDINA DOMESTICA 'SEIKA'	OBSESSION NANDINA	5 GALLON	36" O.C.	+/- 74	TRIANGLE SPACING	MED	B / LPD.1
	RHAPHILEPIS INDICA 'BALLERINA'	BALLERINA INDIAN HAWTHORN	5 GALLON	36" O.C.	+/- 51	TRIANGLE SPACING	MED	B / LPD.1
TURF/ GROUND COVER								
	BALL PARK BLEND SOD FROM AG-SOD FARM OR EQUAL		SOD	PER PLAN	+/- 19,459 SQ FT	PER PLAN	MED	
	GREEN PRODUCT SALES MODEL: SB-90	PURCHASE AND INSTALL PROVIDED BY GREEN PRODUCT SALES, OR EQUAL. PH: 949-884-7311		PER PLAN	+/- 2,097 SQ FT	PER PLAN		F / LPD.1

LANDSCAPE CONSTRUCTION LEGEND

SYMBOL	MATERIAL	MANUFACTURER	SQ. FT.	DETAIL/SHEET
①	NO SYMBOL SHOWN 3" THICK MULCH LAYER TO BE INSTALLED IN ALL PLANTERS	AGROMIN TEL: 1.805.485.9200 OR APPROVED EQUAL	+/- 1,688 S.F.	
②	3" MIN. DEEP - 3/4" GRAVEL OVER FILTER FABRIC. LOCALLY AVAILABLE. COLOR: GRAY TO TAN. PRE-TREAT WITH PRE-EMERGENT PRIOR TO LAYING FILTER FABRIC.	DECORATIVE STONE SOLUTIONS PH: 800-699-1878 OR APPROVED EQUAL	+/- 1,800S.F.	D / LPD.1
③	3" MIN. DEEP - STABILIZED DECOMPOSED GRANITE COLOR: GRAY PRE-TREAT WITH PRE-EMERGENT PRIOR TO INSTALLATION.	GAIL MATERIALS 951-867-8106	+/- 122 S.F.	C / LPD.1

PLANTING LEGEND AND NOTE REFERENCE:
 • REFER TO SHEET LPD.1 FOR PLANTING NOTES.
 • REFER TO SHEET LP.1 FOR PLANTING LEGEND.



HIGHLAND HIGH SCHOOL
50M POOL & AQUATICS CENTER

LANDSCAPE PLANTING PLAN

LP.1

APPROVED
 DIV. OF THE STATE ARCHITECT
 APP: 03-122664 INC: 0
 REVIEWED FOR:
 SS [] FLS [] ACS []
 DATE: 08/15/2023



BPA
 LANDSCAPE ARCHITECTS
BRANDON PETRUNIO & ASSOCIATES, INC.
 2625 S. GARDEN WAY, SAN DIMAS, CA 91773
 Phone: 909-592-1100, Fax: 909-592-1101
 Office: 1509 C. San Dimas, Fontana, CA 92335
 T: (424) 232-8940, M: (951) 312-9943, E: brandon@bpatas.com



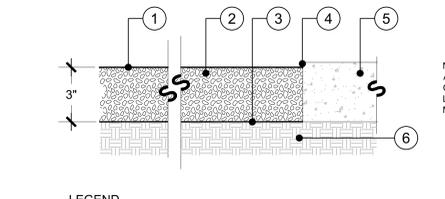
KERN HIGH SCHOOL DISTRICT
 ADDENDUM NO. 2

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SITE

PLANTING NOTES

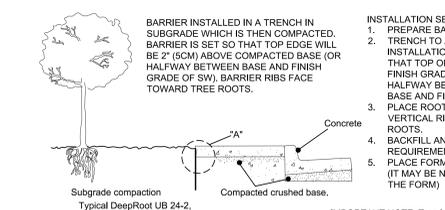
- NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE AND THE CITY/COUNTY INSPECTORS (PLANNING, BUILDING, WATER HEALTH, ETC) 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT INSPECTION SCHEDULES, AND CONFIRM ANY OUTSTANDING PERMITS OR SUBMITTALS. COORDINATE WITH OWNERS REP AND LANDSCAPE ARCHITECT ANY OUTSTANDING ITEMS.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH THE WORK. REPORT DISCREPANCIES OR OMISSIONS IN THE DRAWINGS OR BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS TO THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT. CORRECTED DRAWINGS OR INSTRUCTION SHALL BE ISSUED PRIOR TO THE CONTINUATION OF THIS WORK. CONTRACTOR ASSUMES FULL RESPONSIBILITY/LIABILITY FOR ALL NECESSARY CORRECTIONS DUE TO FAILURE TO REPORT KNOWN DISCREPANCIES.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY AND ASSUME FULL RESPONSIBILITY FOR EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH DAMAGED UTILITIES. ADJUST LOCATION OF ALL TREES TO BE PLANTED AT LEAST 5' FROM ANY UNDERGROUND UTILITY SUCH AS SEWER, GAS, STORM DRAIN, ELECTRICAL, CABLE, OR TELEPHONE.
- LOCATION OF N.I.C. CONSTRUCTION ELEMENTS SUCH AS LIGHTS, SIGNS, VENTS, HYDRANTS, TRANSFORMERS, ETC. ARE APPROXIMATE. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY SHOULD THE LOCATION OF THESE ITEMS INTERFERE WITH THE PROPER EXECUTION OF WORK.
- IRRIGATION SYSTEM SHALL BE INSTALLED AND OPERATIONAL PRIOR TO PLANT MATERIAL WITH THE EXEMPTION OF 24" BOX TREES. CONTRACTOR SHALL HAND WATER MATERIAL IF IRRIGATION SYSTEM WILL NOT BE FUNCTIONAL WITHIN 48 HOUR PERIOD AT NO COST TO OWNER.
- PROVIDE PRE-PLANT WEED CONTROL IN ALL PROPOSED PLANTER AREAS, PER SPECIFICATIONS. PRIOR TO START OF PLANTING, USE A NON-SELECTIVE CONTACT HERBICIDE, APPLIED PER MANUFACTURER'S RECOMMENDATIONS AND LEAVE SPRAYED PLANTS INTACT FOR AT LEAST 14 DAYS BEFORE REMOVING BY MOWING OR GRUBBING. APPLY WATER AND FERTILIZER BY IRRIGATION OR BY HAND FOR 10 DAYS AS REQUIRED TO ACHIEVE WEED GERMINATION, AND THEN REAPPLY CONTACT HERBICIDES PER ABOVE. REPEAT AS REQUIRED TO ELIMINATE ALL WEEDS PRIOR TO PROCEEDING WITH PLANTING OPERATIONS. MINIMUM 2 APPLICATIONS.
- ONCE ROUGH GRADES HAVE BEEN ESTABLISHED IN PLANTING AREAS, SOIL SAMPLES SHALL BE TAKEN @ RATE OF 1 SAMPLE PER ACRE. SAMPLES SHALL BE TESTED BY AN APPROVED SOILS LABORATORY FOR STANDARD AGRICULTURAL SUITABILITY ANALYSIS AND SOILS MANAGEMENT REPORT TO BE PROVIDED. TAKE TWO SAMPLES AT EACH LOCATION: (1) GROUND LEVEL 10" DEEP, (2) 24" TO 36" DEEP. EACH SAMPLE SHALL CONTAIN APPROXIMATELY 1 QUART OF SOIL TO BE LABELED PER LOCATION AND DEPTH. SUBMIT SOIL REPORT TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO IMPLEMENTATION. INSTALL SOIL PREPARATION AND BACK FILL TO CONFORM TO APPROVED RECOMMENDATIONS. PROVIDE (2) TWO FOLLOW-UP TESTS POST INCORPORATION FOR COMPLIANCE VERIFICATION. ANY FURTHER DEFICIENCIES SHALL BE INCORPORATED AT NO COST TO OWNER AND SUBSEQUENT REPORT PROVIDED UNTIL SOIL IS DEEMED ACCEPTABLE BY LAB.
- OBTAIN ALL SOIL FOR LANDSCAPE PLANTING AREAS OR BERMS AND RAISED PLANTER BACKFILL (UNLESS OTHERWISE NOTED) FROM ON-SITE EXCAVATIONS IF DEEMED ACCEPTABLE BY SOILS LAB. SHOULD IMPORT SOIL BE NECESSARY, SUBMIT IMPORT SOIL TESTING RESULTS FOR APPROVAL PRIOR TO IMPORTATION. SOIL SHALL BE SANDY LOAM, BE DEEMED VIABLE MATERIAL BY SOILS LAB TEST REPORT. SOILS MAY NOT CONTAIN TOXIC CHEMICALS OR ELEMENTS WHICH MAY INHIBIT OR RETARD NORMAL PLANT GROWTH AND BE VIABLE WITH MINIMAL POST DELIVERY MODIFICATION.
- REMOVE ALL WEED, ROCKS OVER 2" DIAMETER, DEBRIS AND OTHER EXTRANEOUS MATERIALS FROM THE UPPER 6" OF SOIL AND ALL BACKFILL AND DISPOSE OF OFFSITE IN A LEGAL MANNER.
- ENSURE THAT ROUGH GRADING HAS BEEN CERTIFIED BY CIVIL ENGINEER AND THAT CIVIL ENGINEER OR OWNER'S AUTHORIZED REPRESENTATIVE HAS APPROVED FINE GRADING TO 1/4" OF A FOOT PRIOR TO BEGINNING SOIL PREPARATION OPERATIONS. PROVIDE FOR INCLUSION OF ALL AMENDMENTS, SETTLING, ETC. IN DETERMINATION OF FINAL GRADES. ASSURE POSITIVE DRAINAGE IN ALL PLANTING AREAS, AND WATER TO BE DIRECTED AWAY FROM STRUCTURES AND HAZARDOUS CONDITIONS.
- CONTRACTOR RESPONSIBLE TO LOCATE AND TAG ALL PLANT MATERIAL. MATERIAL SHALL BE IN CONFORMANCE WITH PLANTING PLAN DESCRIPTIONS, SPECIFICATIONS, AND AS OUTLINED IN ANSI Z60.1. ALL PLANT MATERIAL IS SUBJECT TO REVIEW AND APPROVAL PRIOR TO INSTALLATION. PROVIDE PHOTOS OF REPRESENTATIVE EXAMPLES OF EACH TAGGED BLOCK TO LANDSCAPE ARCHITECT MINIMUM 14 DAYS PRIOR TO ANTICIPATED DELIVERY. PHOTOS SHALL INCLUDE A PERSON AND/OR POLE WITH CLEAR 1" INTERVAL MARKINGS FOR SCALE PURPOSES. LANDSCAPE ARCHITECT MAY OPT TO REVIEW MATERIAL AT NURSERY AT THEIR DISCRETION. MATERIAL DELIVERED TO THE SITE MAY BE REJECTED BASED ON UNHEALTHY APPEARANCE OR NON-COMFORMANCE EVEN IF PREVIOUSLY REVIEWED AND APPROVED.
- TREES SHALL BE STRAIGHT AND OF UNIFORM SHAPE WITHOUT DAMAGED, CROOKED OR MULTIPLE LEADERS. TREES WITH ABRASIONS OF THE BARK, SUN SCALDS, DISFIGURING KNOTS OR FRESH CUTS OF LIMBS OVER 1/2" INCH WHICH HAVE NOT BEEN PRUNED AND PAINTED OR COMPLETELY CALLOUSED, WILL NOT BE ACCEPTED. NURSERY STOCK SHALL HAVE GROWN IN SPECIFIED CONTAINER SIZE FOR A MINIMUM TIME TO FULLY ROOT INSIDE SAID CONTAINER.
- FINAL LOCATION OF ALL PLANT MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE AND LANDSCAPE ARCHITECT.
- THE PLANTING PLANS ARE ONLY ACCURATE FOR PLANTING LOCATION AND TYPES. PLANTING QUANTITIES ARE GIVEN FOR CONVENIENCE ONLY. CONTRACTOR SHALL VERIFY ALL QUANTITIES BY PLAN CHECK AND BASED UPON ACTUAL FIELD CONDITIONS. THE PLANTING LEGEND IS ACCURATE ONLY FOR PLANT TYPE AND MINIMUM SIZE. IN THE EVENT OF A DISCREPANCY, THE CONTRACTOR SHALL ADJUST THE QUANTITIES OF THE SMALLEST PLANT SIZE SPECIFIED IN THE LEGEND TO CONFORM WITH THE QUANTITIES REQUIRED BY THE PLAN AND ACTUAL FIELD CONDITIONS. PLANT SYMBOLS AND SPECIFIED SPACING SHALL TAKE PRECEDENCE.
- INSTALL GROUND COVER AND/OR SHRUB MASSES WITH TRIANGULAR SPACING UNLESS OTHERWISE INDICATED. AT EDGES OF PLANTING AREAS, THE CENTER LINE OF THE LAST ROW OF SHRUBS AND/OR GROUND COVER SHALL BE LOCATED AT ONE-HALF THE SPECIFIED CENTER SPACING FROM EDGE.
- REMOVE ALL NURSERY STAKES AND ESPALIER RACKS IMMEDIATELY AFTER INSTALLATION UPON PROVIDING SUPPORT PER PLAN UNLESS OTHERWISE CONFIRMED IN WRITING WITH OWNER/ LANDSCAPE ARCHITECT.
- DURING THE LENGTH OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER STAKING AND/OR GUYING OF TREES TO ENSURE STABILITY.
- MULCH ALL LANDSCAPE AREAS (EXCLUDING TURF AND BIO-RETENTION BASIN BOTTOMS) WITH A 3" DEEP LAYER OF 1/2"-1 1/2" FOREST FLOOR MULCH BY AGUNAGA GREEN OR APPROVED EQUAL, AT THE CONCLUSION OF PLANTING OPERATIONS. MATERIAL SHALL BE SPREAD EVENLY, RAKED SMOOTH AND THOROUGHLY WETTED TO AID IN COMPACTION. SUBMIT SAMPLE TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. *KEEP BARK MULCH 4" CLEAR FROM BASE OF TREES, AND 3" FROM SHRUBS, GRASSES, AND SUCCULENTS.
- CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS AND/OR REPLACEMENT OF ANY DAMAGED LANDSCAPE AREAS AND PLANT MATERIAL WITHIN AND OUTSIDE THE LIMITS OF WORK. REPLACEMENT PLANT MATERIAL MUST BE OF MATCHING SPECIES AND EQUAL SIZE. TURF SHALL BE SOD FORM. ANY REPAIRS TO TREES OR SHRUBS SHALL BE AS DIRECTED BY CERTIFIED ARBORIST HIRED BY CONTRACTOR AT NO COST TO OWNER. A REPORT SHALL BE PROVIDED ON ARBORIST'S LETTERHEAD AND SUBMITTED AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO COMMENCEMENT OF REPAIRS. CREDIT SHALL BE PROVIDED FOR TREES OF LESSER SIZE, WITH EXISTING TREE VALUE ESTABLISHED BY USING THE TRUNK FORMULA METHOD AS DEFINED IN THE "GUIDE FOR PLANT APPRAISAL", CURRENT EDITION AT TIME OF CALCULATION.
- INSTALLATIONS THAT ARE ADJACENT TO OPEN SPACE, NATURALIZED SLOPES OR UNDEVELOPED LAND ARE SUBJECT TO DAMAGE BY RODENTS OR DEER AND SHALL BE TREATED WITH AN APPROPRIATE REPELLENT IN A SPRAY AND/OR TABLET FORM, WHERE ALLOWED BY CURRENT REGULATIONS. MATERIAL, SUCH AS REPELLEX BY GROPOWER OR APPROVED EQUAL, THAT PROVIDES IMMEDIATE AND LONG TERM PROTECTION, SHALL BE USED.
- INSTALL EROSION CONTROL MAT ON SLOPES 2:1 AND STEEPER (SLOPES 1:1 AND GREATER ARE TO RECEIVE BIOD-MAT 70). KEY IN MATERIAL @ TOP OF SLOPE AND SECURE WITH 12" LONG HEAVY DUTY GALVANIZED SOIL STAPLES (8" LONG NAILS MAY BE USED WHERE SOIL HARDNESS PREVENTS USE OF STAPLES) 12" O.C. HORIZONTALLY ALONG SLOPE AND 5' O.C. VERTICALLY DOWN THE SLOPE (MINIMAL TOP MIDDLE AND TOE WHERE SHORT SLOPES APPLY). PROVIDE MINIMUM 2" OVERLAP AT TOP AND BOTTOM AND MINIMUM 6" OVERLAP ALONG SIDES OF MATERIAL.
- ROOT BARRIERS SHALL BE INSTALLED AT ALL TREES WITHIN 6 FEET OF ANY HARDSCAPE. PAVEMENT OR CURB. ROOT BARRIERS TO BE UB24-2 BY DEEP ROOT CORPORATION, (800) 456-7668, INSTALLED PER MANUFACTURER'S SPECIFICATIONS. NOTE: ROOT BARRIERS SHALL NOT SURROUND OR CIRCLE THE ROOTBALL. ROOT BARRIERS INSTALLED ADJACENT TO A BIOSWALE SHALL NOT INTERFERE WITH DRAINAGE TO OR FROM THE BIOSWALE SYSTEM.



- LEGEND**
- FINISH GRADE
 - GRAVEL PER LEGEND
 - MIRAFLEX OR EQUAL FILTER FABRIC, OVERLAP MIN 8" AND STAPLE
 - SET 1/2" MAX BELOW HARDSCAPE/STEEL EDGE/ CONCRETE BAND
 - CONCRETE BAND/PAVING OR STEEL EDGING (WHERE OCCURS)
 - COMPACTED SUB-GRADE (90% MIN.)

D GRAVEL PLACEMENT

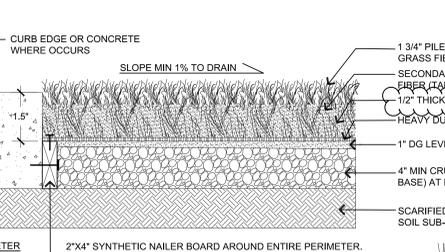
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- LEGEND**
- 4" PERF. PVC PIPE W SAND SOCK; CAP 8"
 - AMENDED BACKFILL, AMEND PER AGRONOMIC SOILS REPORT.
 - COMPACTED NATIVE.
 - 2"X12" PINE LODGE POLE STAKE OR APPROVED EQUAL (2 REQ'D)
 - RUBBER CINCH-TIE (4 PER TREE)
 - ROOTBALL TO BE SET 1" ABOVE FINISH GRADE.
 - 3" DEPTH OF MULCH REFER TO PLANTING LEGEND FOR TYPE.
 - 3"-4" HIGH BERM AROUND OUTSIDE OF ROOTBALL. REMOVE PRIOR TO END OF MAINTENANCE.
 - FINISH GRADE
 - PLANT PIT, SLOPE TO DRY SUMP.
 - DRY SUMP, 6" DIA. X 6" DEEP MIN. LINE W FILTER FABRIC FILL WITH 3/4" WASHED GRAVEL.
 - INSTALL RUB24-2 ROOT BARRIER, AT ALL TREES WITHIN 6' OF HARDSCAPE. MINIMUM 12" LENGTH. INSTALLED AT EDGE OF HARDSCAPE.

E LINEAR ROOT BARRIER

SCALE: NO_SCALE



- LEGEND**
- 1 3/4" PILE HEIGHT ARTIFICIAL GRASS FIBER (GREEN)
 - SECONDARY THATCH GRASS FIBER (TAN/BROWN)
 - 1/2" THICK ACRYLIC COATED OR SILICA SAND INFILL
 - HEAVY DUTY BACKING, PERFORATIONS @ 1" PER 4"
 - 1" DG LEVELING COURSE
 - 4" MIN CRUSHED STONE BASE (CLASS II ROAD BASE) AT MIN 90% RELATIVE COMPACTION
 - SCARIFIED AND COMPACTED NATURAL SOIL SUB-GRADE.
 - 2'X4" SYNTHETIC NAILER BOARD AROUND ENTIRE PERIMETER. RAMSET @ 12" O.C. & 3/8" RED HEAD EVERY 4" O.C. MAX. TURF TO BE AFFIXED USING GALVANIZED ROOFING NAILS @ 3" O.C
 - 1" MAX
 - 2X4 RECYCLED PLASTIC HEADER
 - OUTDOOR RATED WASHER HEAD SCREW, PLACE SILICONE AROUND HEAD.
 - LIQUID NAILS 2X4 TO OUTSIDE EDGE OF DRAIN BOX.
 - 2X4 RECYCLED PLASTIC HEADER
 - 3" MIN. OUTDOOR RATED WASHER HEAD SCREW.

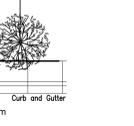
F ARTIFICIAL CURB

SCALE: NO_SCALE

NOTES:
APPLY PRE-EMERGENT ON SUB-GRADE PRIOR TO LAYING PROPOSED MATERIALS.

- INSTALLATION SEQUENCE:**
- PREPARE BASE AND SUBGRADE
 - TRENCH TO APPROPRIATE DEPTH FOR INSTALLATION OF ROOT BARRIER SO THAT TOP OF BARRIER IS 2" (5CM) BELOW FINISH GRADE OF TOP OF SIDEWALK (OR HALFWAY BETWEEN TOP OF COMPACTED BASE AND FINISH GRADE OF SW)
 - PLACE ROOT BARRIER IN TRENCH. VERTICAL RIBS MUST FACE TOWARD TREE ROOTS.
 - BACKFILL AND COMPACT TO REQUIREMENTS.
 - PLACE FORM MATERIAL AGAINST BARRIER (IT MAY BE NAILED FROM THE OUTSIDE OF THE FORM)

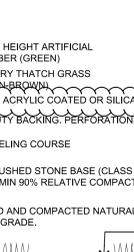
IMPORTANT NOTE: Tree location must align with "as-built" center of barrier.



Typical DeepRoot UB 24-2. Minimum 6 panels or 12 linear feet (3.66m).

G DECOMPOSED GRANITE

SCALE: NO_SCALE



- LEGEND**
- FINISH GRADE
 - DECOMPOSED GRANITE PER LEGEND
 - SET 1/2" MAX BELOW HARDSCAPE/STEEL EDGE/ CONCRETE BAND
 - CONCRETE BAND/PAVING OR STEEL EDGING (WHERE OCCURS)
 - COMPACTED SUB-GRADE (90% MIN.)

G DECOMPOSED GRANITE

SCALE: NO_SCALE

ESTABLISHED PLANTS (21 GRAM)
FOR EACH 12-18 INCHES OF PLANT HEIGHT OR SPREAD, OR FOR EACH 1/2 INCH OF TREE TRUNK DIAMETER USE:
1. ONE TABLET FOR SLOW GROWING PLANTS
2. TWO TABLETS FOR FAST-GROWING PLANTS OR POOR SOIL SITUATIONS.

CONTAINER SIZE	21-GRAM FERTILIZER TABLET CHART - NEW PLANTINGS					
	1 GAL.	3 GAL.	5 GAL.	15 GAL.	24" BOX	36" BOX
RECOMMENDED QUANTITY OF (21 GR) PLANT TABLETS	1	2-3	2-3	7-10	15-24	22-36

- LEGEND**
- 4" PERF. PVC PIPE W SAND SOCK; CAP 8"
 - AMENDED BACKFILL, AMEND PER AGRONOMIC SOILS REPORT.
 - COMPACTED NATIVE.
 - 2"X12" PINE LODGE POLE STAKE OR APPROVED EQUAL (2 REQ'D)
 - RUBBER CINCH-TIE (4 PER TREE)
 - ROOTBALL TO BE SET 1" ABOVE FINISH GRADE.
 - 3" DEPTH OF MULCH REFER TO PLANTING LEGEND FOR TYPE.
 - 3"-4" HIGH BERM AROUND OUTSIDE OF ROOTBALL. REMOVE PRIOR TO END OF MAINTENANCE.
 - FINISH GRADE
 - PLANT PIT, SLOPE TO DRY SUMP.
 - DRY SUMP, 6" DIA. X 6" DEEP MIN. LINE W FILTER FABRIC FILL WITH 3/4" WASHED GRAVEL.
 - INSTALL RUB24-2 ROOT BARRIER, AT ALL TREES WITHIN 6' OF HARDSCAPE. MINIMUM 12" LENGTH. INSTALLED AT EDGE OF HARDSCAPE.

A TREE PLANTING

SCALE: NO_SCALE



- LEGEND**
- PLANT PER LEGEND - 1 GALLON THRU 15 GALLON CONTAINER
 - SET CROWN 1/2" - 1" ABOVE SURROUNDING GRADE.
 - WATER BASIN MIN 4" DEPTH. REMOVE PRIOR TO END OF MAINTENANCE PERIOD.
 - AMENDED BACKFILL - RIP AND TILL ENTIRE PLANTING AREA TO A DEPTH OF 10" & INCORPORATE AMENDMENTS IN THE UPPER 1/3 OF PLANT PIT.
 - 20-10-5 FERTILIZER TABLET PER SPECS. IN ADDITION TO COMPOST AND FERTILIZERS.
 - MULCH OR OTHER GROUND PLANE MATERIAL PER PLAN, KEEP MATERIAL AWAY FROM PLANT STEM AND LOWER BRANCHES.
 - UNDISTURBED SOIL.

B SHRUB PLANTING

SCALE: NO_SCALE



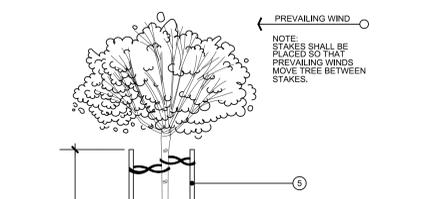
- LEGEND**
- FINISH GRADE
 - DECOMPOSED GRANITE PER LEGEND
 - SET 1/2" MAX BELOW HARDSCAPE/STEEL EDGE/ CONCRETE BAND
 - CONCRETE BAND/PAVING OR STEEL EDGING (WHERE OCCURS)
 - COMPACTED SUB-GRADE (90% MIN.)

C DECOMPOSED GRANITE

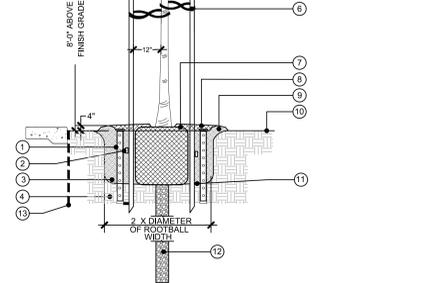
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- LEGEND**
- FINISH GRADE
 - GRAVEL PER LEGEND
 - MIRAFLEX OR EQUAL FILTER FABRIC, OVERLAP MIN 8" AND STAPLE
 - SET 1/2" MAX BELOW HARDSCAPE/STEEL EDGE/ CONCRETE BAND
 - CONCRETE BAND/PAVING OR STEEL EDGING (WHERE OCCURS)
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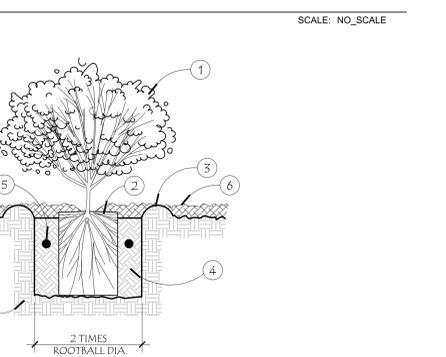
- LEGEND**
- BUBBLER PER IRRIGATION PLAN
 - TREE ROOTBALL
 - AERATION DEVICE PER NOTE 1 BELOW



NOTES:
INSTALL 3" DIAMETER RING OF MULCH @ BASE OF TREES. CONTRACTOR SHALL INCREASE DIAMETER 12" FOR EVERY ADDITIONAL SIZE OVER 24" BOX.
INSTALL ARBOR GUARDS @ BASE OF TREES IN TURF AREAS ONLY. AUGURED HOLE CAN BE OMITTED FOR AREAS PASSING PERCOLATION TESTS. CONTRACTOR SHALL TEST MULTIPLE HOLES PER APPROVED PERC. TEST METHOD.
REMOVE CONCRETE DEBRIS OR OVER-POURS AS REQ'D. TO ALLOW ROOT BARRIER TO LAY FLUSH AGAINST ADJACENT HARDSCAPE.

NOT TO SCALE

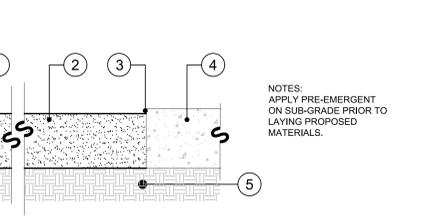
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- LEGEND**
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 - WATER BASIN MIN 4" DEPTH. REMOVE PRIOR TO END OF MAINTENANCE PERIOD.
 - AMENDED BACKFILL - RIP AND TILL ENTIRE PLANTING AREA TO A DEPTH OF 10" & INCORPORATE AMENDMENTS IN THE UPPER 1/3 OF PLANT PIT.
 - 20-10-5 FERTILIZER TABLET PER SPECS. IN ADDITION TO COMPOST AND FERTILIZERS.
 - MULCH OR OTHER GROUND PLANE MATERIAL PER PLAN, KEEP MATERIAL AWAY FROM PLANT STEM AND LOWER BRANCHES.
 - UNDISTURBED SOIL.

B SHRUB PLANTING

SCALE: NO_SCALE



- LEGEND**
- FINISH GRADE
 - DECOMPOSED GRANITE PER LEGEND
 - SET 1/2" MAX BELOW HARDSCAPE/STEEL EDGE/ CONCRETE BAND
 - CONCRETE BAND/PAVING OR STEEL EDGING (WHERE OCCURS)
 - COMPACTED SUB-GRADE (90% MIN.)

C DECOMPOSED GRANITE

SCALE: NO_SCALE



- LEGEND**
- FINISH GRADE
 - GRAVEL PER LEGEND
 - MIRAFLEX OR EQUAL FILTER FABRIC, OVERLAP MIN 8" AND STAPLE
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 - CONCRETE BAND/PAVING OR STEEL EDGING (WHERE OCCURS)
 - COMPACTED SUB-GRADE (90% MIN.)

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 03-122664 INC: 0
REVIEWED FOR
SS FLS ACS Z
DATE: 08/15/2023

pjhm
architects

LICENSED ARCHITECT
NICHOLAS W. KRUE
Lic. # C15585
02/25
RENEWED DATE
STATE OF CALIFORNIA

BPA
LANDSCAPE ARCHITECTS
BRANDON PETRUNIO & ASSOCIATES, INC.
24461 RIDGE ROUTE DRIVE #100, LAGUNA HILLS, CA 92653
Office Phone: 949.496.6191
T: (424) 232-5940, M: (931) 312-9943, E: brandon@bpatas.com

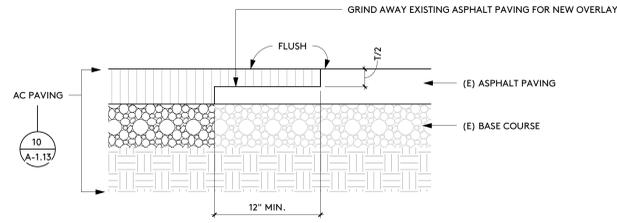
LICENSED LANDSCAPE ARCHITECT
Signature
01/31/2025
RENEWED DATE
05/25/2023
STATE OF CALIFORNIA

**HIGHLAND HIGH SCHOOL
50M POOL & AQUATICS CENTER**
KERN HIGH SCHOOL DISTRICT

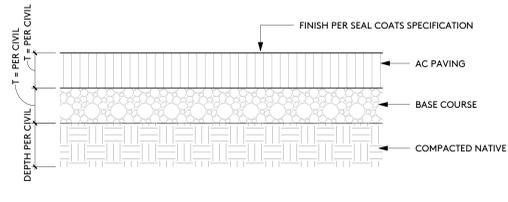
ADDENDUM NO. 2

LANDSCAPE PLANTING DETAILS
LPD.1

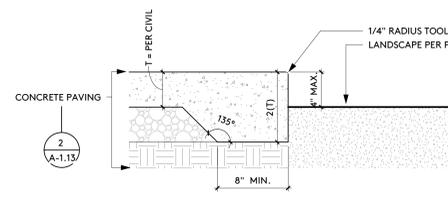
OC Office: 24461 Ridge Route Drive #100, Laguna Hills, CA 92653
SD Office: 804 Pier View Way #103, Oceanside, CA 92054
SD Phone: 760.750.5527
LA Office: 837 Tracton Avenue #410, Los Angeles, CA 90013
LA Phone: 213.278.0172
pjhm.com
Web: 213.278.0172



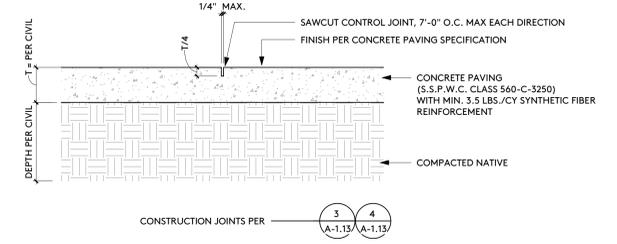
AC PAVING - CONSTRUCTION JOINT 13
 1 1/2" = 1'-0"



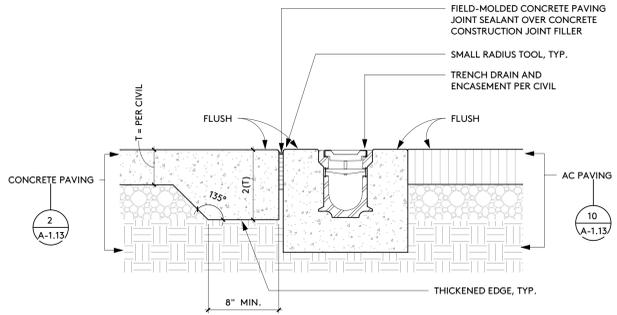
AC PAVING AT NON-APPARATUS ACCESS ROADWAY



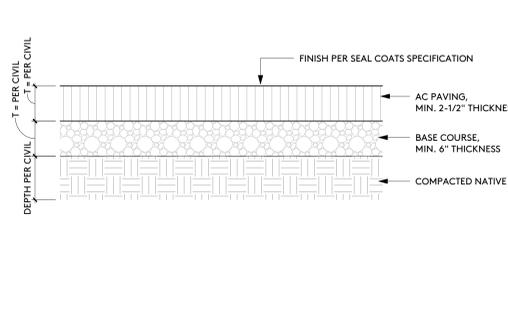
CONCRETE PAVING - SLAB EDGE 5
 1 1/2" = 1'-0"



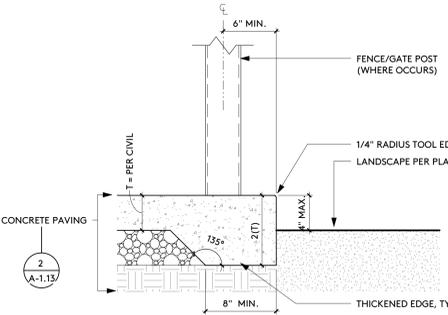
CONCRETE PAVING AT NON-APPARATUS ACCESS ROADWAY



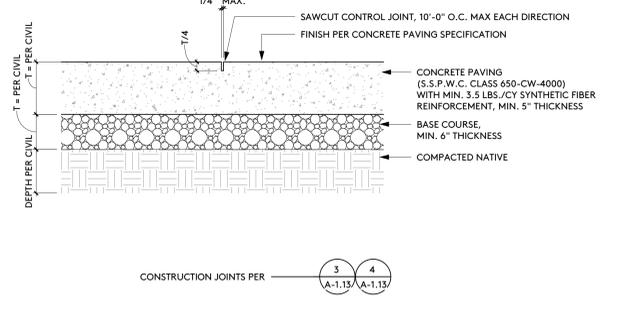
TRENCH DRAIN 14
 1 1/2" = 1'-0"



AC PAVING AT APPARATUS ACCESS ROADWAY



CONCRETE PAVING - SLAB EDGE 6
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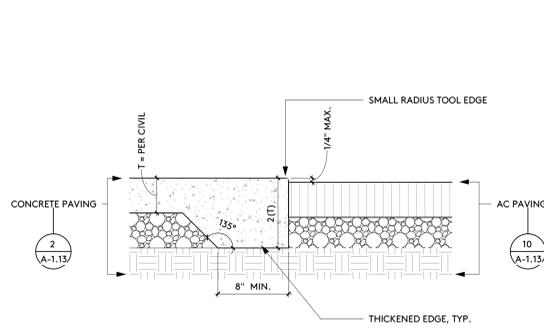


CONCRETE PAVING AT APPARATUS ACCESS ROADWAY

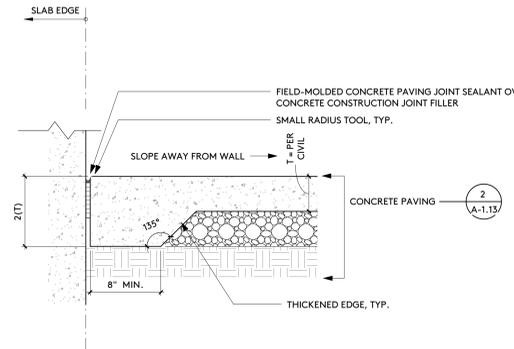
AC PAVING 10
 1 1/2" = 1'-0"

CONCRETE PAVING - SLAB EDGE 6
 1 1/2" = 1'-0"

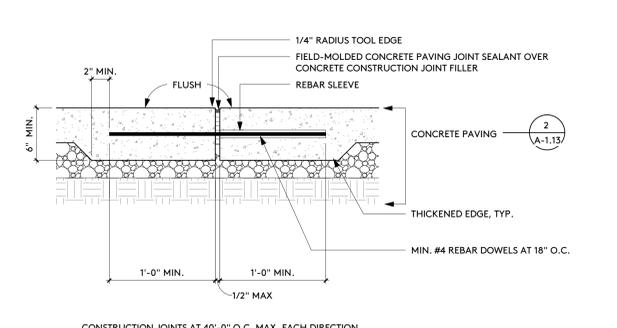
CONCRETE PAVING 2
 1 1/2" = 1'-0"



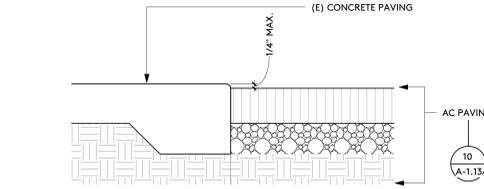
CONSTRUCTION JOINT - CONCRETE/AC 11
 1 1/2" = 1'-0"



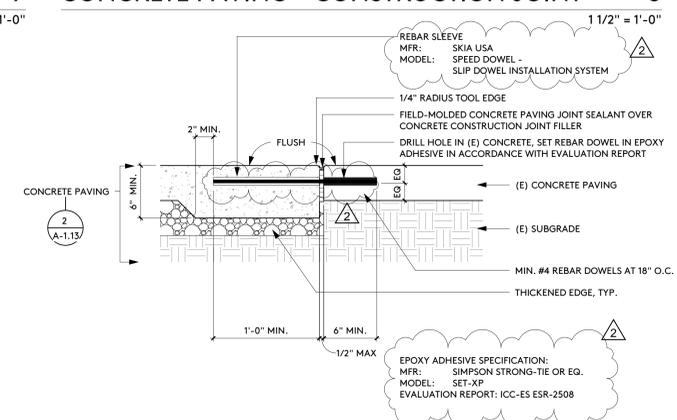
CONCRETE PAVING - SLAB EDGE 7
 1 1/2" = 1'-0"



CONCRETE PAVING - CONSTRUCTION JOINT 3
 1 1/2" = 1'-0"



CONSTRUCTION JOINT - CONCRETE/AC 12
 1 1/2" = 1'-0"



CONCRETE PAVING - CONSTRUCTION JOINT 4
 1 1/2" = 1'-0"

ADDENDUM NO. 2

OC Office: 24461 Ridge Route Drive #100, Laguna Hills, CA 92653

SITE DETAILS - HARDSCAPE

MIN. #4 REBAR DOWELS AT 18" O.C.

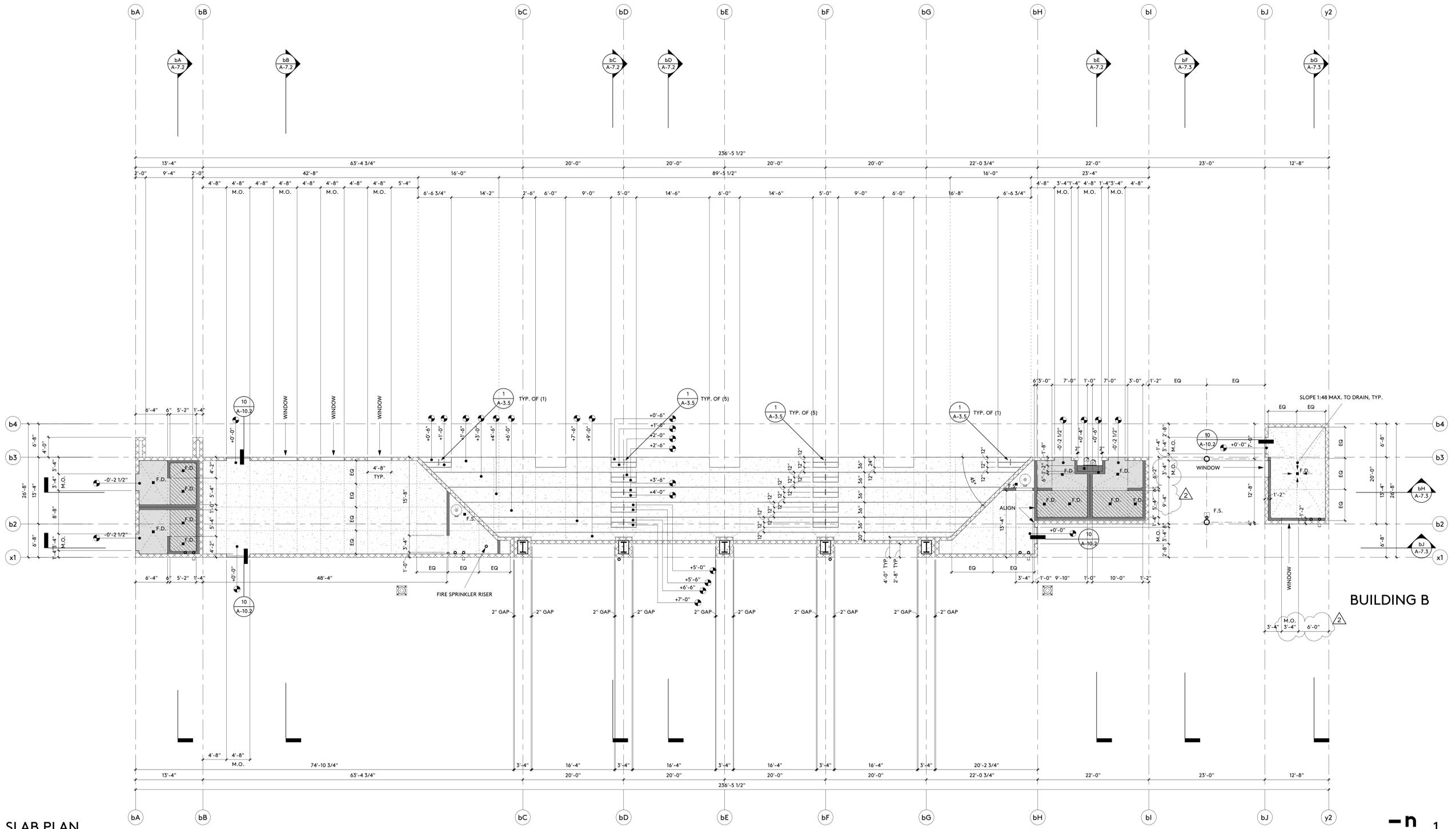
THICKENED EDGE, TYP.

(E) SUBGRADE

(E) CONCRETE PAVING

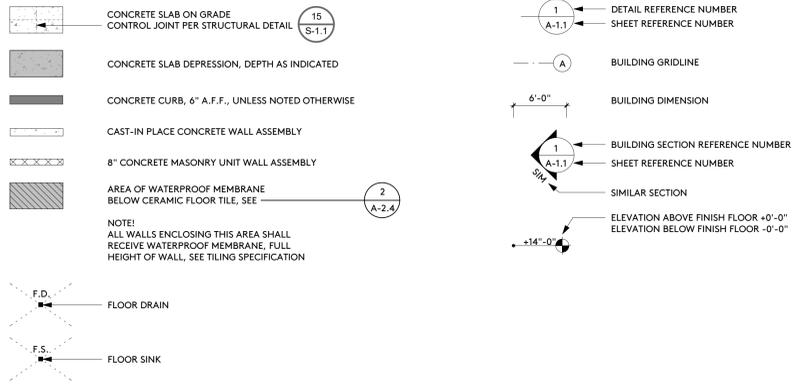
CONCRETE PAVING

1 1/2" = 1'-0"



SLAB PLAN

1
 1/8" = 1'-0"



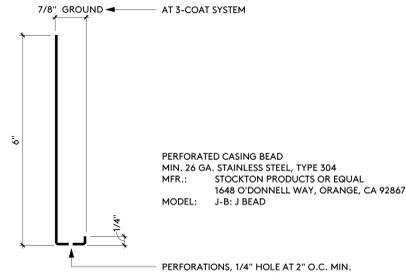
SYMBOLS

HIGHLAND HIGH SCHOOL
 50M POOL & AQUATICS CENTER

KERN HIGH SCHOOL DISTRICT

ADDENDUM NO. 2

SLAB PLAN



PROFILE

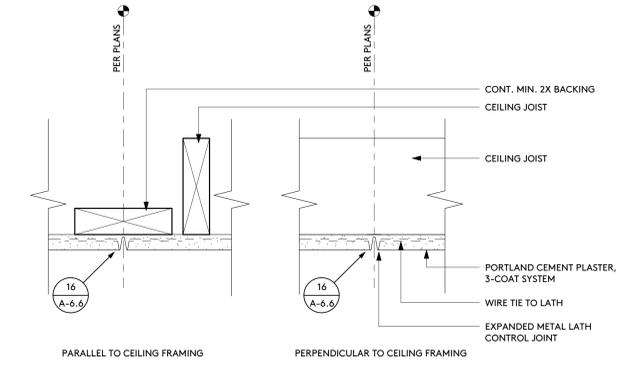
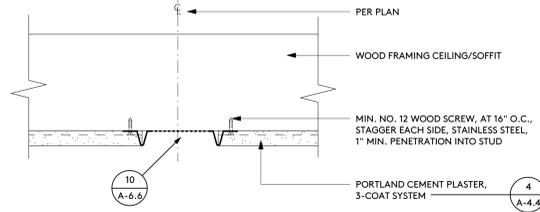
13

6" = 1'-0"

CEILING/SOFFIT VENT

9

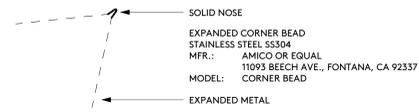
3" = 1'-0"



CONTROL JOINT

1

3" = 1'-0"



PROFILE

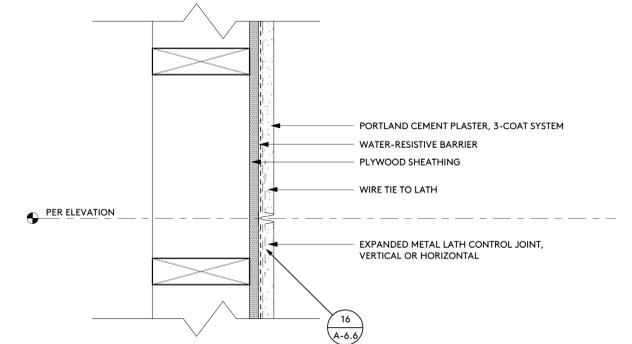
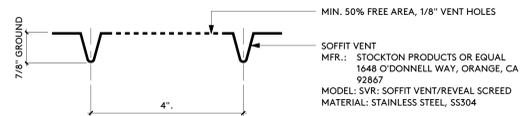
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6" = 1'-0"

CEILING/SOFFIT VENT

10

6" = 1'-0"



CONTROL JOINT

2

3" = 1'-0"



PROFILE

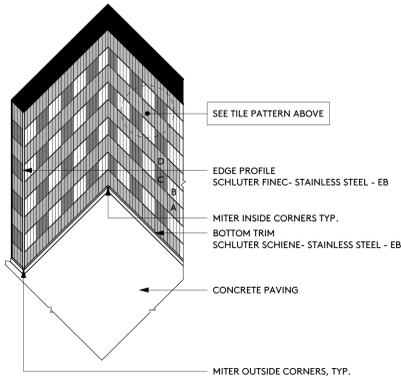
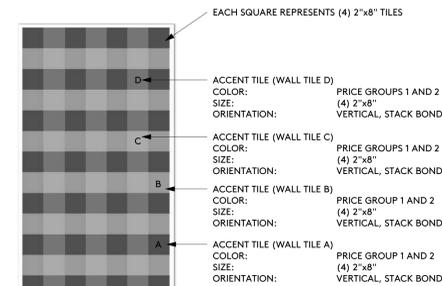
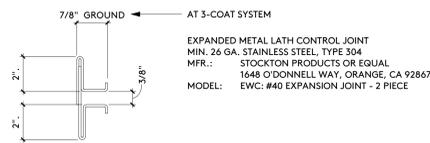
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6" = 1'-0"

PROFILE

11

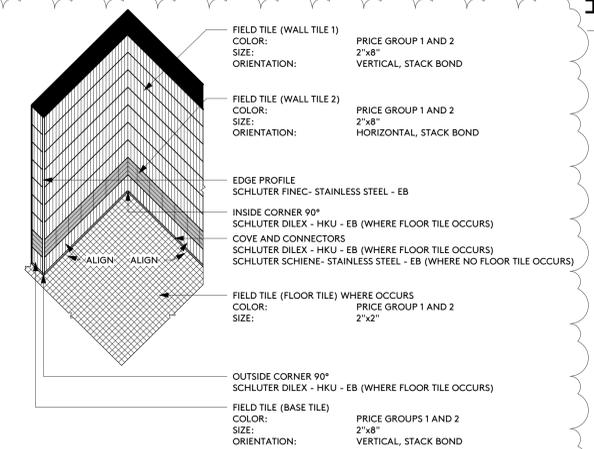
6" = 1'-0"



FIELD TILE LAYOUT

8

3/8" = 1'-0"



FIELD TILE LAYOUT

4

3/8" = 1'-0"

HIGHLAND HIGH SCHOOL
 50M POOL & AQUATICS CENTER

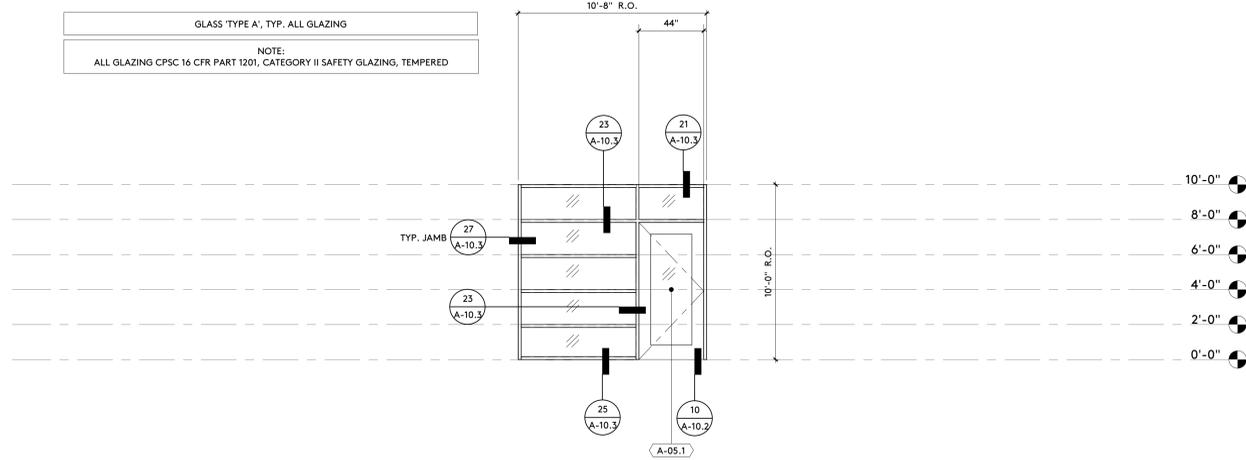
EXTERIOR ELEVATION DETAILS

KERN HIGH SCHOOL DISTRICT

A-6.6

ADDENDUM NO. 2

GLASS TYPE 'A', TYP. ALL GLAZING
 NOTE:
 ALL GLAZING CPSC 16 CFR PART 1201, CATEGORY II SAFETY GLAZING, TEMPERED



WINDOW WALL ELEVATION - WW-A5.1

G
 1/4" = 1'-0"

OPENING NUMBER	ROOM NUMBER	OPENING FUNCTION	FRAME TYPE	FRAME MATERIAL	DOOR TYPE	DOOR MATERIAL	GLAZING, GLASS TYPE	FIRE RATINGS (IN MIN.)			OPENING DETAILS					OPENING DETAILS: SEE SHEETS: A-10.2, A-10.3, A-10.4 DOOR HARDWARE GROUP: SEE SPECIFICATION SECTION 08 71 00 GLAZING GLASS TYPE: SEE SPECIFICATION SECTION 08 80 00 NOTE! DOOR SHALL BE OPENABLE FROM INSIDE WITH A SINGLE MOTION WITHOUT THE USE OF ANY TOOLS, EFFORT, OR SPECIAL KNOWLEDGE.			
								FRAME FIRE ASSEMBLY	DOOR FIRE ASSEMBLY	SIDE/LITE/TRANSOM GLASS FIRE ASSEMBLY	EXIT DEVICE REQUIRED	DOOR HARDWARE GROUP	LOCKABLE INSIDE	HEAD	JAMB		SILL	THRESHOLD	MULLION/TRANSOM
A-01.1	A-01	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	A	-	-	-	NO	1	No	21	22	-	15	23	
A-02.1	A-02	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	B	-	-	-	NO	2	No	26	22	-	15	23	
A-02.2	A-02	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	B	-	-	-	NO	2	No	26	22	-	15	23	
A-03.1	A-03	INTERIOR DOOR	B	HOLLOW METAL	1	HOLLOW METAL	-	-	-	-	NO	3	Yes	2	2	-	5	-	
A-04.1	A-04	INTERIOR DOOR	C	HOLLOW METAL	1	HOLLOW METAL	-	-	-	-	NO	4	No	1	1	-	5	-	
A-04.2	A-04	EXTERIOR DOOR	C	HOLLOW METAL	1	HOLLOW METAL	-	-	-	-	NO	5	No	6	7	-	10	-	
A-05.1	A-05	WINDOW WALL	WW-A5.1	HOLLOW METAL	3	HOLLOW METAL	-	-	-	-	NO	5	No	-	-	-	-	-	SEE WINDOW WALL ELEVATIONS
A-07.1	A-07	INTERIOR DOOR	B	HOLLOW METAL	1	HOLLOW METAL	-	-	-	-	NO	3	Yes	2	2	-	5	-	
A-08.1	A-08	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	B	-	-	-	NO	2	No	26	22	-	15	23	
A-08.2	A-08	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	B	-	-	-	NO	2	No	26	22	-	15	23	
A-09.1	A-09	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	A	-	-	-	NO	1	No	21	22	-	10	23	

BUILDING A

B-01.1	B-01	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	B	-	-	-	NO	7	-	21	22	-	15	23	
B-02.1	B-02	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	B	-	-	-	NO	7	-	21	22	-	15	23	
B-03.1	B-03	WINDOW WALL	WW-B3.1	HOLLOW METAL	3	HOLLOW METAL	-	-	-	-	NO	8	Yes	-	-	-	-	-	SEE WINDOW WALL ELEVATIONS
B-03.2	B-03	WINDOW WALL	WW-B3.2	HOLLOW METAL	3	HOLLOW METAL	-	-	-	-	NO	8	Yes	-	-	-	-	-	SEE WINDOW WALL ELEVATIONS
B-03.3	B-03	EXTERIOR WINDOW	E	HOLLOW METAL	-	-	A	-	-	-	-	-	-	26	22	24	-	23	
B-03.4	B-03	EXTERIOR WINDOW	E	HOLLOW METAL	-	-	A	-	-	-	-	-	-	26	22	24	-	23	
B-03.5	B-03	EXTERIOR WINDOW	E	HOLLOW METAL	-	-	A	-	-	-	-	-	-	26	22	24	-	23	
B-04.1	B-04	INTERIOR DOOR	B	HOLLOW METAL	1	HOLLOW METAL	-	-	-	-	NO	9	-	1	1	-	5	-	
B-05.1	B-05	INTERIOR DOOR	B	HOLLOW METAL	1	HOLLOW METAL	-	-	-	-	NO	9	-	1	1	-	5	-	
B-06.1	B-06	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	B	-	-	-	NO	10	-	26	22	-	10	23	
B-07.1	B-07	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	B	-	-	-	NO	11	-	26	22	-	20	23	
B-08.1	B-08	EXTERIOR DOOR	A	HOLLOW METAL	1	HOLLOW METAL	B	-	-	-	NO	11	-	26	22	-	20	23	
B-09.1	B-09	EXTERIOR DOOR	A	HOLLOW METAL	3	HOLLOW METAL	A	-	-	-	NO	12	-	6	7	-	10	23	
B-09.2	B-09	EXTERIOR DOOR	F	HOLLOW METAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEE FRAME TYPE 'F'
B-09.3	B-09	EXTERIOR DOOR	F	HOLLOW METAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEE FRAME TYPE 'F'

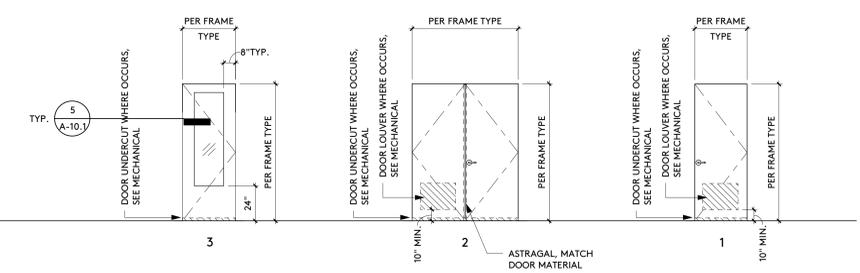
BUILDING B

C-01.1	C-01	EXTERIOR DOOR	D	FIBERGLASS	2	FIBERGLASS	A	-	-	-	NO	14	-	41	42	-	45	43	
C-01.2	C-01	EXTERIOR DOOR	D	FIBERGLASS	2	FIBERGLASS	A	-	-	-	NO	13	-	41	42	-	45	43	
C-02.1	C-02	EXTERIOR DOOR	D	FIBERGLASS	2	FIBERGLASS	A	-	-	-	NO	13	-	41	42	-	45	43	
C-03.1	C-03	EXTERIOR DOOR	D	FIBERGLASS	2	FIBERGLASS	A	-	-	-	NO	13	-	41	42/47	-	44	43	

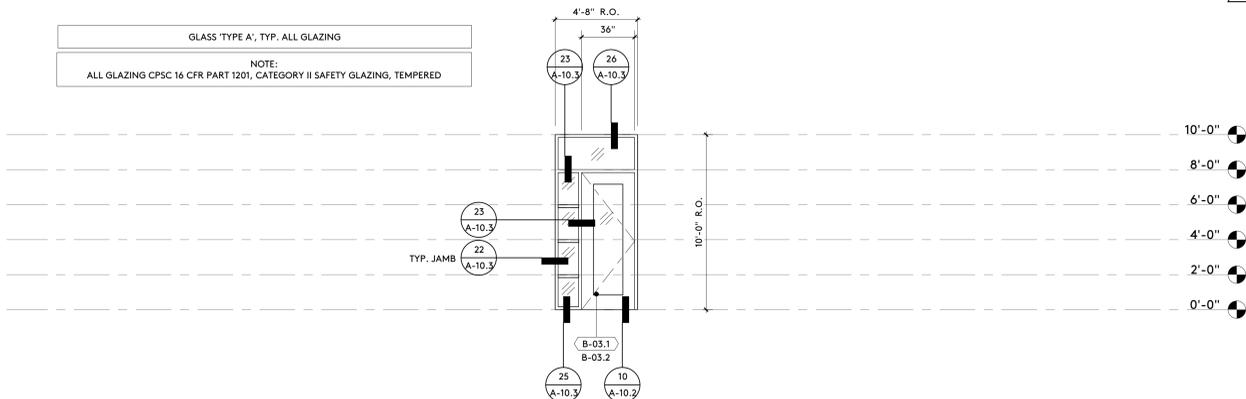
BUILDING C

OPENING SCHEDULE

NOTE:
 ALL GLAZING CPSC 16 CFR PART 1201, CATEGORY II SAFETY GLAZING, TEMPERED



GLASS TYPE 'A', TYP. ALL GLAZING
 NOTE:
 ALL GLAZING CPSC 16 CFR PART 1201, CATEGORY II SAFETY GLAZING, TEMPERED

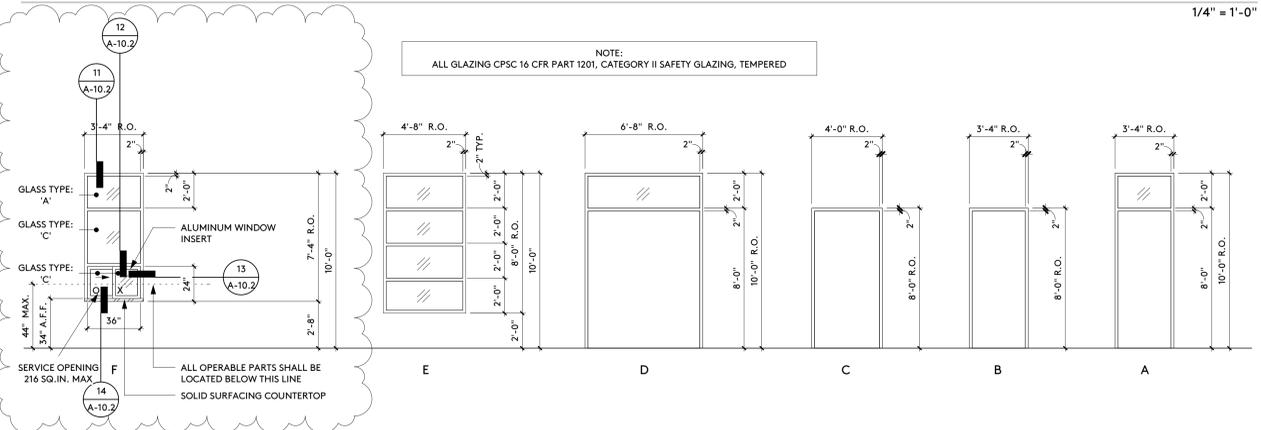


WINDOW WALL ELEVATION - WW-B3.1, WW-B3.2

J
 1/4" = 1'-0"

DOOR TYPES

NOTE:
 ALL GLAZING CPSC 16 CFR PART 1201, CATEGORY II SAFETY GLAZING, TEMPERED



FRAME TYPES

1/4" = 1'-0"

APPROVED
 DIV. OF THE STATE ARCHITECT
 APP: 03-122664 INC.: D
 REVIEWED FOR
 SS FLS ACS
 DATE: 08/15/2023

pjhm
 architects

LICENSED ARCHITECT
 THOMAS W. KRUE
 Lic.# C15585
 02/25
 Renewal Date
 STATE OF CALIFORNIA

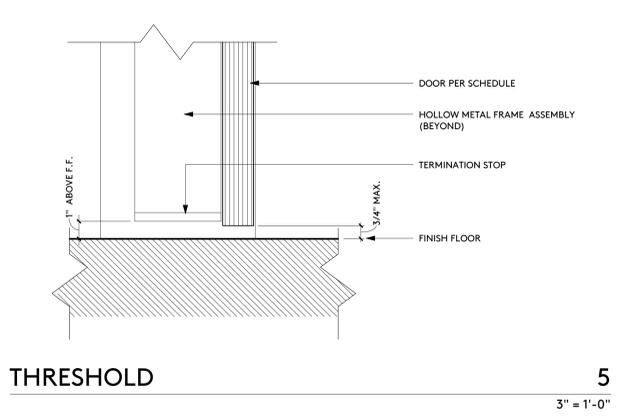
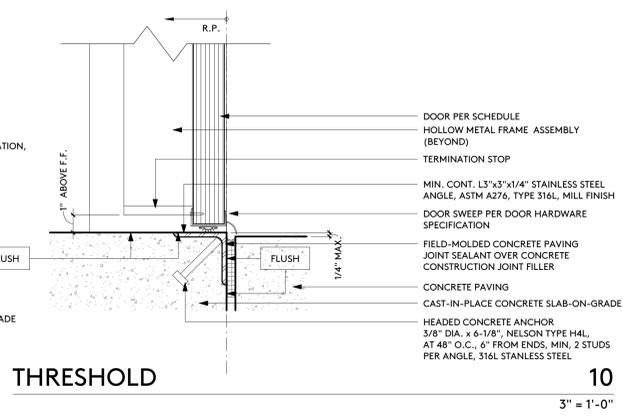
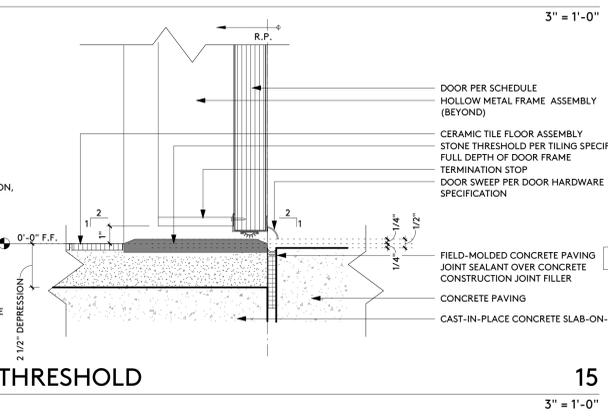
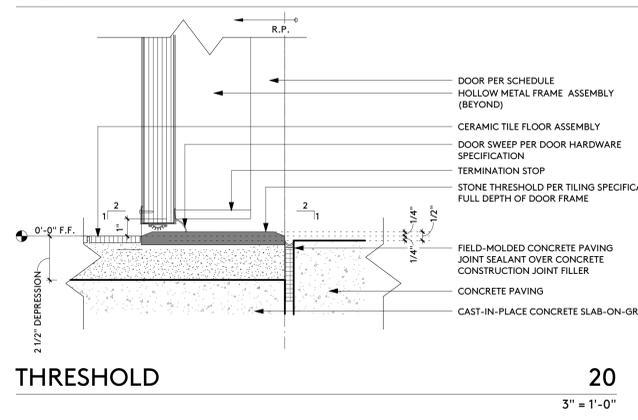
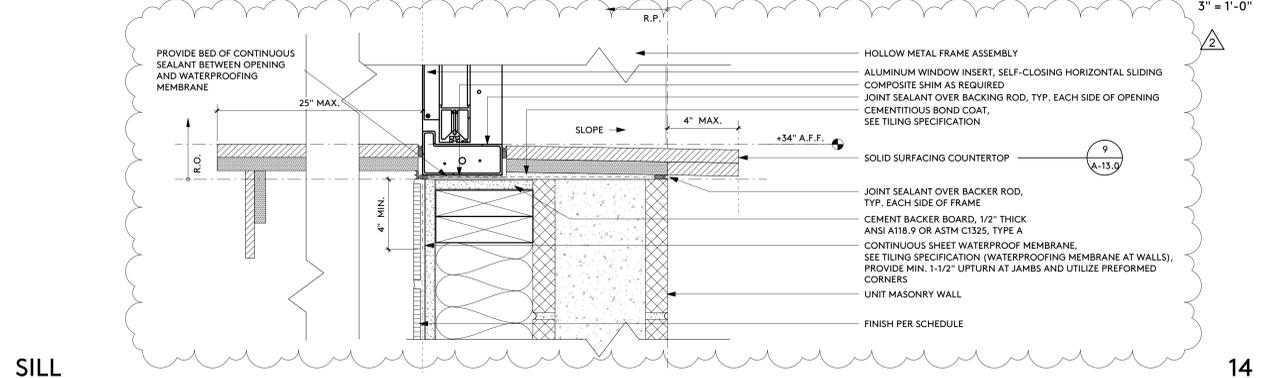
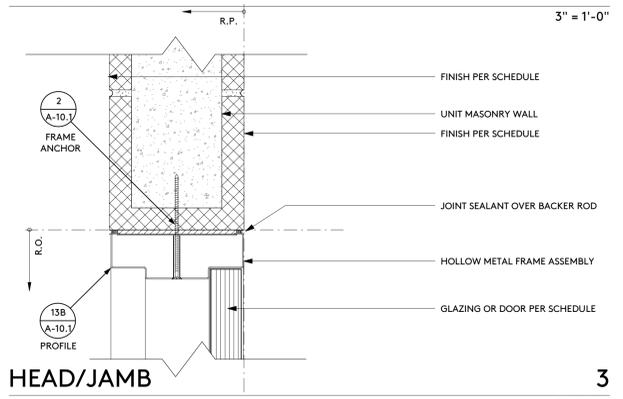
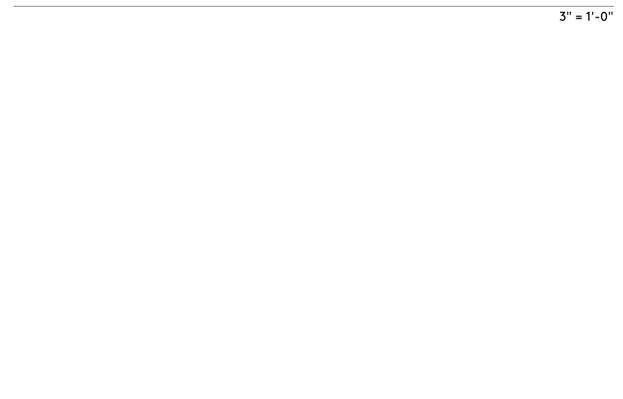
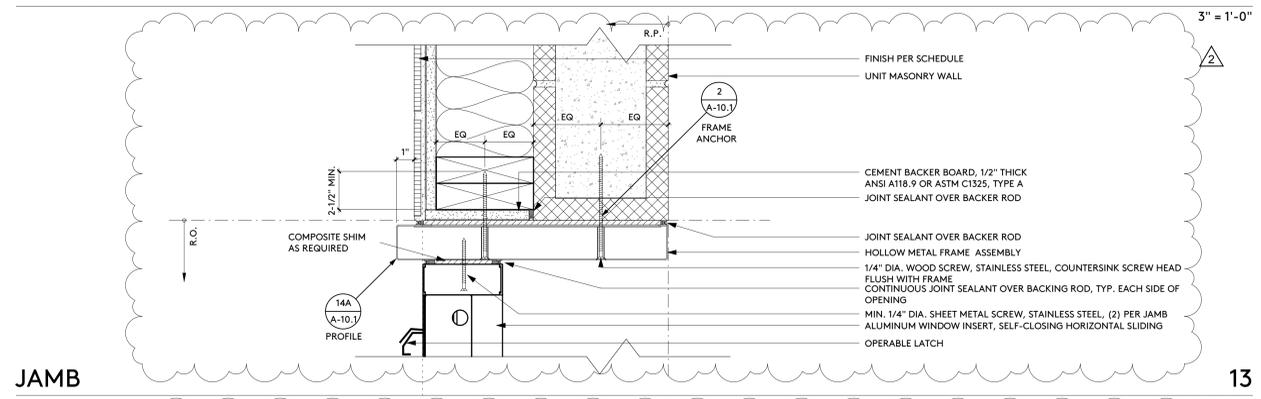
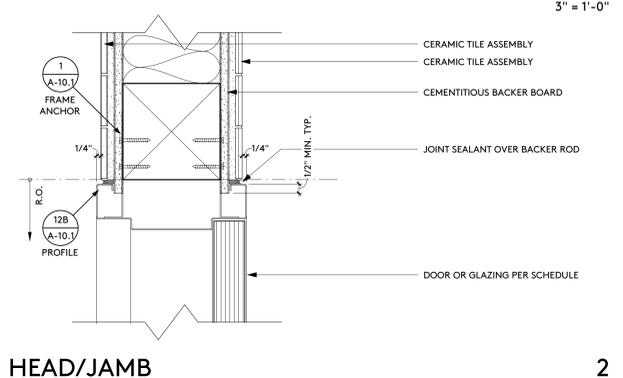
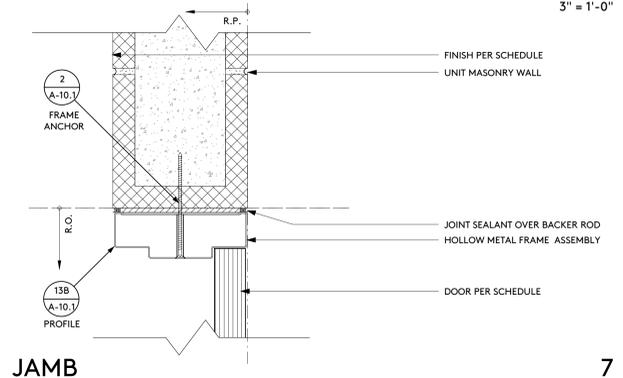
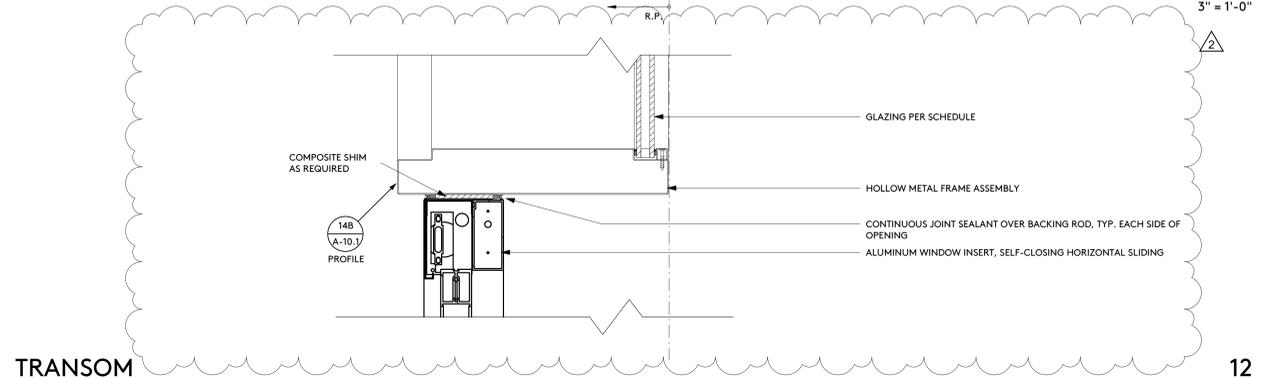
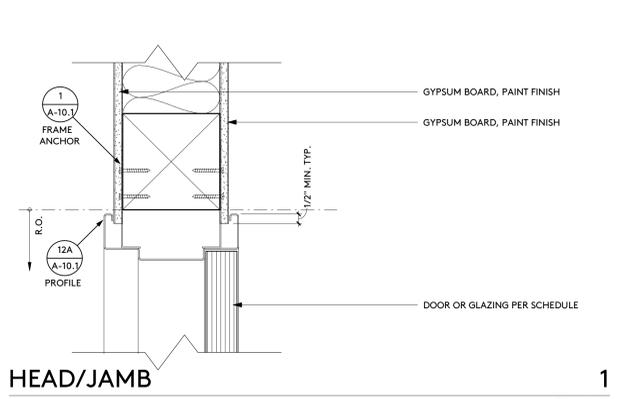
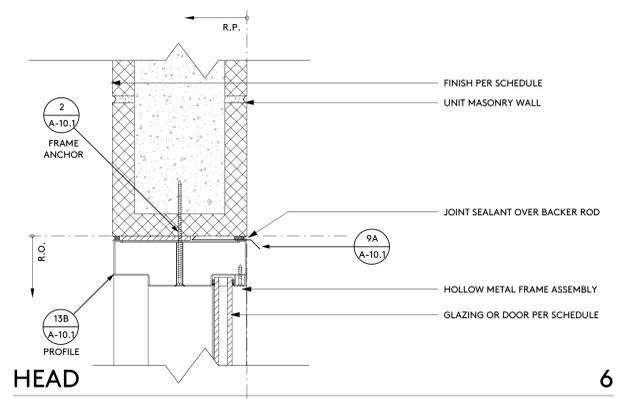
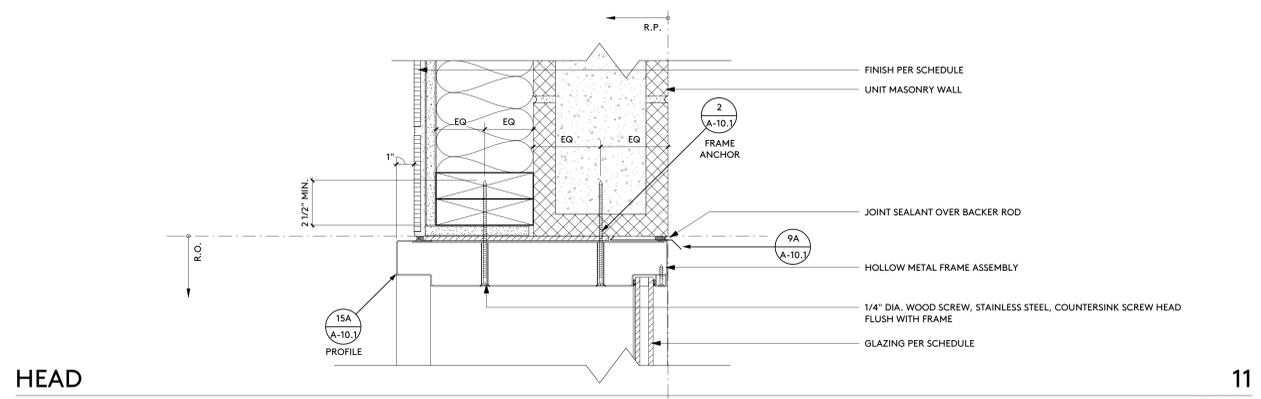
HIGHLAND HIGH SCHOOL
 50M POOL & AQUATICS CENTER
 KERN HIGH SCHOOL DISTRICT

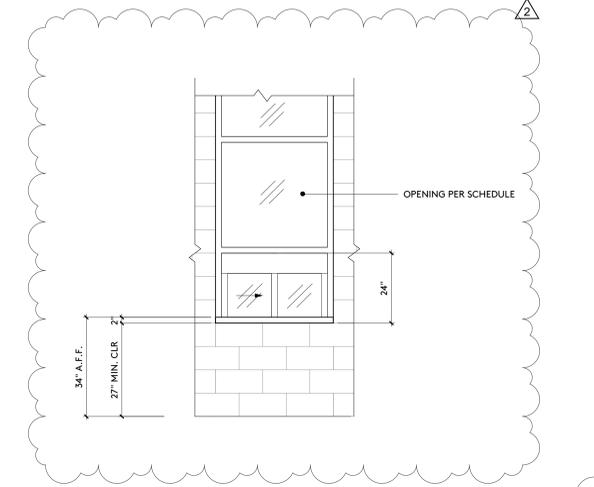
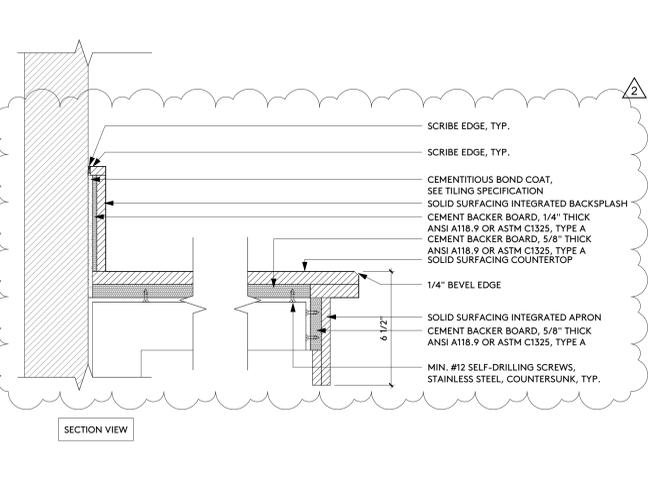
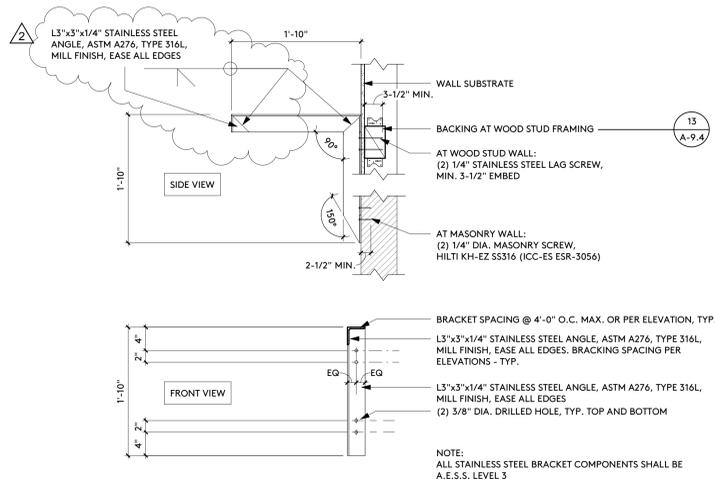
OPENING SCHEDULE/TYPES
 ADDENDUM NO. 2

A-10.0

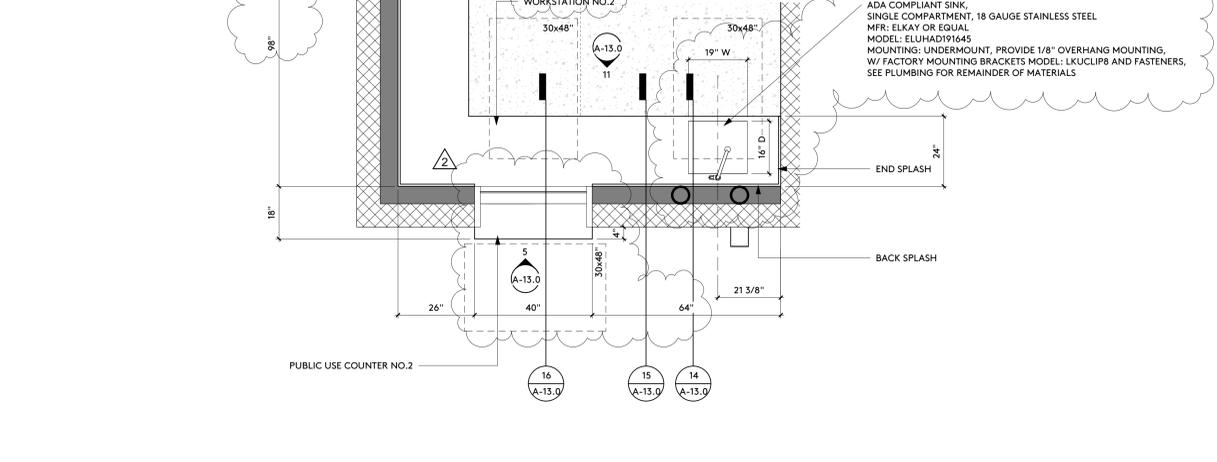
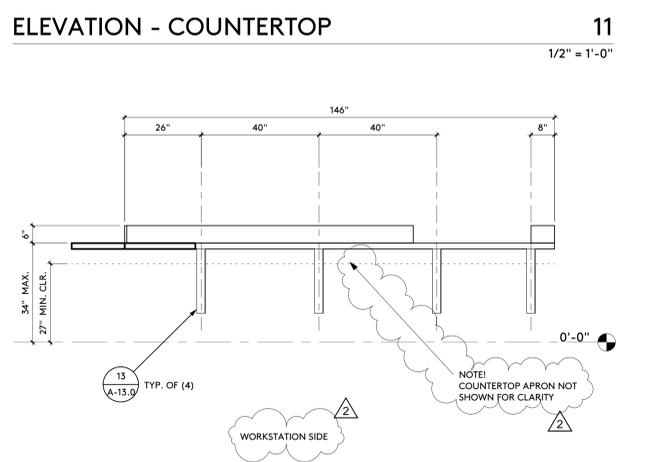
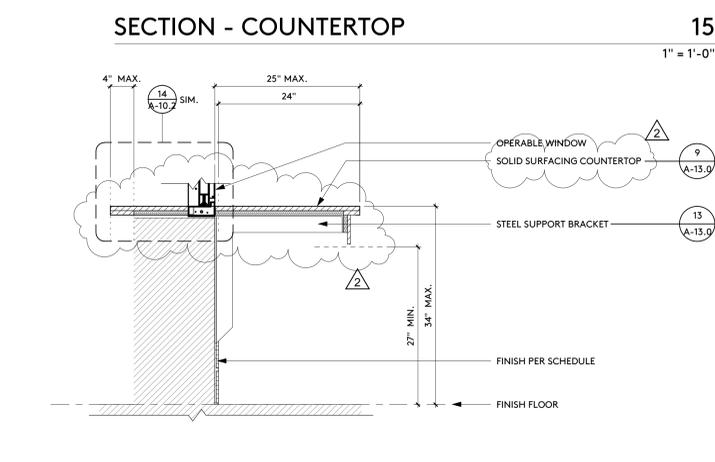
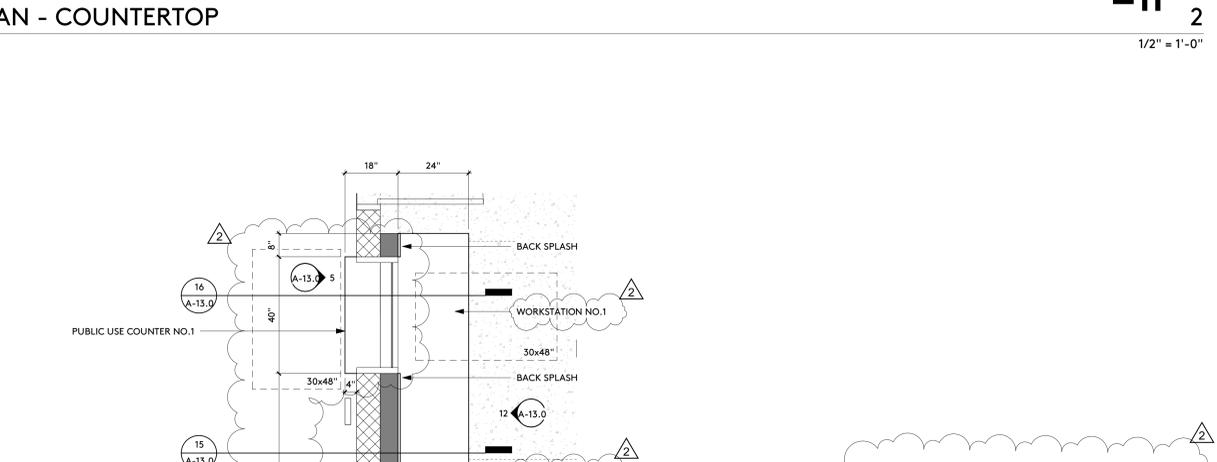
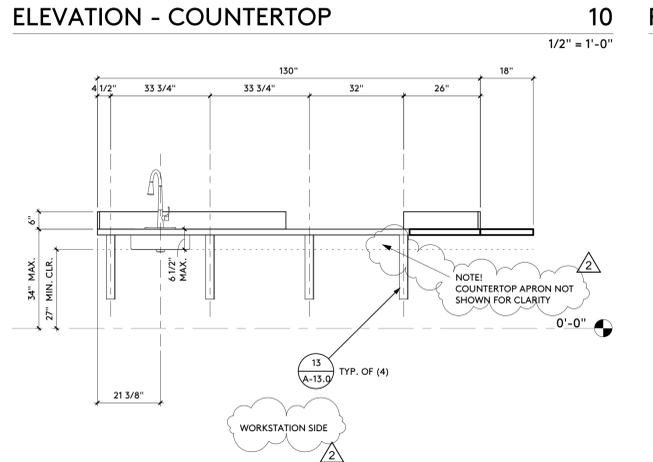
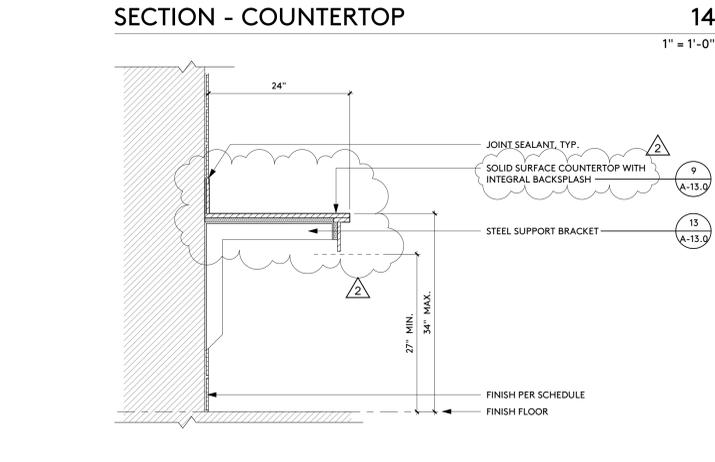
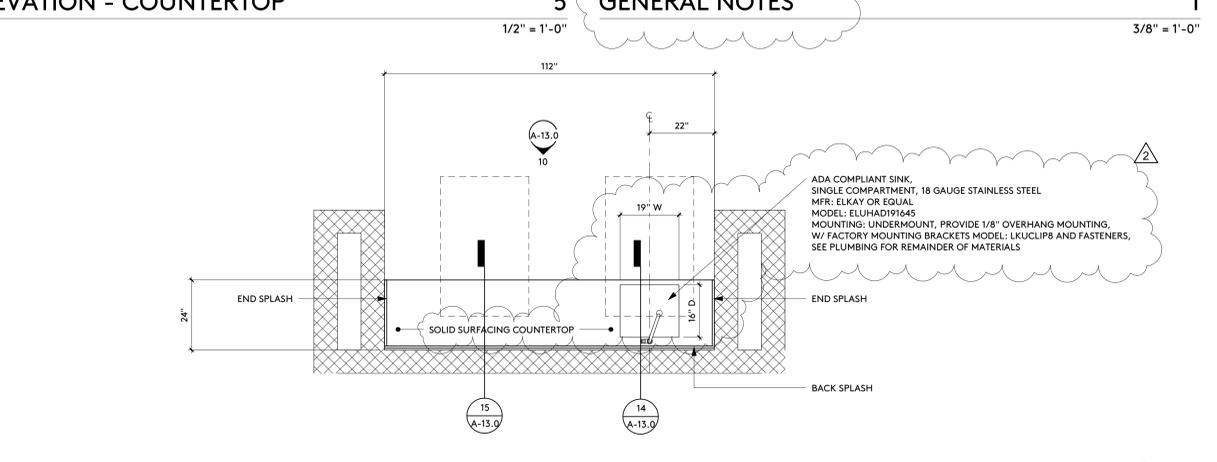
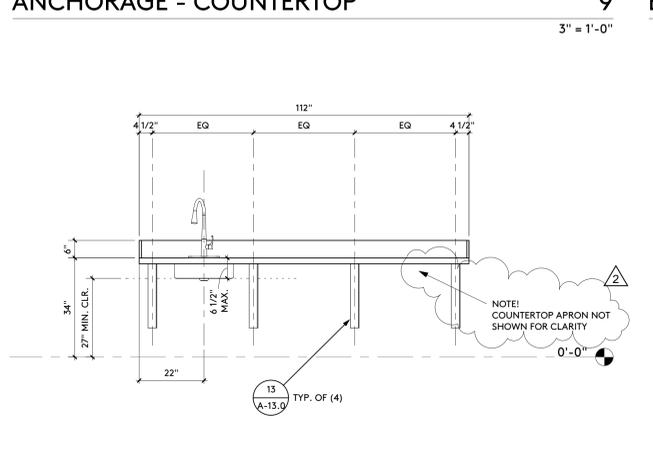
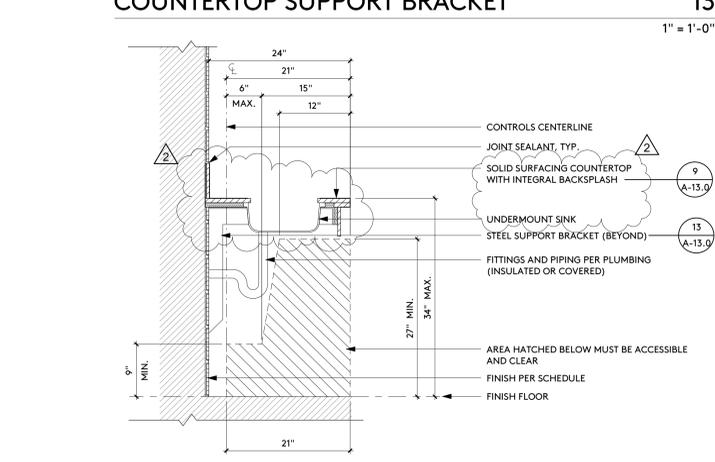
OC Office: 24461 Ridge Route Drive #100, Laguna Hills, CA 92653 • OC Phone: 949.496.6191 • SD Office: 804 Pier View Way #103, Oceanside, CA 92054 • SD Phone: 760.750.5527 • LA Office: 837 Tracton Avenue, #410, Los Angeles, CA 90013 • LA Phone: 213.278.0172 • Web: pjhm.com

5/24/2023 10:19:13 AM





- GENERAL NOTES** 1
3/8" = 1'-0"
- SOLID SURFACING COUNTERTOP GENERAL NOTES
1. ALL MATERIAL SHALL BE RATED FOR EXTERIOR EXPOSURE
 2. 1/4" BEVEL EDGE ON FRONT OF COUNTERTOP
 3. ALL FASTENERS SHALL BE STAINLESS STEEL
 4. SOLID SURFACING SHALL BE FULLY ADHERED TO SUB-TOP (CEMENT BACKING BOARD)
 5. COUNTERTOP SHALL HAVE INTEGRAL 6-INCH HIGH BACKSPASH AND END SPLASH WHERE SHOWN
 6. COUNTERTOP SHALL HAVE MATCHING APRONS, BACKSPASH, ENDSPLASH
 7. COUNTERTOP CUTOUTS AND MOUNTING HOLES SHALL BE CUT BY COUNTERTOP FABRICATOR PRIOR TO INSTALLATION.
 8. NOT USED
 9. ALL EDGES SHALL BE SCRIBED WHERE INDICATED, NO TRIM PERMITTED, 1/8" MAX. TOLERANCE



APPROVED
DIV. OF THE STATE ARCHITECT
APP: 03-122664 INC.: 0
REVIEWED FOR
SS FLS ACS
DATE: 08/15/2023

pjhm
architects

LICENSED ARCHITECT
RODAS W. KRUE
Lic. # C15585
02/25
RENEWED DATE
STATE OF CALIFORNIA

HIGHLAND HIGH SCHOOL
50M POOL & AQUATICS CENTER

KERN HIGH SCHOOL DISTRICT

COUNTERTOP DETAILS

ADDENDUM NO. 2

A-13.0

5/24/2023 9:30:05 AM

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