

Project: Fillmore Middle School HVAC and Shade Structures

**Project Number: WD25817 DSA# 03-125539
03-125541**

Bid Addendum 01

Date: April 24th, 2026

Owner: Fillmore Unified School District

**Architect: Westgroup Designs
19900 MacArthur Blvd Suite 1000
Irvine, CA 92612
(949) 250-0880
(949) 250-0882 Fax**

The clarifications, modifications, changes, additions, and/or deletions contained herein shall be incorporated within the construction documents for the project. Such information shall take precedence over that previously published. Responses shall be considered modifications to the contract hereby incorporated into the contract documents as established above.

BID ADDENDUM 01 - NARRATIVE

Reference Underground Utility Mapping

Reference drawing showing approximate locations of underground utilities.

Bid RFI Responses

Bid RFI 1-12:

-AMG RFI #1
-AMG RFI #2

-COAST RFI #1 – BOND LIMIT
-COAST RFI #2 – EQUIPMENT PAD THICKNESS
- COAST RFI #3 – SHADE STRUCTURE INSTALLATION
-COAST RFI #4 – GYM FIRE SPRINKLERS
-COAST RFI #5 – GYM FLOOR PROTECTION
-COAST RFI #6 – EQUIPMENT PAD BASE
-COAST RFI # 7 – ROOFING PATCHBACK

-AC PRO #1 – HVAC SCOPE OF WORK
-AC PRO #2 – HVAC CONTROLS
-AC PRO #3 – FIRE ALARM SYSTEM

Revised Drawings

A-1.1 – MECHANICAL ENCLOSURE FLOOR PLAN AND DETAILS.

- Detail 1: Extended new slab to allow ease of constructability for new fence post footings. Defined the slope of new concrete slab for water drainage. Defined control points. Added sawcut locations. Defined grade break locations. Referenced structural details at joint of new concrete slab to existing concrete slab. Defined fence post footing locations.
- Detail 2: Extended new slab to allow ease of constructability for new fence post footings.
- Detail 3: Added dimension to define the height of the new fence.

A-2.1 – CEILING PLAN – DEMOLITION AND IMPROVEMENT.

- General notes: Addition of general note #4. PATCH AND REPAIR CEILING AND WALLS AS REQUIRED. REPLACE ANY REMOVED OR DAMAGED TILES WITH NEW TILES MATCHING EXISTING SIZE, MATERIAL, TEXTURE AND FINISH TO MAINTAIN A UNIFORM APPEARANCE.

SD 2 – OD CONDENSING UNITS FOUNDATION, ANCHORAGE DETAILS, FAN COIL SUPPORT PLATFORM AND ISOLATORS SPECIFICATIONS

- Added detail 10 – NEW AND EXISTING SLAB CONNECTION DETAIL.

A-1.1 – ENLARGED SITE PLANS.

- Added dimensions to better define boundary of concrete work.
- Added dash lines to represent sawcut joints.
- Defined light fixtures to be demolished.

A-1.2 – ENLARGED PLANS & DETAILS.

- Detail 1: Added "IMPROVEMENT" to the details title.

A-1.3 – NORTH RESTROOM FLOOR PLAN AND ELEVATIONS.

- Detail 2: Defined the extent of the existing wall tile.
- Detail 3: Defined the extent of the existing wall tile.
- Detail 4: Defined the extent of the existing wall tile.
- Detail 5: Defined the extent of the existing wall tile.
- General notes: Added note #2: PATCH, PREPARE, AND REPAIR ALL WALL AND CEILING SURFACES AFFECTED BY REMOVAL AND RELOCATION OF FIXTURES. PROVIDE SURFACE PREPARATION INCLUDING CLEANING, SANDING AND PRIMING AS REQUIRED. APPLY PAINT FINISHES TO MATCH EXISTING TO ACHIEVE A UNIFORM, SEAMLESS APPEARANCE.

A-1.4 – SOUTH RESTROOM FLOOR PLAN AND ELEVATIONS.

- Detail 2: Defined the extent of the existing wall tile.
- Detail 3: Defined the extent of the existing wall tile.
- Detail 4: Defined the extent of the existing wall tile.

-Detail 5: Defined the extent of the existing wall tile.

-General notes: Added note #2: PATCH, PREPARE, AND REPAIR ALL WALL AND CEILING SURFACES AFFECTED BY REMOVAL AND RELOCATION OF FIXTURES. PROVIDE SURFACE PREPARATION INCLUDING CLEANING, SANDING AND PRIMING AS REQUIRED. APPLY PAINT FINISHES TO MATCH EXISTING TO ACHIEVE A UNIFORM, SEAMLESS APPEARANCE.

Revised Specification

-SECTION 09 90 00 – PAINTING AND COATING. HAS BEEN REMOVED.

-SECTION 05 12 0 – STRUCTURAL STEEL. HAS BEEN REMOVED.

-SECTION 05 12 13 – ARCHITECTURALLY-EXPOSED STRUCTURAL STEEL FRAMING. HAS BEEN REMOVED.

-SECTION 05 50 00 – METAL FABRICATIONS. HAS BEEN REMOVED.



Fillmore Unified School District

Bonds, Facilities & Projects

Shipping Address: 707 First Street • Fillmore, CA 93015
Mailing Address: 425 Orchard Street • Fillmore, CA 93016
Phone (805) 524-8051 • Fax (805) 524-5435
RJ Stump – Bond & Facilities projects - Manager

RE: Addenda #1

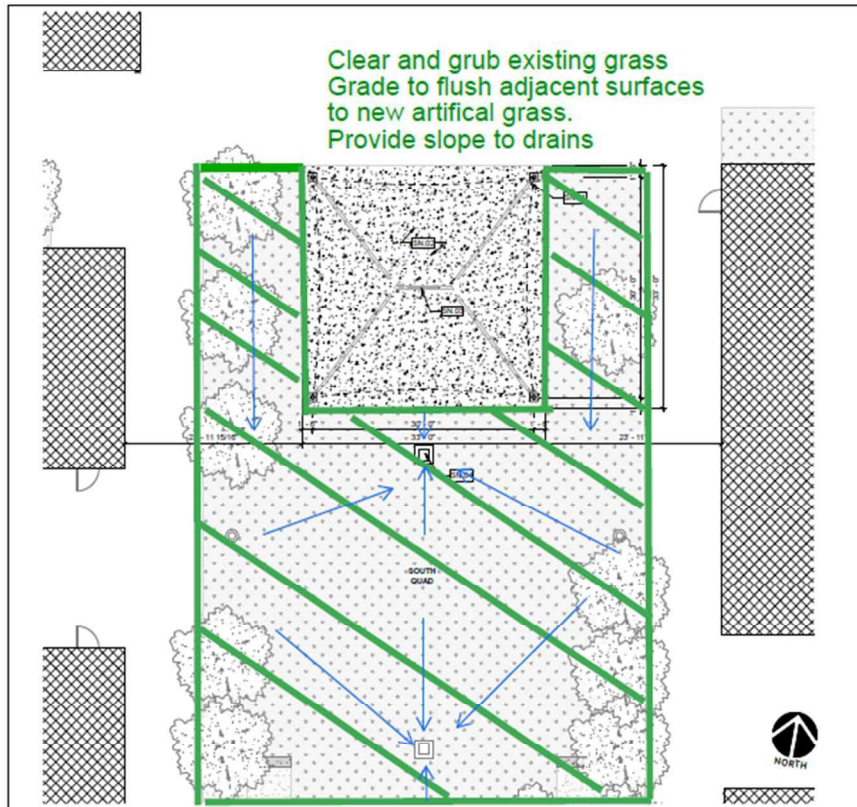
Fillmore middle school
627 A St. Fillmore CA. 93015
Shade & HVAC at Gym building

Clarifications and additions to bid documents for Addenda #1:

- Schedule:
 - Contractor is advised of the following dates, during which time the interior work at the Gym will be restricted. The exterior work can continue unimpeded as scheduled:
 - Gym floor will be refinished from July 31 to August 3rd. Limited or no access to the Interior Gym.
 - Orientation - 7/29, 7/30 & 8/4 - Limited access to the Gym and outside pavilion.
- Time for completion:
 - The intent of the schedule for this project consists of 2 milestones:
 - Milestone #1 (67 calendar days) - Construction to commence from Notice to proceed (NTP) - June 5 through August 12, 2026 (approximately 60 days), this period is to allow access for all invasive, heavy, and noisy work. All interior and invasive work shall be completed prior to the start of the new school year on 8/12/26.
 - Milestone #2 (30 days) - It is anticipated that remaining work, including roofing, exterior work, and commissioning and testing, can be completed within 30 days after the start of school without impacting school activities. Any invasive or noisy work required after the first day of school will be subject to the space's availability and may require evening, afternoon, or weekend work. Exterior work that is not disruptive to normal school operations may be enclosed with temporary chain-link fencing and performed during regular work hours from 7:00 a.m. to 4:00 p.m.
 - Contractor is expected to provide all submittals within 10 days of notice of award (NOA) and expedite delivery of material & equipment to facilitate the project timelines.
- Add artificial grass to areas indicated. All costs to be included with the base bid.
 - Zoom recreation is the preferred contractor for providing & installing new turf based on FUSD standards. Please contact Norma Rojas at c) (802) 667-9440 - e) norma@zoomrecreation.com

- Contractor is to provide, including but not limited to the following for a complete installation: clear & grub, grade, slope to drains, place and compact base and haul off spoils as needed to accommodate the installation of the new turf. Install 2" of base rock, 1-1/2" road base, & weed barrier
 - Install new turf.
 - Remove and cap existing irrigation lines to perimeter of the new turf while ensuring water supply to the other irrigation lines, routed to other areas, are maintained.
 - See the attached drawing, specifications and section detail for the Artificial turf.
- Roofing:
 - Contractor to utilize a Tremco certified installer to maintain the existing warranty. See the attached existing warranty.
- Prebid RFI responses from Westgroup Design attached.
- Fire sprinklers:
 - Adjust fire sprinklers to accommodate the new duct work.

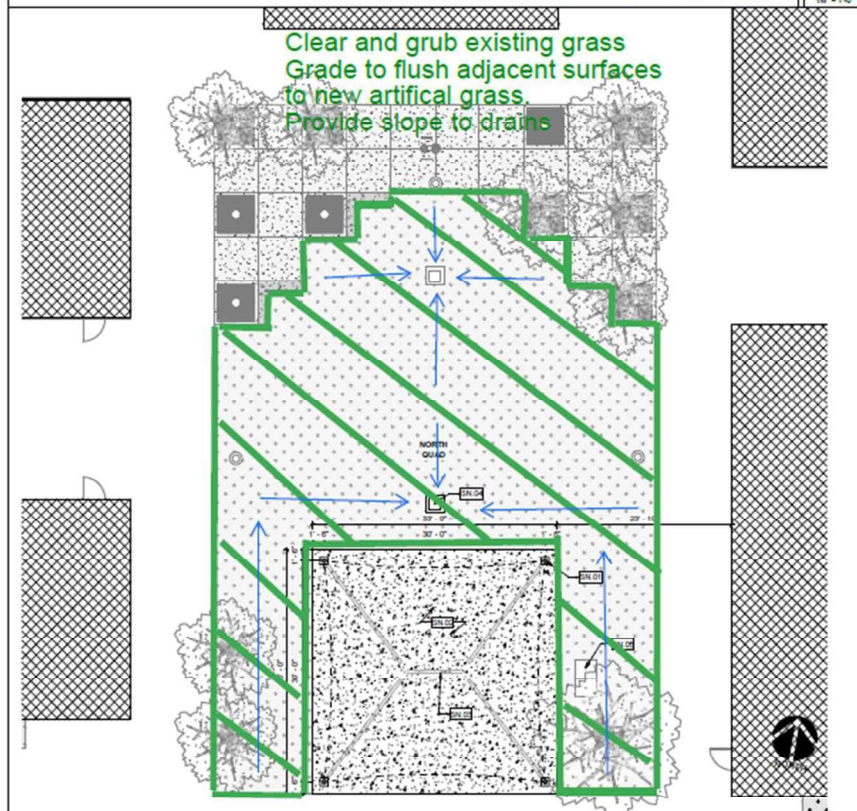
Areas for artificial turf



ENLARGED SITE PLAN - CANOPY 1 - IMPROVEMENT

1

1/8" = 1'-0"



ENLARGED SITE PLAN - CANOPY 2 - IMPROVEMENT

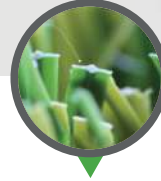
2

1/8" = 1'-0"



GLOBAL SYN-TURF
GREENING PLANET EARTH

Product Specification Sheet



Trainers Turf-63

USES

- ▶ Pet Areas
- ▶ Sports
- ▶ Landscape
- ▶ Commercial or Residential
- ▶ Medium-Heavy Traffic

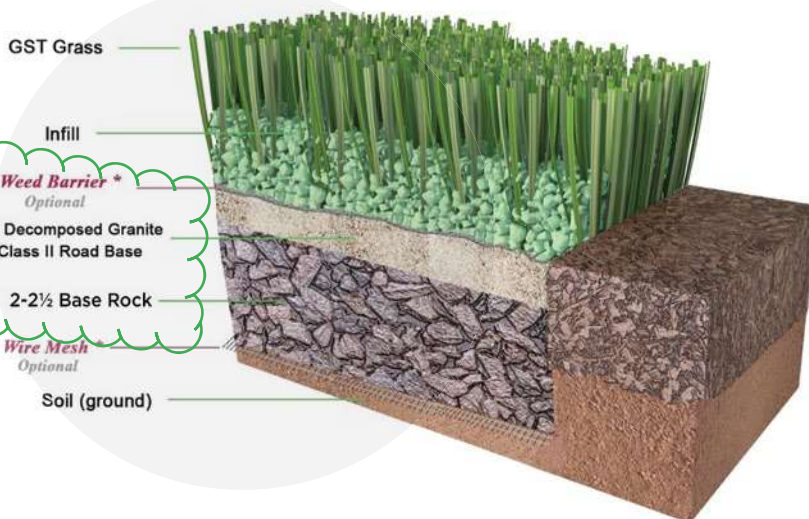


15 Year Manufacturer's Warranty
8 Year Manufacturer's High Traffic Warranty



Flo-Rite Drainage Technology

Install 2" of base rock, 1-1/2" road base, & weed barrier



STEMGRASS BLADE

SPECIFICATIONS

Pile Height: 1-1/4"

Turf Gauge: 3/8"

Face Weight: 63 oz./yd²

Backing Weight: 29 oz./yd²

Total Weight: 92 oz./yd²

Stitch Rate: 16/10cm

Stitches/M²: 16800

Material/Dtex: PE12500 + PP4000

Color: Emerald Green and Olive Green with Green Thatching

Type Of Fiber: PE Monofilament Diamond Shaped Stemgrass and PP Curled As Thatch

Infill Amount: 1.0 lb./psf.

Primary Backing: Premium GST Backing

Tuft Bind: 9+ lb/force (ASTM D1335)

Blade Type: Stemgrass Blade

Permeability: 62.9 inches/hr. (ASTM F1551)

Melting Point: 176 °F (ASTM D2859)

Grab Tear MD: >200 lb./force (ASTM D5034)

Grab Tear CMD: >200 lb./force (ASTM D5034)

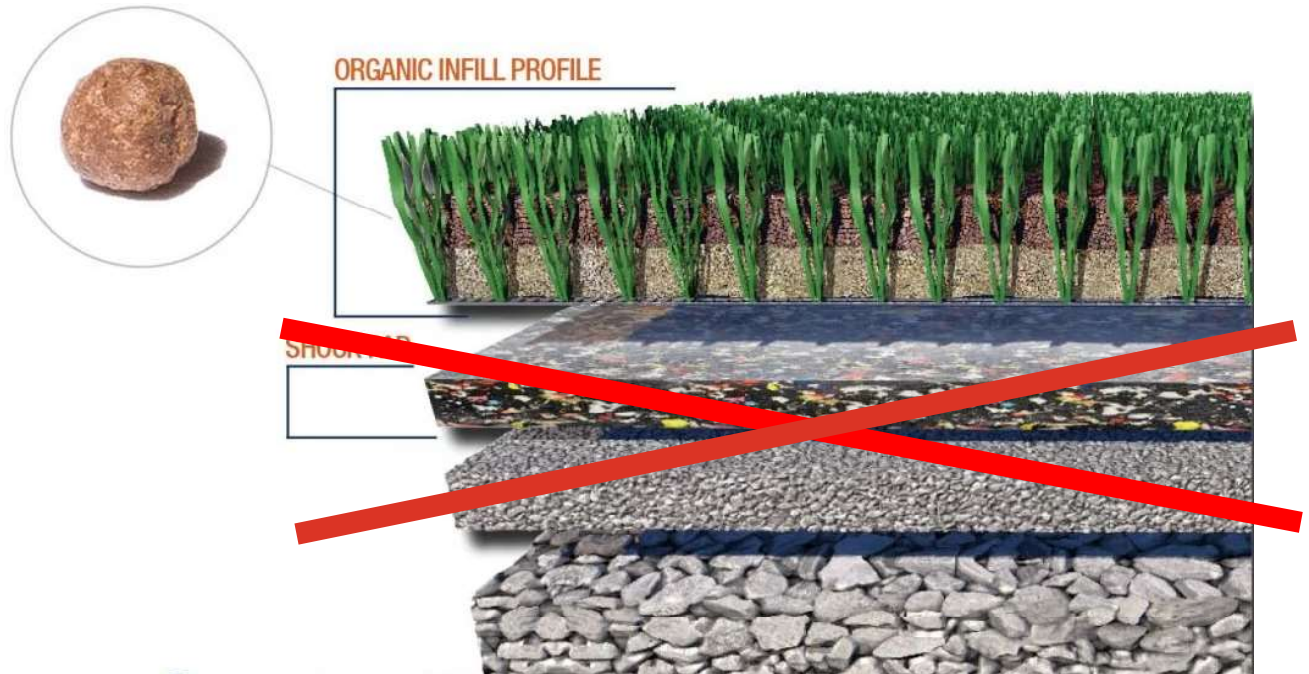
Roll Width: 15 ft

Roll Length: 100 ft

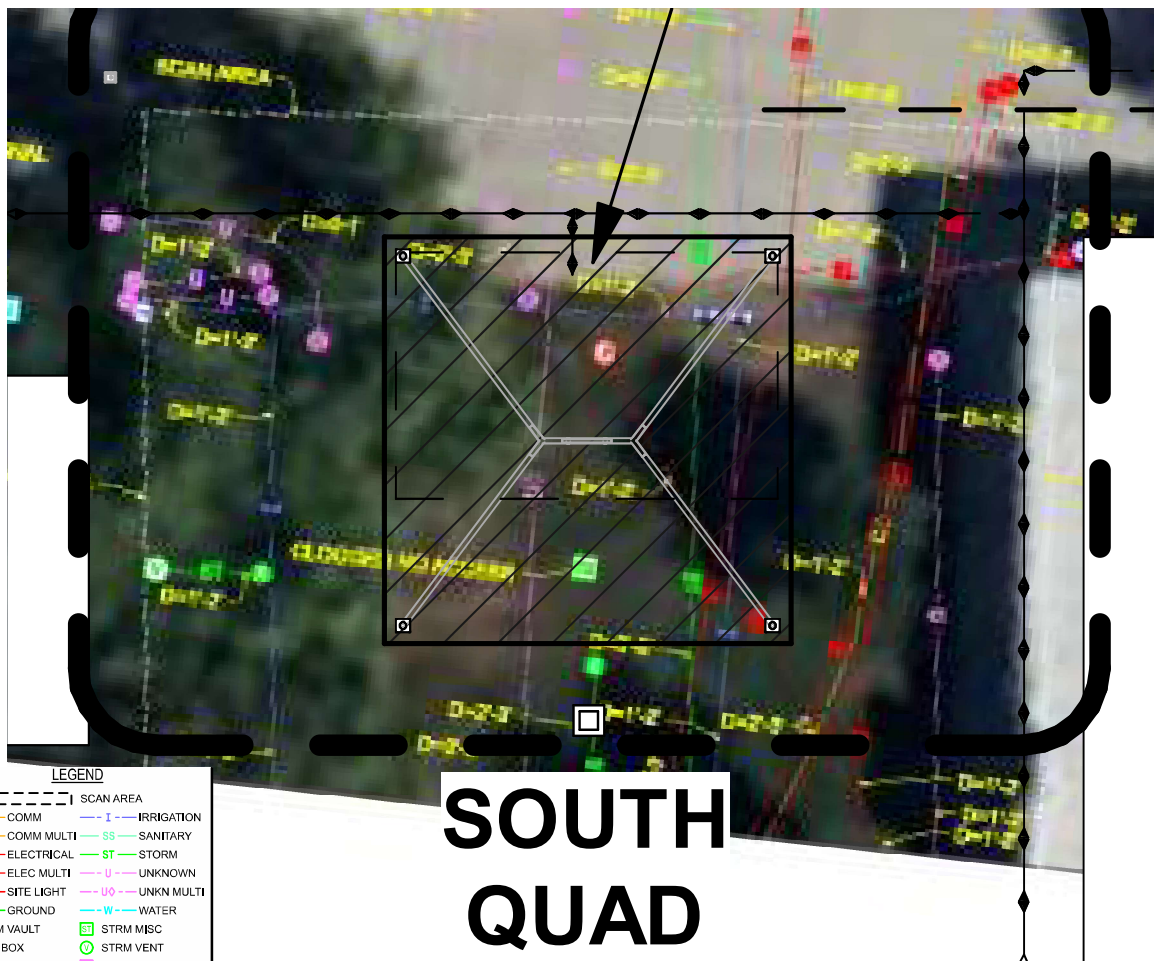
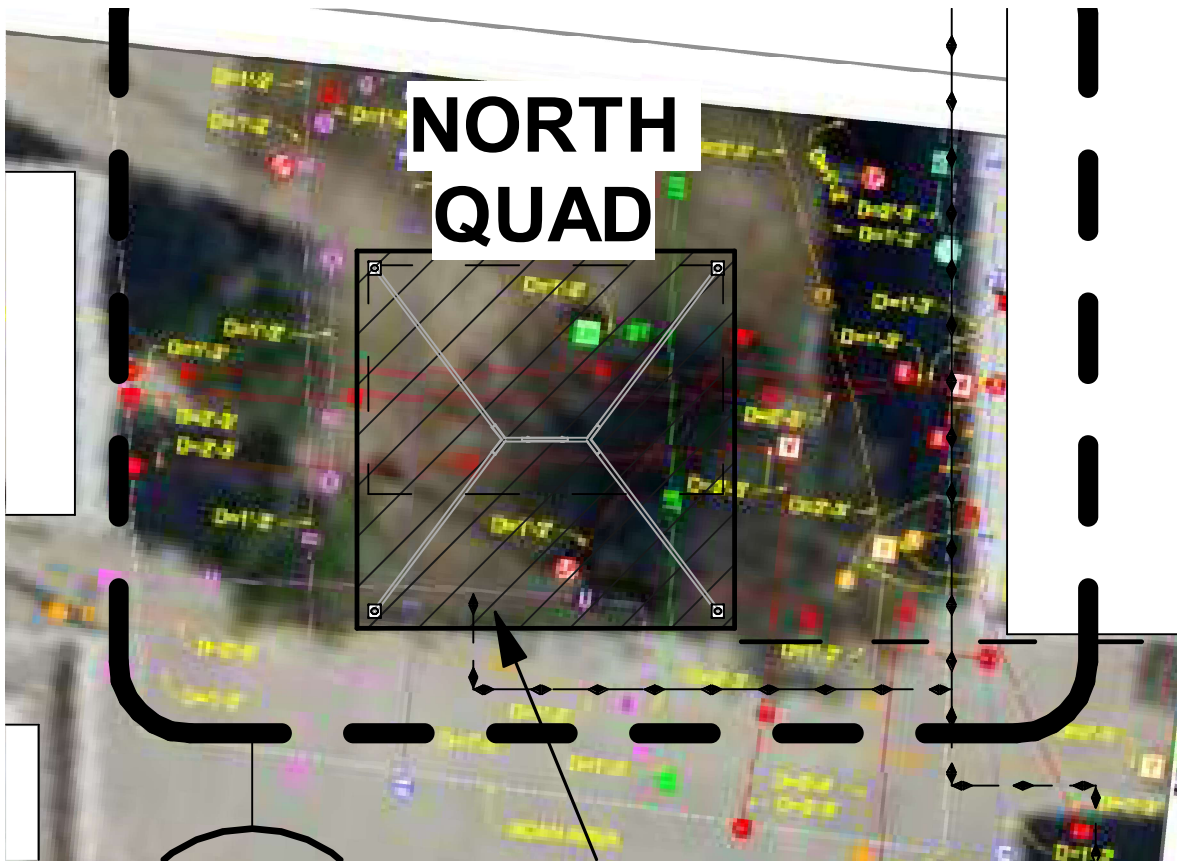
Sq. Ft. Per Roll: 1500

Total Roll Weight: 894 lbs





Install 2" of base rock, 1-1/2" CL2 road base, weed barrier & organic fill.



LEGEND

--- SCAN AREA	--- IRRIGATION
C COMM	SS SANITARY
CO COMM MULTI	ST STORM
E ELECTRICAL	U UNKNOWN
EO ELEC MULTI	UO UNKN MULTI
SL SITE LIGHT	W WATER
G GROUND	STRM MISC
COMM VAULT	STRM VENT
ELEC BOX	UNKN MISC
SITE LIGHT	HYDRANT
ELEC VAULT	WATER METER
IRR CNTRL VALVE	WATER MISC
SAN CLEANOUT	WATER RISER
CATCH BASIN	WATER VALVE
STRM MANHOLE	
LINE CONTINUES	END OF INFO

D= DEPTH

"UNDERGROUND UTILITIES SHOWN ARE BASED ON OWNER-PROVIDED RECORD DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED. LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL UTILITIES AND COORDINATE PRIOR TO ANY EXCAVATION OR CONSTRUCTION."

PROJECT NAME:		Fillmore middle school – HVAC & shade structures	
PROJECT NUMBER:		Project No. 2026-010 / DSA #03-125539 & 2026-011 / DSA #03-125541	
TO:		RJ Stump Fillmore Unified School Dist. Roy Frey WestGroup Designs	
		EMAIL: ri.stump@fillmoreusd.org royf@westgroupdesigns.com	
DATE:	April 17, 2026		
	AMG & Associates, Inc Ph. 661 251-7401		
FROM:			EMAIL:
DOCUMENT/DIVISION NUMBER:	03-125539 HVAC project.		DRAWING NUMBER:

REQUESTED CLARIFICATION:

1. Spec shows 09 21 16 Gypsum Board, where will this apply? Please identify areas where this applies
2. Spec shows 09 90 00 Painting and Coatings, where will this apply? Please identify areas where this applies
3. Please provide specifications for the fences & gates scope of work

RESPONSE TO CLARIFICATION:

PRE-BID CLARIFICATION FORM

- 1.- At patch-back locations of affected ceilings and walls related to HVAC removal and new HVAC installation.
- 2.- Not applicable- refer to note on detail (3/A-1.1).
- 3.- Install fencing and gates per plans. No spec required.

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

PROJECT NAME:		Fillmore middle school – HVAC & shade structures	
PROJECT NUMBER:		Project No. 2026-010 / DSA #03-125539 & 2026-011 / DSA #03-125541	
TO:		RJ Stump Fillmore Unified School Dist. Roy Frey WestGroup Designs	
		EMAIL: ri.stump@fillmoreusd.org rovf@westgroupdesigns.com	
DATE:	April 17, 2026		
	AMG & Associates, Inc Ph. 661 251-7401		
FROM:			EMAIL:
DOCUMENT/DIVISION NUMBER:		03-125541 Shade project	DRAWING NUMBER:

1. Can you confirm the following spec section apply to this project: 051200, 051213, 055000, Div 26. If yes, please identify areas where is applicable.
2. Please confirm GC is to purchase and install the shade structure.
3. Regarding the scope of work at bathroom, please confirm no new toilet accessories or partitions are required. We are to use the existing accessories already installed.

Pre-Bid Clarification Form
Page 19

PRE-BID CLARIFICATION FORM

1. Spec sections 051200, 051213, 055000 are not applicable. Specs have been crossed out, clouded and delta.
2. All material for the shade structures A & B, have been contracted and will be provided by USA shade FOB to the job site.

Contractor shall:

- o Ensure access and proper lifting equipment are on site at time of delivery.
 - o Be responsible for layout and verification of existing conditions prior to delivery.
 - o Notify Owner of any dimension discrepancies via RFI before scheduling delivery
 - o Excavate all footings.
 - o Provide and place rebar for all footings.
 - o Form, set anchor bolts, place concrete for all footings & foundations.
 - o The contractor is responsible to erect, assemble and complete the installation for a final product.
 - o Coordinate with USA shade to provide all warranties, guarantees and close out documents.
2. Contractor may elect to contract with USA directly for the installation of the structures or utilize another qualified contractor with the same qualifications..

3. New partitions are not expected. Relocation of the existing partitions to meet the 60" clear floor space.
New toilet accessories, per plans.

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

Project:
Project No.:
Location:

RFI No.:
Date Created:
Respond By:

To:
Firm Name:
Street Address:
City, State, Zip:
Phone:
Email:

From:
Coast Construction Group
328 N Olympic Ave.
Arlington, WA 98223
Phone:
Email:

Subject	
Drawing Reference	
Attachments	
Specification Reference	
Shop Drawing	
Subcontractor Impacted	

Question

Please see page 2 for Coast Construction Group single project bond limit on our surety letter. (\$20,000,000 single, \$75,000,000 aggregate)
This RFI is submitted at the Request of Fillmore Unified School District and Westgroup Designs per bid walk overview.

Suggestion

Answer

Not applicable in this case. The contractors pre-qualification limit is higher than the Bid estimate. Letter of bond ability is only required when contractors pre-qualification limit is below their bid.
RJ Stump - Manager - Bond / Facilities projects.

Project:
Project No.:
Location:

RFI No.:
Date Created:
Respond By:

To:

Firm Name:
Street Address:
City, State, Zip:
Phone:
Email:

From:

Coast Construction Group
328 N Olympic Ave.
Arlington, WA 98223
Phone:
Email:

Subject	
Drawing Reference	
Attachments	
Specification Reference	
Shop Drawing	
Subcontractor Impacted	

Question

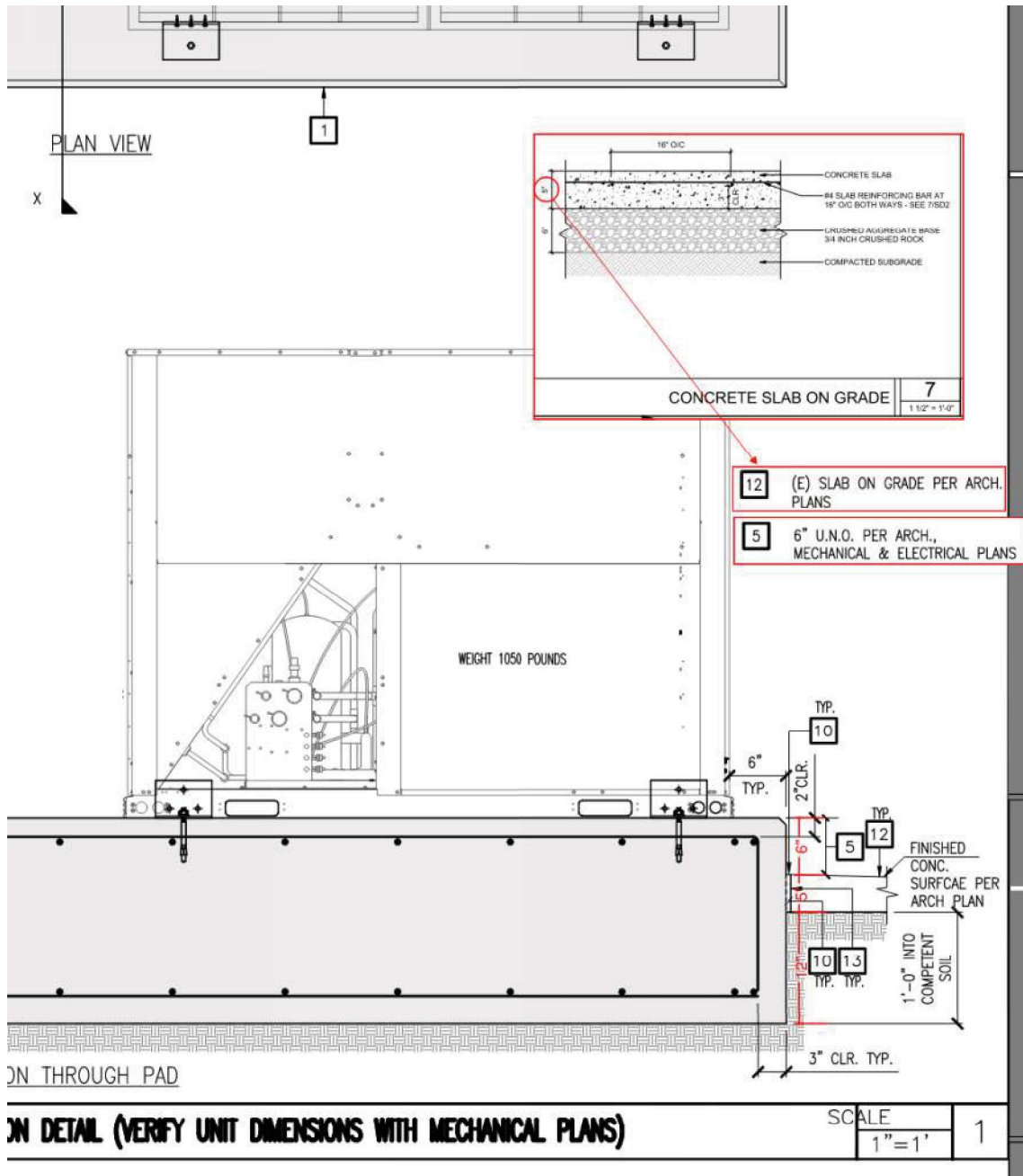
Please confirm equipment pad thickness shown on sheet SD2.
Please see page 2 for deduced measurements.

Suggestion

Based on Sheet A-1.1 and SD2, it is assumed the equipment pad thickness is 23".

Answer

Pad thickness of 23" is Confirmed.



07/13/2020	SHEET TITLE:	
	OD CONDENSING UNITS FOUNDATION, ANCHORAGE DETAILS, FAN COIL SUPPORT PLATFORM AND ISOLATORS SPECIFICATIONS	
	SHEET NUMBER:	
	SD 2	

Project:
Project No.:
Location:

RFI No.:
Date Created:
Respond By:

To:
Firm Name:
Street Address:
City, State, Zip:
Phone:
Email:

From:
Coast Construction Group
328 N Olympic Ave.
Arlington, WA 98223
Phone:
Email:

Subject	
Drawing Reference	
Attachments	
Specification Reference	
Shop Drawing	
Subcontractor Impacted	

Question

Project 03-125541
According to sheet G-1.4 "Structural Steel note 2"

"Only California licenses contractors authorized by Shade Structures shall install the shade structures."

Since Fillmore USD is purchasing the shade structure, does this apply? If so, please provide a list of authorized licensed contractors authorized by Shade Structures for installation.

Can you confirm if the structure is a "bolt together" assembly, or if it is a welded structure? Please provide assembly instructions.

Suggestion

Answer

The contractor is required to provide the installation of the FOB Shade structures using a licensed qualified installer with previous experience with this type of shade structure installation. The structure does not require welding. See above clarifications from the district.

Project:
Project No.:
Location:

RFI No.:
Date Created:
Respond By:

To:
Firm Name:
Street Address:
City, State, Zip:
Phone:
Email:

From:
Coast Construction Group
328 N Olympic Ave.
Arlington, WA 98223
Phone:
Email:

Subject	
Drawing Reference	
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Specification Reference	
Shop Drawing	
Subcontractor Impacted	

Question

Project 03-125539

It is assumed that the fire sprinkler heads within the gymnasium are "high temp" due to the infrared heaters located throughout the building. Will these heads need to be replaced due to the removal of high heat sources due to the potential reduction in heat collection within the top of the ceiling?

Also, given the installation of new large duct work within the gymnasium, will there be any requirement for relocation or added fire sprinkler heads?

Suggestion

DWE/AO/2026-04-24:

If the existing fire sprinkler heads are found to be high temperature, they are to be replaced with ordinary or intermediate temperature heads as required by the sprinkler contractor.

Sprinkler heads are not to be relocated. If an obstruction occurs with mechanical, its preferred the mechanical moves. This can be handled in the field as means and methods.

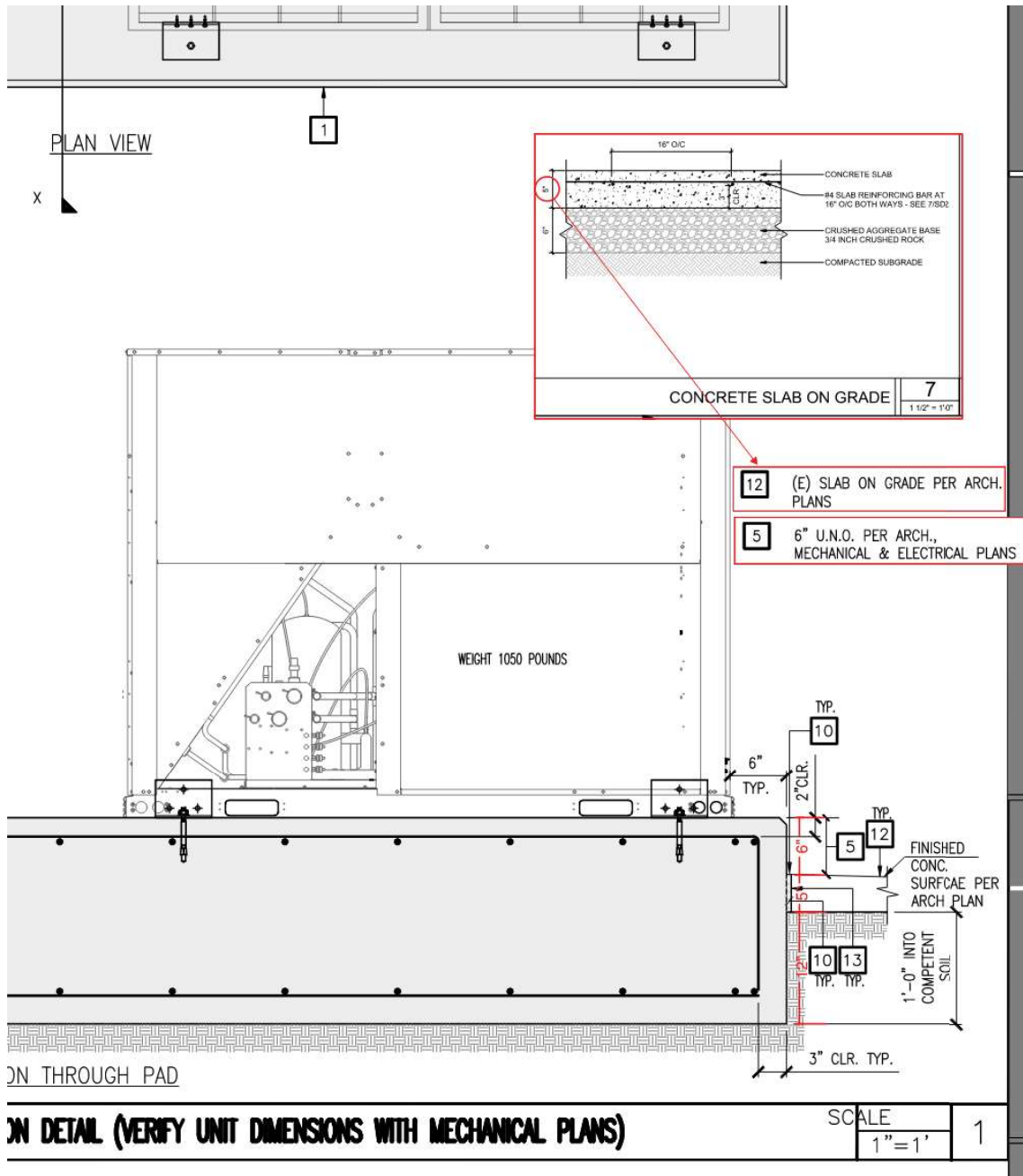
Answer

DWE/AO/2026-04-24:

If the existing fire sprinkler heads are found to be high temperature, they are to be replaced with ordinary or intermediate temperature heads as required by the sprinkler contractor.

Sprinkler heads are not to be relocated. If an obstruction occurs with mechanical, its preferred the mechanical moves. This can be handled in the field as means and methods.





07/13/2020

SHEET TITLE:

OD CONDENSING UNITS
FOUNDATION, ANCHORAGE
DETAILS, FAN COIL SUPPORT
PLATFORM AND ISOLATORS
SPECIFICATIONS

SHEET NUMBER:

SD 2

Project:
Project No.:
Location:

RFI No.:
Date Created:
Respond By:

To:
Firm Name:
Street Address:
City, State, Zip:
Phone:
Email:

From:
Coast Construction Group
328 N Olympic Ave.
Arlington, WA 98223
Phone:
Email:

Subject	
Drawing Reference	
Attachments	
Specification Reference	
Shop Drawing	
Subcontractor Impacted	

Question

Project 03-125539

Will "Ramboard" and single layer of masonite (like) material be suitable for floor protection within the gym during construction?

It is understood that any welding will require additional floor protection.

Does Fillmore USD have a required floor protection plan or will this fall under "means and methods" during construction?

Suggestion

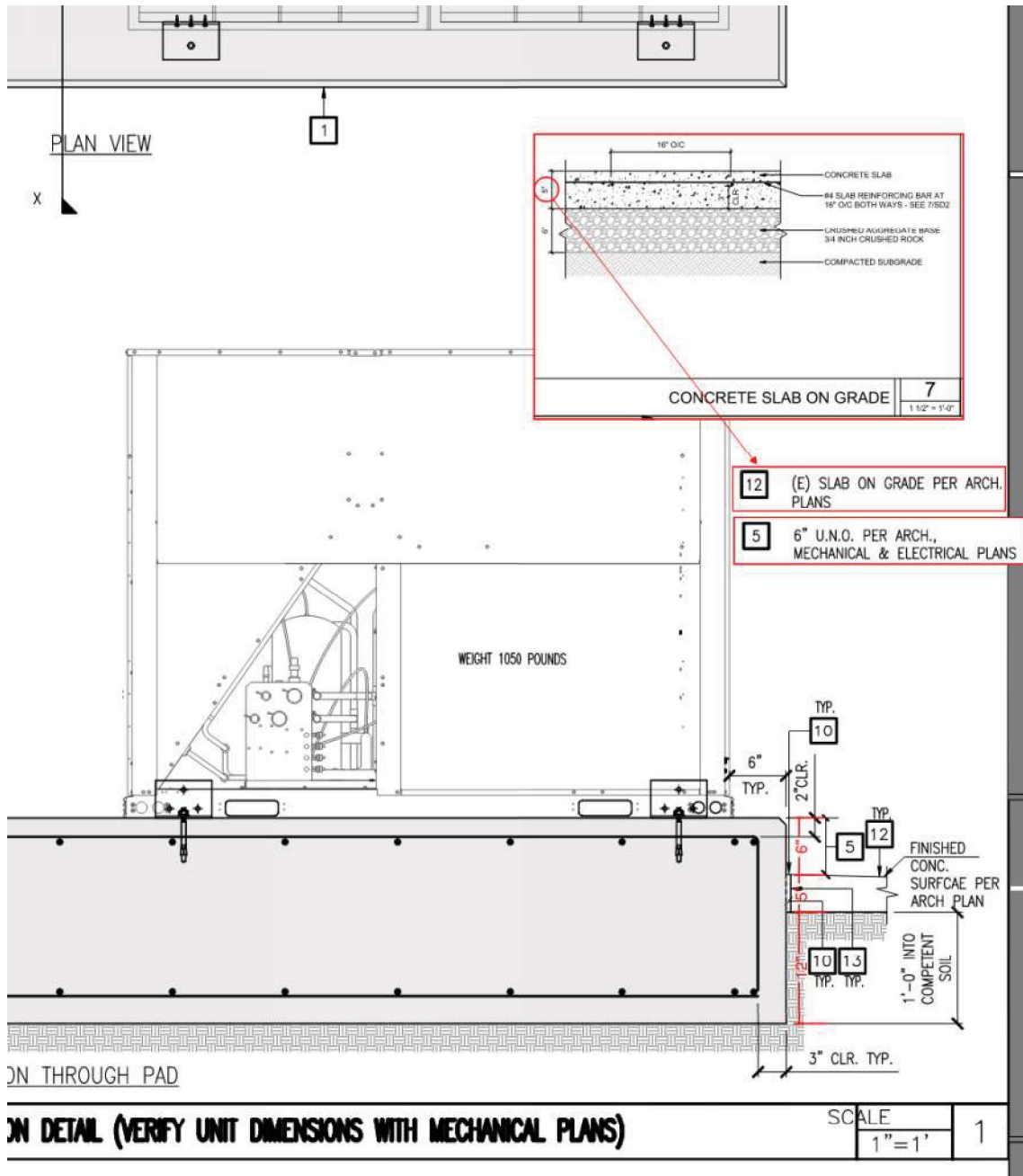
Answer

Protection of the floor falls under means and methods.

Contractor shall be solely responsible for protecting the existing indoor basketball court flooring from any and all damage for the full duration of construction activities associated with the Work, including but not limited to roof and wall work within the gymnasium.

Protection methods, materials, and means shall be determined entirely by the Contractor. The Contractor shall ensure that the existing flooring remains in its original condition, free from damage including, but not limited to, scratching, denting, gouging, staining, moisture intrusion, impact damage, or deterioration resulting from construction operations, personnel, equipment, materials, or debris. Any exposure to falling debris, water, dust, or construction traffic shall be fully mitigated by the Contractor through their chosen means and methods. At completion of the Work, the flooring shall be returned in a condition equal to that existing prior to construction.





3/13/2020

SHEET TITLE:

OD CONDENSING UNITS
FOUNDATION, ANCHORAGE
DETAILS, FAN COIL SUPPORT
PLATFORM AND ISOLATORS
SPECIFICATIONS

SHEET NUMBER:

SD 2

Project:
Project No.:
Location:

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Street Address:
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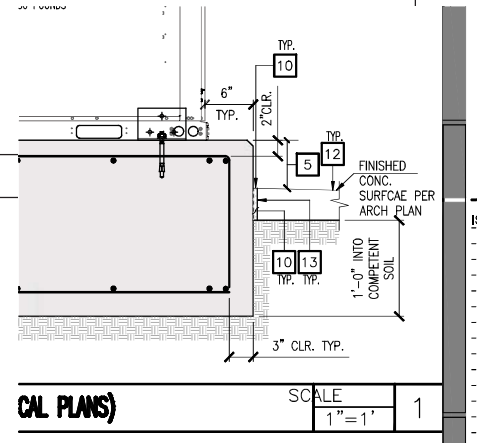
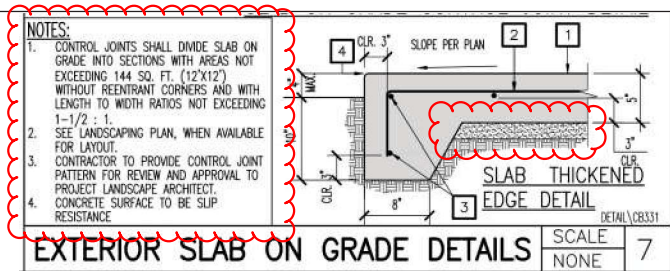
Question

Project 03-125539

Sheet SD2 detail 7 shows what appears to be A-Base for exterior slab on grade details. There is no notes specifying the material or thickness. The notes do not appear to align with the detail and appear to be related to landscaping.

Please confirm if A-Base is required below new equipment pad, if so please provide thickness and compaction %.

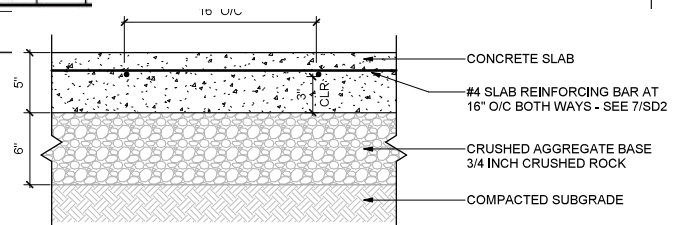
Suggestion



Answer

Reference detail 7/SD2 is for slab on grade.
See detail 1/A-1.1 for gravel base below slab on grade.
Required compaction is 90%.

For Equipment pad see detail 1/SD2.
No base is required.



Project:
Project No.:
Location:

RFI No.:
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Respond By:

To:

Firm Name:
Street Address:
City, State, Zip:
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Coast Construction Group
328 N Olympic Ave.
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Drawing Reference	
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Question

Project 03-125539

There is no detail showing how the waterproof membrane is to be patched at the demo locations of the exhaust fans or duct work. There is an infill framing detail on sheet SD2 detail 4, but nothing further. This only shows wood framing details.

Additionally, there is no section 07 00 00, for thermal & moisture protection in the project manual.

Please provide patch details for roofing system and type of approved material to be utilized.

Suggestion

Answer

Please see notes below and attached roofing information related to the patch-back of the existing roofing.
Contractor shall remove existing mechanical equipment, curbs, and associated roof penetrations and infill roof to match existing construction.
Existing roof is indicated as composition roofing over plywood sheathing and wood framing; however, contractor shall field verify all existing conditions prior to construction.
Roof infill shall include, but not be limited to:
•Replacement of any removed or damaged roof framing members to match existing size, spacing, and capacity
•Installation of new plywood sheathing to match existing thickness and nailing pattern
•Installation of underlayment, flashing, and roofing materials to match existing in type, profile, and appearance
•Integration with adjacent roofing to provide a continuous, watertight system
Contractor shall ensure that all new work is fully compatible with existing roofing system and installed in accordance with manufacturer's requirements and applicable codes.
All roof patching shall be performed by a licensed roofing contractor.
Final installation shall provide a weathertight condition with no visible transition between new and existing roofing.
Contractor shall be responsible for maintaining full waterproofing integrity of the roof and shall repair any leaks resulting from this work at no additional cost to the Owner.
Provide minimum 2-year warranty for roof patching work (or match existing roof warranty if greater).

TREMCO**20 YEAR QA WARRANTY
FOR NEW ROOFS**

WARRANTY NUMBER: 152011

OWNER: Fillmore Unified School District

ADDRESS: 627 Sespe Avenue, Fillmore, CA 93015

BUILDING DESCRIPTION: Fillmore Middle School - Gymnasium Complex -

Roof Sections: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 & 12

ADDRESS: 543 "A" Street, Fillmore, CA 93016

ROOF AREA: 37,700 sq. ft.

DATE OF JOB COMPLETION: June 14, 2013

INSTALLATION PRICE: \$454,939.00

ROOFING SYSTEM: REPLACEMENT: BURmastic 200

INSTALLATION CONTRACTOR: Craig Roof Company, Inc.

ADDRESS: 132 Garden Street, Space T-1, Santa Barbara, CA 93101

Tremco Incorporated (hereinafter "Tremco") hereby warrants to the above-named Owner that, subject to the terms, conditions, and limitations stated herein, it will repair leaks and provide the following services to the Owner on the roofing system on the building (hereinafter "TRS") for a period of twenty (20) years from the date of job completion. TRS shall be defined as the weatherproofing assembly and its components, which includes the following: membrane, insulation, flashings, all sheet metal-related details, and termination details as specified by Tremco. The services being offered by Tremco include the following:

A. INSPECTIONS AND HOUSEKEEPING

In year two (2), year five (5), year ten (10), and year fifteen (15) of this warranty, Tremco shall provide roof inspections, and limited housekeeping services, except as excluded in Section C and Section D, on the TRS. (If a TremCare Service Agreement has been purchased for the TRS in addition to this warranty, these inspections and the related reporting will be carried out as part of the TremCare Service Agreement. The warranty and the TremCare Service Agreement will remain in effect for the warranty period simultaneously.)

Roof inspection services shall include the following:

1. Visual inspection of the roof membrane and roof surface conditions.
2. Inspection of the flashing systems including, but not limited to, the metal edge system, base flashings on equipment and adjoining walls, counterflashings and termination details, soil stacks and vents, and inspection of rooftop projections, and equipment including, but not limited to, pitch pans, HVAC equipment, sky lights, and access hatches.

Roof inspection services do not include:

1. Inspection for water damage or mold growth.
2. Detection or identification of mold.

General rooftop housekeeping services shall include the following: Removal of incidental debris. All debris will be disposed of at the Owner's approved on-site location.

B. ROOF INSPECTION REPORTS

Tremco will provide roof inspection reports to the Owner based upon the inspections as defined in paragraph A. The reports shall become part of the roof database maintained on the Tremco TRS. Tremco will be excused from performing under this warranty if prevented or delayed by events not within its control, including events such as floods, fires, accidents, riots, explosions, governmental order, acts or omissions of contractors or other third parties, inability to access the TRS, etc. Roof inspection reports will not address the presence of water damage to any building components other than the TRS or the presence of mold.



OWNER'S RESPONSIBILITIES

It is agreed by the parties that Tremco, by this warranty, does not assume possession or control of any part of the TRS. Control and ownership of the TRS and all parts of the building remains solely with the Owner. The Owner is solely responsible for all requirements imposed by any federal, state or local law, ordinance or regulation, and all repair, maintenance, and other work with respect to the TRS and the building, except as expressly stated by this warranty.

General roof top housekeeping does not eliminate or replace the building Owner's responsibility for keeping effluent and debris from the roof surface. Customer production-related materials are excluded as part of the housekeeping services. If scheduled cleaning is insufficient to maintain the roof integrity, Owner must pay for additional cleaning/inspections or assume responsibility for such cleanings. Owner agrees that all debris on or removed from the roof is the sole property of Owner, and it is the sole responsibility of Owner to properly dispose of said debris.

The Owner shall, at all times, exercise reasonable care in the use and maintenance of the TRS.

In order to protect the investment this TRS represents, the building Owner must fulfill his responsibilities as outlined in the attached Owner's Manual. Lack of care and maintenance can have significantly damaging effects on the system's overall performance and is cause for cancellation of this warranty.

Care and maintenance guidelines include, but are not limited to:

- * Regular ongoing inspection by the Owner - This will allow for implementation of good housekeeping practices and early detection of problems such as any physical damage.
- * Verification that no alterations or unauthorized repairs have been made to the roofing system.

If alterations are being considered, the Owner must notify Tremco in order for the proper authorized follow-up to be completed.

The Owner shall report all leaks which occur in the TRS within the warranty period by contacting Tremco at 1-800-422-1195 and in writing to Tremco Incorporated at 3735 Green Road, Beachwood, Ohio 44122, as soon as possible (however, in no event more than thirty (30) days) after leakage is or should have been discovered. Immediate repair of leaks is critical to prevent water damage and mold growth. In no event is Tremco responsible for any repairs to any part of the building other than the TRS. The liability or expense for such repair is to be assumed and paid by the Owner. If the leak is not within the coverage of this warranty, Tremco shall advise the Owner, and the Owner shall have repairs performed within thirty (30) days according to Tremco specifications by a Tremco certified or approved applicator. The Owner agrees to provide Tremco with unrestricted ready access to the TRS and all areas of the building on which the TRS is located.

D. WARRANTY EXCLUSIONS

This warranty does not cover any leaks or damage or failure of the TRS or any part thereof as a result of:

1. Natural or accidental disasters including, but not limited to, damage caused by lightning, hailstorms, floods, hurricane force winds (74 mph or greater), tornadoes, earthquakes, fire, vandalism, animals, penetration of the membrane, or chemical attack by outside agents.
2. Use of materials not specified by Tremco, or unauthorized repairs to the TRS.
3. Any intentional or negligent act on the part of the Owner or any third party including, but not limited to, misuse, traffic, storage of or discharge of materials or effluent on the roof. Any repair of these items will be at Owner's expense.
4. Distortion, expansion or contraction of the TRS caused by faulty original construction or design of building components including parapet walls, copings, chimneys, skylights, vents or roof deck, or lack of positive, proper, or adequate drainage resulting in ponding water on the roof.

E. WARRANTY LIMITATIONS

Tremco shall have no responsibility and/or liability under this warranty until all bills for installation, supplies, and services sold in connection with the TRS have been paid in full.

The Owner's rights under this warranty are specific to the Owner and are not transferable.

Tremco's obligations under this warranty may be voided by Tremco based on any of the events described in Section D, change in usage of the building without the prior written approval of Tremco, repairs, alterations, penetrations of or attachments to the TRS without the prior written approval of Tremco, building settlement, deterioration, cracking or failure of the roof deck, coping and parapet walls, infiltration or condensation of moisture in, through or around walls, copings, underlying structure, hardware or equipment, or failure of the Owner to comply with its obligations described in this warranty.

F. OTHER TERMS

THIS WARRANTY IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, OBLIGATIONS OR AGREEMENTS, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, AND ANY RIGHTS OR REMEDIES AGAINST ANY PERSON OR ENTITY UNDER THE UNIFORM COMMERCIAL CODE OR OTHERWISE WITH RESPECT TO THE SALE OF GOODS AND/OR SERVICES. THE REMEDIES AND OBLIGATIONS STATED IN THIS WARRANTY ARE THE SOLE AND EXCLUSIVE REMEDIES OF AND OBLIGATIONS TO THE OWNER FOR ANY AND ALL MATTERS ARISING WITH RESPECT TO OR IN ANY WAY CONNECTED WITH THE TRS, OR ITS COMPONENT PRODUCTS, OR ANY GOODS OR SERVICES RELATED THERETO, REGARDLESS OF THE SOURCE OR PROVIDER OF SUCH GOODS OR SERVICES. THE OWNER SHALL PROVIDE WAIVERS OF SUBROGATION UPON REQUEST. NO REPRESENTATIVE OF TREMCO INCORPORATED, OR ANY EMPLOYEE, AGENT OR AFFILIATED COMPANY ("AFFILIATE") HAS AUTHORITY TO VARY OR ALTER THESE TERMS. IN NO EVENT SHALL TREMCO INCORPORATED OR ANY AFFILIATE BE LIABLE FOR ANY DAMAGE TO THE BUILDING ITSELF (OTHER THAN THE TRS). THE CONTENTS OF THE BUILDING, OR ANY OTHER SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. THE TOTAL LIABILITY OF TREMCO INCORPORATED, AND ANY AFFILIATE OVER THE LIFE OF THE WARRANTY, SHALL NOT IN ANY EVENT EXCEED IN DOLLAR VALUE THE INSTALLED CONTRACT PRICE OF THE TRS AS IT APPEARS ABOVE, AND THIS TOTAL LIABILITY SHALL BE PRO-RATED ON A STRAIGHT LINE BASIS OVER THE LIFE OF THE WARRANTY, AND TREMCO'S LIABILITY SHALL NOT EXCEED SUCH PRO-RATED AMOUNT. NEITHER TREMCO INCORPORATED OR ANY AFFILIATE SHALL BE LIABLE FOR ANY DAMAGES WHICH ARE BASED UPON NEGLIGENCE, BREACH OF WARRANTY, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY OTHER THAN THE EXCLUSIVE LIABILITY SET FORTH IN THIS WARRANTY.

The Owner agrees that this warranty, and the services and remedies set forth herein, are exclusive, and there are no other warranties between the Owner and Tremco or any affiliate. Any unresolved issues under this warranty shall be submitted to the exclusive jurisdiction of the courts of Cuyahoga County, Ohio, and governed by Ohio law.

TREMCO INCORPORATED
ROOFING & BUILDING MAINTENANCE DIVISION

By: 

Title: Warranty Administrator

Date: June 27, 2013

PROJECT NAME:		Fillmore middle school – HVAC & shade structures	
PROJECT NUMBER:		Project No. 2026-010 / DSA #03-125539 & 2026-011 / DSA #03-125541	
TO:		RJ Stump Fillmore Unified School Dist. Roy Frey WestGroup Designs	EMAIL: ri.stump@fillmoreusd.org rovf@westgroupdesigns.com
DATE:	4/16/2016		
FROM:	AC PROS INC	EMAIL:	estimating@acprosinc.com
DOCUMENT/DIVISION NUMBER:		DRAWING NUMBER:	

During the job walk it was mentioned that the HVAC scope of work needs to be completed over the summer break however any outside work part of the scope could be completed after summer break. Please clarify the time line for this project or will the project duration be extended?

Milestone #1 (67 calendar days)- Construction to commence from Notice to proceed (NTP) on June 5 through August 12, 2026 (approximately 60 days), this period is to allow uninhibited access for all invasive, heavy, and noisy work. All interior and invasive work shall be completed prior to the start of the new school year.

Milestone #2 (30 days) - It is anticipated that remaining work, including roofing, exterior work, and commissioning and testing, can be completed within 30 days after the first day of school without impacting school activities. Any invasive or noisy work required after the first day of school will be subject to the space's availability and may require evening, afternoon, or weekend work. Exterior work that is not disruptive to normal school operations may be enclosed with temporary chain-link fencing and performed during regular work hours from 7:00 a.m. to 4:00 p.m.

Contractor is expected to provide all submittals within 10 days of notice of award (NOA) and expedite delivery of material & equipment to facilitate the project timelines.

RJ Stump

RESPONSE TO CLARIFICATION:

PROJECT NAME:		Fillmore middle school – HVAC & shade structures	
PROJECT NUMBER:		Project No. 2026-010 / DSA #03-125539 & 2026-011 / DSA #03-125541	
TO:		RJ Stump Fillmore Unified School Dist. Roy Frey WestGroup Designs	
		EMAIL: ri.stump@fillmoreusd.org rovf@westgroupdesigns.com	
DATE:	4/16/2016		
FROM:	AC PROS INC		EMAIL: estimating@acprosinc.com
DOCUMENT/DIVISION NUMBER:		DRAWING NUMBER:	

Please advise whether HVAC controls are required as part of our scope of work. If controls are to be provided, kindly confirm the existing controls system currently in place and provide the contact information for the responsible controls contractor or service company.

1. Controls are included in the project scope. Refer to schedule note #9 for the RTU, and schedule note # 2 on the Fan coil schedule for stand alone controls. Also, refer to key note #5 on the exhaust fan schedule. Refer to sheet M3-1.1 for thermostat and pressure sensor locations.

2. Existing controls are stand alone to each unit - local wired thermostats, switches , and timers. No central EMS system exists and no EMS vendor is available.

RESPONSE TO CLARIFICATION:

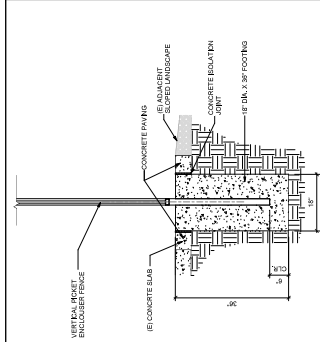
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PROJECT NUMBER:		Project No. 2026-010 / DSA #03-125539 & 2026-011 / DSA #03-125541	
TO:		RJ Stump Fillmore Unified School Dist. Roy Frey WestGroup Designs	
		EMAIL: ri.stump@fillmoreusd.org rovf@westgroupdesigns.com	
DATE:	4/16/2016		
FROM:	AC PROS INC		EMAIL: estimating@acprosinc.com
DOCUMENT/DIVISION NUMBER:		DRAWING NUMBER:	

Please advise what is the fire alarm system currently in place and provide the contact information for the responsible fire alarm contractor or service company.

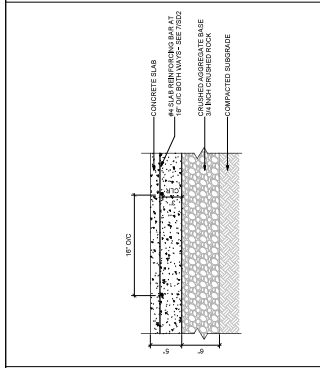
See below for fire alarm control panel/system information:

- Raymond Lopez / DWE

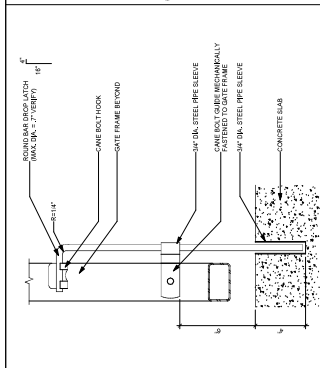
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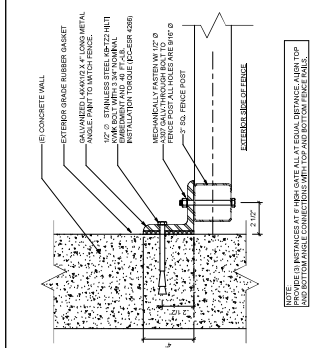
FENCE POST FOOTING @ CORNER



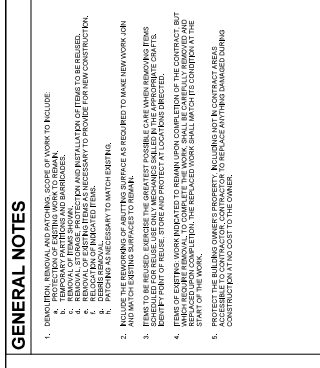
CONCRETE SLAB ON GRADE



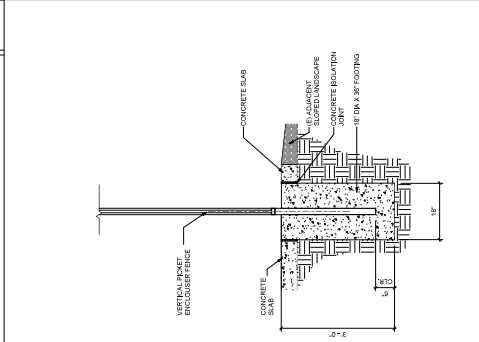
CANE BOLT



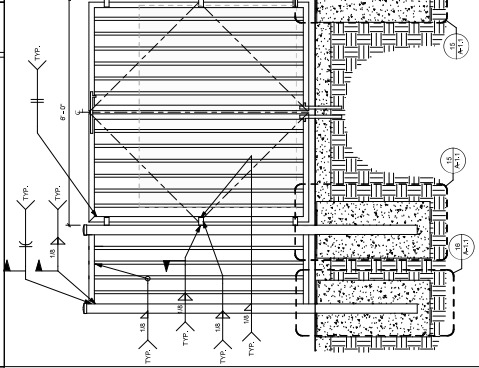
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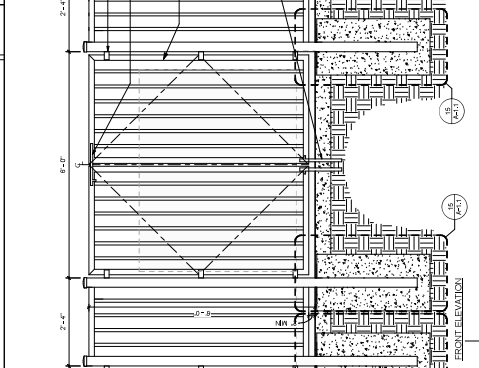
GENERAL NOTES



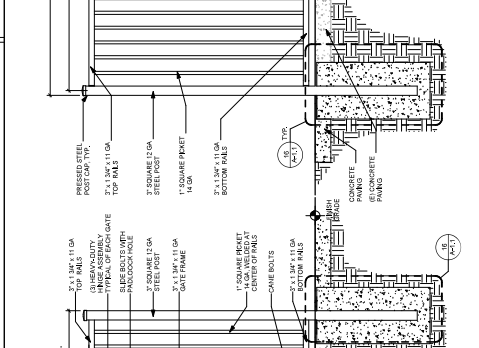
FENCE POST FOOTING @ CENTER



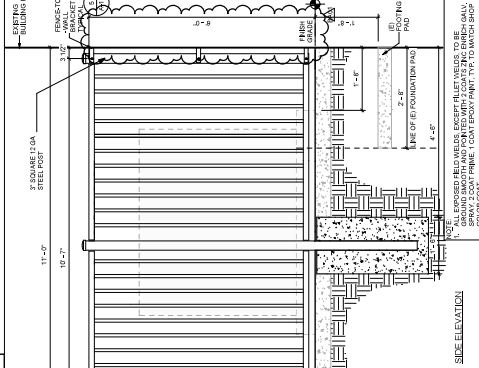
END ELEVATION



SIDE ELEVATION



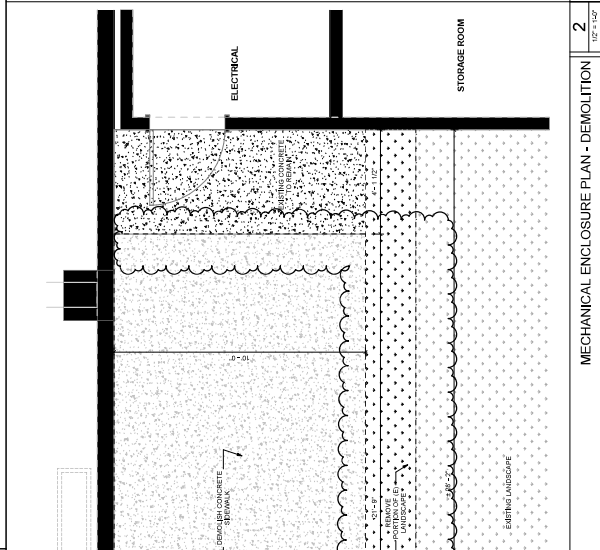
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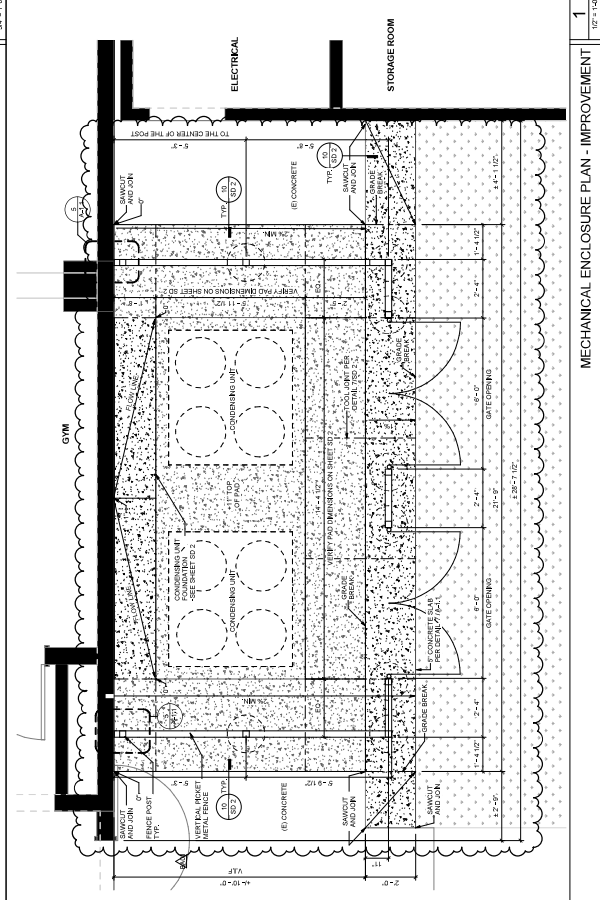
GENERAL NOTES



MECHANICAL ENCLOSURE PLAN - DEMOLITION



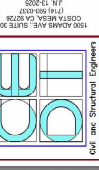
MECHANICAL ENCLOSURE PLAN - IMPROVEMENT



MECHANICAL ENCLOSURE PLAN - IMPROVEMENT



Coast Engineering Designs inc.



**FILLMORE MIDDLE
SCHOOL - BUILDING F
- GYM - HVAC
REPLACEMENT
FILLMORE
UNIFIED SCHOOL
DISTRICT
543 A St. Fillmore, CA 93015**

100.000.000.000

REVISIONS	04.22.2026
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REGISTRATION/SIGNATURE: _____

4/12/2026

SHEET TITLE

OD CONDENSING UNITS

FOUNDATION, ANCHORAGE

DETAILS, FAN COIL SUPPORT

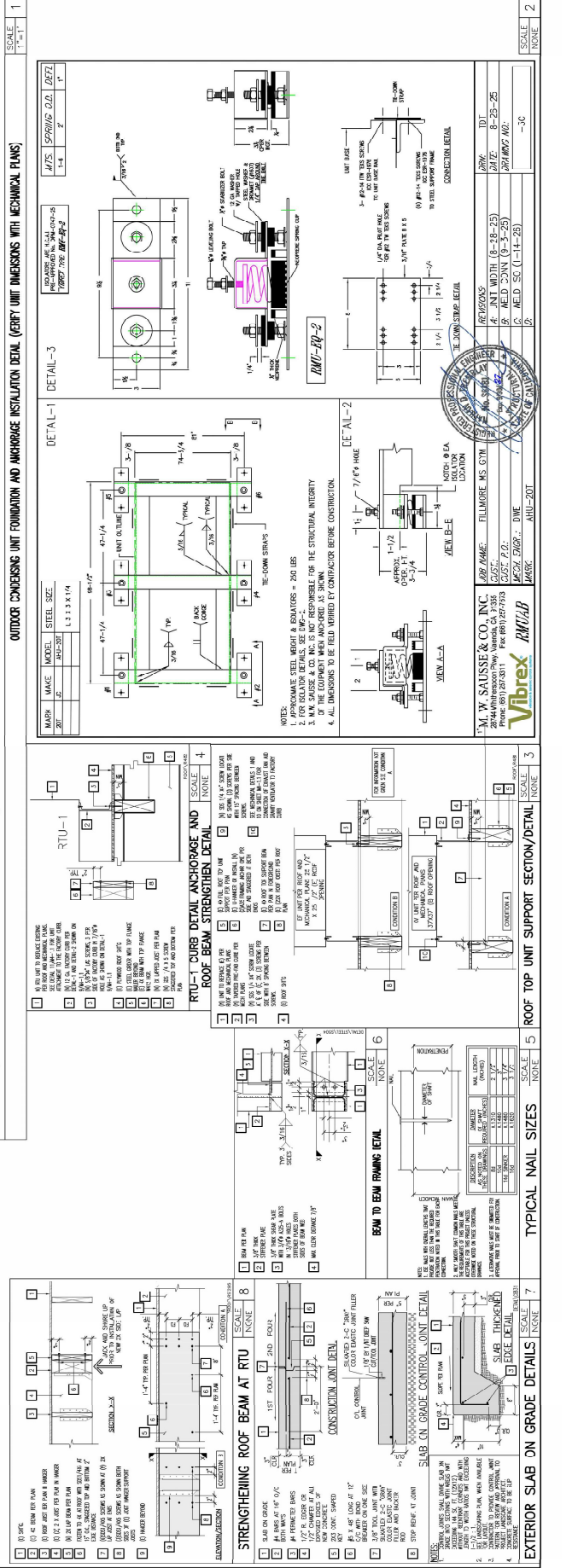
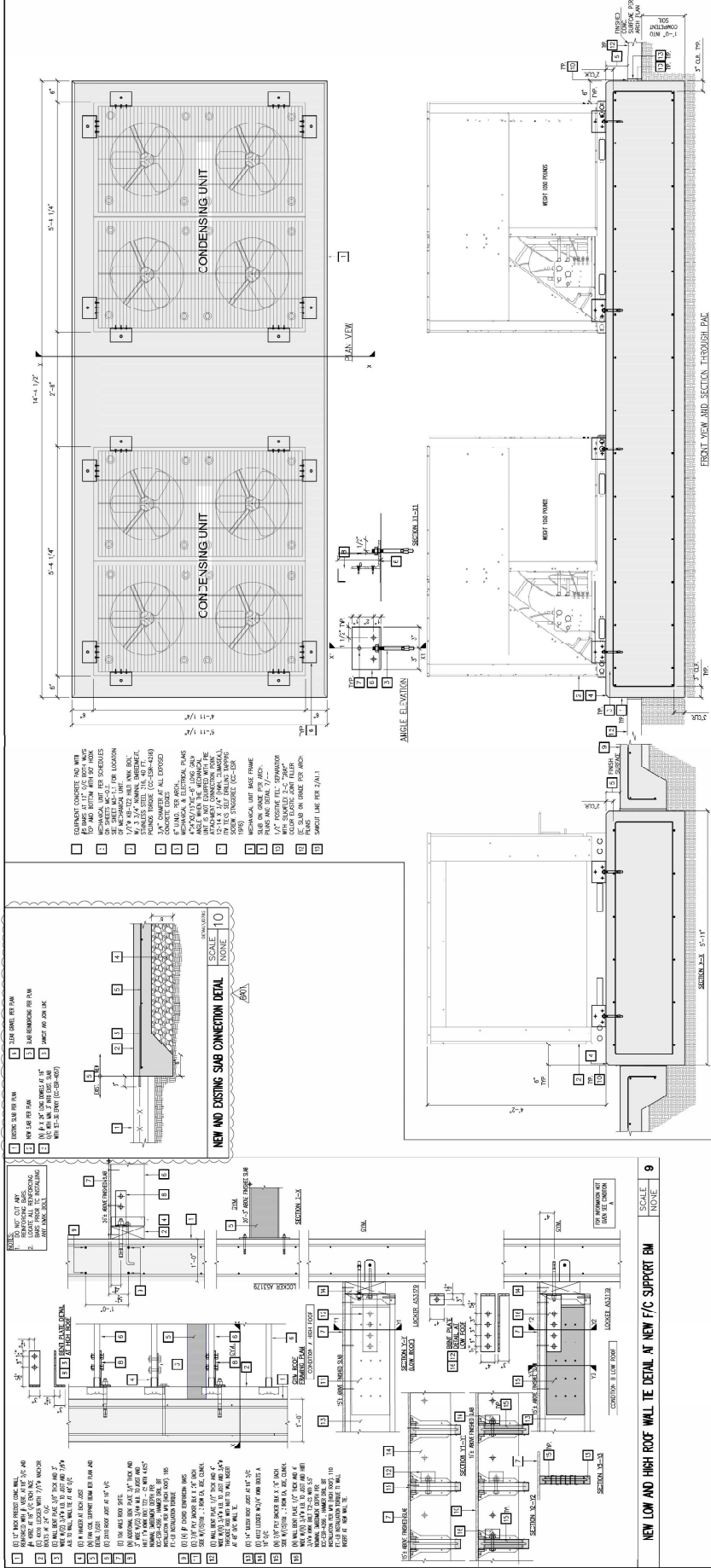
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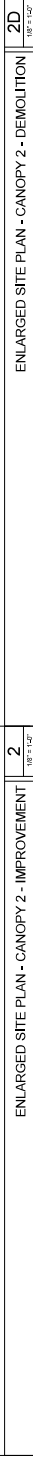
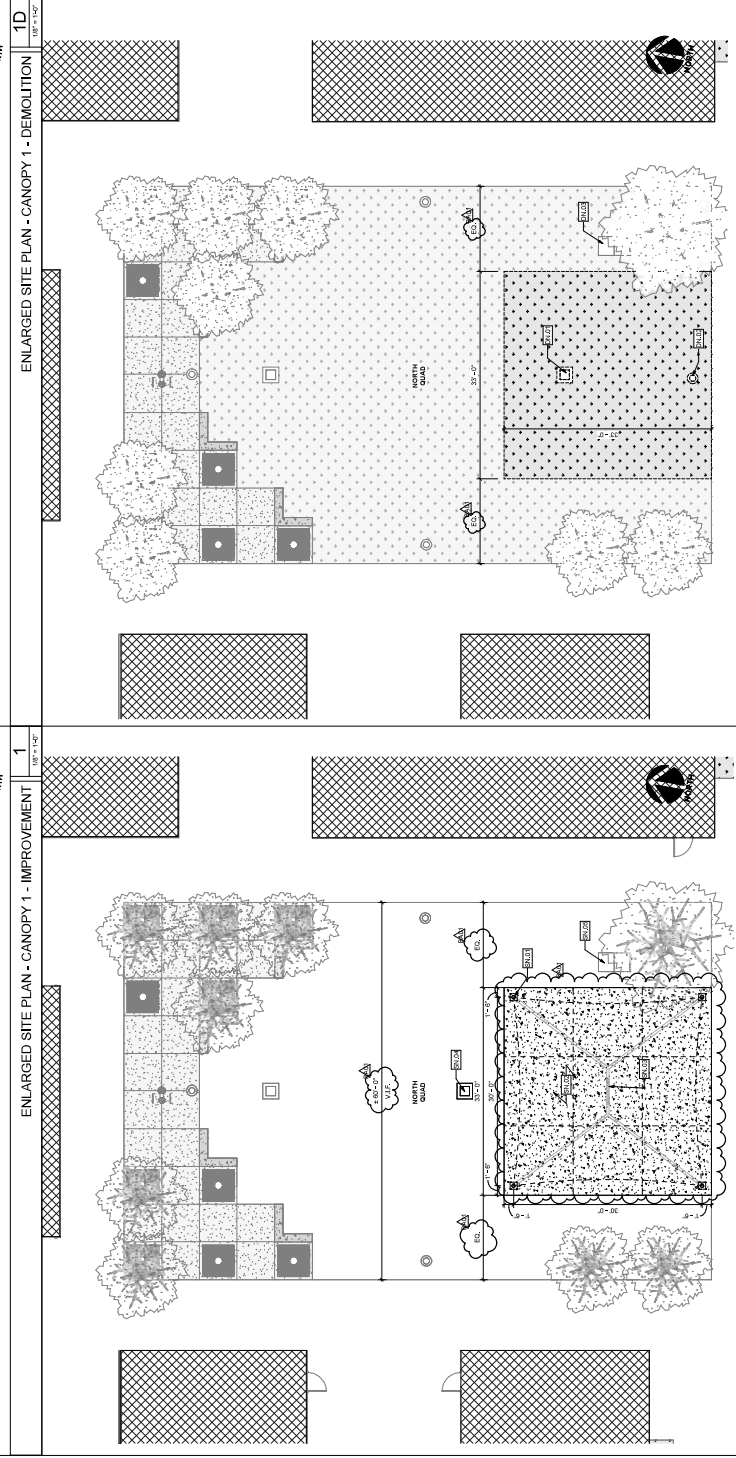
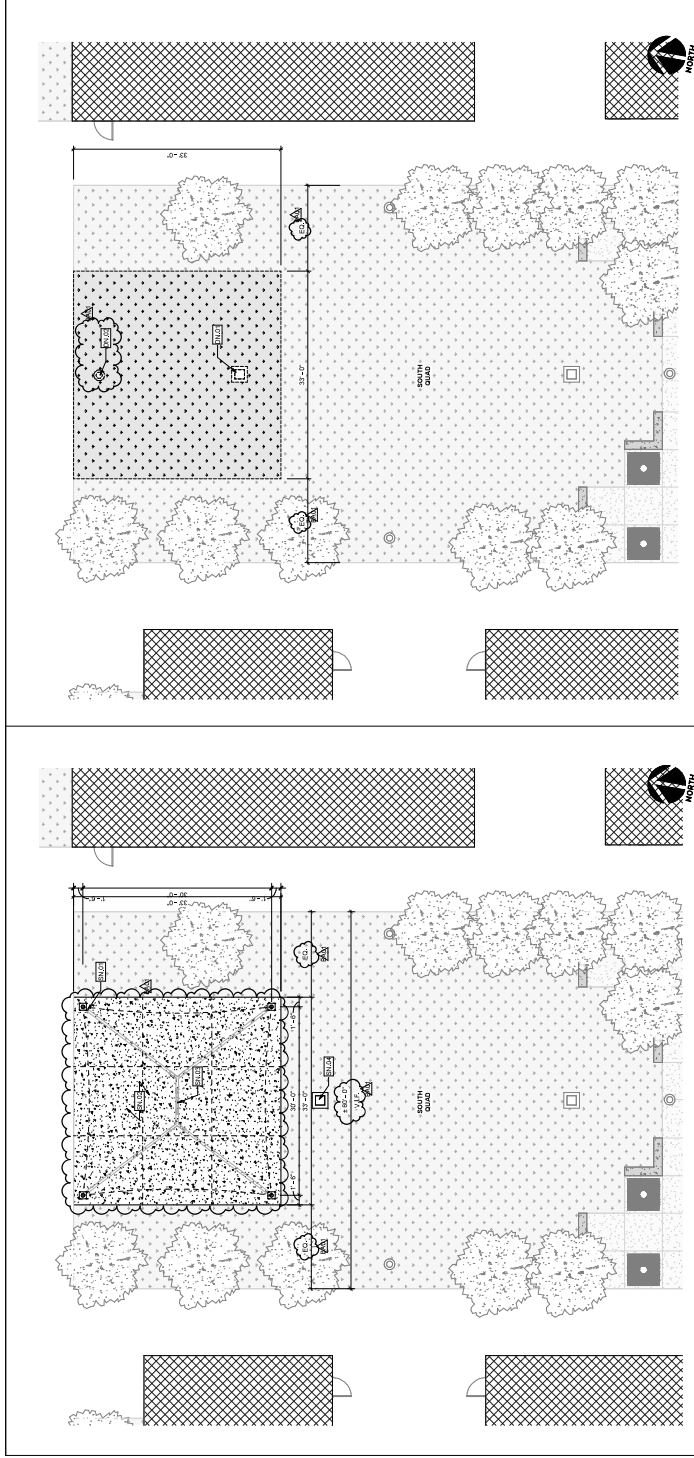
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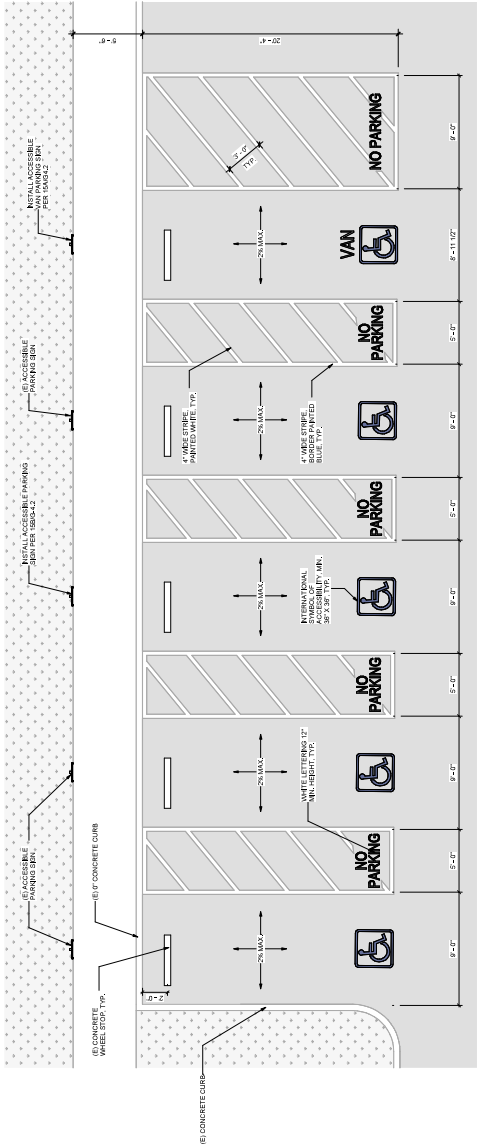
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ACCESSIBLE PARKING PLAN

6

10' x 11' 10"

NO PARKING FIRE LANE

NO PARKING FIRE LANE

NO PARKING FIRE LANE

FIRE LANE CURB

4

10' x 11' 10"

WESTGROUP
DESIGNS

16000 MacArthur Boulevard | Suite 1000
Atlanta, Georgia 30328
949.250.0800 | FAX 949.250.0862
www.westgroupdesigns.com

FILLMORE MIDDLE
SCHOOL - SHADE
STRUCTURES

FILLMORE UNIFIED
SCHOOL DISTRICT

543 A St. Fillmore, CA 93015

RESOLUTION

REVISIONS

DATE

BY

DESCRIPTION

REGISTERED PROFESSIONAL



SHEET TITLE

ENLARGED PLANS &
DETAILS

SHEET NUMBER

A-1.2

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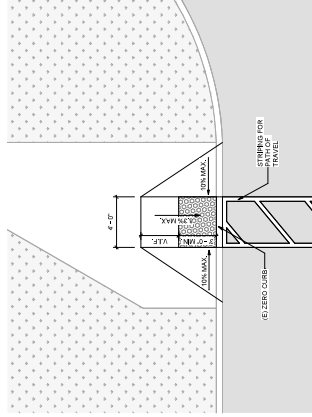
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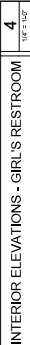


(E) CURB RAMP - IMPROVEMENT

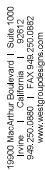
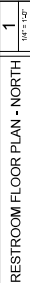
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10' x 11' 10"

1. REMOVE EXISTING WALL-BOUNDED FEATURES AS REQUIRED FOR REPAIRING, PATCHING AND REPAIRING. WALL FINISHES AT ALL IMPACTED AREAS, WHERE FLEIS IS DISTURBED, REMOVE TO THE NEAREST GROUT LINE AND REPLACE TO MATCH EXISTING SIZE, COLOR AND FINISH.
2. PATCH, PREPARE, AND REPAIR ALL WALL AND CEILING SURFACES AFFECTED BY REMOVAL AND REPAIR. PATCHES SHALL BE MATCHED TO EXISTING SURFACES. PATCHES SHALL BE MATCHED TO EXISTING SURFACES IN COLOR, TEXTURE, AND SHEEN. FEATHER AND BLEND NEW PAINT INTO EXISTING TO ACHIEVE A UNIFORM, SEAMLESS APPEARANCE.



SN#	DESCRIPTION
SN#01	PROVIDE INSULATION (W/SP) FOR ALL WATER SUPPLY AND DRAIN PIPE.
SN#02	ADJUST UPRIGHT HEIGHT OF W/SP/UP ABOVE 10K-40" MAX. ABOVE THE FLOOR TO THE REFLECTIVE SURFACE.
SN#03	ADJUST UPRIGHT HEIGHT OF PAPER TOWEL DISPENSER AND SOAP DISPENSER TO 40"-50" MAX. ABOVE FLOOR TO THE HIGHEST OPERABLE PART.
SN#04	ADJUST COATING PATTERN TO ALLOW 60" MIN. MEASURED PERPENDICULAR FROM THE SEAT WALL.
SN#05	PROVIDE ACCESSIBLE WALL 100% PER WASH-2.
SN#06	REPLACE SANITARY NAPPEL DISPENSER PER COMPLAINT THAT DOES NOT REQUIRE WASHING OF THE WRIST TO OPERATE. BOMBARDIER
SN#07	REMOVE AND REINSTALL 16" SOAP DISPENSER.

FILLMORE UNIFIED
SCHOOL DISTRICT

543 A St, Fillmore, CA 93015

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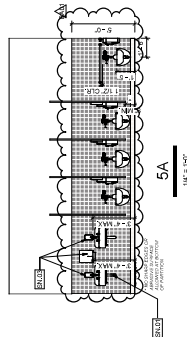
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23817	Author	Checker	09/10/25

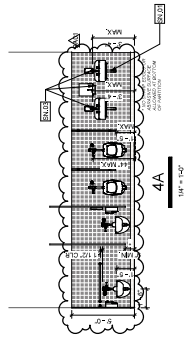
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REMOVE EXISTING WALL-MOUNTED FEATURES AS REQUIRED FOR REMODELING, PATCH AND REPAIR WALL FINISHES AT ALL IMPACTED AREAS, WHERE TILE IS DISTURBED, REMOVE TO THE NEAREST GROUT LINE AND REPLACE TO MATCH EXISTING SIZE, COLOR AND FINISH.

- PATCH, PREPARE, AND REPAIR ALL WALL AND CEILING SURFACES AFFECTED BY REMOVAL AND RELOCATION OF FIXTURES. PROVIDE SURFACE PREPARATION INCLUDING CLEANING, SANDING, AND PRIMING AS REQUIRED. APPLY PAINT FINISHES TO MATCH EXISTING ADJACENT SURFACES IN COLOR, TEXTURE, AND SHEEN. FEATHER AND BLEND NEW PAINT INTO EXISTING TO ACHIEVE A UNIFORM, SEAMLESS APPEARANCE.

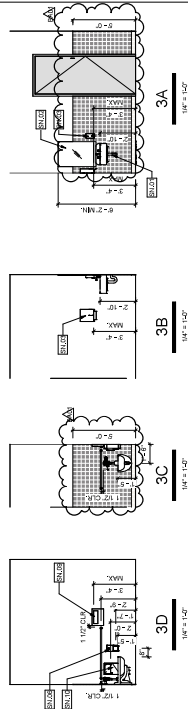


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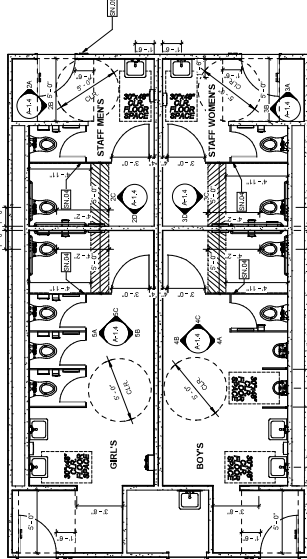
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EN01	PROVIDE INSULATION W/IMP FOR ALL W/OUT SUPPLY AND DEM. IPE
EN02	ADJUST MOTORING HEIGHT OF MECH ABOVE SH-40 MAX. ABOVE THE
EN03	ADJUST MOTORING HEIGHT OF MECH ABOVE SH-40 MAX. ABOVE THE
EN04	ADJUST MOTORING HEIGHT OF MECH ABOVE SH-40 MAX. ABOVE THE
EN05	ADJUST MOTORING HEIGHT OF MECH ABOVE SH-40 MAX. ABOVE THE
EN06	ADJUST MOTORING HEIGHT OF MECH ABOVE SH-40 MAX. ABOVE THE
EN07	ADJUST MOTORING HEIGHT OF MECH ABOVE SH-40 MAX. ABOVE THE
EN08	ADJUST MOTORING HEIGHT OF MECH ABOVE SH-40 MAX. ABOVE THE
EN09	ADJUST MOTORING HEIGHT OF MECH ABOVE SH-40 MAX. ABOVE THE
EN10	ADJUST MOTORING HEIGHT OF MECH ABOVE SH-40 MAX. ABOVE THE



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DOM



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SHEET TITLE:
**SOUTH RESTROOM
FLOOR PLAN AND
ELEVATIONS**

SHEET NUMBER:
A-1.4

WD PROJ.#	DRAWN BY:	CHECKED	DATE
5817	Author	Checker	09/10/25

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**SECTION 09 90 00
PAINTING AND COATING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Interior painting and coating systems.

1.02 RELATED REQUIREMENTS

- A. Section 09 96 00 - High-Performance Coatings: Other painted metal items.

1.03 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board; 2020.
- C. SSPC-SP 13 - Surface Preparation of Concrete; (Reaffirmed 2015).; 2003.

1.04 REGULATORY REQUIREMENTS

- A. Conform to T24, CCR for flame and smoke rating requirements for finishes.
- B. Conform to T19, CCR for all application processes and safety procedures.
- C. Materials shall comply with FDA requirements.
- D. Conform to requirements of SCAQMD.
- E. 2022 California Green Building Standards Code

1.05 DEFINITIONS

- A. Conform to ASTM D16 for interpretation of terms used in this Section.

1.06 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- C. Samples: Submit four paper draw down samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
- D. Maintenance Data: Submit coating maintenance manual including care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements for additional provisions.
 - 2. Extra Paint and Finish Materials: 1 gallon of each color and gloss, store where directed.
 - 3. Label each container with color, type, and gloss in addition to manufacturer's label.

1.07 QUALITY ASSURANCE

- A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 3 years experience and approved by manufacturer.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, product name, product code, color designation, VOC content, batch date, environmental handling, surface preparation, application, and use instructions.
- C. Paint Materials: Store at a minimum of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.09 FIELD CONDITIONS

- A. Do not apply materials when environmental conditions are outside the ranges required by manufacturer.
- B. Follow manufacturer's recommended procedures for producing the best results, including testing substrates, moisture in substrates, and humidity and temperature limitations.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design Products: Subject to compliance with requirements, provide Dunn Edwards products indicated; Contact Kim Hampton – Kim.Hampton@DunnEdwards.com
- B. Acceptable Manufacturers subject to submitting products that meet or exceed performance and physical characteristics of basis of design products:
 - 1. Sherwin Williams.
 - 2. PPG.
 - 3. Vista.

2.02 PAINTINGS AND COATINGS

- A. General:
 - 1. Provide materials for use within each paint system that are compatible with one another, and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. Provide factory-mixed coatings unless otherwise indicated.
 - 3. Do not reduce, thin, or dilute coatings or add materials to coatings unless specifically indicated in manufacturer's instructions.
- B. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction
- C. Colorants: The use of colorants containing hazardous chemicals, such as ethylene glycol, is prohibited and zero VOC colorants should be used whenever possible.
- D. Colors: As selected by the Architect.
- E. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

2.03 PAINT SCHEDULE - INTERIOR

- A. Gypsum Board Substrates: 3 coats
 - 1. Prime Coat: Primer sealer, latex, Vinylastic Premium VNPR00.
 - 2. Intermediate Coat: Latex, interior, matching topcoat.
 - 3. Topcoat: Paint gloss and colors as scheduled on drawings.
 - a. Latex, interior, eggshell, Spartawall Eggshell SWLL30
 - b. Latex, interior, semi-gloss, Spartawall Eggshell SWLL50
 - c. Latex, interior, flat, Spartazero Flat SZRO10
- B. Gypsum Board Substrates (where indicated for enamel paint): 3 coats
 - 1. Prime Coat: Vinylastic Slect Latex wall sealer (VNSL00)
 - 2. Intermediate Coat: Enduracat Semi-Gloss Pre-CAtalyzed, water based, single component epoxy (ENPX50)
 - 3. Topcoat: Enduracat Semi-Gloss Pre-Catalyzed, water based, single component epoxy (ENPX50)

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

3.02 PREPARATION

- A. Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing. Mask permanent labels for items certified or tested by Underwriter's Laboratories, Warnock-Hersey, or other testing agencies, fusible links, and identification stamps.
- B. Clean surfaces thoroughly and correct defects prior to application.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- D. Remove mildew from impervious surfaces by scrubbing with solution of water and bleach. Rinse with clean water and allow surface to dry.
- E. Gypsum Board: Fill minor defects with filler compound; sand smooth and remove dust prior to painting.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's written instructions.
- C. Apply coatings at spread rate required to achieve manufacturer's recommended dry film thickness and a uniform finish.
- D. Regardless of number of coats specified, apply additional coats until complete hide is achieved.
- E. Walls with Base: Paint the entire wall, including the wall behind the base.

3.04 PRIMING

- A. Apply primer to all surfaces unless specifically not required by coating manufacturer. Apply in accordance with coating manufacturer's instructions.
- B. Primers specified in painting schedules may be omitted on items factory primed or factory finished items if acceptable to top coat manufacturers.

3.05 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.
- B. Clean surfaces immediately of overspray, splatter, and excess material.
- C. After coating has cured, clean and replace finish hardware, fixtures, and fittings previously removed.

3.06 PROTECTION

- A. Protect finished coatings from damage until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

**SECTION 05120
STRUCTURAL STEEL**

PART 1 - GENERAL

1.1 SUMMARY

- A. Provisions of Division 01 apply to this section
- B. Section Includes:
 - 1. Structural steel.
- C. Related Sections:
 - 1. Section 01420: Testing and Inspection.
 - 2. Section 03300: Cast-In-Place Concrete.
 - 3. Section 04820: Concrete Unit Masonry.
 - 4. Section 05300: Metal Decking.
 - 5. Section 05500: Metal Fabrications.
 - 6. Section 07810: Cementitious Fireproofing.
 - 7. Section 09900: Paints and Coatings.

1.2 REFERENCE STANDARDS, SPECIFICATIONS AND CODES

- A. CBC Chapter 22A.
- B. American Institute of Steel Construction (AISC):
 - 1. AISC – Steel Construction Manual, 14th Edition, including:.
 - a. AISC 360 Specifications for Structural Steel Buildings.
 - b. AISC Code of Standard Practice for Steel Buildings and Bridges.
 - c. RCSC – Specification for Structural Joints Using ASTM A325 or A490 Bolts.
- C. American Society for Testing and Materials (ASTM):
 - 1. ASTM A36 – Standard Specification for Carbon Structural Steel
 - 2. ASTM A53 – Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
 - 3. ASTM A108 – Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished.
 - 4. ASTM A123 – Standard Specification for Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products

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5. ASTM A153 – Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
6. ASTM A307 – Standard Specification for Carbon Steel Bolts and Studs, 60000 PSI Tensile Strength.
7. ASTM A325 – Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 Ksi Minimum Tensile Strength.
8. ASTM A435 - Standard Specification for Straight-Beam Ultrasonic Examination of Steel Plates.
9. ASTM A490 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.
10. ASTM A500 – Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes.
11. ASTM A501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
12. ASTM A572 – Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel.
13. ASTM A653 – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
14. ASTM A673 - Standard Specification for Sampling Procedure for Impact Testing of Structural Steel.
15. ASTM A780 – Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
16. ASTM A992 – Standard Specification for Structural Steel Shapes.
17. ASTM C1107 – Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-Shrink).
18. ASTM E23 - Standard Test Methods for Notched Bar Impact Testing of Metallic Materials.
19. ASTM E112 - Standard Test Methods for Determining Average Grain Size

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20. ASTM F1554 – Standard Specification for Anchor Bolts, Steel, 36, 55 and 105-Ksi Yield Strength.
21. ASTM F959 - Standard Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners.
22. ASTM F1852 – Standard Specification for "Twist Off" Type Tension Control Structural Bolt/Nut/Washer Assemblies, Steel, Heat Treated, 120/105 ksi Minimum Tension Strength.

D. American Welding Society (AWS):

1. AWS D1.1 – Structural Welding Code - Steel.
2. AWS D1.8 – Structural Welding Code – Seismic Supplement.
2. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination.
3. AWS B2.1 – Specifications for Welding Procedures and Performance Qualification.

E. SSPC – Steel Structures Painting Council:

1. SP-2 - Hand Tool Cleaning.

1.3 SYSTEM DESCRIPTION

A. Regulatory Requirements:

1. Structural steel shall conform to CBC requirements, except that steel manufactured by acid Bessemer process is not permitted for structural purposes.
2. Sheet and strip steel other than those listed in CBC, if provided for structural purpose, shall comply with DSA requirements.

1.4 SUBMITTALS

A. Shop Drawings:

1. Submit Shop Drawings, including complete details and schedules for fabrication and shop assembly of members, and details, schedules, procedures and diagrams showing the sequence of erection. Fully detail minor connections and fastenings not shown or specified in the Contract Documents to meet required conditions using similar detailing as shown in the Contract Documents. Include a fully detailed, well controlled sequence and technique plan for shop and field welding that minimizes locked in stresses and distortion; submit sequence and technique plan for review by the Architect.
 - a. Include details of cuts, connections, camber, and holes in accordance with Figure 4.5 of AWS D1.1 or AISC Chapter J, weld position plan and other pertinent data. Indicate welds by standard AWS symbols, and show size, length and type of each weld.

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- b. Provide setting drawings, templates, and directions for installation of anchor bolts and other anchorages to be installed for Work specified in other sections.
 - c. Erection and Bracing Plan and Erection Procedure: Submit an erection and framing plan, including columns, beams, and girders, signed and sealed by a Structural or Civil Engineer registered in the State of California in accordance with Title 8 CCR, Section 1710, Erection of Structures. Maintain a copy at the Project site as required by the California Division of Industrial Safety.
 - d. Submit a list of steel items to be galvanized.
 - e. Include identification and details of AESS members, if applicable.
- B. Product Data:**
- 1. Submit copies of fabricator's specifications and installation instructions for the following products. Include laboratory test reports and other data required demonstrating compliance with these Specifications:
 - a. Structural steel, each type; including certified copies of mill reports covering chemical and physical properties.
 - b. Welding electrodes.
 - c. Welding gas.
 - d. Unfinished bolts and nuts.
 - e. Structural steel primer paint.
 - f. High-strength bolts, including nuts and washers.
- C. Manufacturer's Mill Certificate:**
- 1. Submit, certifying that products meet or exceed specified requirements.
- D. Mill Test Reports:**
- 1. Submit manufacturer's certificates, indicating structural yield and tensile strength, destructive and non-destructive test analysis.
- E. Welding Procedure Specifications (WPS):** Submit weld procedures for all welding on project to Owner's testing laboratory for approval. After approval by testing laboratory, submit to Architect for record. Weld procedures shall be qualified as described in AWS D1.5, AISC 341 and AISC 358, as applicable. Weld procedures shall indicate joints details and tolerances, preheat and interpass temperature, post-heat treatment, single or multiple stringer passes, peening of stringer passes for groove welds except for the first and the last pass, electrode type and size, welding current, polarity and amperes and root treatment. The welding variables for each stringer pass shall be recorded and averaged, from these averages the weld heat input shall be calculated. Submit the manufacturer's product data sheet for all welding material used.
- F. Welder's Certificates:** Field welders shall be Project certified in accordance with

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AWS D1.1. Shop welders shall be Project certified for FCAW in accordance with AWS D1.1.

- G. Test Reports: Submit reports of tests conducted on shop and field welded and bolted connections. Include data on type of test conducted and test results.
- H. Welding Material Certification: Provide certificate that welding material complies to specifications. Submit to Owner's testing laboratory.

1.5 QUALITY ASSURANCE

- A. Comply with the following as a minimum requirement, except as otherwise indicated:
 - 1. Perform welding in accordance with AWS Standards, AWS D1.1, and California Building Code Section 2004A.1 and approved Weld Procedure Specifications (WPS).
- B. Shop fabrication shall be inspected in accordance with CBC.
- C. Erect mock-up panel of fabricated structural steel meeting Architecturally Exposed Structural Steel (AESS) tolerances for exposed areas. Approval by Architect is required. Mock-up to remain for comparison but may not be left as part of the work.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Store structural steel above grade on platforms, skids or other supports.
- B. Protect steel from corrosion.
- C. Store welding electrodes in accordance with AWS D 12.1.
- D. Store other materials in a weather-tight and dry place until installed into the Work.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Stock Materials: Provide exact materials, sections, shapes, thickness, sizes, weights, and details of construction indicated on Drawings. Changes because of material stock or shop practices will be considered if net area of shape or section is not reduced thereby, if material and structural properties are at least equivalent, and if overall dimensions are not exceeded.
- B. All shapes, bars, plates, tubes and pipes shall be made of materials with at least 16% recycled content if produced from Basic Oxygen Furnace (BOF) or at least 67% recycled content if produced from Electric Arc Furnace (EAF).

2.2 MATERIALS

- A. Structural Steel: All wide flange shapes shall conform to ASTM A992 grade 50. Other steel shall conform to ASTM A36.

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- B. Unfinished Threaded Fasteners: ASTM A307, Grade A, regular low carbon bolts and nuts.
- C. High-Strength Threaded Fasteners: ASTM A325, ASTM A490 ASTM F959 or ASTM F1852 quenched and tempered, steel bolts, nuts and washers.
- D. Primer: Lead-free metal primer, Tnemec 10-99, Rust-Oleum X-60, or equal.
- E. Steel Pipe: ASTM A53, Type E or S, Grade B.
- F. Structural Tubing:
 - 1. Hot-formed, ASTM A501.
 - 2. Cold-formed, ASTM A500, Grade B.
- G. Galvanizing: ASTM A123.
- H. Shear stud connectors: ASTM A108, Grade 1015 forged steel, headed, uncoated, granular flux filled shear connector or anchor studs by Nelson Stud Welding Division of TRW, Lorain, OH, or equal.
- I. Grout: ASTM C1107, non-shrink type, pre-mixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing additives, capable of developing a minimum compressive strength of 7,000 psi at 7 days; of consistency suitable for application and a 30 minute working time.

2.3 FABRICATION

- A. Cleaning and Straightening Materials: Materials being fabricated shall be thoroughly cleaned of scale and rust, and straightened before fabrication. Cleaning and straightening methods shall not damage material. After punching or fabrication of component parts of a member, twists or bends shall be removed before parts are assembled.
- B. Cutting, Punching, Drilling and Tapping: Unless otherwise indicated or specified, structural steel fabricator shall perform the cutting, punching, drilling and tapping of Work so that Work of other trades will properly connect to steel Work.
- C. Milling: Compression joints depending on contact bearing shall be furnished with bearing surfaces prepared to a common plane by milling.
- D. Use of Burning Torch: Oxygen cutting of members shall be performed by machine. Gouges greater than 3/16 inch that remain from cutting shall be removed by grinding. Reentrant corners shall be shaped notch free to a radius of at least 1/2 inch. Gas cutting of holes for bolts or rivets is not permitted.
- E. Galvanizing: After fabrication, items indicated or specified to be galvanized shall be galvanized in largest practical sizes. Fabrication includes operations of shearing, punching, bending, forming, assembling or welding. Galvanized items shall be free from projections, barbs, or icicles resulting from the galvanizing process.
- F. Welding:

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1. Type of steel furnished in welded structures shall provide chemical properties suitable for welding as determined by chemical analysis. Welds shall conform to the verification and inspection requirements of CBC Chapter 17A. Conform to AWS D1.1, and CBC Chapter 22A.
 2. Materials and workmanship shall conform to the requirements specified herein and to CBC requirements, modified as follows:
 - a. No welded splices shall be permitted except those indicated on Drawings unless specifically reviewed by the Architect.
 - b. Drawings will designate joints in which it is important that welding sequence and technique be controlled to minimize shrinkage stresses and distortion.
 3. Welding shall be performed in accordance with requirements of the AWS Structural Welding Code.
 4. Architecturally Exposed Structural Steel: Verify that weld sizes, fabrication sequence, and equipment used for Architecturally Exposed Structural Steel will limit distortions to allowable tolerances. Prevent surface bleeding of back-side welding on exposed steel surfaces. Grind smooth exposed fillet welds ½ inch (13 mm) and larger. Grind flush butt welds. Dress exposed welds.
 5. Remove erection bolts on welded, Architecturally Exposed Structural Steel; fill holes with plug welds; and grind smooth at exposed surfaces.
- G. Shop Finish:
1. Notify the PI when Work is ready to receive shop prime coat. Work shall be inspected by the PI before installation of primer.
 2. Structural steel and fittings, except galvanized items, which will be exposed when building is completed, shall receive a coat of primer.
 3. The primer specified shall be spray applied, filling joints and corners and covering surfaces with a smooth unbroken film. The minimum dry film thickness of the primer shall be 2.0 mils.
 4. Do not prime surfaces that will be fireproofed, field welded, in contact with concrete or high strength bolted.
- H. Comply with fabrication tolerance limits of AISC's "Code of Standard Practice for Steel Buildings and Bridges" for structural steel.
- I Fabricate Architecturally Exposed Structural Steel with exposed surfaces smooth, square, and free of surfaces blemishes, including pitting, rust and scale seam marks, roller marks, rolled trade names, and roughness.
1. Remove blemishes by filling, grinding, or by welding and grinding, prior to cleaning, treating and shop priming.
 2. Comply with fabrication requirements, including tolerance limits of AISC's

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"Code of Standard Practice for Steel Buildings and Bridges" for Architecturally Exposed Structural Steel.

- J. Architecturally Exposed Structural Steel: use special care in unloading, handling and erecting the steel to avoid marking or distorting the steel members. Minimize damage to any shop paint when temporary braces or erection clips are used. Avoid unsightly surfaces upon removal. Grind smooth tack welds and holes filled with weld metal or body solder. Plan and execute all operations in such a manner that the close fit and neat appearance of the structure will not be impaired.

2.4 SHOP AND FIELD QUALITY CONTROL

- A. A special inspector, approved by DSA to inspect the Work of this section, shall inspect high-strength bolted connections. The Owner will provide a DSA approved independent testing laboratory to perform tests and prepare test reports in accordance with CBC 1704A.3.3. The PI shall be responsible for monitoring the work of the special inspector and testing laboratories to ensure that the testing program is satisfactorily completed.
- B. An AWS CWI certified special inspector, approved by DSA to inspect the Work of this section, shall inspect welded connections in accordance with CBC 1704A.3.1. The Owner will provide a DSA approved independent testing laboratory to perform tests and prepare test reports. The PI shall be responsible for monitoring the work of the special inspector and testing laboratories to ensure that the testing program is satisfactorily completed.
- C. The independent testing laboratory shall conduct and interpret test and state in each report whether test specimens comply with requirements, and specifically state any deviations there from.
- D. Provide access to all places where structural steel Work is being fabricated or produced so required inspection and testing can be performed.
- E. The independent testing laboratory may inspect and/or test structural steel at plant before shipment; however, Architect reserves the right at any time before Contract Completion to deem materials not in compliance with the specified requirements as defective Work.
- F. Correct defects in structural Work when inspections and laboratory test reports indicate noncompliance with specified requirements. Perform additional tests as may be required to reconfirm noncompliance of original Work, and as may be required to show demonstrate compliance of corrected Work.
- G. Welding: Inspect and test during fabrication and erection of structural steel assemblies as follows:
1. Certify welders and conduct inspections and tests as required. Record types and locations of defects found in the Work. Record Work required and performed to correct deficiencies.
 2. Inspect welds. Welds shall be visually inspected before performing any non-destructive testing. Groove weld shall be inspected by ultrasonic or other approved non-destructive test methods. Testing shall be performed to AWS D1.1 Table 6.3 cyclically loaded non-tubular connections.

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3. Ultrasonic testing shall be performed by a specially trained and qualified technician who shall operate the equipment, examine welds, and maintain a record of welds examined, defects found, and disposition of each defect. Repair and test defective welds.
 4. Rate of Testing: Completed welds contained in joints and splices shall be tested 100 percent either by ultrasonic testing or by radiography.
 5. Welds, when installed in column splices, shall be tested by either ultrasonic testing or radiography.
 6. Base metal thicker than 1-1/2 inches, when subjected to through-thickness weld shrinkage strains, shall be ultrasonically inspected by shear wave methods for discontinuities directly behind such welds. Tests shall be performed at least 48 hours after completed joint has cooled down to ambient air temperature.
 7. Any material discontinuities shall be reviewed based on the defect rating in accordance with the criteria of AWS D1.1 table 6.3 by the Architect and DSA.
 8. Other method of non-destructive testing and inspection, for example, liquid dye penetrate testing, magnetic particle inspection or radiographic inspection may be performed on weld if required.
 9. Lamellar Tearing: Lamellar-tearing resulting from welding is a crack (with zero tolerance) and shall be repaired in accordance with AWS D1.1.
 10. Lamination: The rejection criteria shall be based on ASTM A435.
 11. Where testing reveals lamination or conditions of lamellar tearing in base metal, the steel fabricator shall submit a proposed method of repair for review by the Architect. Test repaired areas as required.
 12. Magnetic Particle Testing: Magnetic particle testing when required shall be provided in accordance with AWS D1.1 for procedure and technique. The standards of acceptance shall be in accordance with AWS D1.1 - Qualification.
- H. Lamellar Tearing: Prior to welding plates 1 to 1-1/2 inches thick and greater and rolled shapes within the distance from 6 inches above the top of the joint to 6 inches below the bottom of the joint shall be checked by ultrasonic testing for laminations in base metal which may interfere with the inspection of the completed joint. Should these defects occur, members will be reviewed by the Architect and DSA. Welding procedure specifications in sub-section 1.5G specify welding practices to minimize lamellar tearing.
- I. Prior Testing of Base Material: Test material before fabrication.
- J. Lines and levels of erected steel shall be certified by a State of California licensed surveyor as set forth in related Division 01 section.
- K. Welded studs shall be tested and inspected by the special inspector in accordance with requirements of AWS D1.1 - Stud Welding.
- L. Record Drawings: After steel has been erected, correct or revise Shop Drawings and erection diagrams to correspond with reviewed changes performed in the

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field.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify governing dimensions and conditions of the Work before commencing erection Work.
 - 1. Report discrepancies between drawings and field dimensions to Architect before commencing work.
 - 2. Beginning of installation means erector accepts existing conditions and surfaces underlying or adjacent to work of this section.
- B. Provide temporary shoring and bracing, and other support during performance of the Work. Remove after steel is in place and connected, and after cast-in-place concrete has reached its design strength.

3.2 ERECTION

- A. Install structural steel accurately in locations, to elevations indicated, and according to AISC specifications and CBC requirements.
- B. Clean surfaces of base plates and bearing plates.
 - 1. Install base and bearing plates for structural members on wedges, shims, or setting nuts as required.
 - 2. Tighten anchor bolts after supported members have been positioned and plumbed. Do not remove wedges or shims; cut off flush with edge of base or bearing plate before packing with grout.
- C. Maintain erection tolerances of structural steel within AISC Code of Standard Practice for Steel Buildings and Bridges.
 - 1. Architecturally Exposed Structural Steel members and components, plumbed, leveled and aligned to a tolerance not to exceed one-half the amount permitted for structural steel. Contractor to provide adjustable connections between Architecturally Exposed Structural Steel and the structural steel frame or the masonry or concrete supports, in order to provide the erector with means for adjustment.
- D. Align and adjust various members forming part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact after assembly. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
 - 1. Level and plumb individual members of structure.
- E. Do not permit thermal cutting during erection of structural steel.
- F. Where indicated for field connections, provide standard bolts complying with ASTM A307.
- G. Install high strength steel bolts at locations indicated. Assembly and installation shall be in accordance with CBC requirements.

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1. Allowable hole sizes: 1/16 inch larger than bolt size.
 2. Use friction type connection with standard hardened steel circular, square or rectangular washer under bolt nut.
 3. Thoroughly clean area under bolt head, nut and washer. Remove all paint, lacquer, oil or other coatings except organic zinc-rich paints in accordance with SSPC, SP-2.
 4. Tighten bolts by power torque wrench or hand wrench until twist-off.
- H. Contractor shall be responsible for correcting detailing and fabrication errors and for correct fitting of all members and components.
- I. Erect structural steel plumb and level and to proper tolerances as set forth in the AISC Manual. Provide temporary bracing, supports or connections required for complete safety of structure until final permanent connections are installed.
- J. Install column bases within a tolerance of 1/8 inch of detailed centerlines, level at proper elevations. Support bases on double nuts and solidly fill spaces under bases with cement grout.
- K. Provide anchor bolts with templates and diagrams. Contractor shall be responsible for proper location and installation of bolts. Correct deficiencies and errors.
- L. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and apply galvanizing repair paint according to ASTM A780.

3.3 FITTING

- A. Closely fit members, finished true to line and in precise position required to allow accurate erection and proper joining in the field.
- B. Drilling to enlarge unfair holes will not be allowed. Allow only enough drifting during assembly to bring parts into position, but not enough to enlarge holes or distort the metal. Do not heat rolled sections, unless approved by Architect.

3.4 PUNCHING AND DRILLING

- A. Punch material 1/16 inch larger than nominal diameter of bolt, wherever thickness of metal is equal to or less than the diameter of the bolt plus 1/8 inch.
- B. Drill or sub-punch and ream where metal is equal to or more than the diameter of the bolt plus 1/8 inch. Make diameter for sub-punched and sub-drilled holes 1/16 inch larger than nominal diameter of bolt.
- C. Precisely locate holes to ensure passage of bolt through assembled materials without drifting. Enlarge holes when necessary to receive bolts by reaming; flame cutting to enlarge holes is not acceptable. Structural Steel members with poorly matched holes will be rejected.

3.5 FINISHING

- A. After erection, spots or surfaces where paint has been removed, damaged, or burned off and field rivets, bolts, and other field connections not concealed in the work, shall be cleaned of dirt, oil, grease, and burned paint and furnished with a spot coat of the same primer installed during shop priming.

SECTION 05120
STRUCTURAL STEEL

- B. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint. Install paint to exposed areas with the same material installed during shop painting. Install by brush or spray to provide a minimum dry film thickness of 1.5 mils.

3.6 FIELD QUALITY CONTROL

- A. Owner will provide a special inspector and independent testing laboratory to perform field inspections and tests and to prepare test reports.
- B. Correct deficiencies in or remove and replace structural steel that inspections and test reports indicate do not comply with specified requirements.

3.7 CLEAN UP

- A. Remove rubbish, debris and waste materials and legally dispose of off the Project Site.

3.8 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

3.9 HANDLING

- A. Both in shop and in the field, transport, handle and erect to prevent damage or overstressing of any component.

END OF SECTION

SECTION 05 12 13 - ARCHITECTURALLY-EXPOSED STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Additional requirements for structural steel members designated as architecturally-exposed structural steel (AESS).

1.02 RELATED REQUIREMENTS

- A. Section 05 12 00 - Structural Steel Framing: General requirements for structural steel members, including AESS framing specified in this section.
- B. Section 09 91 13 - Exterior Painting: Finish coat requirements and coordination with primer and surface preparation specified in this section.

1.03 REFERENCE STANDARDS

- A. AISC 303 - Code of Standard Practice for Steel Buildings and Bridges; 2016.
- B. AISC 360 - Specification for Structural Steel Buildings; 2016.
- C. ASTM A6/A6M - Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling; 2019.
- D. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2020.
- E. ASTM A1085/A1085M - Standard Specification for Cold-Formed Welded Carbon Steel Hollow Structural Sections (HSS); 2015.
- F. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.
- G. SSPC-SP 6 - Commercial Blast Cleaning; 2007.

1.04 SUBMITTALS

- A. Product data for each type of product specified. Submit paint systems in accordance with Section 09 91 13.
- B. Shop Drawings: Detailing for fabrication of AESS components.
 - 1. Provide erection documents clearly indicating which members are AESS members and the AESS category of each part.
 - 2. Include details that clearly identify AESS requirements found in this specification. Provide connections for AESS consistent with concepts shown on drawings.
 - 3. Indicate welds by AWS A2.4 symbols, distinguishing between shop and field welds, and show size, length and type of each weld. Identify grinding, finish and profile of welds as defined by the designated AESS category.

1.05 QUALITY ASSURANCE

- A. Fabricator Qualifications: In addition to those qualifications listed in Section 05 12 00, engage an AISC Certified Fabricator, experienced in fabricating AESS similar to that indicated for this project with a record of successful in-service performance, as well as sufficient production capacity to fabricate AESS without delaying the work.
- B. Comply with applicable provisions of AISC 303, Section 10 for the designated AESS category.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Handle finished pieces in accordance with Section 10 of AISC 303, using nylon-type slings, or chains with softeners, or wire ropes with softeners such that they are not damaged.
- B. Store materials to permit easy access for inspection and identification. Keep steel members off ground by using pallets, platforms, or other supports. Protect steel members and packaged

materials from erosion and deterioration. Use special care in handling to prevent twisting or warping of AESS members.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Comply with Section 05 12 00, except as amended in this section for aesthetic purposes.

2.02 FABRICATION

- A. Fabricate and assemble AESS in shop to greatest extent possible. Locate field joints in AESS assemblies at concealed locations or as approved by Architect. Detail AESS assemblies to minimize field handling and expedite erection.
- B. Permissible tolerances for member depth, width, out of square, and camber and sweep to be as specified in ASTM A6/A6M, ASTM A500/A500M, and ASTM A1085/A1085M.
- C. Use special care in handling and shipping of AESS both before and after shop painting to minimize damage to any shop finish. Use nylon-type slings or softeners when using chains or wire rope slings.
- D. Fabricate AESS in accordance with categories defined in AISC 303, as follows:
 - 1. AESS 1: Basic elements.
 - 2. AESS 2: Feature elements viewed at a distance greater than 20 feet (feature elements not in close view).
 - 3. AESS 3: Feature elements viewed at a distance less than 20 feet (feature elements in close view).

2.03 PAINT SYSTEM

- A. Compatibility: All components/procedures of AESS paint system to comply with coating system specified, submitted, and approved per Sections 09 91 13, 09 91 23, and 09 96 00. As a minimum, identify required surface preparation, primer, intermediate coat (if applicable), and finish coat. Primer, intermediate coating, and finish coating to be from a single manufacturer combined in a system documented by manufacturer with adequate guidance for fabricator to procure and execute.
- B. Primer: As specified in Sections 09 91 13, 09 91 23, and 09 96 00. Primer to comply with all federal standards for VOC, lead and chromate levels.
- C. Finish Coating: Field apply intermediate and top coats per Sections 09 91 13, 09 91 23, and 09 96 00.

2.04 SHOP PRIMING

- A. Surface Preparation:
 - 1. Provide surface preparations to meet SSPC-SP 6.
- B. Shop prime structural steel members. Do not prime surfaces that will be fireproofed, field welded, in contact with concrete, or high strength bolted with slip-critical connections.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Erector to check all AESS members upon delivery for twist, kinks, gouges or other imperfections which may result in rejection of appearance of member. Coordinate remedial action with fabricator prior to erecting steel.

3.02 PREPARATION

- A. Provide connections for temporary shoring, bracing and supports only where noted on approved fabrication documents. Temporary connections not shown are to be made at locations not exposed to view in final structure or as approved by Architect.
- B. Handle, lift and align pieces using nylon straps or chains with softeners required to maintain appearance of AESS through process of erection.

3.03 ERECTION

- A. AESS 1 and 2: Basic elements; feature elements not in close view:
1. Employ special care to handle and erect AESS. Erect finished pieces using nylon straps or chains with softeners such that they are not damaged.
 2. Place weld tabs for temporary bracing and safety cabling at points concealed from view in completed structure or where approved by Architect during pre-installation meeting. Obtain Architect approval of methods for removing temporary devices and finishing AESS members prior to erection.
 3. AESS Erection Tolerances: Erect to standard frame tolerances for structural steel per Chapter 7 of AISC 303.
 4. Set AESS accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
 5. Remove blemishes or unsightly surfaces resulting from temporary braces or fixtures.
 6. Remove all backing and run out tabs.
 7. When temporary braces or fixtures are required to facilitate erection, take care to avoid any blemishes, holes or unsightly surfaces resulting from use or removal of such temporary elements.
- B. AESS 3: Feature elements in close view:
1. Erect to requirements of AESS 1 and 2 and as follows:

3.04 CLEANING

- A. Touch-up Painting: Complete cleaning and touch-up painting of field welds, bolted connections, and abraded areas of shop paint to blend with adjacent surfaces of AESS. Perform touch-up work in accordance with manufacturer's instructions and as specified in Section 09 91 13, 09 91 23, and 09 96 00.

END OF SECTION

**SECTION 05500
METAL FABRICATIONS**

Part 1 GENERAL

1.1 SECTION INCLUDES

- A.** Shop fabricated ferrous metal items, galvanized and prime painted.

1.2 REFERENCES

- A.** ASTM A992, Grade 50 - Structural Steel.
- B.** ASTM A53 - Pipe, Steel, Black and Hot-Dipped, Zinc-coated Welded and Seamless Steel Pipe.
- C.** ASTM A123 - Zinc Coating (Hot-Dip) on Iron and Steel Products.
- D.** ASTM A153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- E.** ASTM A167 - Stainless Steel and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.
- F.** ASTM A283/A283M - Low and Intermediate Tensile Strength Carbon Steel Plates.
- G.** ASTM A307 - Carbon Steel Bolts and Studs, 60,000 psi Tensile.
- H.** ASTM A500 - Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes.
- I.** ASTM C1107 - Packaged Dry Hydraulic - Cement Grout (Non-Shrink).
- J.** AWS A2.4 - Standard Welding Symbols.
- K.** AWS D1.1 - Structural Welding Code.
- L.** AWS A5.1 - Carbon Steel Covered Arc-Welding Electrodes.
- M.** SSPC Paint 21 - Steel Structures Painting Council - White or Colored Silicone Alkyd Paint.

1.3 SUBMITTALS

- A.** Submit Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners and accessories. Include erection drawings, elevations and details where applicable. Indicate welded connections using standard

**SECTION 05500
METAL FABRICATIONS**

AWS A2.4 Welding Symbols. Indicate net weld lengths.

1.4 FIELD MEASUREMENTS

- A.** Verify field measurements.

Part 2 PRODUCTS

2.1 MATERIALS

- A.** Steel Sections: ASTM A992, Grade 50.
- B.** Steel Tubing: ASTM A500, Grade B.
- C.** Plates: ASTM A283; Milled Steel.
- D.** Pipe: ASTM A53, Grade B, Schedule 40.
- E.** Fasteners: Standard commercial quality steel as required for application.
- F.** Bolts, Nuts and Washers: ASTM A307 galvanized to ASTM A153 for galvanized components. Unless noted otherwise on Drawings.
- G.** Shop and Touch-Up Primer: SSPC Paint 21, Series P10-99 modified alkyd, red color, air dried, by Tnemec or equal as approved in accordance with Section 01600 for substitutions.
- H.** Touch-Up Primer for Galvanized Surfaces: Ready mixed Zinc rich galvanizing compound, DEVCON 2, by Devcon Corp., Danvers, MA, GALVICON, by Southern Coatings, Sumter, SC, or equal as approved in accordance with Section 01600 for substitutions.
- I.** Stainless Steel: ASTM A167; Minimum 16 Gage, Type 304, No. 4 Finish.
- J.** Welding Materials: AWS A5.1, E70XX, type and procedures required by electrode manufacturer for materials being welded.
- K.** Grout: ASTM C1107, Non-shrink type, pre-mixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing additives, capable of developing a minimum compressive strength of 8,000 psi at 7 days; of consistency suitable for application and a 30 minute working time.

**SECTION 05500
METAL FABRICATIONS**

2.2 FABRICATION

- A.** Fit and shop assemble in largest practical sections for delivery to site.
- B.** Fabricate items with joints tightly fitted and secured.
- C.** Continuously seal joined members by continuous welds.
- D.** Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush and hairline. Ease exposed edges to small uniform radius.
- E.** Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- F.** Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.3 FINISHES

- A.** Clean surfaces of rust, scale, grease and foreign matter prior to finishing.
- B.** Do not prime surfaces in direct contact with concrete or where field welding is required.
- C.** Prime paint items with two coats in accordance with requirements of SSPC-21.
- D.** Galvanize steel items to a zinc coating thickness in accordance with ASTM A123. Surfaces shall be free of icicles, spangles and puddling. Vent all enclosed spaces. See drawings and schedules for extent of steel items to be provided with a galvanized finish.

Part 3 EXECUTION

3.1 EXAMINATION

- A.** Verify that field conditions are acceptable and are ready to receive work.
- B.** Beginning of installation means erector accepts existing conditions.

3.2 PREPARATION

**SECTION 05500
METAL FABRICATIONS**

- A.** Clean and strip primed steel items to bare metal where site welding is required.
- B.** Supply items required to be cast into concrete or embedded in masonry with setting templates to appropriate sections.

3.3 INSTALLATION

- A.** Install items plumb and level, accurately fitted, free from distortion or defects.
- B.** Allow for erection loads and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C.** Field weld components indicated on shop drawings.
 - (1)** Weld joints using shielded electric arc method. Use coated welded rods, not fluxed, or type recommended by manufacturer for use with parent metal. Use only certified welders for structural construction.
 - (2)** Grinding: Grind welds on surfaces subject to traffic or contact to smooth flush joints.
 - (3)** Peening: Remove flux and weld spatter as necessary to eliminate unsightly conditions and grind off sharp projections.
 - (4)** Permanently Concealed Welds: No treatment required other than preparation for painting or galvanizing.
- D.** Perform field welding in accordance with AWS D1.1.
- E.** Obtain Architect approval prior to site cutting or making adjustments not scheduled.
- F.** After erection, prime welds, abrasions and surfaces not shop primed except surfaces to be in contact with concrete.

3.4 ERECTION TOLERANCE

- A.** Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B.** Maximum Offset From True Alignment: 1/4 inch.

3.5 SCHEDULE

- A.** The Schedule is a list of principal items only. Refer to Drawing details for items not specifically scheduled.

**SECTION 05500
METAL FABRICATIONS**

- B.** Fasteners: Provide fasteners and connectors of approved types, whether indicated or not.
- C.** Bumper Posts and Guard Rails: As detailed; galvanized finish.
- D.** Door Frames for Overhead Door Openings and Wall Openings: Channel sections; galvanized finish.
- E.** Steel Backing Plates: 1/4 inch thick x widths and lengths required to support plumbing fixture hanger and equipment. Cope studs and weld plates flush to surface with continuous welds.
- F.** Steel Corner Guards: Provide steel angle corner guards as detailed, complete with weld-on anchors. Hot dip galvanized after fabrication.
- G.** Grates and Frames: Provide all gratings, covers and frames for catch basins, trench and storm drains. All work shall be galvanized or cast iron. Provide heavy-duty traffic trench type gratings, covers and frames in all traffic areas; manufactured by Alhambra Foundry Co., Alhambra, CA, McKinley Iron Works, Fort Worth, TX, or Neenah Foundry Co., Neenah, WI., or equal as approved in accordance with Section 01600 for substitutions.
- (1)** Gratings in traffic areas shall be narrow slot type, with openings not greater than 1/2" with direction of slots placed perpendicular to direction of traffic.
- (2)** Covers shall be provided with recessed bolt attachment to frame.

END OF SECTION