

# OUTDOOR LEARNING SHADE STRUCTURES DEL PASO HEIGHTS ELEMENTARY SCHOOL

590 MOREY AVENUE  
SACRAMENTO, CA 95838

## TWIN RIVERS UNIFIED SCHOOL DISTRICT

### PROJECT TEAM

**OWNER**  
TWIN RIVER UNIFIED SCHOOL DISTRICT  
3222 WINONA WAY, SUITE 200  
NORTH HIGHLANDS, CA 95660  
PHONE: (916) 566-1600  
CONTACT: VICTORIA GARCIA

**CIVIL ENGINEER**  
WARREN CONSULTING ENGINEERS  
1117 WINDFIELD WAY, SUITE 110  
EL DORADO HILLS, CA 95762  
PHONE: (916) 985-1870  
CONTACT: ANTHONY TASSANO

**ARCHITECT**  
HARRINGTON DESIGN ASSOCIATES, INC  
5875 PACIFIC STREET, SUITE E2  
ROCKLIN, CA 95677  
PHONE: (916) 577-5789  
CONTACT: FRANCIS J. HARRINGTON, AIA

### DRAWING INDEX

T0.0 TITLE SHEET

#### SPECIFICATIONS (FOR SITE FLATWORK)

SP01 EARTHWORK SPECIFICATION  
SP02 SITE CONCRETE SPECIFICATION  
SP03 ASPHALT PAVING SPECIFICATION

#### CIVIL:

CO.1 CIVIL GENERAL NOTES AND ABBREVIATIONS  
CO.2 TOPOGRAPHIC SURVEY  
C1.1 DEMOLITION PLAN  
C2.1 GRADING AND PAVING PLAN

#### ARCHITECTURE:

A1.0 SHADE STRUCTURE CODE ANALYSIS & ACCESSIBILITY SITE PLAN  
A1.1 ENLARGED PLANS & DETAILS

#### STATEMENT OF GENERAL CONFORMANCE:

THE FOLLOWING DRAWINGS AND/OR SPECIFICATIONS INDEXED BELOW HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. THESE DOCUMENTS HAVE BEEN EXAMINED BY ME FOR DESIGN INTENT AND THEY APPEAR TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE REGULATIONS, AND THE SPECIFICATIONS PREPARED BY ME FOR THIS PROJECT.

THESE DOCUMENTS ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT FOR WHICH I AM THE INDIVIDUAL DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE.

THIS STATEMENT OF GENERAL CONFORMANCE SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341, AND 4-344 OF THE TITLE 24, PART 1, (TITLE 24, PART 1, SECTION 4-317(b)).

SIGNATURE OF ARCHITECT/ENGINEER: FRANCIS J. HARRINGTON, AIA  
DATE: 02/03/2024  
LICENSE NUMBER: C 28875  
EXPIRATION DATE: 9/30/2025

#### DOCUMENTS PREPARED BY OTHERS

ICON SHELTER SYSTEMS INC. - 30' X 64' RECTANGULAR HIP  
DSA #A#04-122375 PC

LS1.0 GENERAL INFORMATION  
LS1.1 GENERAL INFORMATION  
LS2 DSA 103 (NOT USED)  
LS3 DSA 103 (NOT USED)  
LS3.0 30' WIDE RECTANGULAR HIP FOUNDATION PLAN  
LS3.1 30' WIDE RECTANGULAR HIP FRAMING & CONNECTION DETAILS  
LS3.2 30' WIDE RECTANGULAR HIP MULTI RIB ROOFING PLAN  
LS5.0 ELECTRICAL ACCESS

TOTAL SHEET COUNT: 18

### SPECIAL INSPECTIONS & TESTING

THE ITEMS LISTED BELOW ARE NOT SUBJECT TO DSA REQUIREMENTS FOR THE STRUCTURAL TESTS / SPECIAL INSPECTIONS:

- DEEP FOUNDATIONS, SINGLE-STORY STRUCTURE WITH DEAD LOAD LESS THAN 5 PSF (SHADE STRUCTURE BASED ON #A#04-122375 PC)
- SOIL COMPACTION AND FILL (SITE FLATWORK & SHADE STRUCTURE BASED ON #A#04-122375 PC)
- CONCRETE BATCH PLANT (SITE FLATWORK)
- EPOXY SHEAR DOWELS (SITE FLATWORK)

### DEFERRED APPROVALS

INSTALLATION OF DEFERRED APPROVAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR ENGINEER, AND APPROVED BY DSA.

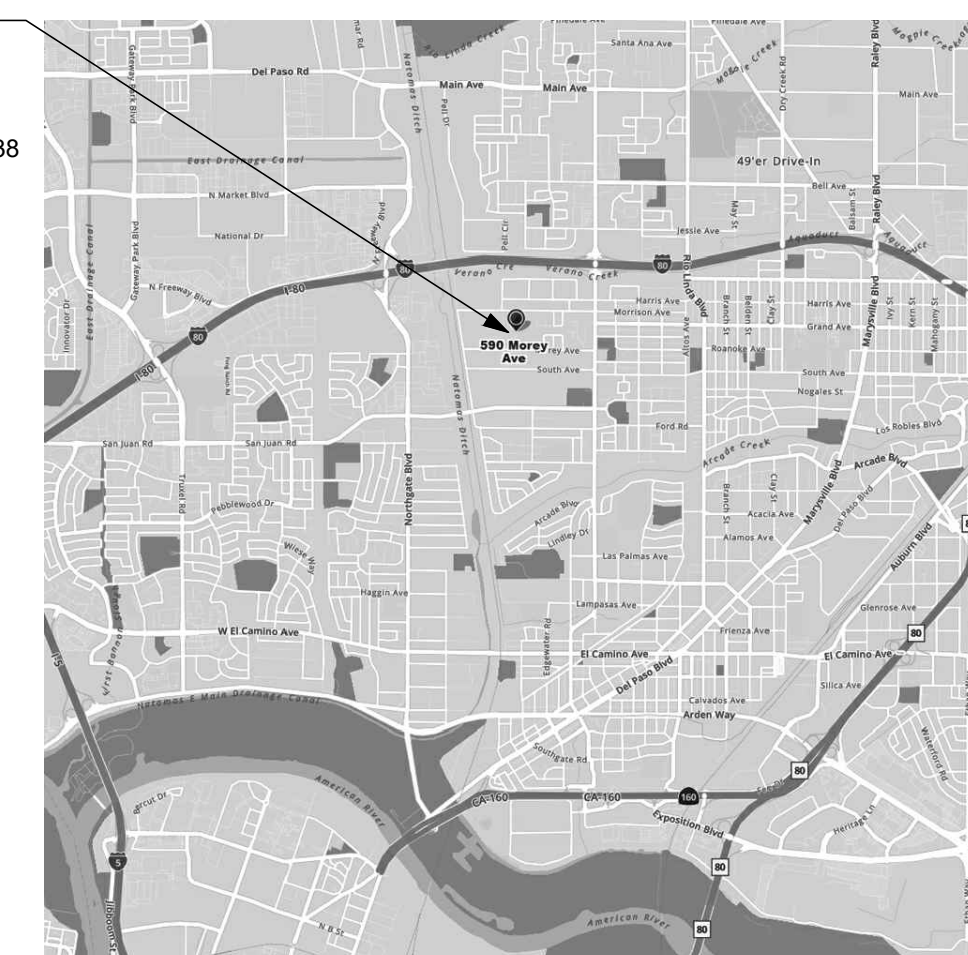
- NONE

### VICINITY MAP

FLOOD HAZARD ZONE: ZONE 'X'

#### PROJECT LOCATION

590 MOREY AVENUE  
SACRAMENTO, CA 95838



### GENERAL NOTES

- ALL WORK SHOWN, NOTED OR DETAILED IS NEW, EXCEPT WHERE INDICATED AS EXISTING OR AS EXISTING TO REMAIN.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE SITE AND SHALL REPORT ANY DISCREPANCIES IN WRITING TO THE CONSTRUCTION MANAGER BY THE MEANS OF AN REQUEST FOR INFORMATION (RFI) OR AS PART OF THE APPLICABLE SHOP DRAWING/SUBMITTAL.
- SPECIFIC ITEMS NOTED TO BE VERIFIED OR FIELD VERIFIED ARE REQUIRED TO BE VERIFIED PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH THE WORK.
- CONTRACTOR IS RESPONSIBLE FOR ALL INCIDENTAL WORK NECESSARY TO COMPLETE THE INSTALLATION OF NEW WORK. THIS INCLUDES, BUT IS NOT LIMITED TO, THE REMOVAL AND/OR REINSTALLATION OF ALL EXISTING ITEMS.
- ALL WORK, MATERIAL, METHODS, ETC. SHALL CONFORM TO ALL GOVERNING BUILDING CODES, REGULATIONS AND AGENCIES.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING THAT ALL NECESSARY PERMITS AND APPROVALS ARE OBTAINED PRIOR TO BEGINNING WORK OR ORDERING MATERIALS.
- ANY CONTACT WITH THESE PLANS AND EXISTING CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT.
- ALL WORK SHALL BE IN COMPLETE CONFORMANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OR AS OTHERWISE OUTLINED IN THE SPECIFICATIONS.
- CONTRACTOR TO COORDINATE WITH EQUIPMENT SUPPLIERS FOR POWER REQUIREMENTS, BLOCKING, SUPPORT FOR EQUIPMENT, PLUMBING REQUIREMENTS AND ROUGH-IN LOCATIONS.
- WHERE INCLUDED IN THESE DRAWINGS, "KEYNOTES" DENOTE NEW WORK TO BE PERFORMED UNDER THIS CONTRACT AND ARE IDENTIFIED TO THE RIGHT OF EACH SHEET. THE "KEYNOTE" NUMBER REFERENCES THE SPECIFICATION SECTION RELATED TO THE WORK DESIGNATED BY THE "KEYNOTE". "NOTES" DENOTE EXISTING ITEMS FOR REFERENCE ONLY AND ARE ALSO IDENTIFIED TO THE RIGHT OF EACH SHEET. "GENERAL SHEET NOTES" DENOTE DESCRIPTIONS OF ADDITIONAL NEW WORK SPECIFIC TO THE SHEET CONTAINING THE "GENERAL SHEET NOTE".
- USE OF ANY (N) MATERIAL CONTAINING ASBESTOS IS PROHIBITED.
- DETAILS, MATERIALS, AND FINISHES ARE TYP. FOR ALL SIM. CONDITIONS U.O.N.
- THE TERM "TYPICAL" (TYP) SHALL BE CONSTRUED TO MEAN APPLYING TO ALL LIKE OR SIMILAR CONDITIONS IN THE AREAS DESIGNATED FOR WORK SCOPE (I.E. WITHIN THE BOUNDARIES OF THIS PROJECT).
- NOT ALL CEILING APPURTENANCES (SMOKE DETECTORS, EXHAUST FANS, ACCESS DOORS, ETC.) ARE SHOWN. CONTRACTOR TO FIELD VERIFY AND TAKE APPROPRIATE ACTION TO ACCOMMODATE THESE ITEMS.
- ALL DEMOLISHED ITEMS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY UNLESS NOTED TO BE SALVAGED BACK TO OWNER.
- PRIOR TO STARTING ANY WORK, THE CONTRACTOR SHALL CONDUCT A SURVEY, WITH A DESIGNATED DISTRICT REPRESENTATIVE, TO DETERMINE THE OPERABILITY OF ALL EXISTING MECHANICAL UNITS, FIRE ALARM, TELEPHONE AND INTRUSION ALARM SYSTEMS. THE DISTRICT'S REPRESENTATIVE WILL PROVIDE A WRITTEN REPORT TO THE CONSTRUCTION MANAGER AND TO THE CONTRACTOR TO INSURE THE SAME OPERABILITY OF THESE COMPONENTS AT THE COMPLETION OF THE PROJECT.
- ALL ITEMS THAT ARE LABELED "CONCURRENT", "NIC", OR "EXISTING" ARE NOT PART OF THIS APPLICATION AND ARE NOT PART OF THE DSA APPROVAL FOR THIS PACKAGE.
- PRIOR TO SITE MOBILIZATION, THE CONTRACTOR AND DISTRICT'S REPRESENTATIVE ARE TO MEET ON SITE AND PHOTO DOCUMENT THE EXISTING CONDITIONS OF THE AREA OF WORK AND LANDSCAPED AREAS WHERE TRENCHING WILL BE OCCURRING OR WHERE VEHICLE TRAFFIC IS ANTICIPATED. ALSO TEST IRRIGATION SYSTEM FOR PROPER OPERATION. AT PROJECT COMPLETION ALL AREAS MUST BE RESTORED TO ORIGINAL CONDITION INCLUDING BUT NOT LIMITED TO INSTALLING SOD AT DAMAGED TURF AREAS, REPLACING DAMAGED PLANTINGS, REPAIRING DAMAGED UNDERGROUND UTILITIES, PATCHING DAMAGED ASPHALT PAVING, RE-STRIPPING PAVING OR REPLACEMENT OF DAMAGED CONCRETE. THE CONTRACTOR AND OWNER'S REPRESENTATIVE SHALL MEET ON SITE AT PROJECT COMPLETION AND REVIEW ALL SITE CONDITIONS AND OPERATION OF IRRIGATION SYSTEM.
- ALL WORK MUST CONFIRM TO 2022 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- DEMOLITION GENERAL NOTES:
  - THE CONTRACTOR IS RESPONSIBLE TO HAVE EMERGENCY SHUT-OFF PROCEDURES IN PLACE PRIOR TO START OF CONSTRUCTION AND SHALL FAMILIARIZE THEMSELVES WITH ALL SHUT-OFF VALVE LOCATIONS ON SITE AND HAVE PROPER TOOLS READILY AVAILABLE TO OPERATE VALVES.
  - SAFETY: CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE PREMISES ON WHICH THE WORK IS PERFORMED AND FOR THE SAFETY OF ALL PERSONS AND PROPERTY ON THE SITE BOTH DURING AND OUTSIDE OF NORMAL WORKING HOURS, UNTIL SUCH WORK IS ACCEPTED BY THE OWNER.
  - UNDERGROUND SERVICES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AND/OR UTILITY DISTRICT AS TO THE LOCATION OF ALL UNDERGROUND FACILITIES. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE LOCATION OF ALL UNDERGROUND UTILITIES OF OTHER BURIED OBJECTS WHICH MAY BE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS.
  - USE OF BARRICADES AND SITE CONTROLS: WHEN THE WORK AREA HAS TRENCHES OR DITCHES DEEPER THAN ONE FOOT, THE CONTRACTOR SHALL PROVIDE FENCING AND BARRICADES AND SUCH TRENCHES AND DITCHES SHALL BE COVERED AT THE END OF EACH DAY. THE CONTRACTOR SHALL EXPEDITE THE FILLING AND COMPACTING OF THE TRENCHES AND DITCHES.
  - QUANTITIES: MATERIAL QUANTITIES IF ANY NOTED ON THESE PLANS ARE NOT GUARANTEED CONTRACT QUANTITIES. CONTRACTOR IS TO PERFORM IS OWN ESTIMATE AND QUANTITY TAKE-OFF. CONTRACTOR IS TO PROVIDE ALL MATERIALS NECESSARY TO ACCOMPLISH COMPLETE PROJECT EVEN IF QUANTITIES ARE DIFFERENT FROM THOSE NOTED ON THE DRAWINGS.
  - ALL ITEMS NOT SHOWN AS (E) EXISTING SHALL BE CONSIDERED NEW AND ARE A PART OF THIS CONTRACT.
  - EXISTING GRADES: EXISTING GRADES IF INDICATED ARE APPROX. ONLY AND MAY VARY. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ALL FILL MATERIAL NECESSARY TO BRING THE PADS AND PAVING TO FINISH ELEVATIONS SHOWN REGARDLESS OF QUANTITY.
  - SEASONAL LIMITS: FILL MATERIAL SHALL NOT BE PLACED, SPREAD OR ROLLED DURING UNFAVORABLE WEATHER CONDITIONS. WHEN THE WORK IS INTERRUPTED BY HEAVY RAINS, FILL OPERATIONS SHALL NOT BE RESUMED UNTIL FIELD TESTS INDICATE THAT THE MOISTURE CONTENTS OF THE SUBGRADE AND FILL MATERIALS ARE SATISFACTORY.
  - MATERIALS: AT FILL AT BUILDING PADS AND PAVED AREAS SHALL BE AGGREGATE BASE ROCK. ALL FILL MATERIALS SHALL BE TESTED FOR MATERIALS CONTENT AT BORROW PIT OR SOILS PLANT.
  - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION SHALL COMPLY WITH 2022 CFC, CHAPTER 33

### APPLICABLE CODES

ALL WORK SHALL CONFORM TO THE FOLLOWING AND ALL OTHER APPLICABLE CODES AND ORDINANCES.

2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24, C.C.R.  
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, C.C.R.  
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24, C.C.R.  
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, C.C.R.  
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, C.C.R.  
2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24, C.C.R.  
2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R.  
2022 CALIFORNIA EXISTING BUILDING CODE, PART 10, TITLE 24, C.C.R.  
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, C.C.R.  
2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24, C.C.R.  
TITLE 19 C.C.R., PUBLIC SAFETY, DIVISION 1 STATE FIRE MARSHAL REGULATIONS  
2022 NFPA 13, THE INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS, AS AMENDED  
2019 NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES, AS AMENDED  
2022 NFPA 72, NATIONAL FIRE ALARM CODE, AS AMENDED

UL 464, 2003 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES  
UL 521, 7TH EDITION, 1999 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS

CONTRACTOR SHALL KEEP TITLE 24, CCR, PARTS 1-5 ON THE BUILDING SITE AT ALL TIMES

**NOTE:**  
THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK.

### DSA PROCEDURES

- ADDENDA MUST BE STAMPED AND SIGNED BY THE ARCHITECT OF RECORD AND APPROVED BY DSA IN ACCORDANCE WITH CCR TITLE 25, PART 1
- THE CONTRACTOR SHALL BE FAMILIAR WITH, AND PERFORM THE DUTIES IN ACCORDANCE WITH DSA PROCEDURE 13-01, CONSTRUCTION OVERSIGHT PROCESS.
- CHANGES TO THE STRUCTURAL, ACCESSIBILITY, OR FIRE AND LIFE-SAFETY PORTIONS OF THE APPROVED PLANS AND SPECIFICATIONS AFTER THE WORK HAS BEEN LET SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT AS REQUIRED IN TITLE 24, PART 1, 4-338 AND CONSTRUCTION CHANGE DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO DSA IN ACCORDANCE WITH DSA IR A-6.
- SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS WILL BE CONSIDERED AS CHANGES TO THE APPROVED PLANS AND / OR SPECIFICATIONS. THEY ARE TO BE TREATED AS CONSTRUCTION CHANGE DOCUMENTS AND WILL REQUIRE DSA'S APPROVAL PRIOR TO FABRICATION AND INSTALLATION IN ACCORDANCE WITH TITLE 24, PART 1, 4-338 AND DSA IR A-6.
- THE PROJECT INSPECTOR (CLASS 2 MIN) MUST BE EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY ARCHITECT, STRUCTURAL ENGINEER, AND DSA IN ACCORDANCE WITH TITLE 24, PART 1, 4-341, AND SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
- A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APPROVED DOCUMENTS WOULD MAKE THE BUILDING NON-COMPLIANT WITH THE REQUIREMENTS OF THE EDITION OF THE CBC IN FORCE AT THE TIME OF ORIGINAL CONSTRUCTION, A CHANGE CONSTRUCTION DOCUMENT OR SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK.

### ABBREVIATIONS

<	CENTERLINE	F.D.	FLOOR DRAIN	P.L.	PROPERTY LINE
Ø	DIAMETER OR ROUND	F.E.	FIRE EXTINGUISHER	PL.LAM.	PLASTIC LAMINATE
#	POUND OR NUMBER	F.H.C.	FIRE HOSE CABINET	PLYWD.	PLYWOOD
(E)	EXISTING	FIN.	FINISH FLOOR	PREP.	PREPARATION
A.C.	ASPHALT CONCRETE	F.L.	FACE OF CONCRETE	P.M.	PRESSED METAL
A.C.C.	ACCESSIBLE	F.O.C.	FACE OF FINISH FLOOR	P.P.	PIPE PENETRATION
A.D.	AREA DRAIN	F.O.S.	FACE OF STUDS	PTN.	PARTITION
A.F.F.	ABOVE FINISH FLOOR	F.O.W.	FACE OF WALL	P.V.	PIPE VENT
ALUM.	ALUMINUM	F.R.P.	FIBERGLASS REINFORCED PLASTIC	R.	RISER/RADIUS
ASPH	ASPHALT	F.V.	FIELD VERIFY	R.D.	ROOF DRAIN
BD.	BOARD	GA.	GAUGE	REINF.	REINFORCED
BLDG.	BUILDING	GALV.	GALVANIZED	REQD.	REQUIRED
BOT.	BOTTOM	G.B.	GRAB BAR	R.H.	ROOF HATCH
B.V.	BOILER VENT	GYP.	GYP/SUM	R.W.L.	RAIN WATER LEADER
CAB.	CABINET	H.B.	HOSE BIBB	S.F.	SOLID CORE
C.B.	CHALK BOARD	H.C.	HOLLOW CORE	SF.	SQUARE FOOT
C.D.	CONDENSATE DRAIN	HGT./HT.	HEIGHT	STOR.	STORAGE
CHEM.	CHEMISTRY	H.M.	HOLLOW METAL	SPEC.	SPECIFICATION
C.G.	CORNER GUARD	HR.	HOUR	S.S.	STAINLESS STEEL
C.J.	CONSTRUCTION JOINT	HR.	HOUR	STD.	STANDARD
CLG.	CEILING	HVAC	HVAC UNIT	STL.	STEEL
CLR.	CLEAR	JT.	JOINT	STR.	STRUCTURAL
C.M.U.	CONCRETE MASONRY UNIT	M.B.	MARKER BOARD	SUSP.	SUSPENDED
COL.	COLUMN	M.H.	MANHOLE	S.V.	SMOKE VENT
CONC.	CONCRETE	M.L.	METAL	SYM.	SYMMETRICAL
CONC.	CONTINUOUS	MUL.	MULLION	T.B.	TACK BOARD
C.F.C.I.	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	(N)	NEW	T.C.	TOP OF CURB
CTR.	CENTER	N.I.C.	NOT IN CONTRACT	T.O.C.	TOP OF CONCRETE
DEMO.	DEMOLITION	N.O. or #	NUMBER	T.O.S.	TOP OF STEEL
D.F.	DRINKING FOUNTAIN	N.T.S.	NOT TO SCALE	T.O.P.	TOP OF PLANT
DIA.	DIAMETER	O.C.	ON CENTER	T.V.	TELEVISION
DIM.	DIMENSION	O.D.	OUTSIDE DIAMETER (DIM.)	T.O.W.	TOP OF WALL
D.S.	DOWNSPOUT	O.F.C.I.	OWNER FURNISHED CONTR. INSTAL.	TYP.	TYPICAL
DTL.	DETAIL	O.F.O.I.	OWNER FURNISHED OWNER INSTAL.	U.O.N.	UNLESS OTHERWISE NOTED
DW	DISH WASHER	O.F.S.	OWNER FURNISHED OVER FLOW SCUPPER	U.V.	UNIT VENTILATOR
DWG.	DRAWING	OPNG.	OPENING	VERT.	VERTICAL
E.F.	EXHAUST FAN	OPP.	OPPOSITE	V.H.	VENT HOOD
E.J.	EXPANSION JOINT	OSB	ORIENTED STRAND BOARD	W/	WITH
EMERG.	EMERGENCY			W.C.	WATER CLOSET
ELEV.	ELEVATION			WD.	WOOD
E.W.C.	ELECTRIC WATER COOLER			W/O	WITHOUT
EXST.(E)	EXISTING			W.W.F.	WELDED WIRE FABRIC

### STRUCTURE DATA

**SHADE STRUCTURE 'S1'**  
AREA: 1920 SF.  
CONSTRUCTION: I-B NON-SPRINKLERED  
OCCUPANCY: A-3  
SEE SHEET A1.0 FOR COMPLETE CODE ANALYSIS

#### DESIGN CRITERIA

VERTICAL LOAD: ROOF LIVE LOAD = 20 PSF  
GROUND SNOW, P<sub>g</sub> = 0 PSF  
BASIC WIND SPEED, V-3 SECONDS = 95 MPH  
RISK CATEGORY II  
EXPOSURE CATEGORY C

SEISMIC LOAD: I = 1.00  
RISK CATEGORY II  
S<sub>s</sub> = 0.53 S<sub>1</sub> - 0.24  
SITE CLASS D - DEFAULT  
S<sub>ds</sub> = 0.49

SEISMIC DESIGN CATEGORY D

### SCOPE OF WORK

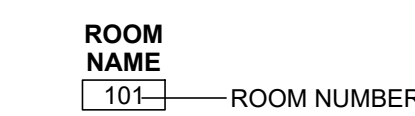
WORK UNDER THIS PROJECT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING GENERAL SCOPE OF WORK

ONE (1) 30'x64' METAL SHADE STRUCTURE BASED ON #A#04-122375 PC (O.F.C.I.); PURCHASE, FABRICATION & DELIVERY BY OWNER/MANUFACTURER, OFF-LOADING & ASSEMBLY BY SITE CONTRACTOR. ASSOCIATED SITE FLATWORK & RESTROOM SIGNS.

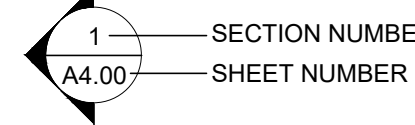
### SYMBOLS LEGEND

SEE INDIVIDUAL SHEETS FOR ADDITIONAL SHEET SPECIFIC SYMBOLS/ LEGENDS INDICATED HERE

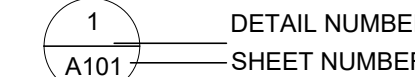
#### ROOM IDENTIFICATION



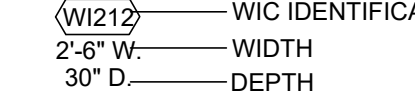
#### BUILDING & WALL SECTION



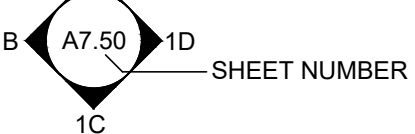
#### DETAIL



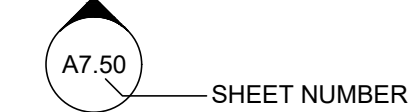
#### CASEWORK REFERENCE



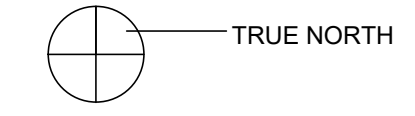
#### INTERIOR ELEVATION



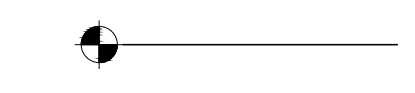
#### EXTERIOR BUILDING ELEVATION



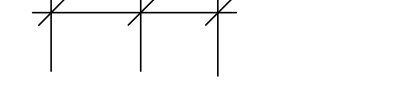
#### NORTH INDICATION



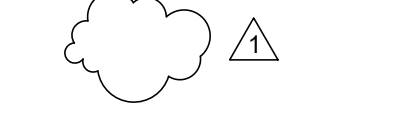
#### DATUM WORK POINT OR CONTROL POINT



#### DIMENSION MARKS



#### REVISION



HARRINGTON  
DESIGN  
ASSOCIATES

5875 PACIFIC STREET, SUITE E2  
ROCKLIN, CA 95677 (916) 577-5789  
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ARCHITECT

CONSULTANT

TwinRivers  
UNIFIED SCHOOL DISTRICT

OWNER

### OUTDOOR LEARNING SHADE STRUCTURES

### DEL PASO HEIGHTS ELEMENTARY SCHOOL

590 MOREY AVENUE  
SACRAMENTO, CA 95838

#### REVISIONS

DSA ADD-001 5/3/2024

DATE February 13, 2024

### TITLE SHEET

T0.0

PART 1 - GENERAL

1.01 INCLUSION OF OTHER CONTRACT DOCUMENTS

A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.02 QUALITY ASSURANCE

A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

B. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.

C. The representatives of the Owner's testing lab will not act as supervisor of construction, nor will they direct construction operations. Neither the presence of the Owner's testing lab representatives nor the testing by the Owner's testing lab shall excuse the contractors or subcontractors for defects discovered in their work during or following completion of the project. Correcting of inadequate compaction or moisture content is the sole responsibility of the contractor.

D. Tests (See Part 3 for Compaction Testing).

E. Contractor shall be solely responsible for all subgrades built. Failures resulting from inadequate compaction or moisture content are the responsibility of the contractor. Contractor shall be solely responsible for any and all repairs.

1.03 SUBMITTALS

a. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.

1.04 WARRANTY

A. Refer to General Conditions.

1.05 REFERENCES AND STANDARDS

A. General: Site survey, included in the drawings, was prepared by Warren Consulting Engineers, and is the basis for data regarding current conditions. While the survey is deemed generally accurate, there exists discrepancies and variations due to elapsed time, weather, etc. Existing dirt grades may vary 0.2 ft. from that shown.

B. Site Visitation: All bidders interfacing with existing conditions shall visit the site prior to bid to verify general conditions of improvements. Discrepancies must be reported prior to the bid for clarification.

C. ANSI/ASTM D698-00 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.

D. ANSI/ASTM D1556-00 - Test Method for Density of Soil in Place by the Sand-Cone Method.

E. ANSI/ASTM D1557-12e1 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (4.54 Kg) Rammer and 18 inch (457 mm) Drop.

F. ANSI/ASTM D 3017-05 Test Methods for Moisture Content of Soils and Soil-Aggregate Mixture by Nuclear Methods (Shallow Depth).

G. ANSI/ASTM D 422-63 (2007) e2  
1 Test Method for Particle Size Analysis of Soil.

H. ANSI/ASTM D 2017E1 Test Method for Liquid Limit, Plastic Limit, and Plasticity Limit.

I. CALTRANS Standard Specifications Section 17.

J. CAL-OSHA, Title 8, Section 1590 (e).

K. Any work within the street, highway or right-of-way shall be performed in accordance with the requirement of the governmental agencies having jurisdiction, and shall not begin until all of those governing authorities have been notified.

1.06 DELIVERY, STORAGE AND HANDLING

A. Transport, store and handle in strict accord with the local jurisdiction.

B. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

1.07 PROJECT CONDITIONS

A. Existing civil, mechanical and electrical improvements are shown on respective site plans to the extent known. Should the Contractor encounter any deviation between actual conditions and those shown, he is to immediately notify the Architect before continuing work.

1.08 EXISTING SITE CONDITIONS

A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.

1.09 ON SITE UTILITY VERIFICATION AND REPAIR PROCEDURES

A. Ground-breaking requirements:

1. All underground work performed by a Contractor must be authorized by the District's Construction Manager or the Low Voltage Consultant prior to start of construction.  
2. The Contractor is to obtain and keep the original School's construction utility site plans on site during all excavation operations. Contractor can contact the District's Construction Manager, Facilities Manager, or the Low Voltage Consultant to procure the drawings.

B. Underground Utility Locating:

1. The contractor shall hire an Underground Utility Locating Service to locate existing underground utility pathways in areas effected by the scope of work for excavation.  
2. Contractor must use an underground utility locator service with a minimum of 3 years experience. The equipment operator must have demonstrated experience. Contact Norcal Underground Locating (800/986-6722) or Precision Locating (800/577-7324)  
3. The Underground Utility Locator Service must have the use of equipment with the ability to locate by means of inductive clamping, induction, inductive metal detection, conductive coupling, or TransOnde (Radiodetection) to generate signals, passive locating (free scoping) for "hot" electric, and metal detector.  
4. The Underground Utility Locator Service must be able to locate existing utilities at a

depth of at least 72".

5. The Underground Utility Locator Service must be able to locate but are not limited to locating the following types of utility pathways:  
a) All conduit pathways containing 110 volt or greater 50-60Hz electrical wire.  
b) All conduit pathways containing an active cable TV system.  
c) All conduit pathways containing wire or conductor in which a signal can be attached and generated without damaging or triggering the existing systems.  
d) All empty conduit pathways or pipe in which a signal probe or sonde (miniature transmitter) can be inserted.  
e) All conduit pathways containing non-conductive cables or wires in which a signal probe or sonde (miniature transmitter) can be inserted.  
f) All plastic and other nonconductive water lines in which a TransOnde Radiodetection) or other "transmitter" can be applied to create a low frequency pressure wave (signal) without damaging or triggering the existing systems.  
g) All copper or steel waterlines and plastic or steel gas lines

6. All markings made by the Underground Utility Locator Service or other shall be clear and visible.

7. The contractor shall maintain all markings made by Underground Utility Locator Service or other throughout the entire length of the project.

8. The Underground Utility Locator Service shall provide the contractor with two sets of maps showing the location of utilities and average depth. They will be referenced to permanent buildings. Contractor will deliver one copy to the district at no additional charge.

9. Contractor is responsible to contact Underground Service Alert (U.S.A. 800/227-2600) and receive clearance prior to any excavation operations.

10. Contractor shall inform the Owner no later than five (5) days prior to the date scheduled for the utility locator service to be on site.

1.10 PROTECTION

A. Adequate protection measures shall be provided to protect workmen and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations.

B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.

C. Any construction review of the Contractor's performance conducted by the Geotechnical Engineer is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.

D. Provide shoring, sheeting, sheet piles and or bracing to prevent caving, erosion or gullying of sides of excavation.

E. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. The contractor shall make a reasonable effort on a daily basis to keep all excavations and the site free from water during entire progress of work, regardless of cause, source, or nature of water.

F. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.

G. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance. Dust control measures shall be in accordance with the local jurisdiction.

H. Trees: Carefully protect existing trees that are to remain. Provide temporary irrigation as necessary to maintain health of trees.

1.11 SEASONAL LIMITS

A. No fill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by rains, fill operations shall not be resumed until field tests indicate that moisture content and density of fill are satisfactory.

B. Excessively wet fill material shall be bladed and aerated per section 3.08, B.

1.12 TESTING

A. General: Refer to Quality Requirements.

B. Geotechnical Engineer: Owner is retaining a Geotechnical Engineer to determine compliance of fill with Specifications, and to direct adjustments in fill operations. Costs of Geotechnical Engineer will be borne by Owner; except those costs incurred for re-tests or re-inspection will be paid by Owner and backcharged to Contractor.

1. If Contractor elects to process or mine onsite materials for use as Suitable Fill, Aggregate Sub Base, Aggregate Base, Rock, Crushed Rock or sand the cost of all testing of this material shall be paid for by the Contractor.  
2. Testing of import fill for compliance with Department of Toxic Substance Control (DTSC) shall be paid for by the Contractor.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Engineered Fill Materials: All fill shall be of approved local materials supplemented by imported fill if necessary. "Approved" local materials are defined as local soils tested and approved by Geotechnical Engineer free from debris, and concentrations of clay and organics; and contain rocks no larger than 3-inches in greatest dimension. The soil and rock should be thoroughly blended so that all rock is surrounded by soil. This may require mixing of the soil and rock with a dozer prior to placement and compaction. Clods, rocks, hard lumps or cobbles exceeding 3-inches in final size shall not be allowed in the upper 12 inches of any fill. Native clay or clayey soils will not be permitted within the upper 12 inches of paved areas.

B. Imported Engineered Fill Material: Imported fill may be required to complete work. Proposed import fill material shall meet the above requirements; shall be similar to the native soils. Import fill shall meet the above requirements; an Expansion Index of 40 or less; be free of particles greater than three-inch (3") in largest dimension; be free of contaminants and have corrosion characteristics within the acceptable limits. All import fill material shall be tested and approved by Soils Engineer prior to transportation to the site. Proposed fill material shall comply with DTSC guidelines to include Phase 1 environmental site assessment and related tests. Refer to the October 2001 DTSC Information Advisory for clean imported fill material.

1. DTSC TESTING: Site work contractor is to coordinate testing with an analytical lab, hired by the owner, licensed by the State of California for the DTSC testing. The costs associated with the testing will be paid by the contractor.

2. DTSC testing shall include documentation as to the previous land use, location, and history. Soils shall be analyzed for all compounds of concern to ensure the imported soil is uncontaminated and acceptable. Testing shall be performed per the recommendations included in DTSC Imported Fill Advisory [http://www.dtsc.ca.gov/Schools/upload/SMP FS Cleanfill-Schools.pdf](http://www.dtsc.ca.gov/Schools/upload/SMP_FS_Cleanfill-Schools.pdf)). Soils shall be tested prior to import to the project site.

3. Lab shall determine geographically which tests and analysis comparison will be appropriate for the testing. (CAM 17 / Title 22); (RWQCB) Regional Water Quality Control Board; or (OEHHA) Office of Environmental Health Hazard Assessment.

4. Frequency of testing shall be conducted in accordance with DTSC's Imported Fill Advisory as follows:

Fill Material Sampling Schedule

Area Of Individual Borrow Area	Sampling Requirements
2 Acres or less	Minimum of 4 samples
2 to 4 Acres	Minimum of 1 sample every 1/2 Acre
4 to 10 Acres	Minimum of 8 Samples
Greater than 10 Acres per location	Minimum of 8 locations with 4 subsamples

Volume of Borrow Area Stockpile

Up to 1,000 Cubic Yards	1 sample per 250 cubic yards
1,000 to 5,000 Cubic Yards	4 samples for the first 1000 cubic Yards + 1 sample per each additional 500 cubic yards
Greater than 5,000 Cubic Yards	12 samples for the first 5,000 cubic yards + 1 sample per each additional 1,000 cubic yards

5. Reports/ Documentation

a. Results of the testing analysis shall be sent to the Owner; Architect; Project Inspector, Project Civil Engineer, DTSC, and DSA. Letter shall reference DSA file and application numbers.

C. Landscape Backfill Material:

1. The top 3" of native topsoil stripped from the site may be used for landscape backfill material.

D. Water: Furnish all required water for construction purposes, including compaction and dust control. Water shall be potable.

E. Aggregate Base: Provide Class 2 3/4" Aggregate Base conforming to standard gradation as specified in Cal Trans Standard Specifications, Section 26.-1.02A.

PART 3 - EXECUTION

3.01 INSPECTION LAYOUT AND PREPARATION

A. Prior to installation of the work of this Section, carefully inspect and verify by field measurements that installed work of all other trades is complete to the point where this installation may properly commence

B. Layout all work, establish grades, locate existing underground utilities, set markers and stakes, setup and maintain barricades and protection facilities; all prior to beginning actual earthwork operations. Layout and staking shall be done by a licensed Land Surveyor or Professional Civil Engineer.

C. Verify that specified items may be installed in accordance with the approved design.

D. In event of discrepancy, immediately notify Owner and the engineer. Do not proceed in discrepant areas until discrepancies have been fully resolved.

3.02 PERFORMANCE

A. GENERAL:

1. General: Do all grading, excavating and cutting necessary to conform finish grade and contours as shown. All cuts shall be made to true surface of subgrade.  
2. Archaeological Artifacts: Should any artifacts of possible historic interest be encountered during earthwork operations, halt all work in area of discovery and immediately contact the Architect for notification of appropriate authorities.  
3. Degree of Compaction: Percentage of maximum density, hereinafter specified as degree of compaction required, means density equivalent to that percentage of maximum dry density determined by ASTM D1557 Compaction Test method, and such expressed percentage thereof will be minimum acceptable compaction for specified work.  
4. Optimum Moisture Content: Optimum moisture content will be determined by Soils Engineer and this information supplied to Contractor. Optimum moisture content shall be maintained until subgrade is covered by surfacing materials.

3.03 DEMOLITION, DISPOSAL AND DISPOSITION OF UNDESIRABLE MAN-MADE FEATURES

A. All other obstructions, such as abandoned utility lines, septic tanks, concrete foundations, and the like shall be removed from site. Excavations resulting from these removal activities shall be cleaned of all loose materials, dish shaped, and widened as necessary to permit access for compaction equipment. Areas exposed by any required over-excavation should be scarified to a depth of 12", moisture-conditioned to near optimum moisture content, and recompacted to at least 90% of the maximum dry density.

3.04 TESTING AND OBSERVATION

A. All grading and earthwork operations shall be observed by the Geotechnical Engineer or his representative, serving as the representative of the Owner.

B. Field compaction tests shall be made by the Geotechnical Engineer or his representative. If moisture content and/or compaction are not satisfactory, Contractor will be required to change equipment or procedure or both, as required to obtain specified moisture or compaction. Notify Geotechnical Engineer at least 48 hours in advance of any filling operation.

C. Earthwork shall not be performed without the notification or approval of the Geotechnical Engineer or his representative. The Contractor shall notify the Geotechnical Engineer at least two (2) working days prior to commencement of any aspect of the site earthwork.

D. If the Contractor should fail to meet the compaction or design requirements embodied in this document and on the applicable plans, he shall make the necessary readjustments until all work is deemed satisfactory, as determined by the Geotechnical Engineer or Engineer.

E. After each rain event Geotechnical Engineer shall test fill material for optimum moisture. Do not place any fill material until desired moisture is achieved.

3.05 CLEARING AND GRUBBING

A. Prior to grading, remove all debris off-site. Remove trees and brush including the root systems. Holes resulting from tree and brush removal should be prepared and backfilled in accordance with paragraphs 3.07, 3.08, 3.09, and 3.10. This may require deepening and/or widening the holes to adequately remove disturbed soil and provide room for compaction equipment. Strip the surface of all organics.

3.06 CUTTING

A. Do all cutting necessary to bring finish grade to elevations shown on Drawings.

B. When excavation through roots is necessary, cut roots by hand.

C. Carefully excavate around existing utilities to avoid unnecessary damage. The contractor shall anticipate and perform hand work near existing utilities as shown on the survey, without additional claims or cost.

3.07 SUBGRADE PREPARATION

A. Grade compact and finish all subgrades within a tolerance of 0.10' of grades as indicated on Drawings and so as not to pool water. Subgrade within building pads and concrete walks shall be within 0.05' of grades indicated.

B. After clearing, grubbing and cutting, subsurface shall be plowed or scarified to a depth of at least 12", until surface is free from ruts, hummocks or other uneven features and uniform and free from large clods. Moisture condition to optimum moisture content and recompact to at least 90% of the maximum dry density as determined by ASTM Test Method D1557. If the existing soils are at a water content higher than specified, the contractor shall provide multiple daily aerations by ripping, blading, and/or discing to dry the soils to a moisture content where the specified degree of compaction can be achieved. After seven consecutive working days of daily aerations, and the moisture content of the soil remains higher than specified, the contractor shall notify the architect. If the existing soils have a moisture content lower than specified, the contractor shall scarify, rip, water and blade existing soil to achieve specified moisture content. The contractor shall make proper allowance in schedule and methods to complete this work.

C. Subgrade in areas to receive landscaping shall be compacted to (90%).

3.08 PLACING, SPREADING AND COMPACTING FILL MATERIAL IN BUILDING PAD AND PAVEMENT AREAS

A. Selected fill material shall be placed in layers which, when compacted, shall not exceed 6 inches in compacted thickness. Each layer shall be spread evenly and thoroughly mixed to insure uniformity in moisture content.

B. Selected fill material shall be moisture-conditioned to specified moisture content. Selected fill material shall be unfrozen. When moisture content of fill material is below that specified, add water until proper moisture content is achieved. When moisture content is above that specified, aerate by blading or other methods mentioned in 3.08 B until moisture content is satisfactory.

C. After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to a minimum of 90% as determined by the ASTM D1557 Compaction Test. Compact each layer over its entire area until desired density has been obtained.

D. Recompaction of Fill in Trenches and Compaction of Fill Adjacent to Walls: Where trenches must be excavated, backfill with material excavated. Place in lifts that when compacted do not exceed 6", moisture conditioned to at least optimum moisture content, and compact to a minimum of 90% relative compaction in building pad and paved areas, and to 90% relative compaction in landscape areas.

E. Jetting of fill materials will not be allowed.

3.09 FINAL SUBGRADE COMPACTION

A. Paved Areas: Upper 6" of all final subgrades supporting pavement sections and all other flatwork shall be brought to specified moisture content and shall be uniformly compacted to not less than 95% of maximum dry density, regardless of whether final subgrade elevation is attained by filling, excavation, or is left at existing grade. After acceptance of final compaction test, contractor shall maintain the required moisture content of subgrade until concrete flatwork is placed.

B. Other Fill and Backfill: Upper 12" of all other final subgrades or finish grades shall be compacted to 90% of maximum dry density.

3.10 PLACING, SPREADING, AND COMPACTION OF LANDSCAPE BACKFILL MATERIALS

A. All landscaped areas shall receive topsoil. After subgrade under landscape area has been scarified and brought to 90% maximum dry density, top soil shall be placed evenly to depth of 12" at 85% of maximum dry density.

B. Project Inspector must verify that materials are uniformly spread to minimum depth specified.

3.11 SLOPE CONSTRUCTION

A. Cut slopes shall be constructed to no steeper than 3:1 (horizontal:vertical). Fill slopes shall be constructed to no steeper than 3:1 (horizontal:vertical). Prior to placement of fill on an existing slope the existing slope shall be benched. The benches shall be in a ratio of 3 horizontal to 1 vertical. The face of the fill slopes shall be compacted as the fill is placed, or the slope may be overbuilt and then cut back to the design grade. Compaction by track walking will not be allowed.

3.12 FINISH GRADING

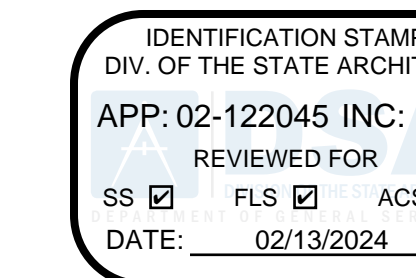
A. At completion of project, site shall be finished graded, as indicated on Drawings. Finish grades shall be "flat graded" to grades shown on the drawing. Mounding of finish grades will not be allowed unless otherwise directed on the landscape drawings. Tolerances for finish grades in drainage swales shall be +/-0.05'. Tie in new and existing finish grades. Leave all landscaped areas in finish condition for lawn seeding. Landscaped planters shall be graded uniformly from edge of planter to inlets. If sod is used for turf areas the finish grade on which it is placed shall be lowered to allow for sod thickness.

3.13 SURPLUS MATERIAL

A. Excavated material not required for grading or backfill shall be removed from site at contractor's expense.

3.14 CLEANING

A. Remove from fill all vegetation, wood, form lumber, casual lumber, and shavings, in contact with ground; buried wood will not be permitted in any fill.



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ARCHITECT



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CONSULTANT



OWNER

OUTDOOR LEARNING  
SHADE STRUCTURES

DEL PASO HEIGHTS  
ELEMENTARY SCHOOL

590 MOREY AVENUE  
SACRAMENTO, CA 95838

DATE February 13, 2024

EARTHWORK  
SPECIFICATION

SP0.1

PART 1 - GENERAL

1.01 INCLUSION OF OTHER CONTRACT DOCUMENTS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.02 QUALITY ASSURANCE

- A. Use only new materials and products.
B. Use materials and products of one manufacturer whenever possible.
C. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record.
D. Sieve analysis from testing laboratories identifying rock/sand percentages within the concrete mix;

1.03 SUBMITTALS

- A. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use.
B. Materials list: Submit to the Architect a complete list of all materials proposed to be used in this portion of the work.
C. With concrete submittal, provide documented history of mix design performance.

1.04 WARRANTY

- A. Refer to General Conditions. 1.05 REFERENCES AND STANDARDS A. California Building Code, 2022 edition.
B. ASTM C-94, Specification for Ready-Mixed Concrete.
D. Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice (latest edition).

1.07 TESTING

- A. Cement and Reinforcing shall be tested in accordance with CBC Section 1705A.3 and 1913A.
B. Notify Inspector, Architect and DSA at least 48 hours prior to placing of concrete.

1.09 PROTECTION

- A. Finish surfaces shall be protected at all times from concrete pour.
B. Make and be responsible for all field dimensions necessary for proper fitting, slopes and completion of work.

PART 2 - PRODUCTS

- A. Cement: Portland cement, ASTM C150, Type II, per ACI 318 Section 3.2.
B. Concrete Aggregates: Normal weight aggregates shall conform to ASTM C33, except as modified by this section.

2.01 MATERIALS

- A. Cement: Portland cement, ASTM C150, Type II, per ACI 318 Section 3.2.
B. Concrete Aggregates: Normal weight aggregates shall conform to ASTM C33, except as modified by this section.
C. Water: Clean and free from deleterious amounts of acids, alkalis, scale, or organic materials and per ACI 318 Section 3.4.
D. Gravel Below Slabs: Free-draining ground or crushed rock graded so that 100 percent will pass a one inch sieve with no appreciable material passing a no. 4 sieve.
E. Sand Below Slabs: Clean, washed sand with no organic materials or salts.
F. Fly Ash: Western Fly Ash, conforming to ASTM C618 for Class N or Class F materials (Class C is not permitted).
G. Water Reducing Admixture: Admixture to improve placing, reduce water cement ratio, and ultimate shrinkage may be used.
H. Air-entraining Admixture: Darawair 1000 by Grace Construction Products or approved equal.
I. Exterior Flatwork Expansion Joint Sealant: WR Meadows or approved equal.
J. Surface Retarder (for exposed aggregate finishes): Rugasol-S by Silka Corporation or approved equal.
K. Form Coating: Material which will leave no residue on concrete surface that will interfere with surface coating, as approved by the Architect.
L. Expansion Joint Material: Preformed 3/8" fiber material, full depth of concrete section, with bituminous binder manufactured for use as concrete expansion joint material, as accepted by the Architect.
M. Reinforcement Bars: New billet steel deformed bars conforming to requirements of ASTM A615 or ASTM A706; Grade 60.
N. Reinforcing supports: Galvanized metal chairs or spacers or metal hangers, accurately placed 3'-0" O.C.E.W.
O. Curing Compound (for exterior slabs only): Burke Aqua Resin Cure by Burke by Edocon, 1100 Clear by W.R. Meadows or accepted equal.
P. Concrete Bonding Agent: Weld-Crete by Larson Products Corp., Daraweld C by Grace Construction Products or accepted equal.
Q. Patching Mortar: Meadow-Crete GPS, one-component, trowel applied, polymer enhanced, shrinkage-compensated, fiber reinforced, cementitious repair mortar for horizontal, vertical and overhead applications as manufactured by W.R. Meadows or accepted equal.
R. Non-shrink Grout: Masterflow 713 Plus by Master Builders or approved equal.
S. Aggregate Base: Class 2 AB per Caltrans specification section 26-1.02A.
T. Joint sealant for expansion joints: Single component silicone sealant, Type S, ASTM D5893
U. Pre-Formed plastic Expansion Joint: W.R. Meadows 3/8" "Snap Cap", Tex-Trude expansion joint cap, or an approved equal.

2.02 CONCRETE DESIGN AND CLASS

- A. Class "B": Concrete shall have 1" max. size aggregate, shall have 3000 psi min. at 28 day strength with a maximum water to cementitious ratio no greater than 0.50.
B. Slump Limits: Provide concrete, at point of final discharge, of proper consistency determined by Test Method ASTM C143 with a slumps of 4" plus or minus 1".
C. Mix Design: All concrete used in this work will be designed for strength in accordance with provisions of CBC, Section 1905A.
D. Air Entrainment; Per the Local Jurisdiction minimum requirements, but no less than 3%.

2.03 MIXING OF CONCRETE

- A. Conform to requirements of CBC, Chapter 19A.
B. All concrete shall be mixed until there is uniform distribution of material and mass is uniform and homogenous; mixer must be discharged completely before the mixer is recharged.
C. Concrete shall be Ready-mixed Concrete: Mix and deliver in accordance with the requirements set forth in ASTM C94 and ACI 301.
D. Approved Testing Laboratory shall check the first batching at the start of the work and furnish mix proportions to the Licensed Weighmaster.
E. Ticket shall be transmitted to Project Inspector by truck driver with load identified thereon.
F. Placement of concrete shall occur as rapidly as possible after batching and in a manner which will assure that the required quality of the concrete is maintained.

2.04 MATERIALS TESTING

- A. Testing of concrete shall be performed per article 3.07 of this specification.

2.05 - EQUIPMENT

- A. Handling and mixing of concrete: Project Inspector may order removal of any equipment which in his opinion is insufficient or in any way unsuitable.

PART 3 - EXECUTION

3.01 APPROVAL OF FORMS AND REINFORCEMENTS

- A. Project Inspector will not accept load without load ticket identifying mix and will keep daily record of pours, identifying each truck, its load and time of receipt and will transmit two copies of record to DSA.
B. All reinforcing steel and or W.W.F. shall be adequately supported by approved devices on centers close enough to prevent any sagging.
C. All reinforcing bar lap splices shall be staggered a minimum of 5 ft.
D. Additional reinforcing steel shall be placed around all utility boxes, valve boxes, manhole frames and covers that are located within the concrete placements.
E. At all right angles or intersections of concrete walks, additional 2"x2" #5, 90 degree bars shall be added at all inside corners for additional crack control.

3.02 PROTECTION

- A. Protect work and materials of this Section prior to and during installation, and protect the installed work and materials of other trades.
B. In the event of damage, make all repairs and replacements necessary to the approval of the Architect at no additional cost to the owner.
C. Sub-Grade in vehicular concrete paved areas: Subgrade shall be clean, shaped and compact to hard surface free from elevations or depressions exceeding 0.05' in 10' from true plan.

3.03 CLEANING

- A. Reinforcement and all other embedded items at time of placing concrete to be free of rust, dirt oil or any other coatings that would impair bond to concrete.
B. Remove all wood chips, sawdust, dirt, loose concrete and other debris just before concrete is to be poured.

3.04 FORMING

- A. Form material shall be straight, true, sound and able to withstand deformation due to loading and effects of moist curing.
B. Build forms to shapes, lines, grades and dimensions indicated.
C. Space clamps, ties, hangers and other form accessories so that working capacities are not exceeded by loads imposed from concrete or concreting operations.
D. Build openings into vertical forms at regular intervals if necessary to facilitate concrete placement, and at bottoms of forms to permit cleaning and inspection.
E. Build in securely braced temporary bulkheads, keyed as required, at planned locations of construction joints.
F. Slope tie-wires downward to outside of wall.
G. Brace, anchor and support all cast-in items to prevent displacement or distortion.
H. During and immediately after concrete placing, tighten forms, posts and shores.
I. Expansion Joints: Install at locations indicated, and so that maximum distance between joints is 20' for exterior concrete unless otherwise shown.
J. Curbs, Valley Gutter, and Curb & Gutter: Install expansion joints at 60' on center, except when placing adjacent to concrete walks, the expansion joints shall align with the expansion joints shown for the concrete walks.
K. Isolation Joints: 3/8" felt between walls and exterior slabs or walks so that paved areas are isolated from all vertical features, unless specifically noted otherwise on plans.
L. Ramps; whether shown or not all ramps shall have control joints and expansion joints.
M. Control joints on ramps shall be aligned and be placed in between with the vertical posts for the handrails.
N. Expansion joints shall be placed at the upper, intermediate, and bottom landings.

3.05 FORM COATING

- A. Before placement of reinforcing steel, coat faces of all forms to prevent absorption of moisture from concrete and to facilitate removal of forms.
B. Before re-using form material, inspect, clean thoroughly and recoat.
C. Seal all cut edges.

3.06 INSTALLATION

- A. General: Reinforcement shall be accurately placed at locations indicated on the drawings within required tolerances and providing required clearances.
B. Placing Tolerances:
1. Per ACI 301 or CRSI/WCRSI Recommended Practice for Placing Reinforcing Bars, unless otherwise shown.
2. Clear distance between parallel bars in a layer shall be no less than 1", the maximum bar diameter not 1 1/2 times the maximum size of coarse aggregate.
3. Splices:
a. Lap splices in concrete: Lap splice lengths shall not be less than 62 bar diameter for No. 5 bar, 56" minimum for No. 6 bars.
b. All splices shall be staggered at 5 feet minimum.

3.07 INSPECTION

- A. Approval of reinforcing steel, after installation, approval must be received from Inspector.

3.08 PLACING OF CONCRETE

- A. Adjacent finish surfaces shall be protected at all times during the concrete pour and finishing.
B. Transport concrete from mixer to place of final deposit as rapidly as practicable by methods which will prevent separation or loss of ingredients.
C. Placing: Once started, continue concrete pour continuously until section is complete between predetermined construction joints.
D. Remove form spreaders as placing of concrete progresses.
E. Place footings as monolithic and in one continuous pour.
F. Keep excavations free of standing water, but moisture condition sub-grade before concrete placement.
G. Compacting: All concrete shall be compacted by mechanical vibrators.
H. Grout under column bearing plates: Dry pack with specified Non-shrink Grout, as recommended by manufacturer.
I. Concrete Flatwork:
1. All flatwork shall be formed and finished to required line and grades.
J. Placing in hot weather: Comply with ACI 305R-91.
K. Placing in cold weather: Comply with ACI 306R-02.
L. Horizontal construction joints: Keep exposed concrete face of construction joints continuously moist from time of initial set until placing of concrete; thoroughly clean contact surface by chipping entire surface not earlier than 5 days after initial pour.

3.09 CONCRETE FINISHES

- A. Concrete Slab Finishing: Finish slab as required by ACI 302.1R.
B. Flatwork, medium broom finish: Typical finish to be used at all exterior walks, stairs and ramps.
C. Joints and Edges: Mark-off exposed joints, where indicated, with 1/4" radius x 1" deep jointer or edging tool.
D. The expansion joints shall be full depth as shown in the plan details.
E. Curing Compound: Cured Concrete in Forms: Keep forms and top on concrete between forms continuously wet until removal of forms, 7 days minimum.

3.10 CURING

- A. Cured Concrete in Forms: Keep forms and top on concrete between forms continuously wet until removal of forms, 7 days minimum.
B. Flatwork/Variable Height Curbs, Curb and gutter, Valley Gutter: Cure utilizing Curing Compound.
C. No Curing Compound shall be applied to areas scheduled to receive resilient track surface including, curbs, ramps, run ways, etc.

3.11 DEFECTIVE CONCRETE

- A. Determination of defective concrete shall be made by the Architect or Engineer.
B. The Owner reserves the right to survey the flatwork, if it is determined to be outside of the maximum tolerance for flatness.
C. As directed by Architect, cut out and replace defective concrete.
D. Permission to patch any area shall not be considered waiver of right, by the Owner, to require removal of defective work, if patching does not, in opinion of engineer, satisfactorily restore quality and appearance of surface.

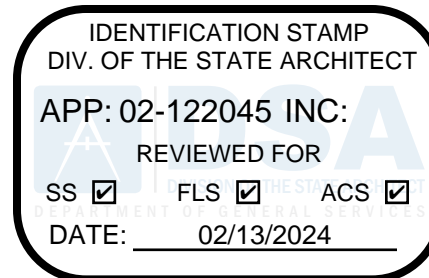
- 1. Concrete that does not match the approved mix design for the given installation type.
2. Concrete not meeting specified 28-day strength.
3. Concrete which contains rock pockets, voids, spalls, transverse cracks, exposed reinforcing, or other such defects which adversely affect strength, durability or appearance.
4. Concrete which is incorrectly formed, out of alignment or not plumb or level.
5. Concrete containing embedded wood or debris.
6. Concrete having large or excessive patched voids which were not completed under Architect's direction.
7. Concrete not containing required embedded items.
8. Excessive Shrinkage, Transverse cracking, Cracking, Curling or Defective Finish.
9. Concrete that is unsuitable for placement or has set in truck drum for longer than 90 minutes from the time it was batched.
10. Expansion joint felt that is not isolating the full depth of the concrete section, and recessed as required for backer rod and sealant where required.
11. Concrete that is excessively wet or excessively dry and will not meet the minimum or maximum slump required per mix design.
12. Finished concrete with oil stains from equipment use, and or rust spots that cannot be removed.
13. Control joints (weakened planed joints) that do not meet the required minimum depth shown on the drawings.
F. Patching: Install specified Patching Mortar per manufacturer's recommendations.

3.12 REMOVAL OF FORMS

- A. Remove without damage to concrete surfaces.
B. Sequence and timing of form removal shall insure complete safety of concrete structure.
C. Forms shall remain in place for not less than the following periods of time.
1. Vertical forms of foundations, walls and all other forms not covered below: 5 days.
2. Slab edge screeds or forms: 7 days.
3. Concrete columns and beam soffits: 28 days.
D. Concrete shall not be subjected to superimposed loads (structure or construction equipment) until it has attained its full design strength and not for a period of at least 21 days after placing.

3.13 CLEANING

- A. Upon completion of work of this Section promptly remove from the working area all scraps, debris and surplus material of this Section.
B. Clean excess material from surface of all concrete walks and utility structures.
C. Power wash all concrete surfaces to remove stains, dried mud, tire marks, and rust spots.



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ARCHITECT



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CONSULTANT



OWNER

OUTDOOR LEARNING SHADE STRUCTURES

DEL PASO HEIGHTS ELEMENTARY SCHOOL

590 MOREY AVENUE
SACRAMENTO, CA 95838

DATE February 13, 2024

SITE CONCRETE SPECIFICATION

SP0.2

**PART 1 - GENERAL**

**1.01 INCLUSION OF OTHER CONTRACT DOCUMENTS**

A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

**1.02 QUALITY ASSURANCE**

A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

B. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.

C. The representatives of the Owner's testing lab will not act as supervisor of construction, nor will they direct construction operations. Neither the presence of the Owner's testing lab representatives nor the testing by the Owner's testing lab shall excuse the contractors or subcontractors for defects discovered in their work during or following completion of the project. Correcting inadequate compaction is the sole responsibility of the contractor.

D. Contractor shall provide verification that asphalt mix temperature meets the requirements of this specification at time of application.

E. Contractor shall be solely responsible for all subgrades built. Any repairs resulting from inadequate compaction is the responsibility of the contractor.

F. Sieve analysis from testing laboratories identifying rock/sand percentages within the asphalt mix shall have a testing date within 90 days of contract signing.

G. Sieve analysis from a testing laboratory identifying rock/sand percentages within the class 2 aggregate base rock shall have a testing date within 90 days of contract signing.

**1.03 SUBMITTALS**

A. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.

**1.04 WARRANTY**

A. Refer to General Conditions

**1.05 REFERENCES AND STANDARDS**

A. ANSI/ASTM D698-00 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.

B. ANSI/ASTM D1556-00 - Test Method for Density of Soil in Place by the Sand-Cone Method.

C. ANSI/ASTM D1557-02 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb (4.54 Kg) Rammer and 18 inch (457 mm) Drop.

D. ANSI/ASTM D 3017-05 Test Methods for Moisture Content of Soils and Soil-Aggregate Mixture by Nuclear Methods (Shallow Depth).

E. ANSI/ASTM D 422-63 Test Method for Particle Size Analysis of Soil.

F. ANSI/ASTM D 4318-05 Test Method for Liquid Limit, Plastic Limit, and Plasticity Limit.

G. CALTRANS Standard Specifications.

H. CAL-OSHA, Title 8, Section 1590 (e).

I. Any work within the street, highway or right-of-way shall be performed in accordance with the requirement of the governmental agencies having jurisdiction, and shall not begin until all of those governing authorities have been notified.

**1.06 DELIVERY, STORAGE AND HANDLING**

A. Transport, store and handle in strict accord with the local jurisdiction.

B. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

**1.07 PROJECT CONDITIONS**

A. Environmental Requirements:

1. Base Course: Do not lay base course on muddy subgrade, during wet weather, or when atmospheric temperature is below 40 degrees F.  
 2. Asphalt Surfacing: Do not apply asphaltic surfacing on wet base, during wet weather, or when atmospheric temperature is below 50 degrees F.

**1.08 EXISTING SITE CONDITIONS**

A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.

**1.09 PROTECTION**

A. Adequate protection measures shall be provided to protect workmen and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations.

B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.

C. Any construction review of the Contractor's performance conducted by the owner's representative is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.

D. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. The contractor shall make a reasonable effort on a daily basis to keep all excavations and the site free from water during entire progress of work, regardless of cause, source, or nature of water.

E. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.

F. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance. Dust control measures shall be in accordance with the local jurisdiction.

**1.10 SEASONAL LIMITS**

A. No fill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by rains, fill operations shall not be resumed until field tests indicate that moisture content and density of fill are satisfactory.

**1.11 TESTING**

A. General: Refer to Section 014000 - Quality Requirements.

B. Geotechnical Engineer: Owner is retaining a Geotechnical Engineer to determine compliance of fill with Specifications, and to direct adjustments in fill operations. Costs of Geotechnical Engineer will be borne by Owner; except those costs incurred for re-tests or re-inspection will be paid by Owner and backcharged to Contractor.

**PART 2 - PRODUCTS**

**2.01 MATERIALS**

A. Sterilant: Soil sterilizer shall be CIBA GEIGY's Pramatom 25-E, Treflan EC or Thompson-Hayward Casoron.

1. Soil sterilizer shall be applied in strict accordance with manufacturer's instructions.

B. Base Course Aggregate: State Specifications, Section 26, Class 2 aggregate base (3/4" max.).

C. Asphalt Binder: Steam-refined paving asphalt conforming to State Specifications, Section 92, viscosity grade PG 64-10. Asphalt binder additives for WMA per Caltrans approved list of manufacturer's.

D. Liquid Asphalt Tack Coat: Per CALTRANS section 94.

E. Surface Course Aggregate: Mineral aggregates for Type "B" asphalt concrete, conforming to State Specifications 39-2.02, Type B, 1/2" maximum, medium grading, 3/8" maximum grading at Playcourt.

F. Seal Coat: shall be a pre-mixed asphalt emulsion blended with select fillers and fibers such as:

1. "Park-Top No. 302", Western Colloid Products.
2. "Overcoat", Reed and Gram.
3. "Drivewalk", Conoco Oil.

G. Wood Headers and Stakes: Pressure treated.

H. Pavement Marking: Colors as directed by Architect. Colors of painted traffic stripes and pavement markings must comply with ASTM D 6628.

1. Waterborne traffic line - colors white, yellow and red, State specification PTWB-01R3.
3. Waterborne traffic line for the international symbol of accessibility and other curb markings - blue, red and green, Federal specification TT-P-1952E.

I. Precast Concrete Bumpers: 3000 psi at 28 day minimum strength; 48" length unless otherwise indicated; provide with steel dowel anchors and concrete epoxy.

J. Pavement Epoxy: K-Lite; Ktepx-590; Ennis Epoxy HPS2 or an approved equal.

- K. Crack Filler:
1. Cracks up to 1/2": QPR model CAR08, 10oz asphalt crack filler; Star STA-FLEX Trowel Grade crack filler or approved equal.
  2. Cracks 1/2" - 1": "Docal 1100 Viscolastic, distributed by Conoco, Inc., Elk Grove, CA, (916) 685-9253, or approved equal.
  2. Cracks greater than 1": Hot Mix, Topeka.

L. Reclaimed Asphalt Paugment (RAP). HMA Type A or Type B may be produced using RAP providing it does not exceed 15% of the aggregate blend.

**2.02 MIXES**

A. General: Plant mixed conforming to State Specifications, Section 39, Type B, 1/2" maximum, medium grading. 3/8" maximum grading shall be used at hardcourt.

B. Temperature of Hot Mix Asphalt: Not less than 275 degrees F nor more than 325 degrees F when added to aggregate.

C. Temperature of Hot Mix Aggregate: Not less than 250 degrees F nor more than 325 degrees F when asphalt is added.

D. Temperature of Hot Mix Asphalt Concrete: Asphalt shall be not less than 285 degrees at time of application, nor more than 350 degrees. Asphalt not meeting the required temperature shall not be used.

E. Temperature of Warm Mix Asphalt: Mixing and placement; Per the approved manufacturers heat range recommendations for mixing and placement.

**PART 3 - EXECUTION**

**3.01 EXAMINATION OF CONDITIONS**

A. Conditions of Work in Place: Subsurfaces which are to receive materials specified under this Section shall be carefully examined before beginning work hereunder, and any defects therein shall be reported, in writing, to the Architect. Work shall not be started until such defects have been corrected. Starting of work shall imply acceptance of conditions as they exist.

**3.02 PREPARATION**

A. Sub-Grade: Clean, shape and compact to hard surface free from elevations or depressions exceeding 0.05' in 10' from true plan. Compact per Section 31 0000. Compaction and moisture content shall be verified immediately prior to placement of asphalt. Proof roll subbase in presence of geotechnical engineer prior to placement of aggregate base.

**3.03 INSTALLATION**

A. Headers:

1. General: Install as edging to asphalt paving, except where adjoining existing pavement, concrete curbs, walks or building.

2. Existing Headers: Remove existing headers where new paving will join existing. Saw cut existing asphalt to provide clean edge.

3. Lines and Levels: Install true to line and grade. Cut off tops of stakes 2-inches below top of header so they will not be visible on completion of job.

**B. Asphalt Paving:**

1. Base Course: Install in accord with State Specifications, Section 26. Compact to relative compaction of not less than 95%, ASTM D1557. The material shall be deposited on the subgrade in such a manner as to provide a uniform section of material within five percent tolerance of the predetermined required depth. Deposition will be by spreader box or bottom dump truck to prevent segregation of the material. The material so deposited on the subgrade shall have sufficient moisture which, in the opinion of the Architect is adequate to prevent excessive segregation. It shall then be immediately spread to its planned grade and cross section. Undue segregation of material, excessive drifting or spotting of material will not be permitted. If in the opinion of the site geotechnical engineer, the material is unsuitably segregated, it shall be removed or completely reworked to provide the desired uniformity of the material.

2. Sterilant: Apply specified material at manufacturer's recommended rate. Applicator of sterilant material shall be responsible for determining location of all planter areas. Apply specified material over entire base course area just prior to application of asphalt. Follow manufacturer's printed directions.

3. Liquid Asphalt Tack Coat: Apply as "tack coat" to all vertical surfaces of existing paving, curbs, walks, and construction joints in surfacing against which paving is to be placed.

4. Asphalt Concrete Surface Course:

a. Comply with State Specifications, 39-6 except as modified below.

1) Final gradation shall be smooth, uniform and free of ruts, humps, depressions or irregularities, with a minimum density of 95% of the test maximum density determined by California Test Methods #304 and 375. Maximum variation 1/8 inch in 10' when measured with steel straightedge in any one direction. Test paved areas for proper drainage by applying water to cover area. Correct portions that do not drain properly by patching with plant mix. In no case shall accessible parking spaces or loading and unloading areas exceed 2% slope in any direction.

2) Asphalt material shall be delivered to the project site in a covered condition to maintain acceptable temperature. Onsite inspector shall verify temperature of asphalt upon truck arrival to the site.

5. Placement and adjustment of Frames, Covers, Boxes and Grates: The Contractor shall set and adjust to finish grade all proposed and existing frames, covers, boxes, and grates of all manholes, drop inlets, drain boxes, valves, cleanouts, electrical boxes and other appurtenant structures prior to placement of asphaltic concrete.

6. Water Testing: All paved areas shall be water tested, to check drainage, in the presence of the project inspector prior to placement of seal coat. The surface of asphalt paving shall not vary more than 1/8 inch above or below the grade established on the plans. If variations in grade are present, they will be corrected by overlaying paving and/or pavement removal and replacement as directed by the Architect.

7. Patching: Cut existing paving square and plumb at all edges to be joined by new paving. In trenches; grind existing asphalt on each side of trench 3" wide x 1/2 the depth of the section. Apply tack coat to vertical surfaces before installing new work. Warp carefully to flush surface, with seal over joints, and feather edge. Sawcut, remove and patch existing paving where cutting is necessary for installation of piping or conduits under Divisions 2, 15 and 16.

C. Pavement Marking: pavement markings shall be done only after the seal coat has thoroughly dried. Existing surfaces to be striped with traffic paint shall be cleaned of dust, dirt, grime, oil, rust or other contaminants which will impair the quality of work or interfere with proper bond of paint coats. Surfaces shall be thoroughly cleaned by whatever means necessary that will satisfactorily accomplish the purpose without damage to asphalt concrete. Provide measured layouts, temporary markings, templates, and other means necessary to provide required marking. Prepare and apply paint in accordance with manufacturer's instructions; paint shall be applied by spray and shall achieve complete coverage free from voids and thin spots. Where indicated on the Drawings, paint parking stall strips, lettering, arrows, accessible symbols, playfield markings, etc. on asphalt concrete paving. Paint strips shall be 4 inches wide (except otherwise indicated) and applied with two (2) coats of herein specified Traffic Line Paint; white (except as otherwise specified or indicated).

1. Paints shall be delivered to the site in unopened containers.

a. Paint shall not be diluted, or watered down.  
 b. Paint shall be applied in 10-12 wet mil thickness (4-6 mil dried). Each coat thickness shall be verified by the project inspector.

2. International Accessible Symbol: Symbol shall be white figures on a blue background. Blue shall be equal to color No. 15090 in Fed. Std. 595c. Lines and symbols shall be accurately formed and true to line and form; lines shall be straight and uniform in width. Painted edges shall be clean cut and free from raggedness, and corners shall be cut sharp and square. Tolerances: Apply striping within a tolerance 1/2 inch in 50 feet. Apply markings and striping to widths indicated with a tolerance of 1/4 inch on straight sections and 1/2 inch on curved sections.

E. Colors: As directed by Architect

**3.04 DEFECTIVE ASPHALT:**

Defective asphalt is as described below.

A. Exposed rock pockets on the finished surface that lack the # 8- #200 fines that is required per the sieve analysis.

B. Asphalt not placed to the design grades.

C. Asphalt that ponds water.

D. Asphalt that was compacted below the minimum required temperature and is cracked.

E. Asphalt that fails to meet the minimum compaction requirements.

F. Asphalt that lacks the minimum thickness required per plan.

G. New asphalt contaminated by a petroleum product, or spilled paint.

H. Asphalt that has depressions, cracks, scored divits from dumpster wheels, heavy equipment use, heavy construction products,

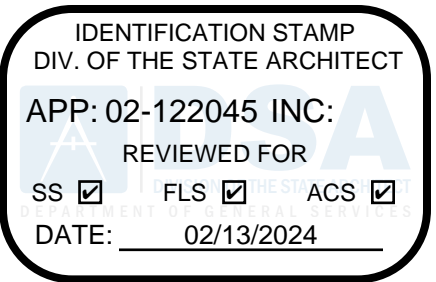
I. Asphalt placed on pumping, unstable sub-grades.

**3.05 CLEANING**

A. Refer to Section 017400.

B. Upon completion of work of this Section promptly remove from the working area all scraps, debris and surplus material of this Section.

C. Clean excess material from surface of all concrete walks and utility structures.



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CONSULTANT



OWNER

**OUTDOOR LEARNING  
 SHADE STRUCTURES**

**DEL PASO HEIGHTS  
 ELEMENTARY SCHOOL**

590 MOREY AVENUE  
 SACRAMENTO, CA 95838

DATE February 13, 2024

**ASPHALT PAVING  
 SPECIFICATION**

**SP0.3**

CIVIL ABBREVIATIONS AND LEGEND

ABBREVIATIONS	
NOTE: NOT ALL ABBREVIATIONS MAY BE USED ON THESE PLANS.	
AB	AGGREGATE BASE
AC	ASPHALTIC CONCRETE
AD	AREA DRAIN
APN	ASSESSOR'S PARCEL NUMBER
ARV	AIR RELEASE VALVE
ASB	AGGREGATE SUB-BASE
BO	BLOW-OFF VALVE
BV	BUTTERFLY VALVE
BW	BACK OF WALK
C/L	CENTERLINE
CB	CATCH BASIN
CL	CLASS
CMP	CORRUGATED METAL PIPE
CATV	CABLE TELEVISION
CO	CLEANOUT
COMM	COMMUNICATION
CONC.	CONCRETE
CONST.	CONSTRUCT
CR	CURB RETURN
CS	CONCRETE SURFACE
DC	DOUBLE CHECK VALVE
DDC	DOUBLE DETECTOR CHECK VALVE
DG	DECOMPOSED GRANITE
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
DS	DOWNSPOUT
E	ELECTRIC
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX	EXISTING
FS	FIRE SERVICE LINE
FDC	FIRE DEPARTMENT CONNECTION
FL	FLOWLINE
FM	SANITARY SEWER FORCE MAIN
FF	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
G	GAS
GR	GRATE ELEVATION
GRD	GRADE ELEVATION
GV	GATE VALVE
HB	HOSE BIBB
HBD	HEADER BOARD
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
INV	PIPE INVERT ELEVATION
JP	JOINT UTILITY POLE
LF	LINEAL FEET
LIP	LIP OF GUTTER
LT	LEFT
MS	MOWSTRIP
NTS	NOT TO SCALE
OH	OVERHEAD
PCC	PORTLAND CEMENT CONCRETE
PD	PLANTER DRAIN
PV	POST INDICATOR VALVE
P/L	PROPERTY LINE
PP	POWER POLE
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
R	RADIUS
RIM	MANHOLE RIM ELEVATION (SOLID COVER)
RP	REDUCED PRESSURE BACKFLOW PREVENTER
RW	RIGHT OF WAY
SCH	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SG	SUBGRADE ELEVATION
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
S/W	SIDEWALK
T	TELEPHONE
TC	TOP OF CURB
TD	TRENCH DRAIN
TD/CB	TRENCH DRAIN CATCH BASIN
TP	TELEPHONE POLE
TR	TOP OF RAMP ELEVATION
TRW	TOP OF RETAINING WALL
TSW	TOP OF SEAT WALL
TW	TOP OF WALK ELEVATION
U	UTILITY
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
VCP	VITRIFIED CLAY PIPE
W	WATER
W/	WITH
W/O	WITHOUT
WV	WATER VALVE

LEGEND	
NOTE: NOT ALL SYMBOLS MAY BE USED ON THESE PLANS.	
PROPOSED GRADING & DRAINAGE SYMBOLS:	
	8" SD STORM DRAIN LINE (SIZE AND FLOW SHOWN)
	STORM DRAIN MANHOLE (SDMH)
	CATCH BASIN (CB)
	DROP INLET (DI)
	AREA DRAIN (AD)
	PLANTER DRAIN (PD) OR FLOOR DRAIN (FD)
	STORM DRAIN CLEANOUT
	ELEVATION
	FF=100.00 FINISHED FLOOR ELEVATION
	PAD=99.33 BUILDING PAD ELEVATION
	CONCRETE SIDEWALK
	GRADED DIRECTION FOR DRAINAGE FLOW
	SWALE
	SLOPE
	TREE TO BE REMOVED
	RETAINING WALL
PROPOSED SANITARY SEWER SYMBOLS:	
	8" SS SANITARY SEWER LINE (SIZE AND FLOW SHOWN)
	SANITARY SEWER MANHOLE (SSMH)
	SEWER CLEANOUT
	FLUSHER BRANCH
PROPOSED WATER SYMBOLS:	
	8" W WATER LINE & SIZE
	8" FS FIRE LINE & SIZE
	8" DW DOMESTIC WATER LINE & SIZE
	8" RW RECLAIMED WATER LINE & SIZE
	8" IRR IRRIGATION SERVICE LINE & SIZE
	8" NP NON POTABLE WATER LINE & SIZE
	8" SP FIRE SPRINKLER SERVICE LINE & SIZE
	GATE VALVE
	WATER METER
	FIRE HYDRANT ASSEMBLY
	FIRE DEPARTMENT CONNECTION
	DETECTOR CHECK VALVE
	DOUBLE DETECTOR CHECK VALVE
	REDUCED PRESSURE BACKFLOW PREVENTER
	BUTTERFLY VALVE
	AIR RELEASE VALVE + SIZE
	BLOW-OFF VALVE + SIZE
	POST INDICATOR VALVE

DEMOLITION GENERAL NOTES

- IN THE EVENT THAT ANY UNUSUAL CONDITIONS NOT COVERED BY THE GEOTECHNICAL INVESTIGATION REPORT OR ARE ENCOUNTERED DURING GRADING OPERATIONS THE GEOTECHNICAL ENGINEER AND THE ARCHITECT SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTIONS.
- NO BURNING OR BLASTING SHALL BE PERMITTED.
- ADDITIONAL DEMOLITION INFORMATION MAY BE SHOWN ON THE GRADING, DRAINAGE, AND UTILITY PLANS, AND THOSE PLANS PREPARED BY OTHER DISCIPLINES FOR THIS PROJECT.
- ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF OFFSITE AT A SUITABLE, LEGAL, DUMP SITE OR OTHER FACILITY.
- ALL DISPOSED OF MATERIALS SHALL BE RECYCLED IF POSSIBLE.
- THE TYPES, LOCATIONS, SIZES, AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN IN THESE PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS, AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, WARREN CONSULTING ENGINEERS CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR FOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH MAY BE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL NOTIFY THE DISTRICT TWO (2) WORKING DAYS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK IN ORDER TO VERIFY TO THE GREATEST EXTENT POSSIBLE THE EXISTING UTILITY LINES, CONFLICTS AND PROPOSED UTILITY CONNECTION POINTS.
- THE SCHOOL DISTRICT SHALL HAVE SALVAGE RIGHTS TO ALL DEMOLISHED ITEMS SHOWN HEREON. THE CONTRACTOR SHALL GIVE THE DISTRICT NOTICE 7 DAYS PRIOR TO THE START OF DEMOLITION. THE DISTRICT SHALL MOVE ANY RETAINED ITEMS OUT OF THE CONTRACTORS WORK AREA, UNLESS ANOTHER ARRANGEMENT IS MADE WITH THE CONTRACTOR. ANY REMAINING ITEMS BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. ANY ITEMS NOT SHOWN FOR REMOVAL SHALL REMAIN AND SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION TO A REASONABLE EXTENT.
- EXISTING UTILITY STRUCTURES IN AREAS OF NEW PAVING SHALL BE REMOVED AND REPLACED WITH NEW BOX/COVER AT NEW GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
- ITEMS OUTSIDE THE LIMITS OF DEMOLITION SHALL REMAIN AND BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
- EXISTING UTILITY STRUCTURES AND PIPING NOT SHOWN ON DEMOLITION PLAN TO BE REMOVED SHALL REMAIN AND BE PROTECTED.

UTILITY VERIFICATION NOTE

PRIOR TO THE START OF CONSTRUCTION, VERIFY AND POTHOLE ALL UTILITY POINTS OF CONNECTION FOR LOCATION, DEPTH, AND SIZE. IF CONFLICT IS FOUND, CONTACT THE ENGINEER IMMEDIATELY FOR DIRECTION.


IRRIGATION DEMOLITION NOTE

WITHIN LANDSCAPE AREAS TO BE DEMOLISHED THERE MAY BE EXISTING IRRIGATION LINES NOT SHOWN ON THIS PLAN. CONTRACTOR SHALL REMOVE LATERAL LINES AND HEADS ENCOUNTERED. MAIN LINES AND CONTROL WIRES MAY ONLY BE REMOVED PROVIDED THAT ROUTING IS KNOWN AND REMOVAL WILL NOT DEACTIVATE AN IRRIGATION SYSTEMS INTENDED TO REMAIN. IF CONFLICT IS FOUND, CONTACT THE ENGINEER FOR DIRECTION.

CIVIL SHEET INDEX

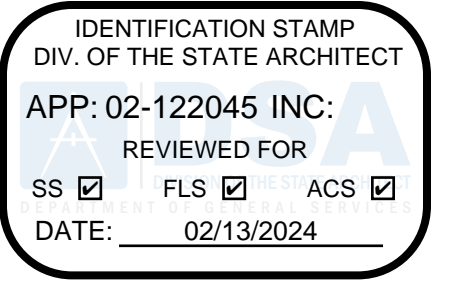
- CO.1 CIVIL GENERAL NOTES AND ABBREVIATIONS
- CO.2 TOPOGRAPHIC SURVEY
- C1.1 DEMOLITION PLAN
- C2.1 GRADING AND PAVING PLAN

GENERAL NOTES:

- THE TYPES, LOCATIONS, SIZES, AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, WARREN CONSULTING ENGINEERS CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR FOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH MAY BE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL NOTIFY MEMBERS OF UNDERGROUND SERVICE ALERT (USA) TWO (2) WORKING DAYS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK BY CALLING TOLL FREE 1-800-227-2600, OR 811.  Know what's below. Call before you dig.
- WARREN CONSULTING ENGINEERS, INC. (WCE) ASSUMES NO RESPONSIBILITY FOR ERRORS IN PHYSICAL LOCATION OF IMPROVEMENTS, HORIZONTAL OR VERTICAL, IF STAKED BY OTHERS. IN ADDITION, ANY SUCH ERRORS IN PHYSICAL LOCATION MAY AFFECT THE INTENDED DESIGN OF SUCH IMPROVEMENTS AND WCE CANNOT BE HELD RESPONSIBLE FOR SUCH CONDITIONS WHICH ARE A RESULT OF ERRORS IN SURVEYING, OR IMPROPER CONSTRUCTION.
- IF SUBSURFACE CULTURAL RESOURCES, REMAINS, AND/OR ARTIFACTS ARE UNCOVERED DURING PROJECT CONSTRUCTION, ALL WORK IN THE VICINITY SHALL BE STOPPED UNTIL SUCH ITEMS CAN BE ASSESSED BY AN APPROPRIATE MEMBER OF THE COUNTY ENVIRONMENTAL IMPACT SECTION STAFF.
- CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
- THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL SAFETY FOR ALL EXCAVATIONS OF 5 FEET OR MORE IN DEPTH.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL NECESSARY PRE-BID AND PRE-CONSTRUCTION SITE INSPECTION, AND/OR OBSERVATIONS ON THE SITE TO PRE-DETERMINE ALL HIS/HER MEANS AND METHODS NECESSARY TO COMPLETE THE IMPROVEMENTS SHOWN ON THESE PLANS AND PER THE PROJECT SPECIFICATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE, AND INCLUDE IN HIS/HER CONTRACT, ALL MEANS AND METHODS NECESSARY TO PERFORM A COMPLETE AND ACCEPTABLE JOB.
- WHERE IMPROVEMENTS LIE WITHIN AN EXISTING DEVELOPED AREA, CONTRACTOR SHALL USE CAUTION WHEN ACCESSING THE SITE THROUGH THESE EXISTING IMPROVEMENTS. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT ANY SUCH EXISTING IMPROVEMENTS OUTSIDE THE PROJECT BOUNDARY, OR EXISTING IMPROVEMENTS WITHIN THE BOUNDARY WHICH ARE TO REMAIN. PROPER PRECAUTIONS SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO KEEP DETAILED RECORDS OF MINOR CHANGES OR ADJUSTMENTS MADE DURING CONSTRUCTION (WHICH WERE NOT FORMALLY ISSUED). UPON PROJECT COMPLETION, THESE RECORDS AND/OR INFORMATION SHALL BE PROVIDED TO THE OWNER AND WARREN CONSULTING ENGINEERS, INC. UNLESS AN OFFICIAL "AS-BUILT" SET OF PLANS IS A REQUIREMENT OF THE CONTRACT. IF AS-BUILT PLANS ARE A REQUIREMENT OF THE CONTRACT, REFER TO SPECIFICATIONS FOR AS-BUILT DELIVERABLE REQUIREMENTS.
- IN VEHICULAR PATHWAYS, EXISTING ASPHALTIC AND/OR CONCRETE SURFACES SHALL BE CUT TO A NEAT AND STRAIGHT LINE, PARALLEL OR PERPENDICULAR TO THE VEHICULAR TRAVELED PATH. THIS IS TYPICALLY THE ROADWAY CENTERLINE, BUT MAY VARY. THAT SAWCUT EDGE SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION SO A CLEAN EDGE REMAINS FOR PATCH BACK. IF EDGE IS DAMAGED, A NEW SAW CUT WILL BE REQUIRED. THE EXPOSED EDGE SHALL BE "TACKED" WITH EMULSION PRIOR TO PAVING.
- NO BURNING OR BLASTING SHALL BE ALLOWED ONSITE UNLESS SPECIFICALLY ADDRESSED ON PLANS, OR SPECIFICALLY APPROVED AND COORDINATED WITH THE ARCHITECT, ENGINEER, AND LOCAL AGENCY OR OTHER ADMINISTRATIVE AUTHORITY.
- SUBGRADE AND RESULTING FINISHED GRADE SHALL BE CONSTRUCTED SMOOTH AND UNIFORM BETWEEN SPOT ELEVATIONS, CONTOURS OR OTHER STRUCTURE ELEVATIONS SHOWN ON GRADING OR OTHER PLANS. NO MOUNDS, RUTS, DEPRESSIONS OR OTHER GRADING DEFICIENCIES WILL BE ALLOWED UNLESS SPECIFICALLY SHOWN ON PLANS.
- ON NEW WATER SYSTEMS, SERVICE LATERALS SHALL BE MADE USING APPROPRIATE "TEE" AND "WYE" FITTINGS. SADDLE TAPS WILL ONLY BE ALLOWED WHEN MAKING CONNECTIONS TO EXISTING WATER MAINS.
- CURING COMPOUND SHALL BE APPLIED IN A CONTINUOUS SOLID WET FLOWING COAT. ANY "SPOTTY" APPLICATIONS SHALL BE RECOATED IMMEDIATELY. APPLICATION SHALL BE INSPECTED BY PROJECT INSPECTOR DURING APPLICATION.
- EMBEDMENT OF FEATURES IN CONCRETE PAVING, CURBS, OR WALLS, SUCH AS SQUARE OR ROUND TUBING, POSTS, OR COLUMNS, STEEL BOLTED PLATES, OR OTHER STRUCTURES, SHALL REQUIRE ADDITIONAL SCORE OR EXPANSION JOINTS TO PREVENT UNCONTROLLED CRACKING. THOSE ADDITIONAL JOINTS MAY OR MAY NOT BE SPECIFICALLY SHOWN ON PLANS BUT SHALL BE PROVIDED BY THE CONTRACTOR.
- EMBEDMENT OF FEATURES IN CONCRETE PAVING, CURBS, OR WALLS, SUCH AS SQUARE OR ROUND TUBING, POSTS, OR COLUMNS, STEEL BOLTED PLATES, OR OTHER STRUCTURES, SHALL REQUIRE A MINOR ADJUSTMENT OF REBAR WITHIN CONCRETE TO ALLOW FOR SUCH STRUCTURE. THAT REBAR ADJUSTMENT MAY NOT BE SPECIFICALLY SHOWN ON PLANS.
- NO MORE THAN 1 GALLON OF WATER PER YARD OF CONCRETE CAN BE ADDED TO THE TRUCK AFTER ARRIVAL TO PROJECT SITE. THE ADDITION OF WATER CAN ONLY BE ADDED UNDER THE SUPERVISION OF THE CONCRETE INSPECTOR OR LABORATORY TECHNICIAN.
- WHEN PUMPING CONCRETE FOR PLACEMENT, ABSOLUTELY NO WATER IS TO BE ADDED TO PUMP HOPPER. ANY WATER ADDED TO HOPPER WILL BE REASON FOR CONCRETE REJECTION AT THE CONTRACTORS EXPENSE.
- ALL CONTRACTION/CONSTRUCTION JOINTS "CJ" SHALL BE 1/4 THE SLAB THICKNESS DEEP, BUT NO LESS THAN 1" FOR CONTROLLING OF CRACKING. CONTRACTOR SHALL EXERCISE CAUTION WHEN FINAL TROWELING OF CONCRETE SO AS NOT TO FILL IN THESE JOINTS WITH CONCRETE CREAM. ANY CRACKS OUTSIDE OF JOINTS WHICH WERE CONSTRUCTED LESS THAN 1" DEEP, SHALL BE CAUSE FOR CONCRETE SLAB(S) TO BE REMOVED AND REPLACE AT CONTRACTORS EXPENSE.
- ANY SCREED BOARDS SET WITHIN CONCRETE SLABS SHALL BE AN "OVERHEAD SCREED" SO THERE IS NO INTERFERENCE WITH THE PLACEMENT AND ALIGNMENT OF SLAB REINFORCING.
- 3-1/2" FELT JOINTS WILL NOT BE ACCEPTED. PROVIDE A FULL 4" FELT JOINT FOR 4" SLAB CONSTRUCTION, AND A 6" FELT JOINT FOR A 6" SLAB CONSTRUCTION.
- SHOULD ANY SHRINKAGE CRACKS OCCUR OUTSIDE OF EITHER THE EXPANSION JOINTS OR CRACK CONTROL JOINTS, THEN THE CONCRETE SLAB SHALL BE SAWCUT AT THE NEAREST JOINTS ON EACH SIDE OF THE CRACK AND THE CONCRETE SECTION SHALL BE, REMOVED AND REPLACED. NEW CONCRETE SHALL BE DOWELED INTO EXISTING CONCRETE PER DRAWING DETAIL.
- ALL AREAS DISTURBED BY GRADING OPERATIONS WHETHER SHOWN ON THE DRAWINGS OR NOT SHALL BE HYDRO SEEDED UNLESS OTHERWISE NOTED. HYDRO SEEDED SHALL CONFORM TO LOCAL CITY/COUNTY STANDARDS.
- REPAIR OR PATCHING OF GALVANIZED METALS, SUCH AS AFTER WELDING GALVANIZED COMPONENTS, SHALL BE MADE USING A ZINC COMPOSITION "HOT STICK" APPLICATION PER ASTM A 780-01. GALVANIZING PAINTS WILL NOT BE ALLOWED.

GENERAL PAVING SURFACE NOTES:

- PROVIDE EQUIVALENT OF MEDIUM BROOM FINISH AT SLOPES UP TO 5.99%, TYPICAL. PROVIDE EQUIVALENT OF HEAVY BROOM FINISH AT SLOPES 6% AND GREATER. REFER TO SPECIFICATIONS.
- ALL NEW PEDESTRIAN WALKWAYS (NON-RAMP) SHALL BE SLOPED NO GREATER THAN 2.0%, AND NO LESS THAN 0.75% IN ANY DIRECTION, UNLESS SPECIFICALLY LABELED OTHERWISE. ALL CONCRETE SHALL MEET THE FOLLOWING SLOPE REQUIREMENTS:
  - NO GREATER THAN 5% SLOPE IN THE DIRECTION OF TRAVEL.
  - NO GREATER THAN 2% SLOPE CROSSING THE DIRECTION OF TRAVEL.
  - NO GREATER THAN 2% SLOPE IN ANY DIRECTION IN COURTYARD OR PLAZA AREAS.



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OUTDOOR LEARNING SHADE STRUCTURES

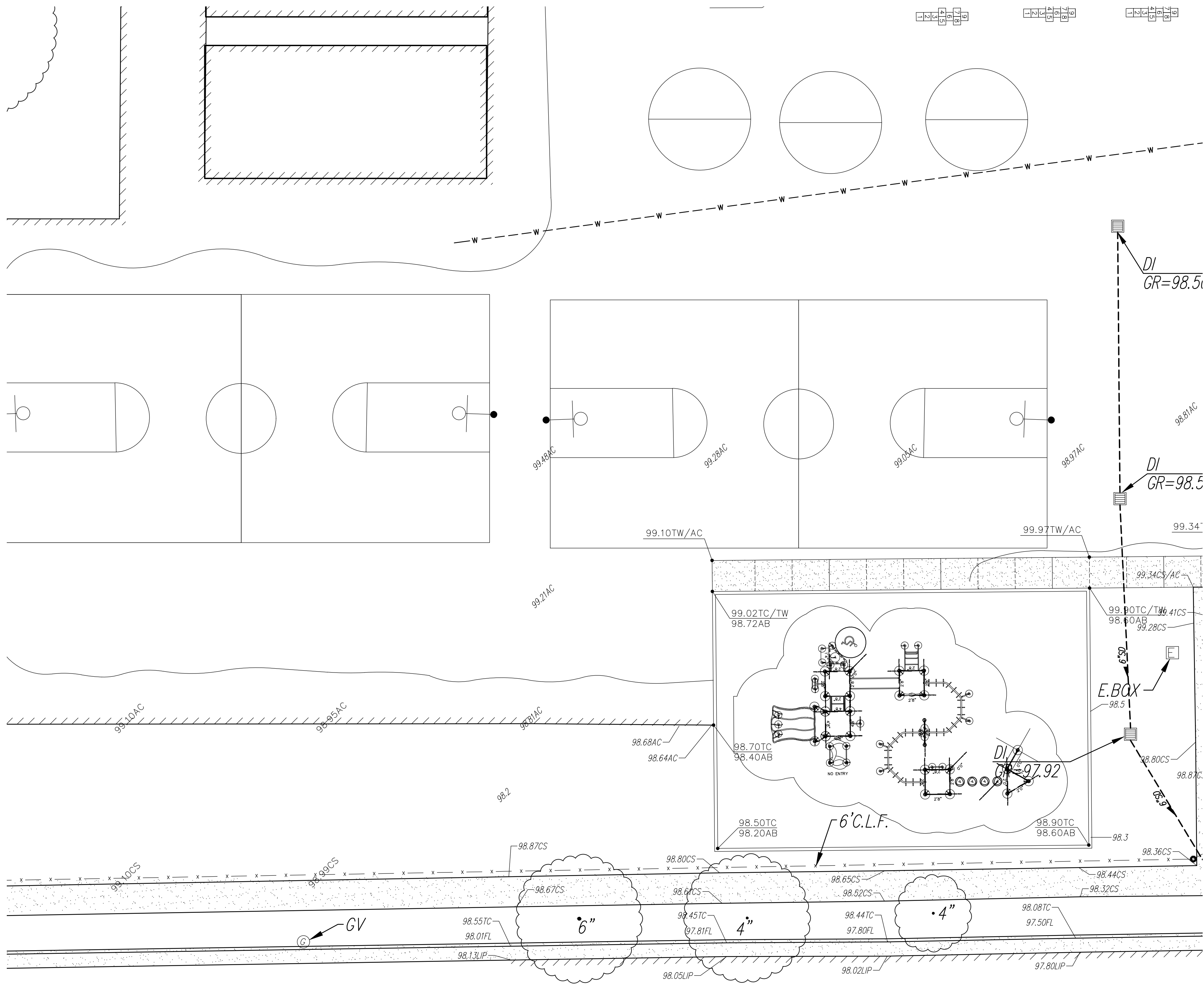
DEL PASO HEIGHTS ELEMENTARY SCHOOL

590 MOREY AVENUE  
SACRAMENTO, CA 95838

DATE February 13, 2024

CIVIL GENERAL NOTES AND ABBREVIATIONS

C0.1



**KESNE**

**EXISTING TOPOGRAPHY**

- = PROPERTY LINE
- = CENTERLINE
- - - = EASEMENT
- = PROPERTY CORNER FOUND AS NOTED
- = PROPERTY CORNER NOTHING FOUND OR SET
- △/123 = TEMPORARY BENCHMARK (SEE TBM LIST FOR INFO)
- = SWALE OR DRAINAGE FLOW
- = DRAINAGE FLOW
- = FENCE (TYPE NOTED)
- = TREE (SIZE/TYPE INDICATED)
- = SLOPE
- = CONTOUR
- = CONCRETE SURFACE
- = EDGE OF ASPHALT
- = EDGE OF BUILDING
- = SIGN
- = POST OR BOLLARD
- 99.9 = GROUND ELEVATION
- 99.99 = HARD SURFACE ELEVATION

**EXISTING UTILITIES**

- 12"SD = STORM DRAIN LINE (SIZE & DIRECTION OF FLOW)
- 12"SD = STORM DRAIN LINE (RECORD INFORMATION)
- 12"SD = STORM DRAIN LINE (UNDERGROUND LOCATING)
- ⊙ = STORM DRAIN MANHOLE
- = STORM DRAIN CLEANOUT
- ⊙ = DROP INLET
- ⊙ = AREA DRAIN
- ⊙ = RAIN WATER LEADER
- ⊙ = DOWNSPOUT
- 12"SS = SANITARY SEWER LINE (SIZE & DIRECTION OF FLOW)
- 12"SS = SANITARY SEWER LINE (RECORD INFORMATION)
- 12"SS = SANITARY SEWER LINE (UNDERGROUND LOCATING)
- ⊙ = SANITARY SEWER MANHOLE
- ⊙ = SANITARY SEWER CLEANOUT
- = WATER LINE (SIZE INDICATED)
- = WATER LINE (RECORD INFORMATION)
- = WATER LINE (UNDERGROUND LOCATING)
- ⊙ = WATER MANHOLE
- ⊙ = WATER VALVE
- ⊙ = WATER METER
- ⊙ = WATER BOX
- ⊙ = IRRIGATION CONTROL VALVE
- ⊙ = FIRE HYDRANT
- ⊙ = BACKFLOW PREVENTER
- ⊙ = SPRINKLER
- ⊙ = HOSE BIBB
- OH-E = OVERHEAD ELECTRIC LINE
- E = UNDERGROUND ELECTRIC LINE
- E = UNDERGROUND ELECTRIC LINE (RECORD INFORMATION)
- E = UNDERGROUND ELECTRIC LINE (UNDERGROUND LOCATING)
- ⊙ = ELECTRIC MANHOLE
- ⊙ = UTILITY POLE (WITH GUY WIRE)
- ⊙ = ELECTRIC METER
- ⊙ = ELECTRIC BOX
- ⊙ = STREET LIGHTING BOX
- ⊙ OR ⊙ = LIGHT STANDARD
- ⊙ = SIGNAL LIGHT
- ⊙ = FLOOD LIGHT
- ⊙ = ELECTRICAL OUTLET
- G = GAS LINE (SIZE INDICATED)
- G = GAS LINE (RECORD INFORMATION)
- G = GAS LINE (UNDERGROUND LOCATING)
- ⊙ = GAS MANHOLE
- ⊙ = GAS VALVE
- ⊙ = GAS METER
- t = TELEPHONE LINE
- t = TELEPHONE LINE (RECORD INFORMATION)
- t = TELEPHONE LINE (UNDERGROUND LOCATING)
- ⊙ = STORM DRAIN BOX
- ⊙ = TRAFFIC SIGNAL BOX

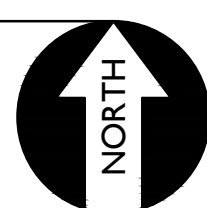
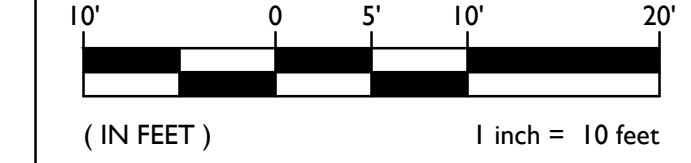
**ABBREVIATIONS**

- NOTE: NOT ALL ABBREVIATIONS MAY BE USED ON THESE PLANS.
- AC ASPHALTIC CONCRETE
  - ACC ACCESSIBLE
  - AIR-CONDITIONING UNIT
  - AD AREA DRAIN
  - APN ASSESSOR'S PARCEL NUMBER
  - APP APPARATUS
  - BBALL BASKETBALL POLE
  - BCM BRASS CAP MONUMENT
  - BFP BACK FLOW PREVENTER
  - BL BLOCK
  - BUILDING
  - BOLLARD
  - BOV BLOW-OFF VALVE
  - BR BRICK
  - B.W.F. BARBED WIRE FENCE
  - C COMMUNICATION
  - C/L CENTERLINE
  - CATV CABLE TELEVISION
  - CIP CAPPED IRON PIPE
  - C.L.F. CHAIN LINK FENCE
  - CMF CORRUGATED METAL PIPE
  - CO CLEANOUT
  - COL COLUMN
  - CONC. CONCRETE
  - COND. CONDENSATE
  - CONT. CONTROL POINT FOUND
  - CPS CONTROL POINT SET
  - CS CONCRETE SURFACE
  - D DEPTH
  - DF DRINKING FOUNTAIN
  - DG DECOMPOSED GRANITE
  - DI DROP INLET
  - DIA DIAMETER
  - DRWY DRIVEWAY
  - DS DOWNSPOUT
  - DWG DRAWING
  - E ELECTRIC
  - EP EDGE OF PAVEMENT
  - ESMT EASEMENT
  - FA FIRE ALARM
  - FDC FIRE DEPARTMENT CONNECTION
  - FFE FINISHED FLOOR ELEVATION
  - FH FIRE HYDRANT
  - FL FLOWLINE
  - FO FIBER OPTIC
  - FS FIRE SERVICE
  - G GAS
  - GB GRADE BREAK
  - GR GRATE
  - GRB GROUND ROD BOX
  - GRD GROUND ROD
  - GV GAS VALVE
  - HB HOSE BIBB
  - HBD HEADER BOARD
  - HP HIGH PRESSURE
  - HR HANDRAIL
  - HVE HIGH VOLTAGE ELECTRIC
  - HWF HIGH WIRE FENCE
  - IC IN CONCRETE
  - ICP IRRIGATION CONTROL PANEL
  - ICV IRRIGATION CONTROL VALVE
  - INV PIPE INVERT ELEVATION
  - IRR IRRIGATION
  - JP JOINT UTILITY POLE
  - JT JOINT TRENCH
  - LNDRG LANDING
  - LVE LOW VOLTAGE ELECTRIC
  - M METAL
  - MH MANHOLE
  - MS MOW STRIP
  - MSC METAL STORAGE CONTAINER
  - NTS NOT TO SCALE
  - OH OVERHEAD
  - OHANG OHANG
  - OIP OPEN IRON PIPE
  - OSPH OLD STEEL POST HOLE
  - P/L PROPERTY LINE
  - PA PLANTER AREA
  - PB PARKING BUMPER
  - PH POSTHOLE
  - PIV POST INDICATOR VALVE
  - PP POWER POLE
  - PRNG PARKING
  - PUE PUBLIC UTILITY EASEMENT
  - PV PAVERS
  - PVC POLYVINYL CHLORIDE
  - R RUBBER
  - RG ROLLING GATE
  - RIM MANHOLE RIM ELEVATION
  - ROW RIGHT OF WAY
  - RW RETAINING WALL
  - RWD REDWOOD
  - RWL RAIN WATER LEADER
  - SD STORM DRAIN
  - SDMH STORM DRAIN MANHOLE
  - SIG SIGNAL
  - SL STREET LIGHT
  - SLB STREET LIGHT BOX
  - SS SANITARY SEWER
  - SSCO SANITARY SEWER CLEANOUT
  - SSMH SANITARY SEWER MANHOLE
  - STL STEEL
  - T TELEPHONE
  - TBALL TETHER BALL POLE
  - TBM TEMPORARY BENCHMARK
  - TC TOP OF CURB
  - TOW TOP OF WALL
  - TP TELEPHONE POLE
  - TRW TOP OF RETAINING WALL
  - UG UNDERGROUND
  - UNK UNKNOWN
  - V VENT
  - VBALL VOLLEYBALL
  - W WATER
  - W/WOOD
  - WF WOOD FENCE
  - W.I.F. WROUGHT IRON FENCE
  - W.R.F. WOOD RAIL FENCE
  - XF TRANSFORMER
  - XWALK CROSSWALK

**TBM LIST**

NUMBER	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	CPS CHISELED "+"	10006.21	9985.63	100.00
2	CPS CHISELED "+"	10177.61	9969.60	98.53
3	CPS CHISELED "+"	10211.39	9771.24	100.03
4	CPS CHISELED "+"	10124.79	10048.16	100.44
5	CPS CHISELED "+"	10083.82	10151.16	100.31
6	CPS CHISELED "+"	10079.09	10268.83	100.28
7	CPS CHISELED "+"	10011.99	10317.98	100.96
8	CPS CHISELED "+"	10007.93	10237.60	100.80
9	CPS CHISELED "+"	9885.73	10186.32	99.53
10	CPS CHISELED "+"	9908.91	10105.09	99.28
11	CPF PK+WASHER SAC CITY	9832.22	9800.32	98.87
12	CPS CHISELED "+"	9855.61	10284.28	98.68
13	CPS CHISELED "+"	9864.05	10150.93	99.54
14	CPS CHISELED "+"	10233.16	10465.95	97.75
15	CPF PK CL INT TAYLOR/KESNER	9842.91	10460.00	97.58

**GRAPHIC SCALE**



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CONSULTANT

**TwinRivers**  
UNIFIED SCHOOL DISTRICT

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**OUTDOOR LEARNING  
SHADE STRUCTURES**

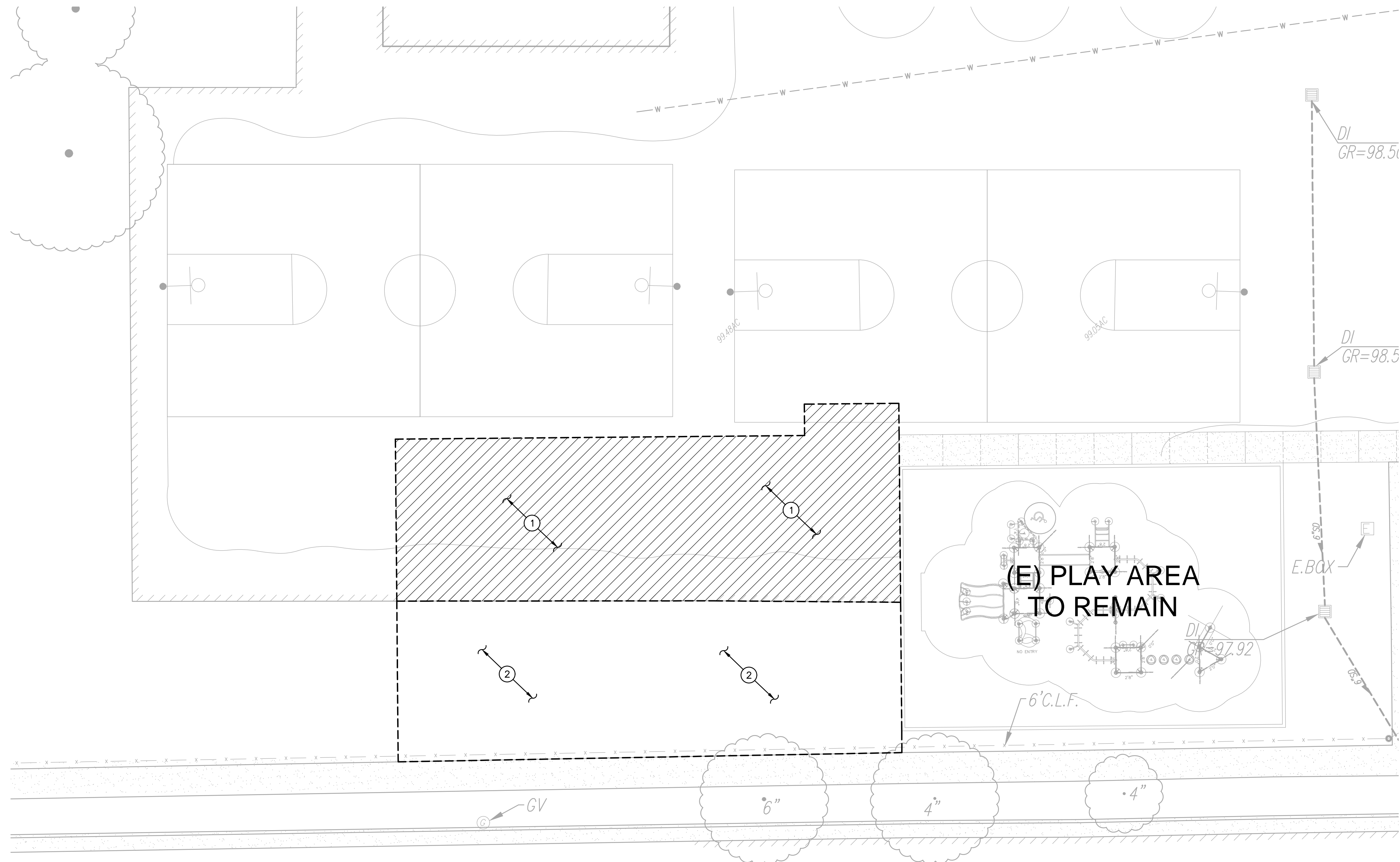
**DEL PASO HEIGHTS  
ELEMENTARY SCHOOL**

590 MOREY AVENUE  
SACRAMENTO, CA 95838

DATE February 13, 2024

**TOPOGRAPHIC  
SURVEY**

**C0.2**



- DEMOLITION NOTES**
- SAWCUT, REMOVE AND DISPOSE OF EXISTING ASPHALT PAVING AND ASSOCIATED AGGREGATE BASE TO EXTENTS SHOWN. SAWCUT SHALL BE A NEAT STRAIGHT LINE, MAINTAIN CLEAN, STRAIGHT CUT EDGE UNTIL NEW PAVING IS PLACED.
  - CLEAR, GRUB AND REMOVE EXISTING VEGETATION.

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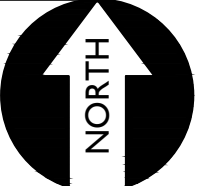
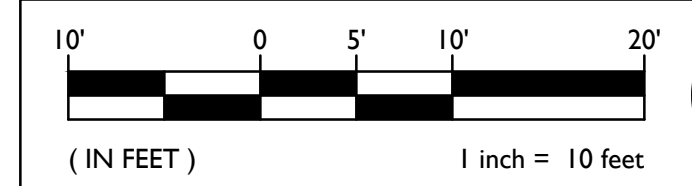
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**DEMOLITION PLAN**

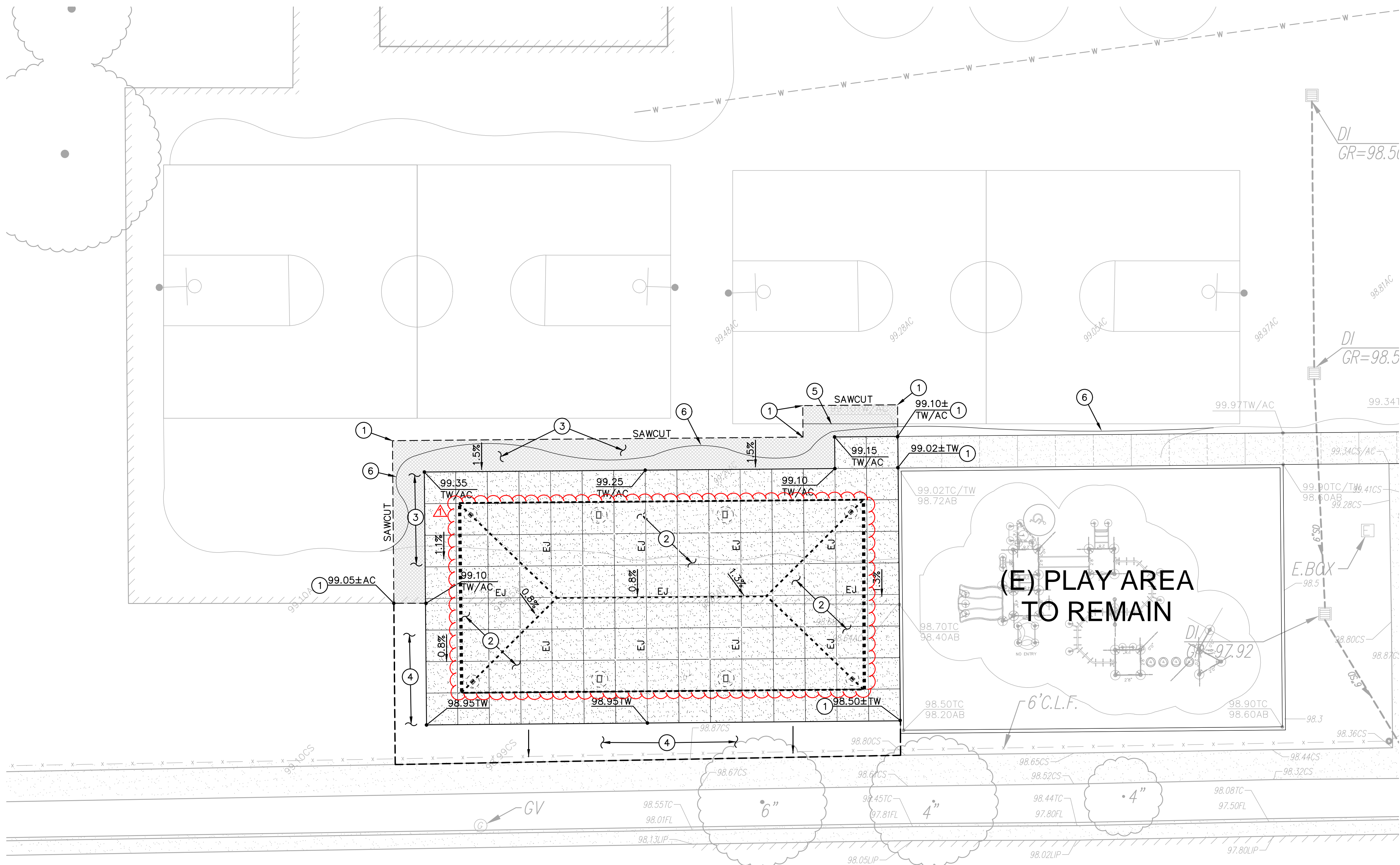
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GRAPHIC SCALE



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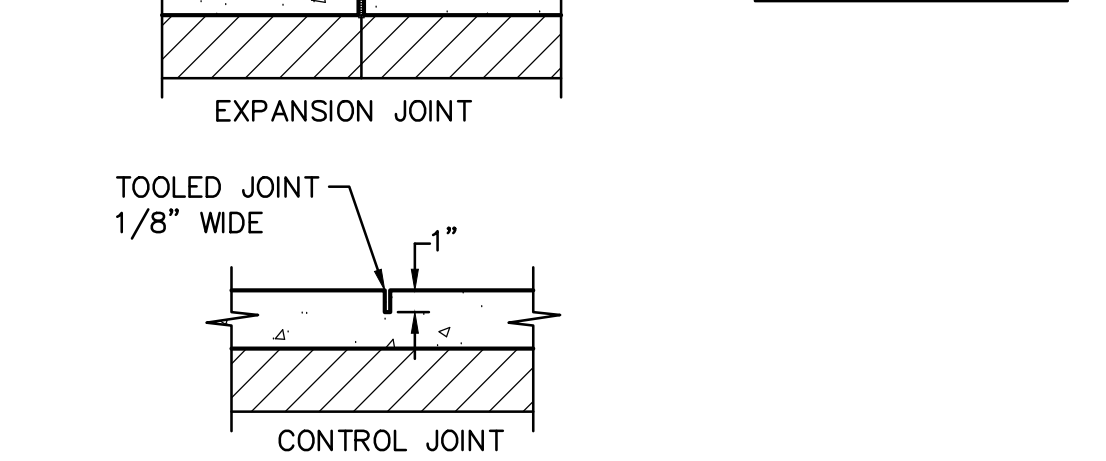
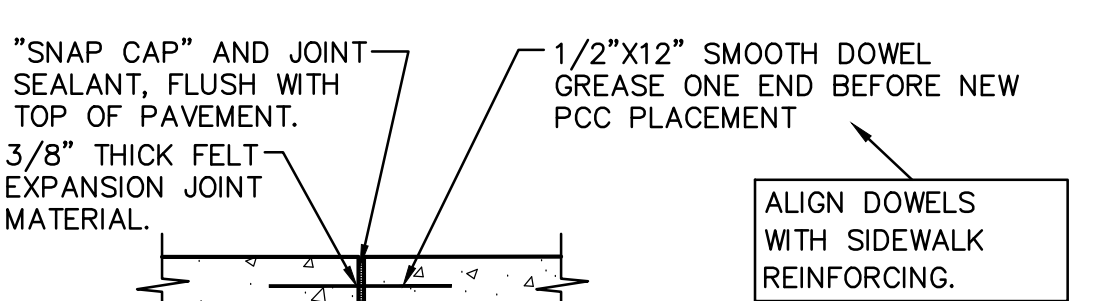
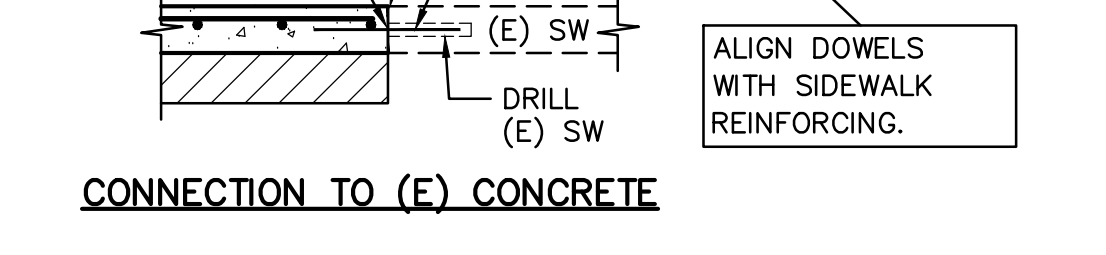
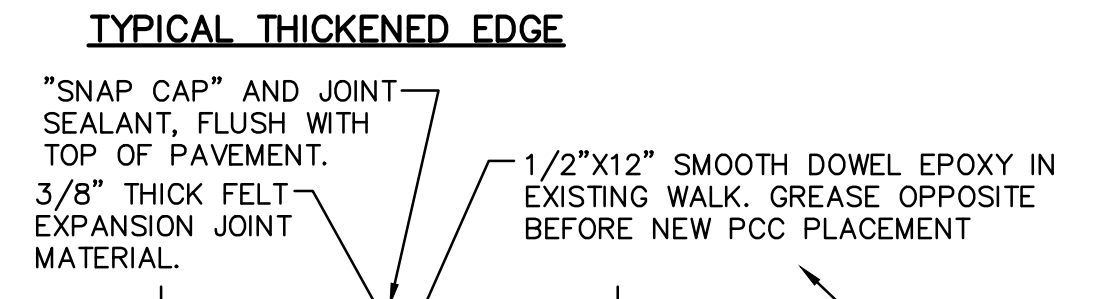
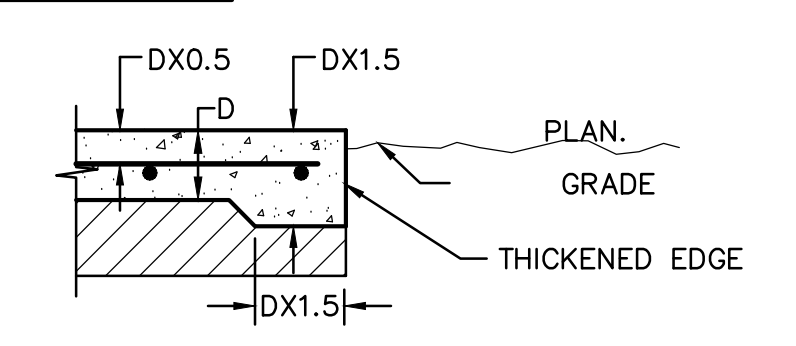
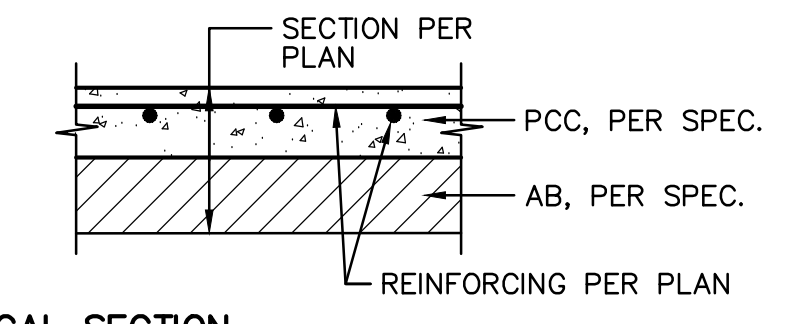
**C1.1**



**SUBGRADE PREPARATION**

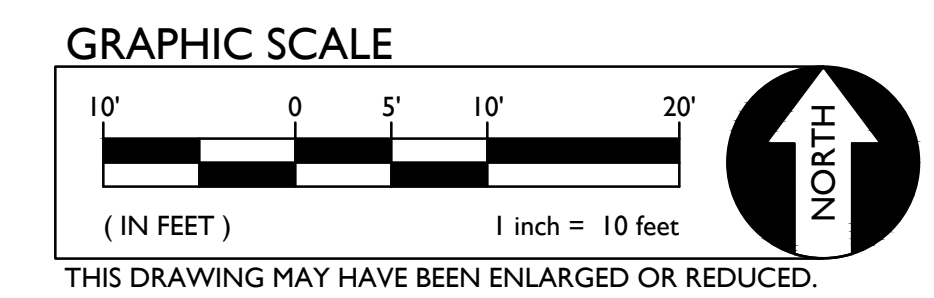
1. FOLLOWING SITE DEMOLITION ACTIVITIES:  
 EXCAVATE DOWN TO ROUGH SUBGRADE ELEVATION. SCARIFY THE EXISTING SOILS TO A MINIMUM DEPTH OF 12 INCHES. MOISTURE CONDITION TO AT LEAST 2 PERCENT ABOVE THE OPTIMUM MOISTURE AND COMPACT TO AT LEAST 90 PERCENT OF THE MAXIMUM DRY DENSITY DETERMINED BY THE ASTM D1557 TEST METHOD.

- GRADING AND DRAINAGE NOTES**
- MATCH EXISTING GRADE/ELEVATION.
  - CONSTRUCT CONCRETE FLATWORK PER PLACE 5" PCC WITH #4 REBAR AT 24" O.C.E.W. OVER 18" CLASS II AB ON A TENSAR BX1100 GEOGRID ON COMPACTED SUBGRADE.
  - PLACE 3" AC OVER 18" CLASS II AB ON A TENSAR BX 1100 GEOGRID ON COMPACTED SUBGRADE. PLACE TWO (2) APPLICATIONS OF SEAL COAT ON NEW PAVEMENT.
  - PLACE A NON-IRRIGATION HYDROSEED MIX AT ALL AREAS DISTURBED BY CONSTRUCTION THAT ARE NOT TO BE PAVED.
  - PAINT 2" WHITE STRIPE TO MATCH EXISTING.
  - PAINT 2" YELLOW STRIPE TO MATCH EXISTING.



- NOTES:**
- PROVIDE FELT EXPANSION JOINTS AT MAX. 20 FEET O.C.
  - PROVIDE CONTROL JOINTS AT 8 FEET O.C. MAX.
  - EXPANSION OR CONTROL JOINTS SHALL NOT EXCEED 1/2" IN SURFACE WIDTH.

**1 CONCRETE SIDEWALK** NO SCALE



**HARRINGTON DESIGN ASSOCIATES**

5875 PACIFIC STREET, SUITE E2  
 ROCKLIN, CA 95677 (916) 577-5789  
 www.HarringtonDA.com



ARCHITECT



**WCE**

WARREN CONSULTING ENGINEERS, INC.  
 1117 WINDFIELD WAY, SUITE 110  
 EL DORADO HILLS, CA 95762 | (916) 985-1870

CONSULTANT

**TwinRivers**  
 UNIFIED SCHOOL DISTRICT

OWNER

**OUTDOOR LEARNING SHADE STRUCTURES**

**DEL PASO HEIGHTS ELEMENTARY SCHOOL**

590 MOREY AVENUE  
 SACRAMENTO, CA 95838

**REVISIONS**  
 DSA ADD-001 5/3/2024

DATE February 13, 2024

**GRADING AND PAVING PLAN**

**C2.1**



**FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL**

PROJECT INFORMATION		
School District/Owner: TWIN RIVERS UNIFIED SCHOOL DISTRICT		
Project Name/School: DEL PASO HEIGHTS ES / OUTDOOR LEARNING SHADE STRUCTURES		
Project Address: 509 MOREY AVE, SACRAMENTO, CA		

FIRE & LIFE SAFETY INFORMATION			
1. Has a fire hydrant flow test been performed within the past 12 months? (If yes, provide a copy of the test data.) PER 2019 CFC APPENDIX BB FIRE FLOW REQUIREMENTS FOR BUILDINGS SECTION BB101.1 "FIRE FLOW REQUIREMENTS DO NOT APPLY TO STRUCTURES OTHER THAN BUILDINGS."	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
2. Was the fire hydrant water flow test performed as part of this LFA review?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
3. Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? (If yes, indicate FHSZ classification below.)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Refer to the following website for FHSZ locations: <a href="http://egis.fire.ca.gov/FHSZ/">http://egis.fire.ca.gov/FHSZ/</a>	Moderate <input type="checkbox"/>	High <input type="checkbox"/>	Very High <input type="checkbox"/>
Wildland Interface Area (WIFA) (If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)	WIFA <input type="checkbox"/>		

**ACCESSIBLE PATH OF TRAVEL:**

ACCESSIBLE PATH OF TRAVEL AS INDICATED IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE, OR VERTICAL LEVEL CHANGES CHANGES THAT DO NOT EXCEED 1/4" VERTICAL AND IS AT LEAST 48" WIDE. THE PATH SURFACE IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. THE CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80". GENERAL CONTRACTOR SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL BASED UPON THESE NOTES AND SHALL NOTIFY THE ARCHITECT FOR ITEMS THAT ARE NOT COMPLIANT.

PASSING SPACES (11B-403.5.3) OF 60"x60" MIN. ARE LOCATED NOT MORE THAN 200' APART. WALKS WITH CONTINUOUS GRADIENTS HAVE 40' IN LENGTH OF LEVEL AREAS (11B-403.7) NOT MORE THAN 400' APART. THERE IS NO DROP-OFF OVER 4" AT THE EDGE OF WALK OR LANDING UNLESS IDENTIFIED BY A GUARD, A HANDRAIL, OR A WARNING CURB AT LEAST 6" IN HEIGHT ABOVE THE WALK (11B-303.5).

**DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:**

THE PATH OF TRAVEL (POT) IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS, AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCOMPLYING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

**(E) PARKING CALCULATION:**

(E) PARKING LOT, NORTH	
TOTAL (E) PARKING STALL COUNT	7
ACCESSIBLE PARKING REQUIREMENTS (CBC TABLE 11B-208.2)	
TOTAL ACCESSIBLE STALLS REQ'D	1
ACCESSIBLE STALLS REQ'D (CAR)	0
ACCESSIBLE STALLS REQ'D (VAN)	1
ACCESSIBLE STALLS PROVIDED	0 CAR, 1 VAN COMPLIANT

**EXISTING CAMPUS BUILDING DATA**

BLDG	EXISTG/NEW	NAME/USE	AREA (SF)	OCCUPANCY TYPE	CONST. TYPE
A	EXISTG	CLASSROOMS	3,840 SF	E	V-B
B	EXISTG	CLASSROOMS	5,000 SF	E	V-B
C	EXISTG	CLASSROOMS/ADMINISTRATION	5,000 SF	E	V-B
D	EXISTG	MULTI-PURPOSE/CAFETERIA/KITCHEN	5,320 SF	A-2	V-B
E	EXISTG	CLASSROOMS	2,530 SF	E	V-B
F	EXISTG	CLASSROOMS	2,880 SF	E	V-B
G	EXISTG	CLASSROOMS	3,840 SF	E	V-B
H	EXISTG	CLASSROOMS	1,280 SF	E	V-B
J	EXISTG	CLASSROOMS	960 SF	E	V-B
K	EXISTG	CLASSROOMS	3,320 SF	E	V-B

**CODE ANALYSIS: (NEW SHADE STRUCTURE)**

(N) SHADE STRUCTURE 'S1' OCCUPANCY CLASSIFICATION CONSTRUCTION TYPE	A-3 II-B NON-SPRINKLERED 30'x64' = 1920 SF
OCCUPANT LOAD	1920 / 15 = 128 OCCUPANTS
BASIC ALLOWABLE AREA (TABLE 506.2)	9,500 SF
TOTAL BUILDING AREA	1,800 SF
1920 SF < 9,500 SF	COMPLIES

**LEGEND:**

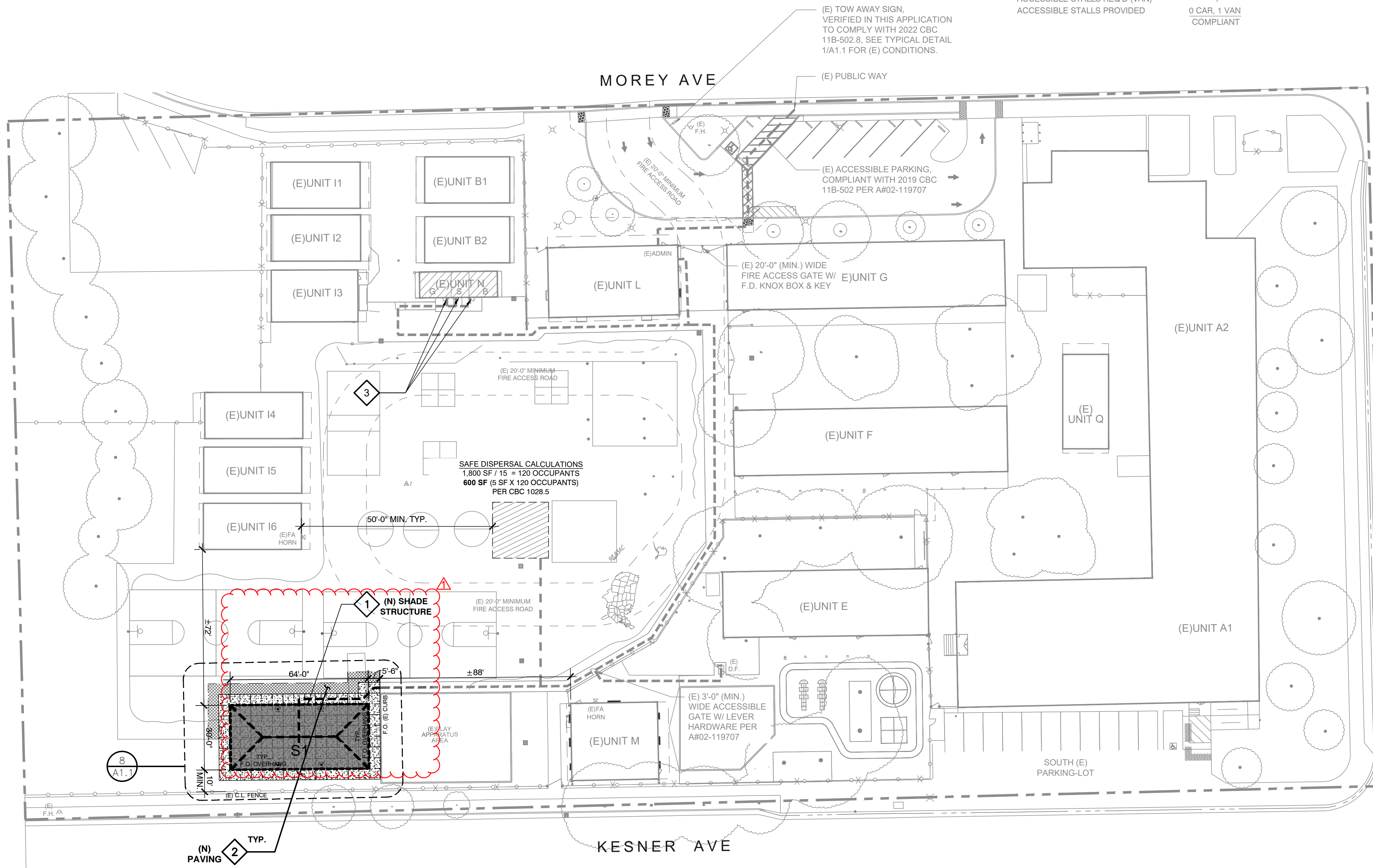
- (E) BUILDING NOT INCLUDED IN THIS APPLICATION.
- (N) SHADE STRUCTURE WITH CAST-IN-PLACE CONCRETE BELOW. SEE ENLARGED SITE PLAN FOR ADDITIONAL INFORMATION INCLUDING COLUMN LOCATIONS.
- SAFE DISPERSAL AREA THROUGH EXISTING LIGHTING, ILLUMINATION OF THE PATH OF TRAVEL FOR THE EXIT DISCHARGE AND SAFE DISPERSAL AREA COMPLIES WITH CBC 1008.2.3
- (E) ALL-GENDER (STAFF) & STUDENT (BOYS & GIRLS) RESTROOMS VERIFIED IN THIS APPLICATION TO COMPLY WITH 2022 CBC 11B-603 SEE 18/A1.1 FOR (E) CONDITIONS
- (E) PROPERTY LINE
- (E) AND (N) ACCESSIBLE PATH OF TRAVEL (P.O.T.), COMPLIANT WITH 11B-202.4
- (E) FIRE ALARM HORN. VERIFIED IN THIS APPLICATION THE CAMPUS FIRE ALARM SIGNAL IS WITHIN PROXIMITY OF THE SHADE STRUCTURE
- (E) FIRE APPARATUS ACCESS ROAD IS RATED FOR A 75,000 LB FIRE APPARATUS VEHICLE WEIGHING UP TO 75,000 LBS PER CFC APPENDIX D102.1
- (E) ACCESSIBLE DRINKING FOUNTAIN PER DSA #02-119707, COMPLIANT WITH 2019 CBC 11B-602

**KEY NOTES:**

- 1 (N) SHADE STRUCTURE (ICON SHELTER SYSTEMS) BASED ON RH30X64 COLUMN LAYOUT (3 BAYS) PER DSA #04-122375 PC, OWNER-FURNISHED / CONTRACTOR-INSTALLED, WITH DRILLED PIERS FOR 10' HEIGHT COLUMNS, TYP. OF 8. PER #30 - PIER DETAIL ON L33.0. SEE ENLARGED PLANS FOR ADDITIONAL INFORMATION & CIVIL DRAWINGS FOR DEMO, GRADING, PAVING, ETC.
- 2 (N) PAVING, SEE CIVIL DRAWINGS FOR ADDITIONAL INFO
- 3 (N) RESTROOM SIGNS AT EXISTING UNIT N, SEE ENLARGED PLAN 18/A1.1

**(E) PARKING CALCULATION:**

(E) PARKING LOT, SOUTH	
TOTAL (E) PARKING STALL COUNT	12
ACCESSIBLE PARKING REQUIREMENTS (CBC TABLE 11B-208.2)	
TOTAL ACCESSIBLE STALLS REQ'D	1
ACCESSIBLE STALLS REQ'D (CAR)	0
ACCESSIBLE STALLS REQ'D (VAN)	1
ACCESSIBLE STALLS PROVIDED	NORTH (E) 1 VAN PARKING-LOT LIANT



1 OVERALL SITE PLAN  
SCALE: 1"=30'-0"

5875 PACIFIC STREET, SUITE E2  
ROCKLIN, CA 95677 (916) 577-5789  
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**OUTDOOR LEARNING SHADE STRUCTURES**

DEL PASO HEIGHTS ELEMENTARY SCHOOL

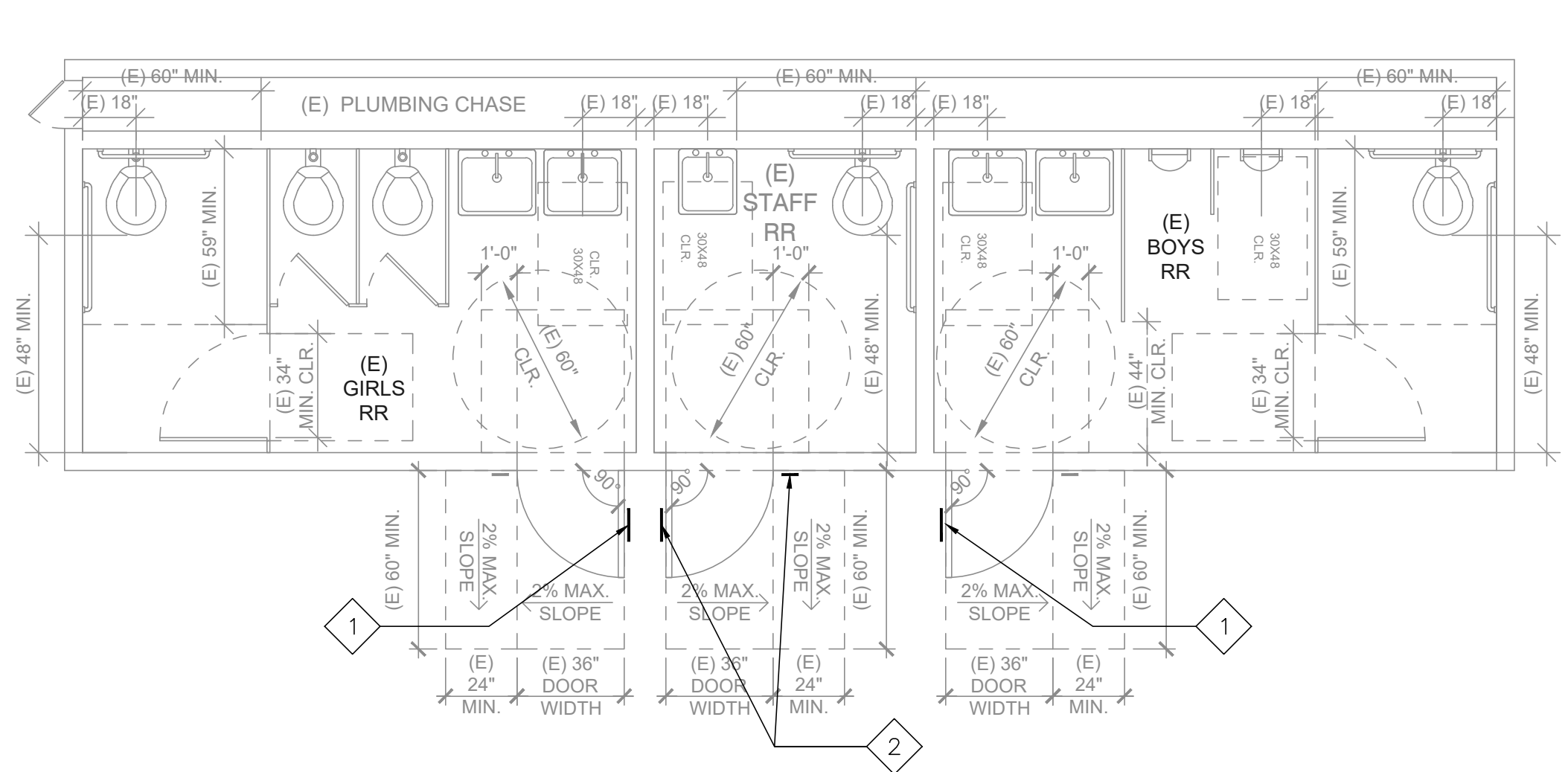
590 MOREY AVENUE  
SACRAMENTO, CA 95838

**REVISIONS**

DSA ADD-001	5/3/2024
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DATE February 13, 2024

**SHADE STRUCTURE CODE ANALYSIS & ACCESSIBILITY SITE PLAN**



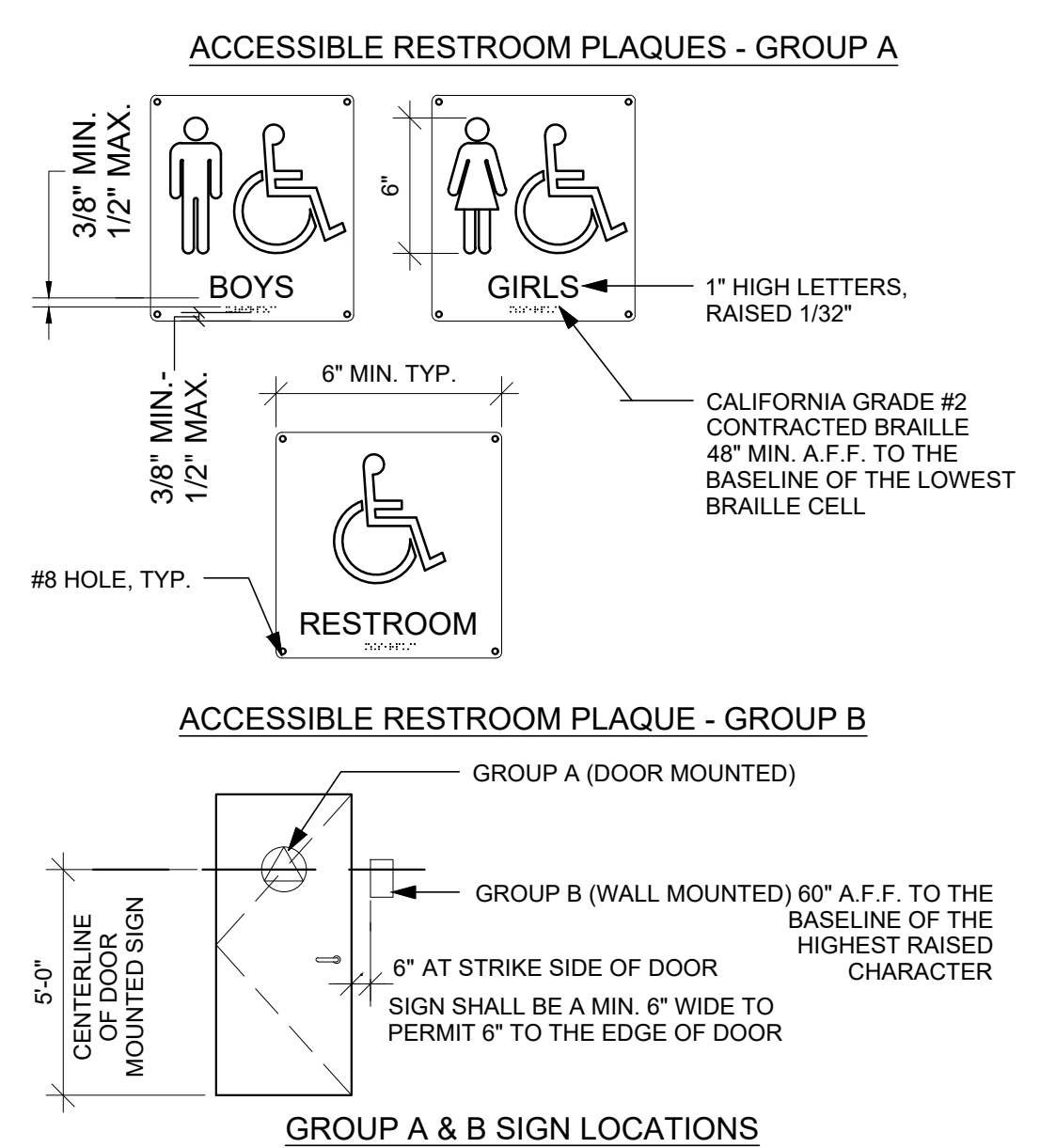
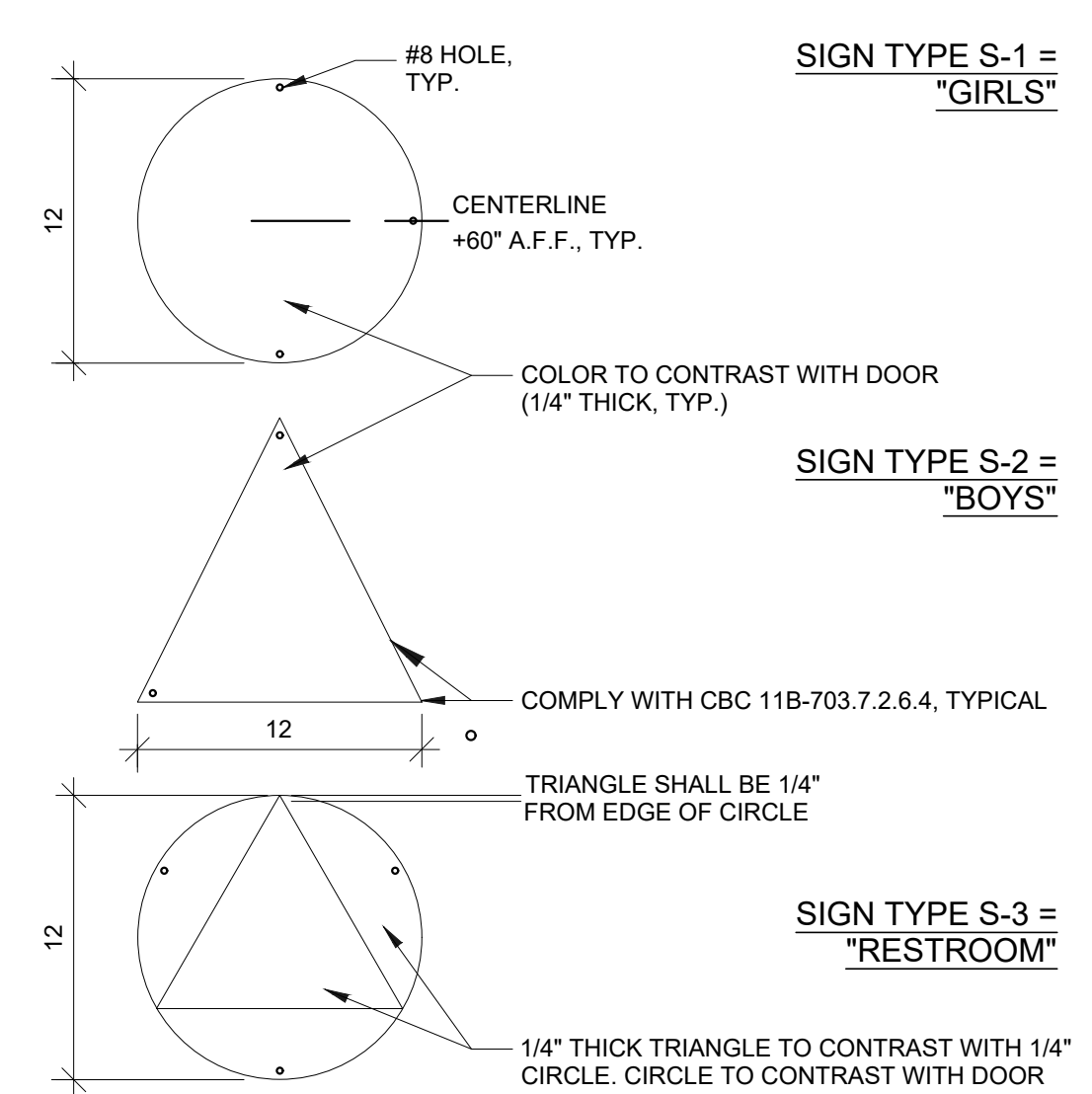
**GENERAL NOTES:**

- (E) RESTROOM FIXTURES & ACCESSORIES ARE MOUNTED IN COMPLIANCE WITH 9/A1.1 FOR ACCESSIBLE (ADULT) HEIGHTS
- (E) STUDENT (BOYS & GIRLS) RESTROOM WALL SIGNS ARE IN COMPLIANCE WITH 20/A1.1, GROUP B

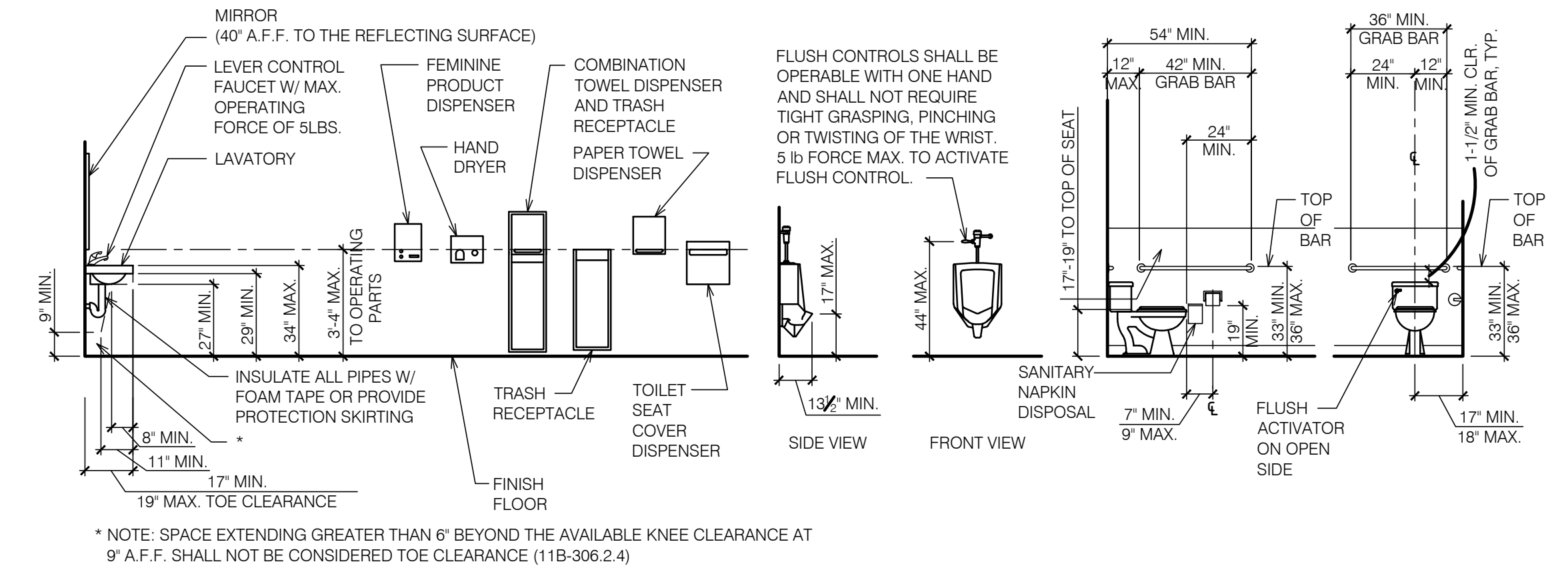
**NEW WORK KEYED NOTES:**  
 APPLIES TO RESTROOMS

- REMOVE & DISPOSE OF (E) RESTROOM DOOR PLAQUE, PATCH, REPAIR & PAINT, AS NECESSARY. PROVIDE (N) RESTROOM DOOR PLAQUES, TYP. AT BOTH BOYS & GIRLS, SEE DETAIL 20/A1.1. CONTRACTOR TO PROVIDE A SUBMITTAL FOR REVIEW BY ARCHITECT. GROUP A, TYPE S-1 (GIRLS) CIRCLE SHALL BE WHITE TO CONTRAST WITH BLUE DOOR. GROUP A, TYPE S-2 (BOYS) TRIANGLE SHALL BE WHITE TO CONTRAST WITH BLUE DOOR.
- REMOVE & DISPOSE OF (E) RESTROOM DOOR PLAQUE & WALL SIGN, PATCH, REPAIR & PAINT, AS NECESSARY. PROVIDE (N) RESTROOM DOOR PLAQUE AND WALL SIGN, SEE DETAIL 20/A1.1. CONTRACTOR TO PROVIDE A SUBMITTAL FOR REVIEW BY ARCHITECT. GROUP A, TYPE S-3 (RESTROOM): BLUE TRIANGLE OVER WHITE CIRCLE TO CONTRAST WITH BLUE DOOR. GROUP B (RESTROOM): BLUE BACKGROUND WITH WHITE LETTERS.

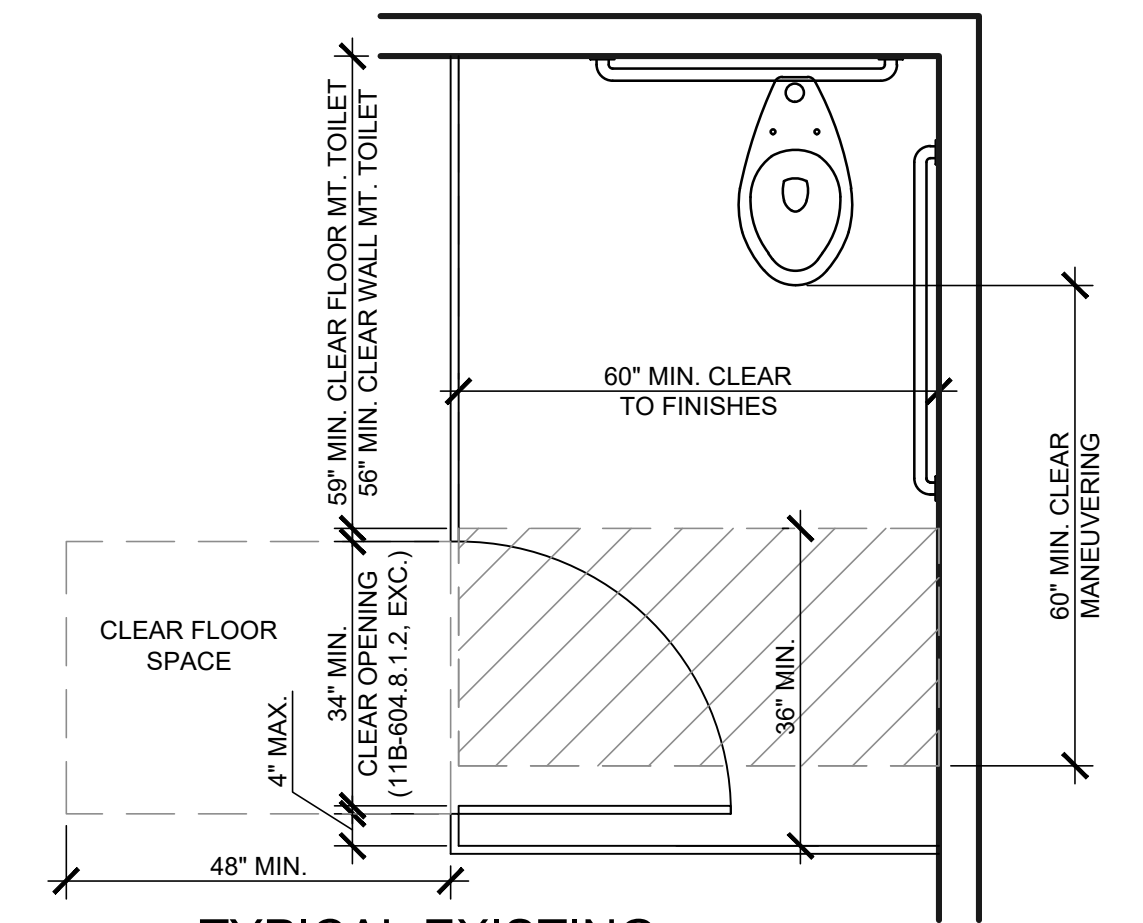
**18 (E) ACCESSIBLE ALL-GENDER (STAFF) & STUDENT (BOYS/GIRLS) RESTROOM**  
 SCALE: 1/4" = 1'-0"



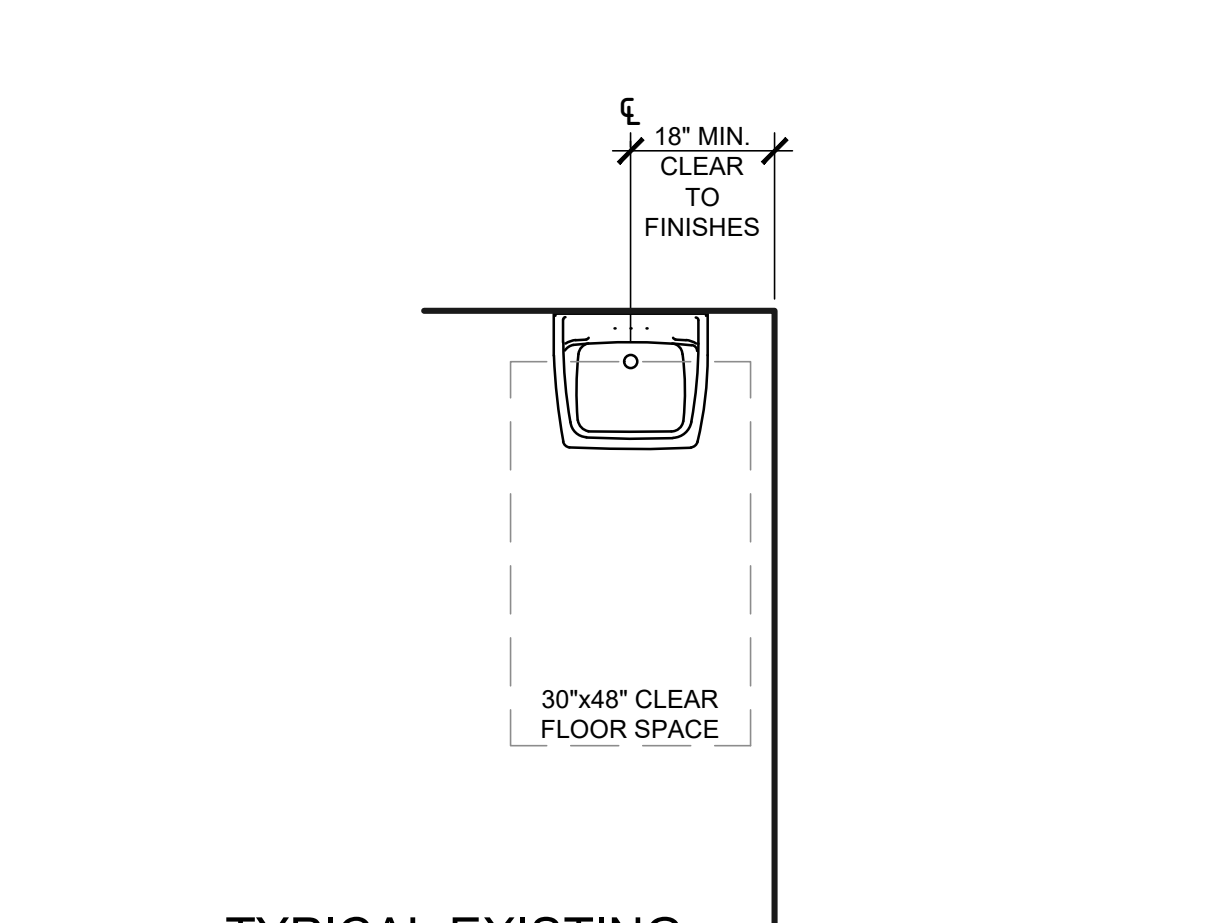
**20 TYPICAL ACCESSIBLE RESTROOM SIGNAGE**  
 SCALE: 1/2" = 1'-0"



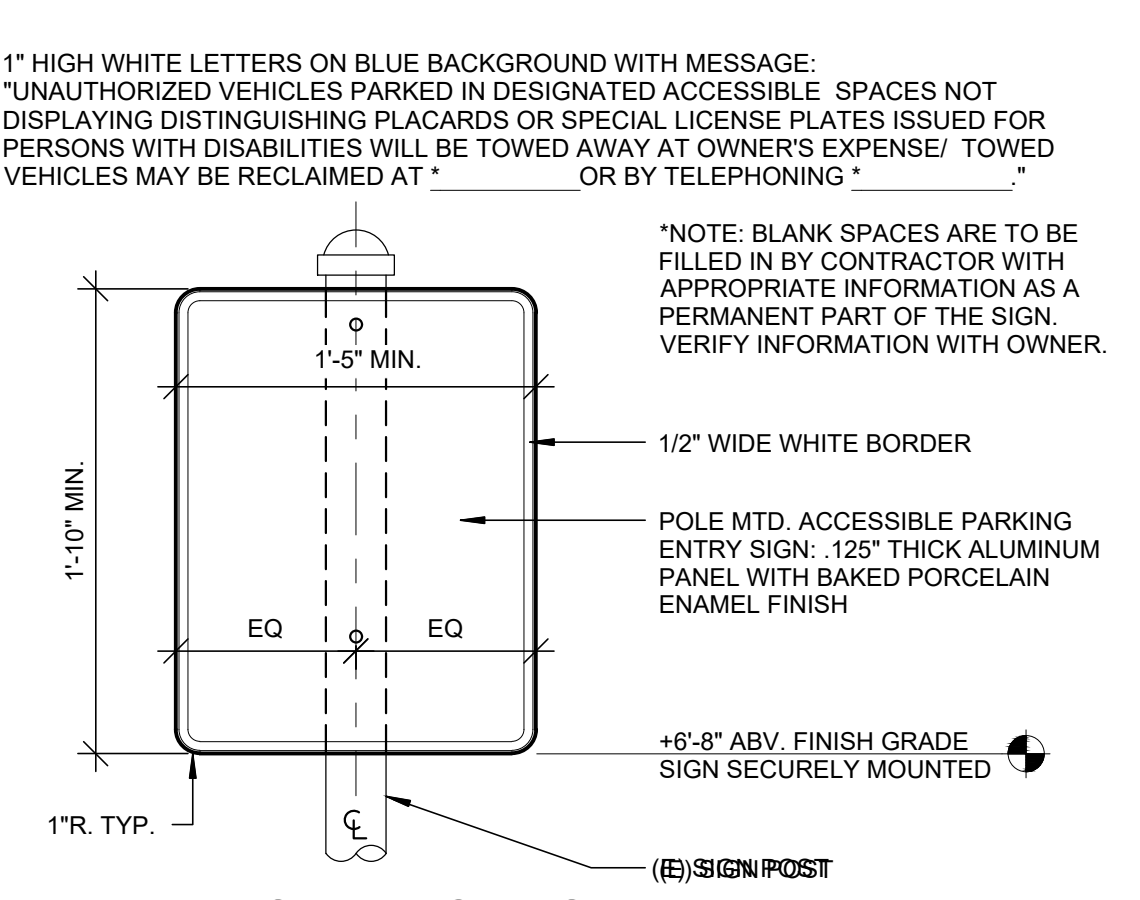
**9 TYPICAL EXISTING ACCESSIBLE FIXTURE & ACCESSORY (ADULT) MOUNTING HEIGHTS**  
 SCALE: 1/4" = 1'-0"



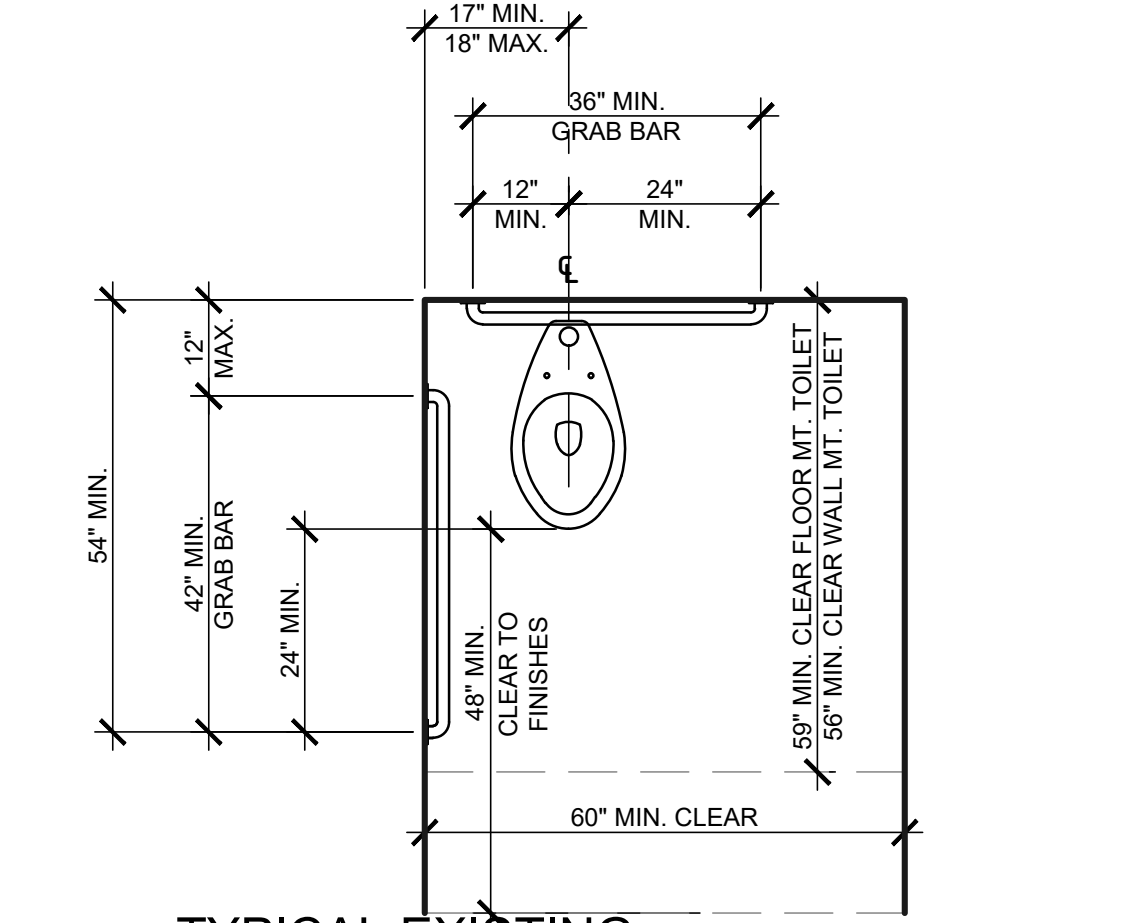
**10 TYPICAL EXISTING ACCESSIBLE STALL CLEARANCES**  
 SCALE: 1/2" = 1'-0"



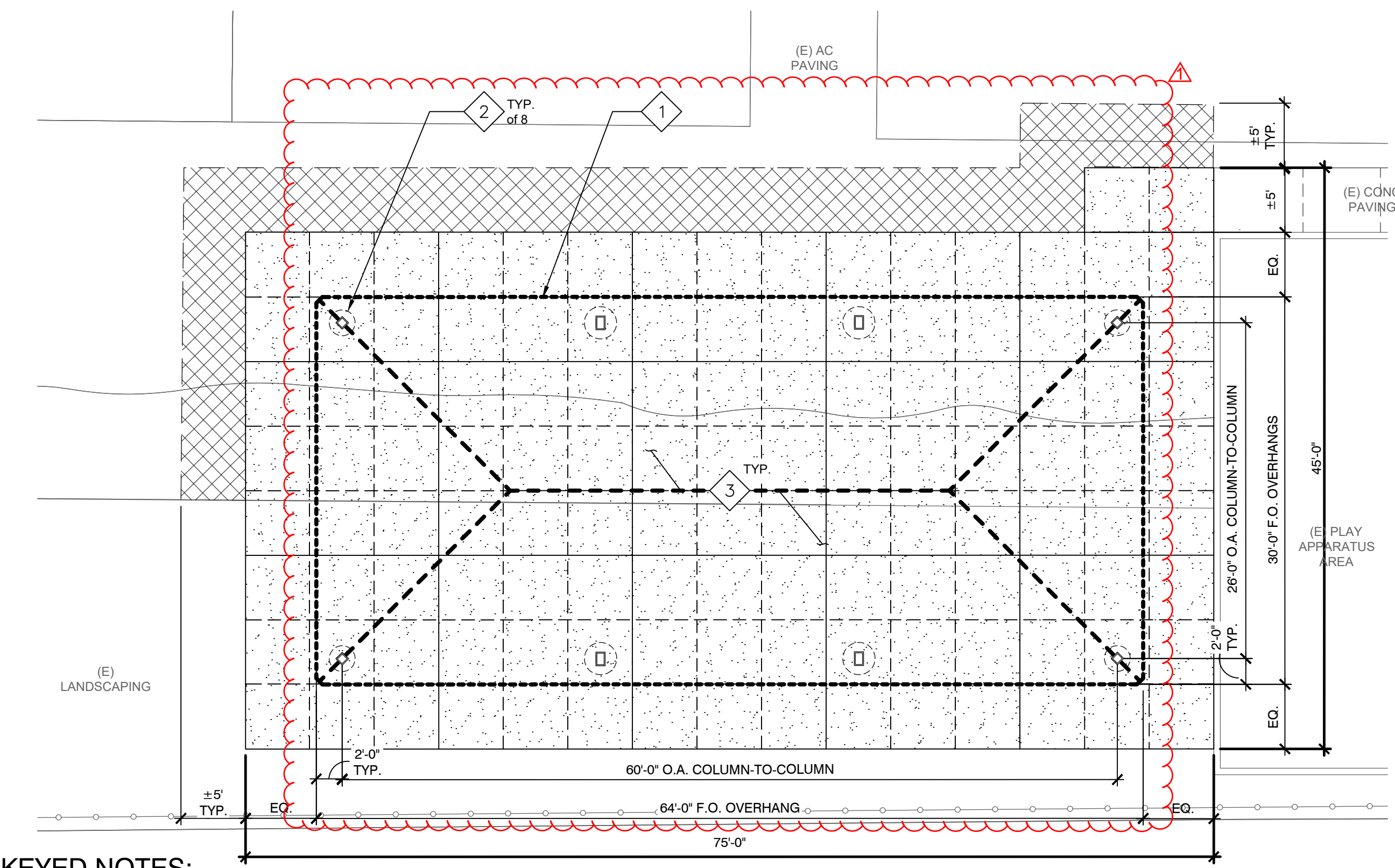
**6 TYPICAL EXISTING LAVATORY CLEARANCE PLAN**  
 SCALE: 1/2" = 1'-0"



**1 TYPICAL EXISTING ACCESSIBLE PARKING ENTRY SIGN**  
 SCALE: 1 1/2" = 1'-0"



**2 TYPICAL EXISTING TOILET CLEARANCES PLAN**  
 SCALE: 1/2" = 1'-0"



- KEYED NOTES:**  
 APPLIES TO RESTROOMS
- (N) SHADE STRUCTURE, OWNER-FURNISHED / CONTRACTOR-INSTALLED, BASED ON RH30X64 COLUMN LAYOUT (3 BAYS) PER DSA A#04-122375 PC
  - (N) DRILLED PIERS FOR 10' HEIGHT COLUMNS BASED ON DSA A#04-122375 PC. SEE RH30-PIER DETAIL ON L33.0.
  - (N) CONCRETE PAVING - SEE CIVIL DRAWINGS FOR ADDITIONAL INFO

**8 ENLARGED SITE PLAN - OUTDOOR LEARNING SHADE STRUCTURE**  
 SCALE: 1/8" = 1'-0"



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**OUTDOOR LEARNING SHADE STRUCTURES**

DEL PASO HEIGHTS ELEMENTARY SCHOOL  
 590 MOREY AVENUE  
 SACRAMENTO, CA 95838

**REVISIONS**  
 DSA ADD-001 5/3/2024

DATE February 13, 2024

**ENLARGED PLANS & DETAILS**

DESIGN CRITERIA	DESCRIPTION	DESIGN VALUES
BASE LOCATION LOCATED AT BOTTOM OF BASEPLATE/TOP OF FOOTING		
DEAD AND LIVE LOADS		
ROOF LIVE LOAD		20 PSF
ROOF DEAD LOAD (SUPERIMPOSED ON FRAME)		5 PSF MAX
ROOF PANEL DEAD LOAD		M=1.1 PSF, G=1.2 PSF, S=1.9 PSF
COLLATERAL DEAD LOAD		M=3.9 PSF, G=3.9 PSF, S=3.7 PSF
ROOF LIVE LOAD, L <sub>r</sub>		20 PSF
ROOF SNOW LOAD		20 PSF
GROUND SNOW LOAD, P <sub>g</sub>		20 PSF
RISK CATEGORY		II
ROOF SNOW LOAD, P <sub>s</sub>		20 PSF
FOR SNOW LOAD CONDITIONS ONLY - SITE APPLICATION REVIEWER SHALL VERIFY THE STRUCTURE SHALL BE LOCATED AT LEAST 20 FEET FROM ANY ADJACENT STRUCTURE FOR SNOW DRIFT.		
SNOW LOAD SLOPE FACTOR, C <sub>s</sub>		1.0
SNOW LOAD EXPOSURE FACTOR, C <sub>e</sub>		1.0
SNOW LOAD IMPORTANCE FACTOR, I <sub>s</sub>		1.0
THERMAL FACTOR, C <sub>t</sub>		1.2
LOWEST ANTICIPATED SERVICE TEMPERATURE		30°
WIND DESIGN		
BASIC WIND SPEED (3 SECOND GUST), V <sub>ult</sub> , V <sub>asd</sub>		100 MPH, 78 MPH
RISK CATEGORY		II
EXPOSURE CATEGORY		C
FACTORS: K <sub>d</sub> , K <sub>e</sub> , K <sub>z</sub>		0.85, 1.0, 0.85
q <sub>h</sub> = 0.00256 K <sub>d</sub> K <sub>e</sub> K <sub>z</sub> V <sup>2</sup>		18.50 PSF
C <sub>mn</sub> PER ASCE FIGURE 27.3-5 ROOF ANGLE 18.43° - CLEAR / OBSTRUCTED		CASE A (1.1 / -1.2) CASE B (0.01 / -0.69)
C <sub>me</sub> PER ASCE FIGURE 27.3-5 ROOF ANGLE 18.43° - CLEAR / OBSTRUCTED		CASE A (-0.17 / -1.09) CASE B (-0.96 / -1.65)
C <sub>o</sub> PER ASCE FIGURE 27.3-7 PARALLEL TO RIDGE - CLEAR / OBSTRUCTED (< h)		CASE A (-0.8 / -1.2) CASE B (0.8 / 0.5)
C <sub>o</sub> PER ASCE FIGURE 27.3-7 PARALLEL TO RIDGE - CLEAR / OBSTRUCTED (> h, < 2h)		CASE A (-0.6 / -0.9) CASE B (0.5 / 0.5)
C <sub>o</sub> PER ASCE FIGURE 27.3-7 PARALLEL TO RIDGE - CLEAR / OBSTRUCTED (> 2h)		CASE A (-0.3 / -0.6) CASE B (0.3 / 0.3)
COMPONENTS & CLADDING - C <sub>o</sub> (PRESSURE/SUCTION) CLEAR / OBSTRUCTED		ZONE 3 - (2.29 / -2.11) / (1.0 / -3.0) ZONE 2 - (1.77 / -1.63) / (0.8 / -2.3) ZONE 1 - (1.15 / -1.05) / (0.5 / -1.5)
SEISMIC DESIGN		
LATERAL FORCE RESISTING SYSTEM		STEEL - ORDINARY CANTILEVER COLUMN
ANALYSIS PROCEDURE		EQUIVALENT LATERAL FORCE
SEISMIC IMPORTANCE FACTOR, I <sub>e</sub>		1.0
SEISMIC SITE CLASS		D
MCE <sub>r</sub> SPECTRAL RESPONSE ACCELERATION @ 0.2 s, S <sub>0.2</sub>		2.60
MCE <sub>s</sub> SPECTRAL RESPONSE ACCELERATION @ 0.2 s, S <sub>1</sub>		0.90
SHORT PERIOD SITE COEFFICIENT, F <sub>a</sub>		1.20
LONG PERIOD COEFFICIENT, F <sub>v</sub>		1.70
FUNDAMENTAL PERIOD OF THE STRUCTURE, T (WORST CASE FOR ALL STRUCTURES)		0.152 s
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, S <sub>0.2</sub>		2.08
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, S <sub>0.2</sub> - USED TO DETERMINE C <sub>s</sub> (WITH CAP PER ASCE 7 12.8.1.3) SOIL PROPERTIES MAY NOT BE CLASSIFIED AS SITE CLASS E.		2.08 * 0.70 = 1.456
DESIGN SPECTRAL RESPONSE ACCELERATION AT 1-s PERIODS, S <sub>1</sub>		1.0
SEISMIC DESIGN CATEGORY		
SITE SPECIFIC RESPONSE ANALYSIS NOT REQUIRED PER ASCE 7 11.4.8 EXCEPTION 2		T <sub>s</sub> = 0.49 s
RESPONSE MODIFICATION FACTOR, R		1.25
OVERSTRENGTH FACTOR, Q		1.25
REDUNDANCY FACTOR, ρ		1.3
HORIZONTAL OR VERTICAL IRREGULARITIES		NONE
SEISMIC RESPONSE COEFFICIENT, C <sub>s</sub> (20' WIDE, 30' WIDE, 40' WIDE)		1.16
DESIGN BASE SHEAR, V (20' WIDE, 30' WIDE, 40' WIDE)		42.73 PSF
ALLOWABLE SOIL BEARING FOR FOUNDATIONS		VARIES - SEE FOUNDATION CHARTS
FLOOD DESIGN - DESIGN IS ASSUMED TO NOT BE IN FLOOD HAZARD AREA		
IF PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED & SIGNED FROM A SOILS ENGINEER IS REQUIRED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED.		

STRUCTURAL SEPARATION

ALL DEFLECTIONS SHOWN ALSO INCLUDE THE P-DELTA ROTATION PER IR PC-7

DEFLECTIONS ARE FOR (1) STRUCTURE

SOIL CLASSES PER CBC TABLE 1806.2

MAXIMUM DRIFT δ <sub>max</sub>	SIDE COLUMNS		
	Soil Class 5	Soil Class 4	Soil Class 3
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 2.40	[ ] 2.55	[ ] 2.55
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 2.15	[ ] 2.30	[ ] 2.40
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 2.20	[ ] 2.20	[ ] 2.20
MINIMUM SEPARATION (δ <sub>m</sub> = C <sub>d</sub> δ <sub>max</sub> ) C <sub>d</sub> = 1.25			
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 3.00	[ ] 3.10	[ ] 3.21
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 2.69	[ ] 2.88	[ ] 3.00
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 2.75	[ ] 2.75	[ ] 2.88
MAXIMUM DRIFT δ <sub>max</sub>	END COLUMNS		
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 2.40	[ ] 2.55	[ ] 2.55
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 2.15	[ ] 2.30	[ ] 2.40
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 2.20	[ ] 2.20	[ ] 2.20
MINIMUM SEPARATION (δ <sub>m</sub> = C <sub>d</sub> δ <sub>max</sub> ) C <sub>d</sub> = 1.25			
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 3.00	[ ] 3.10	[ ] 3.21
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 2.69	[ ] 2.88	[ ] 3.00
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)	[ ] 2.75	[ ] 2.75	[ ] 2.88

INSTRUCTIONS FOR ARCHITECTS SUBMITTING THESE PRE-CHECKED DRAWINGS TO DSA:

BEFORE SUBMITTING THESE PRE-CHECKED DRAWINGS FOR YOUR PROJECT, FOLLOW THE STEPS BELOW TO PROPERLY DEFINE THE APPROVED OPTIONS:

- STEP 1: SELECT FRAME DIMENSIONS FOR YOUR PROJECT
- HIP STRUCTURES UP TO 20' WIDE USE THE "RH 20" BASE FRAME
  - HIP STRUCTURES UP TO 30' WIDE USE THE "RH 30" BASE FRAME
  - HIP STRUCTURES UP TO 40' WIDE USE THE "RH 40" BASE FRAME
  - MAXIMUM WIDTH IS 40' (SEE "ARCHITECTURAL VIEWS" SHEET FOR REFERENCE)
  - THE 24', 44', 64', 84' AND 104' LENGTHS ARE SUGGESTED BECAUSE THEY ARE THE MOST COMMON (20' BAYS ARE THE MOST ECONOMIC)
  - FRAME LENGTHS ASSUME 2' OVERHANGS (UNO BY ARCHITECT - 2' MAX DIMENSION)

STEP 1	FRAME DIMENSIONS	
	SUGGESTED	OTHER
	FRAME WIDTH	[ ] 20' [ ] 30' [ ] 40'
	FRAME LENGTH	[ ] 24' [ ] 44' [ ] 64' [ ] 84' [ ] 104'

- STEP 2: SELECT ROOF DECK FOR YOUR PROJECT
- "M" REPRESENTS MCELROY METAL "MULTI-RIB" ROOF PANEL
  - "G" REPRESENTS MCELROY METAL "MEGA-RIB" ROOF PANEL
  - "S" REPRESENTS MCELROY METAL "MEDALLION-LOK" 16" STANDING SEAM ROOF PANEL

STEP 2	ROOF PANEL	
	ROOF PANEL TYPE	
	[ ] M [ ] G [ ] S	

- STEP 3: IDENTIFY THE S<sub>s</sub> ACCELERATION (g) FOR YOUR PROJECT
- S<sub>s</sub> VALUE DETERMINES THE REQUIRED SEISMIC DESIGN FORCES
  - S<sub>s</sub> VALUE DEPENDS ON THE PROJECT'S GEOGRAPHICAL LOCATION (VALUES RANGE FROM 0.00 TO 3.73)
  - FIND S<sub>s</sub> VALUES FOR YOUR PROJECT ON THE USGS WEBSITE (SEARCH INTERNET FOR "USGS SEISMIC DESIGN MAPS")

STEP 3	PROJECT SITE S <sub>s</sub> ACCELERATION (g)	
	[ ] 0.53	

- STEP 4: IDENTIFY THE S<sub>s</sub> REGION FOR YOUR PROJECT
- THE REGIONS ARE DEPENDANT ON THE S<sub>s</sub> VALUE DETERMINED IN STEP 3
  - THE S<sub>s</sub> REGION DICTATES THE MAXIMUM DEAD LOAD PERMITTED ON THE FRAME

STEP 4	S <sub>s</sub> REGION	
	DESCRIPTION	MAX DEAD LOAD
	[ ] 0.53	5 PSF
	[ ] 0.6 < S <sub>s</sub> < 2.00	5 PSF

- STEP 5: IDENTIFY THE ROOF DEAD LOAD FOR YOUR PROJECT
- THE ROOF DEAD LOAD WILL ALWAYS BE INCLUDED
  - THE COLLATERAL DEAD LOAD REPRESENTS ADDITIONAL LOAD THAT CAN BE SUPPORTED BY THE FRAME
  - BE SURE THE TOTAL ROOF DEAD LOAD FOR YOUR PROJECT IS LESS THAN OR EQUAL TO THE MAX DEAD LOAD SHOWN IN STEP 4 FOR YOUR S<sub>s</sub> VALUE
  - S<sub>s</sub> VALUE USED IN CALCULATION IS THE CAPPED S<sub>s</sub> (SEE DESIGN CRITERIA)

STEP 5	TOTAL ROOF DEAD LOAD	
	DEAD LOAD	EXAMPLES
	ROOF DECK	1.1 PSF
	COLLATERAL	3.9 PSF
	TOTAL	5.0 PSF

- STEP 6: IDENTIFY THE FOUNDATION REQUIREMENTS FOR YOUR PROJECT
- IDENTIFY SOIL CLASS FOR PROJECT SITE PER SITE SPECIFIC SOIL CONDITIONS
  - USE THIS TO SELECT CORRECT FOUNDATION SIZE ON FOUNDATION SHEET

STEP 6	FOUNDATION REQUIREMENTS		
	SOIL CLASS 5 (BEARING) 1500 PSF	SOIL CLASS 4 (BEARING) 2000 PSF	SOIL CLASS 3 (BEARING) 3000 PSF
	[ ]	[ ]	[ ]
	[ ]	[ ]	[ ]

- STEP 7: SELECT MISCELLANEOUS OPTIONS FOR YOUR PROJECT
- MAXIMUM CLEAR HEIGHT IS 12'-0"; (SEE "ARCHITECTURAL VIEWS" SHEET FOR REFERENCE)
  - MARK UP PC DRAWINGS WITH SIZE AND LOCATION OF CUTOUTS BEFORE SUBMITTING TO DSA

STEP 7	MISCELLANEOUS	
	DESIGN	OPTIONS
	CLEAR HEIGHT	[ ] 10' [ ] 12' MAX
	ELECTRICAL CUTOUTS	[ ] YES [ ] NO
	GUTTERS	[ ] YES [ ] NO

- STEP 8: SELECT APPLICABLE SHEET INDEX FOR YOUR PROJECT
- REFERENCE THE BASE FRAME (STEP 1) AND THE ROOF PANEL TYPE (STEP 2)
  - IDENTIFY THE APPLICABLE SHEET INDEX

STEP 8	SHEET INDEX												
	RH 20			RH 30			RH 40						
	BASE FRAME	M	G	S	M	G	S	M	G	S			
	ROOF PANEL TYPE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
	GENERAL NOTES	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0
	FOUNDATION PLAN	LS2.0	LS2.0	LS2.0	LS3.0	LS3.0	LS3.0	LS4.0	LS4.0	LS4.0	LS4.0	LS4.0	LS4.0
	FRAMING PLAN	LS2.1	LS2.1	LS2.1	LS3.1	LS3.1	LS3.1	LS4.1	LS4.1	LS4.1	LS4.1	LS4.1	LS4.1
	FRAME CONNECTION DETAILS	LS2.1	LS2.1	LS2.1	LS3.1	LS3.1	LS3.1	LS4.2	LS4.2	LS4.2	LS4.2	LS4.2	LS4.2
	ROOFING LAYOUT & DETAILS	LS2.2	LS2.3	LS2.4	LS3.2	LS3.3	LS3.4	LS4.3	LS4.4	LS4.5	LS4.6	LS4.7	LS4.8
	(NOT USED) DSA 103 EXAMPLE	LS1.3	LS1.3	LS1.1	LS1.2	LS1.2	LS1.1	LS1.3	LS1.3	LS1.3	LS1.3	LS1.3	LS1.3
	MISC DESIGN OPTIONS	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0	LS5.0

- STEP 9: INCLUDE APPLICABLE SHEETS WITH YOUR DSA SUBMITTAL
- INCLUDE "MISC DESIGN OPTIONS" SHEET FOR PROJECTS WITHOUT ELECTRICAL CUTOUTS OR GUTTERS

STEP 10: IDENTIFY PROJECT NAME AND LOCATION	
PROJECT NAME:	SCHOOL DISTRICT:
DEL PASO HEIGHT ES OUTDOOR LEARNING SHADE STRUCTURE	TWIN RIVERS USD

- STEP 11: CROSS OUT EXAMPLE 103 FORMS & INCORPORATE REQUIRED SPECIAL INSPECTIONS 103 FORMS THAT ARE PROJECT SPECIFIC

SITE SPECIFIC PARAMETERS

INSTRUCTIONS: DESIGN PROFESSIONAL SHALL CHECK THE APPROPRIATE SELECTION BOXES BELOW AND ENTER THE DESIGN PARAMETERS APPLICABLE TO THE SPECIFIC PROJECT SITE

SNOW

ps = 0 psf  
Fl = 0 psf  
Ce = 0 psf

WIND

V = 95 mph < XX mph  
ktl = 1  
EXPOSURE:  C  D

SEISMIC

DESIGN BASED ON SITE CLASS D  
NO GEOTECHNICAL INVESTIGATION REQUIRED

S<sub>s</sub> = 0.53 F<sub>a</sub> = 1.2

DESIGN BASED ON SITE CLASS DETERMINED PER CHAPTER 20 OF ASCE 7-16  
GEOTECHNICAL INVESTIGATION REQUIRED

SITE CLASS:  C  D  E

S<sub>s</sub> = \_\_\_\_\_ F<sub>a</sub> = \_\_\_\_\_ PER ASCE 7-16 SUPPL 3, TABLE 11.4-1

DESIGN BASED ON SITE SPECIFIC GROUND MOTION HAZARD ANALYSIS  
PER CHAPTER 21 OF ASCE 7-16

SHORT-PERIOD DESIGN SPECTRAL RESPONSE PARAMETER, S<sub>ds</sub>, SHALL BE AS SPECIFIED IN GEOTECHNICAL INVESTIGATION

COS APPROVAL REQUIRED  
NOT ELIGIBLE FOR OTC REVIEW

SITE CLASS:  C  D  E

S<sub>ds</sub> = F<sub>a</sub> S<sub>s</sub> = 0.49

SITE CLASS C or D: 0.7 \* S<sub>ds</sub> = 0.7 \* 0.49 = 0.343 < XXX

SITE CLASS E: \_\_\_\_\_

C<sub>s</sub> = XXX USED IN DESIGN

SEISMIC DESIGN CATEGORY  D  E

\*SITE SPECIFIC S<sub>ds</sub> VALUE BEFORE APPLYING REDUCTION ALLOWED BY ASCE 7 SECTION 12.8.1.3

ABBREVIATIONS:

ACI	AMERICAN CONCRETE INSTITUTE	MPH	MILES PER HOUR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	M	MULTI-RIB ROOF PANEL (MCELROY)
ASM	ASSEMBLY (INTERNAL REFERENCE)	NTS	NOT TO SCALE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATLS	NO	NUMBER
AWS	AMERICAN WELDING SOCIETY	OC	ON CENTER
CBC	CALIFORNIA BUILDING CODE	OSHA	OCCUPATIONAL HEALTH AND SAFETY ADMIN
CJP	COMPLETE JOINT PENETRATION	PCF	POUNDS PER CUBIC FOOT
CLR	CLEAR	PJ	PRETENSIONED JOINT
DEG	DEGREE	PLCS	PLACES
DIA	DIAMETER	PLT	PLATE
DIM	DIMENSION	PSF	POUNDS PER SQUARE FOOT
DSA	DIVISION OF THE STATE ARCHITECT	PSI	POUNDS PER SQUARE INCH
EQ	EQUAL	QTY	QUANTITY
FT	FEET	REF	REFERENCE
GA	GAGE	SQ	SQUARE
IN	INCHES	SS	STANDING SEAM ROOF PANEL (MCELROY)
KSI	KIPS PER SQUARE INCH	TYP	TYPICAL
MAX	MAXIMUM	UNO	UNLESS NOTED OTHERWISE
MIN	MINIMUM	USGS	U.S. GEOLOGICAL SURVEY
MISC	MISCELLANEOUS	W/	WITH

ARCHITECTURAL REQUIREMENTS

DESCRIPTION	DESIGN VALUES
TYPE OF CONSTRUCTION	II-B
OCCUPANCY CLASSIFICATION	A-3
NUMBER OF STORIES	1
FIRE SPRINKLER SYSTEM	NOT BY ICON/WEIGHT NOT INCLUDED IN DESIGN
MOST COMMON RH20 MIN/MAX SQ.FT (SEE STEP 1)	486/2,898
MOST COMMON RH30 MIN/MAX SQ.FT (SEE STEP 1)	720/3,120
MOST COMMON RH40 MIN/MAX SQ.FT (SEE STEP 1)	960/4,166
AREA OVER 4000 SQ.FT REQUIRES GEOHAZARD REPORT	
ALLOWABLE ARE FOR II-B / A-3 IS 950 SQ.FT	

RELATED BUILDING CODES AND STANDARDS

TITLE 24 CODES:

- 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC).....(PART 1, TITLE 24, CCR)
- 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
- 2022 CALIFORNIA ELECTRICAL CODE.....(PART 3, TITLE 24, CCR)
- 2022 CALIFORNIA MECHANICAL CODE (CMC).....(PART 4, TITLE 24, CCR)
- 2022 CALIFORNIA PLUMBING CODE (CPC).....(PART 5, TITLE 24, CCR)
- 2022 CALIFORNIA ENERGY CODE.....(PART 6, TITLE 24, CCR)
- 2022 CALIFORNIA FIRE CODE (CFC) .....(PART 9, TITLE 24, CCR)
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE.....(PART 11, TITLE 24, CCR)
- 2022 CALIFORNIA REFERENCE STANDARDS CODE.....(PART 12, TITLE 24, CCR)
- TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS:  
2022 CBC, CHAPTER 35  
2022 CFC, CHAPTER 80

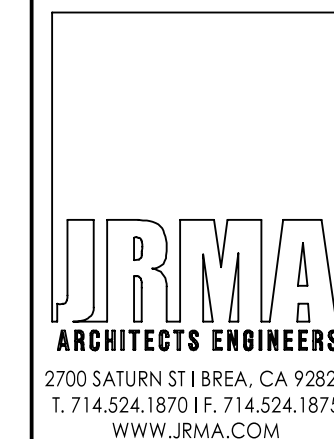
SCOPE OF WORK NARRATIVE

THESE DRAWINGS ILLUSTRATE THE FABRICATION AND INSTALLATION REQUIREMENTS FOR A FREE-STANDING PREFABRICATED STEEL SHADE STRUCTURE. THE ENTIRE STRUCTURAL SYSTEM IS COMPRISED OF HOLLOW STRUCTURAL STEEL MEMBERS SUPPORTED BY CONCRETE FOUNDATIONS. THE FLEXIBILITY INCLUDED HEREIN ALLOWS THE STRUCTURE TO COMPLY WITH A WIDE VARIETY OF PROJECT SITES AND LOADING REQUIREMENTS.

PRE-CHECK (PC) DOCUMENT  
Code: 2022 CBC  
A separate project application for construction is required.

APPROVED  
DIV. OF THE STATE ARCHITECT  
APP: 04-122045 PC  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 05/15/2024

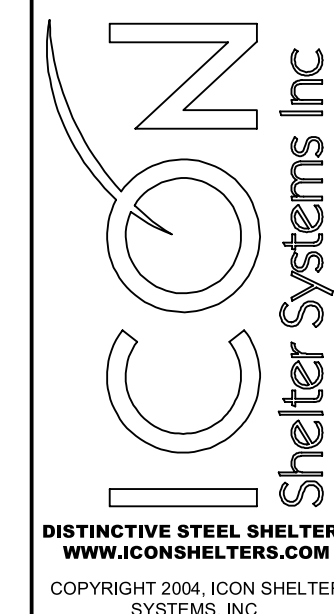
ICON STD RH/DSA-PC  
DRAWN BY JD  
DATE 7/25/2023  
REV  
REV DATE



Oct. 04, 2023

APPROVED  
DIV. OF THE STATE ARCHITECT  
APP: 04-122045 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 10/10/2023

GENERAL INFO



1455 LINCOLN AVE  
HOLLAND MI, 49423

616.396.0919  
800.748.0985  
616.396.0944 FX

LS1.0

GENERAL:

- GENERAL NOTES AND TYPICAL DETAILS SHALL APPLY TO ALL PARTS OF THE JOB EXCEPT WHERE THEY MAY CONFLICT WITH DETAILS AND NOTES ON OTHER SHEETS. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW BY THE STRUCTURAL ENGINEER FOR THIS PROJECT.
- WORK SHALL CONFORM TO THE REQUIREMENTS, AS AMENDED TO DATE, OF THE LATEST ADOPTED EDITION OF THE CBC, C.A.C. TITLE 24, AND ALL STATE AND FEDERAL REGULATIONS.
- OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR THIS PROJECT PRIOR TO PROCEEDING WITH ANY WORK INVOLVED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS, ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR THIS PROJECT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
- THESE CONSTRUCTION DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, INCLUDING, BUT NOT LIMITED TO, BRACING, TEMPORARY SUPPORTS, AND SHORING. OBSERVATION VISIT TO THE SITE BY FIELD REPRESENTATIVES OF THE ARCHITECT/ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES, ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER DURING THE CONSTRUCTION SHALL BE DISTINGUISHED FROM CONSTRUCTION AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER, WHETHER OF MATERIAL OR WORK, ARE FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING PERFORMANCE WITH CONTRACT DOCUMENTS, BUT DO NOT GUARANTEE CONSTRUCTION.
- ASTM DESIGNATIONS AND ALL STANDARDS REFER TO THE LATEST AMENDMENTS, EXCEPT AS AMENDED BY CBC CHAPTER 35.
- CONFORM TO APPLICABLE CAL/OSHA CONSTRUCTION SAFETY REGULATIONS FOR ALL WORK PERFORMED DURING CONSTRUCTION. JOB SITE SAFETY IS STRICTLY THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THE ARCHITECT/ENGINEER OR OWNER.
- THE ENGINEER AND THEIR CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, HANDLING, REMOVAL OR DISPOSAL OF HAZARDOUS MATERIALS AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES.
- SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, OR IF A CHANGE IN THE SCOPE OF WORK IS PROPOSED, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED CHANGE(S) SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
- THE SCHOOL DISTRICT INSPECTOR ON RECORD SHALL INSPECT AND APPROVE THE ERECTED FRAME PRIOR TO ROOF INSTALLATION.
- SEE REQUIREMENTS FOR LOCATION IN ANY FIRE HAZARD SEVERITY ZONE FOR WILDLAND URBAN INTERFACE AREAS (WUI) AS SPECIFIED IN THE APPLICABLE VERSION OF THE CALIFORNIA BUILDING CODE. PROVIDE PROTECTION AND DETAILS OF ALL AREAS COMPLYING WITH THE WUI REQUIREMENTS.
- LOCATING THIS STRUCTURE CLOSER THAN 20 FEET TO OTHER STRUCTURES MAY AFFECT THE ALLOWABLE AREA FOR THE EXISTING CONSTRUCTION PER THE APPLICABLE VERSION OF THE CALIFORNIA BUILDING CODE.
- VIEWS AND DETAILS ARE NOT DRAWN TO SCALE (UNLESS NOTED OTHERWISE). DO NOT SCALE THESE DRAWINGS.

STRUCTURAL AND MISCELLANEOUS STEEL:

- ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATION MANUAL REFERENCED BY THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
- PIPE SECTIONS SHALL CONFORM TO ASTM A53, Fy = 35 KSI, GRADE B OR A501 UNLESS NOTED OTHERWISE.
- STRUCTURAL TUBING (HSS SHAPES) SHALL CONFORM TO ASTM A-500, GRADE B (OR C), Fy = 46 KSI, MIN.
- IF MATERIAL AVAILABILITY IS LIMITED, MEMBER THICKNESS CAN BE INCREASED BEYOND WHAT IS SHOWN IN THESE DRAWINGS (MAXIMUM INCREASE OF 1/8").
- ALL CHANNELS, ANGLES, AND MISC. STEEL SHALL CONFORM TO ASTM A-36, Fy = 36 KSI.
- ALL PLATE STEEL SHALL CONFORM TO ASTM A-572, Fy= 50 KSI.
- ALL COLD FORM STEEL SHALL CONFORM TO ASTM A-653, CS = TYPE B, Fy = 50 KSI Fu = 65 KSI
- STRUCTURAL STEEL AND DECK SHALL BE IDENTIFIED FOR CONFORMITY PER CBC 2202A.1.
- ALL ROOF DECKS SHALL HAVE KYNAR 500 METAL COATING.
- ALL ROOF DECKS SHALL CONFORM TO ASTM A-792, Fy = 50 KSI.
- ALL BASE CONNECTIONS ARE A PART OF THE LATERAL FORCE RESISTING SYSTEM

NOTICE OF DISCLAIMER FOR STRUCTURAL ENGINEERING RESPONSIBILITY

- PER TITLE 24, PART 1, SECTION 4-316(e) OF THE CALIFORNIA CODE OF REGULATIONS, THIS NOTICE SHALL BE GIVEN TO DSA PRIOR TO THE APPROVAL OF PLANS AND SPECIFICATIONS.
- FOR THE SITE SPECIFIC PROJECT, J. R. MILLER & ASSOCIATES IS NOT THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE.
- FOR THE SITE SPECIFIC PROJECT, J.R. MILLER & ASSOCIATES' RESPONSIBILITY IS LIMITED TO THE PREPARATION OF THE PLANS AND SPECIFICATIONS FOR THE SHELTERS OF THIS PC ONLY.
- STRUCTURAL OBSERVATION OF CONSTRUCTION IS SPECIFICALLY EXCLUDED FROM J.R. MILLER & ASSOCIATES' RESPONSIBILITY FOR THE SITE SPECIFIC PROJECT.
- ALL CONSTRUCTION ACTIVITIES RELATED TO STRUCTURAL ENGINEERING SHALL BE DELEGATED TO A QUALIFIED ENGINEER BY THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE. THESE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, STRUCTURAL OBSERVATION OF CONSTRUCTION, REVIEW OF INSPECTION REPORTS, AND SIGNING OFF OF THE VERIFIED REPORT FOR COMPLETED WORK.
- J.R. MILLER & ASSOCIATES WILL BE RESPONSIBLE FOR RESPONDING TO QUESTIONS PERTAINING TO THE PLANS AND SPECIFICATIONS FOR THE SHELTERS OF THIS PC WHICH ARISE DURING PLAN REVIEW AND CONSTRUCTION.

CONSTRUCTION NOTES

- A DSA-CERTIFIED CLASS 3 (MINIMUM) PROJECT INSPECTOR IS REQUIRED FOR THIS PROJECT.
- CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
- A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
- A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS ARE THAT ALL THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK, (SECTION 4-317(c), PART 1, TITLE 24, CCR)
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES

WELDING:

- ALL WELDING SHALL COMPLY WITH AWS D1.1 SPECIFICATIONS AND SHALL BE DONE BY AWS QUALIFIED WELDERS CERTIFIED FOR THE TYPE OF WELDING TO BE PERFORMED AS REQUIRED BY DSA.
- ALL WELDING SHALL BE DONE BY GAS METAL ARC PROCESS WITH E70XX ELECTRODES. FLUX CORE ARC WELD SHALL CONFORM TO CHARPY NOTCH TOUGHNESS RATING OF 20 FT-LB @ ( 0° F).
- ALL WELDING SHALL BE DONE IN THE SHOP WITH REQUIRED INSPECTION, PRE-APPROVED BY DSA, TO ENSURE PROPER MATERIAL ID AND WELDING.
- WELD FILLER METAL MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION OF COMPLIANCE WITH CODE AND SPECIFICATIONS.

BOLTING:

- ALL BOLTS SHOWN ON THESE DRAWINGS ARE HOT DIPPED GALVANIZED ASTM F3125 GRADE A325 HIGH STRENGTH BOLTS (UNO), WITH THE NUTS CONFORMING TO HOT DIPPED GALVANIZED ASTM A-563 GRADE DH.
  - HIGH STRENGTH BOLTS SHALL BE VERIFIED AND INSPECTED PER CBC 1705A2.1.
  - BEFORE ERRECTING THE FRAME, VERIFY ALL BOLTS AND NUTS ARE CLEAN OF DEBRIS AND BURRS – INCLUDING THE HARDWARE ALREADY FASTENED INSIDE THE MEMBERS. CHASING SOME OF THE BOLTS AND NUTS MAY BE REQUIRED.
  - HARDENED STEEL WASHERS SHALL CONFORM TO ASTM F-436.
  - THE BOLTING INSTALLATION REQUIREMENTS OUTLINED BELOW ARE CRITICAL TO THE STRUCTURE'S DESIGN AND PERFORMANCE. THE INSTALLER IS REQUIRED TO COORDINATE THIS PHASE OF CONSTRUCTION WITH THE SPECIAL BOLTING INSPECTOR AND THE INSPECTOR OF RECORD PRIOR TO THE ERECTION OF THE FRAME BE INSTALLED AND INSPECTED PER THE APPLICABLE VERSION OF AISC'S USING HIGH-STRENGTH BOLTS", CBC 1705A.2.1; AISC 341-16 J7; AISC 360-16 N5.6.
- APRENTENSIONED JOINTS MUST BE INSTALLED AND INSPECTED TO MEET ONE OF THE FOLLOWING REQUIREMENTS:
- TURN-OF-NUT PRETENSIONING: PER SECTION 8.2.1 OF THE SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS, WASHERS ARE NOT REQUIRED FOR THIS METHOD, THE NUT OR HEAD SHALL BE ROTATED AS SPECIFIED IN TABLE 8.2. THE PART NOT TURNED SHALL BE PREVENTED FROM ROTATING.
  - CALIBRATED WRENCH: PER THE SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS, WASHERS ARE REQUIRED (NOT SUPPLIED BY ICON) THESE SHALL BE INSTALLED PER THE INSTALLATION TORQUE DETERMINED IN THE PRE-INSTALLATION VERIFICATION OF THE FASTENER ASSEMBLY PER SECTION 7. THE PART NOT TURNED SHALL BE PREVENTED FROM ROTATING.
  - IDENTIFIED ON THE FRAME CONNECTION DETAILS WITH "PT REQUIRED"
- B) ALL OTHER JOINTS MUST BE INSTALLED AND INSPECTED TO MEET THE REQUIREMENTS OF THE SNUG-TIGHTENED JOINTS. SNUG TIGHT CONDITION EXISTS WHEN ALL PILES IN A CONNECTION HAVE BEEN PULLED INTO FIRM CONTACT BY THE BOLTS IN THE JOINT AND ALL OF THE BOLTS IN THE JOINT HAVE BEEN TIGHTENED SUFFICIENTLY TO PREVENT REMOVAL OF THE NUTS WITHOUT THE USE OF A WRENCH.

FOUNDATIONS:

- ALLOWABLE SOIL PRESSURES ASSUME CLASS 5 SOIL CLASSIFICATION PER CBC TABLE 1806A, UNLESS NOTED OTHERWISE. PASSIVE PRESSURE IS ASSUMED TO START 12" BELOW TOP OF FOOTING.
- PER CBC SECTION 1803A.2, GEOTECHNICAL REPORTS ARE NOT REQUIRED FOR ONE-STORY LIGHT-STEEL FRAME BUILDINGS OF TYPE II CONSTRUCTION AND 4,000 SQUARE FOOT OR LESS IN FLOOR AREA AND NOT LOCATED WITHIN EARTHQUAKE FAULT ZONESOR SISMIC HAZARD ZONES AS SHOWN ON THE MOST RECENT MAPS PUBLISHED BY THE CGS. ALLOWABLE FOUNDATION AND LATERAL SOIL PRESSURE VALUES MAY BE DETERMINED FROM TABLE 1806A.2.
- FILL AND BACKFILL SHALL BE COMPACTED TO 95% OF MAX. DENSITY IN ACCORDANCE WITH ASTM TEST METHOD D-1557 OR AS RECOMMENDED BY THE GEO-TECH ENGINEER. FLOODING NOT PERMITTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORINGS, ETC. NECESSARY TO SUPPORT CUT AND/OR FILL BANKS DURING EXCAVATION, AND FORMING AND PLACEMENT OF CONCRETE.
- MINIMUM SETBACK FROM TOE OF SLOPE ON AN ASCENDING SLOPE SHALL BE 15 FEET AND MINIMUM SETBACK FROM TOE OF SLOPE ON A DESCENDING SLOPE SHALL BE 40 FEET
- PER CBC SECTION 1803A.6, GEOHAZARD REPORTS ARE NOT REQUIRED FOR ONE-STORY LIGHT-STEEL FRAME BUILDINGS OF TYPE II CONSTRUCTION AND 4,000 SQUARE FOOT OR LESS IN FLOOR AREA AND NOT LOCATED WITHIN EARTHQUAKE FAULT ZONESOR SISMIC HAZARD ZONES AS SHOWN ON THE MOST RECENT MAPS PUBLISHED BY THE CGS.
- GEOHAZRD REPORTS ARE TO COMPLY WITH DSA IR A-4 PER IR-7 SECTION 1.8
- SITE SPECIFIC GEOTECHNICAL REPORT IS REQUIRED AT THE TIME OF SITE APPLICATION IF USING OTHER THAN CLASS 5 SOIL, PER DSA IR PC-7
- LATERAL BEARING HAS BEEN INCREASED PER CBC 1806A.3.4 FOR THE 1/2" DEFLECTION & HAS BEEN DESIGNED FOR P-DELTA EFFECTS. NO 1/3 INCREASE HAS BEEN APPLIED.
- MINIMUM CLEARANCE BETWEEN PIERS SHALL BE 8'-0".

CONCRETE:

- MIX DESIGN REQUIREMENTS: (NORMAL WEIGHT CONCRETE)

STRENGTH P <sub>c</sub> (28 DAYS)	W/C RATIO (NON-AIR ENTRAINED)	W/C RATIO (AIR ENTRAINED)	SLUMP (±1")	UNIT WEIGHT (NORMAL WEIGHT)
5000 PSI	0.44	0.35	3"	150 PCF

- CONCRETE MIX DESIGN PARAMETERS ARE GOOD FOR EXPOSURE CATEGORIES F0, F1 & F2. THE AIR ENTRAINMENT FOR THESE CATEGORIES SHALL BE AS FOLLOWS: F0-0, F1-4.5, F2-6
- CHANGES TO THE MIX DESIGN MUST BE APPROVED BY THE ENGINEER OR ARCHITECT OF RECORD AND DSA.
- AGGREGATES SHALL CONFORM TO THE ASTM C-33 WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.005. MAX AGGREGATE SIZE = 1".
- CEMENT SHALL CONFORM TO ASTM C-150 (TYPE V) UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF FIVE DAYS AFTER PLACEMENT. ALTERNATE METHODS WILL BE APPROVED IF SATISFACTORY PERFORMANCE CAN BE ASSURED.
- CONCRETE SHALL NOT FREE FALL MORE THAN FIVE FEET.
- CONCRETE DURABILITY SHALL BE PER CBC 1904A.1 ACI 318-19, CHAPTER 19.
- CONCRETE SHALL BE TESTED PER CBC 1903A, TABLE 1705A.3, AND ACI 318-19, SECTION 26.12.
- NO ADMIXTURE SHALL CONTAIN CALCIUM CHLORIDE.

REINFORCING STEEL:

- REINFORCING STEEL SHALL BE DEFORMED STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-615, AS FOLLOWS:  
GR 60: (#4 BARS AND LARGER)  
GR 40: (#3 BARS)
- DETAILING, FABRICATION, AND ERECTION OF REINFORCING BARS SHALL CONFORM TO THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING CONCRETE STRUCTURES."
- MIN. COVER FOR CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:  
A. CAST AGAINST EARTH .....3"  
B. CAST AGAINST FORM BELOW GRADE .....2"  
C. FORMED SLABS (#11 BAR & SMALLER).....3/4"  
D. SLABS ON GRADE (FROM TOP OF SLAB) .....1"
- BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIAL LIKELY TO IMPAIR BOND. BENDS SHALL BE MADE COLD
- REINFORCING SHALL BE LAP SPLICED PER ACI 318-19, SECTION 25.5.
- PRIOR TO PLACING OF CONCRETE, REINFORCING STEEL AND EMBEDDED ITEMS SHALL BE WELL SECURED IN POSITION.
- WELDING OF REINFORCING IS NOT ALLOWED.
- REINFORCING STEEL SHALL BE INSPECTED PER CBC 1705A.3.

POWDER-COAT FINISH SYSTEM:

ALL BUILDINGS THAT HAVE A POWDER-COATED FINISH SHALL MEET THE FOLLOWING SPECIFICATIONS:

- THE STEEL FRAME (HSS SECTIONS, COLD FORMED & PLATE STEEL) SHALL BE SHOT-BLASTED TO A NEAR WHITE CONDITION PER SSPC-10 SPECIFICATIONS.
- THE STEEL SHALL BE WASHED IN A ZINC PHOSPHATE IN AN MINIMUM THREE STAGE ELECTRO DEPOSITION PRE-TREATMENT PROCESS.
- IMMEDIATELY FOLLOWING PRE-TREATMENT THE STEEL SHALL BE TOTALLY COATED IN AN EPOXY PRIMER TO A UNIFORM THICKNESS OF A MINIMUM OF 0.7 TO 0.9 MILS. THE E-COATING SHALL PROVIDE A MINIMUM OF 1000 HOURS OF SALT SPRAY CORROSION PROTECTION TO THE STEEL.
- THE STEEL SHALL THEN HAVE A TGIC POLYESTER COLOR COAT APPLIED OVER THE E-COATED SURFACE.
- THE FINISH THICKNESS OF THESE APPLICATIONS SHALL BE A MINIMUM OF 8 TO 12 MILS.
- ALL CARBON STEEL MEMBERS (COLUMNS, BEAMS, PLATES, & COLD FORMED STEEL ETC.) NOT POWDER-COATED SHALL BE PAINTED WITH PRIME COAT PER THE "AISC CODE OF STANDARD PRACTICE" AND THE "AISC SPECIFICATION SECTION M3"(UNLESS NOTED OTHERWISE).

APPROVED  
DIV. OF THE STATE ARCHITECT  
APP: 02-122045 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 05/15/2024

ICON STD RH/DSA-PC

DRAWN BY JD

DATE 7/25/2023

REV

REV DATE

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Professional Engineer  
J. R. Miller  
State of California  
Oct. 04, 2023

APPROVED  
DIV. OF THE STATE ARCHITECT  
APP: 04-122375 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 10/10/2023

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PRE-CHECK (PC) DOCUMENT  
Code: 2022 CBC  
A separate project application for construction is required.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2022 CBC

Application Number: School Name: School District:
04-122188 PC Update PC Update
DSA File Number: Increment Number: Date Created:
2023-04-19 08:36:32

2022 CBC

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing.

\*\*NOTE: Undefined section and table references found in this document are from the CBC, or California Building Code.

KEY TO COLUMNS

Table with 2 columns: 1. TYPE, 2. PERFORMED BY. Rows include Continuous, Periodic, and Test types, and GE, LOR, PI, SI performed by roles.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8
Application Number: School Name: School District:
04-122188 PC Update PC Update
DSA File Number: Increment Number: Date Created:
2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Note. Includes items for pier locations, end strata bearing capacity, and concrete piers.

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Note. Includes items for retaining walls: placement, soil reinforcement, segmental walls, concrete walls, and masonry walls.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3; ACI 318-19 Sections 26.12 & 26.13
Application Number: School Name: School District:
04-122188 PC Update PC Update
DSA File Number: Increment Number: Date Created:
2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Note. Includes items for in-situ concrete strength and application of post-tensioning or prestressing forces.

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Note. Includes items for precast concrete connections and reinforcement, and installation tolerances of precast concrete diaphragm connections.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8
Application Number: School Name: School District:
04-122188 PC Update PC Update
DSA File Number: Increment Number: Date Created:
2023-04-19 08:36:32

Geotechnical Reports: Project has a geotechnical report, or CDs indicate soils special inspection is required by GE

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes item for soil special inspection.

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes items for soil compaction and fill: classification/testing, use of proper materials, and compaction testing.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8
Application Number: School Name: School District:
04-122188 PC Update PC Update
DSA File Number: Increment Number: Date Created:
2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes items for soil improvements and inspection of soil improvements.

NOT USED

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3; ACI 318-19 Sections 26.12 & 26.13
Application Number: School Name: School District:
04-122188 PC Update PC Update
DSA File Number: Increment Number: Date Created:
2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Note. Includes items for shotcrete placement and sample and test shotcrete.

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Note. Includes items for post-installed anchors: installation and post-installed anchors.

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Note. Includes item for other concrete: high-strength bolts.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8
Application Number: School Name: School District:
04-122188 PC Update PC Update
DSA File Number: Increment Number: Date Created:
2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes items for driven deep foundations (piles): materials, capacities, operations, locations, steel piles, and concrete piles.

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Note. Includes item for cast-in-place deep foundations (piers): drilling operations.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3; ACI 318-19 Sections 26.12 & 26.13
Application Number: School Name: School District:
04-122188 PC Update PC Update
DSA File Number: Increment Number: Date Created:
2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes items for cast-in-place concrete: use of design mix, identifying sample, during placement, test concrete, batch plant inspection, and welding of reinforcing steel.

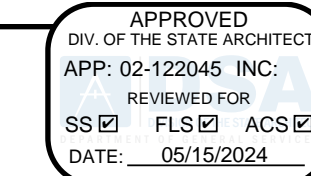
Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes items for prestressed/post-tensioned concrete: sample and test prestressing tendons, and inspection of placement.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

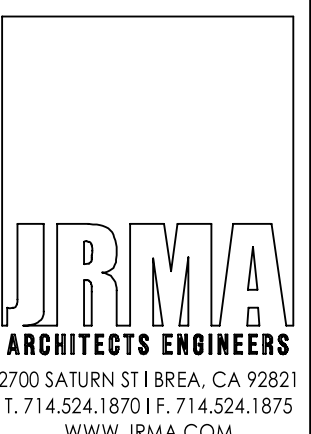
Table 1705A.2.1, AISI 303-16, AISI 304-16, AISI 304L-16, AISI 316-16, AISI 316L-16, AISI 5100-20, RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: School Name: School District:
04-122188 PC Update PC Update
DSA File Number: Increment Number: Date Created:
2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes items for structural steel: material identification, test unidentified materials, examine seam welds, verify and document steel fabrication, and buckling restrained braces.

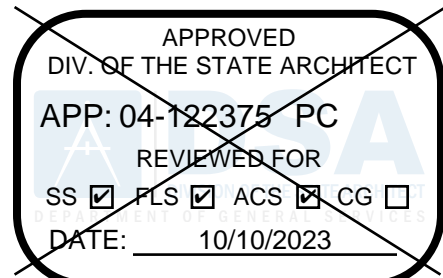
Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes items for high-strength bolts: identification of markings, high-strength bolts, and pretensioned and slip-critical connections.



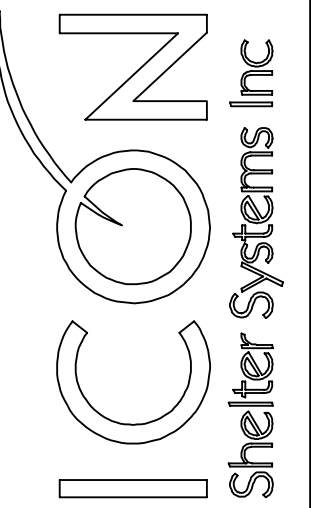
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Code: 2022 CBC
A separate project application for construction is required.

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DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-122188
School Name: PC Update
School District: PC Update
Date Created: 2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes S/A3. WELDING: a. Verify weld filler material identification markings per AWS designation...

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes S/A4. SHOP WELDING (IN ADDITION TO SECTION S/A3): a. Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.

DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA
DGS DSA 103-22 (Revised 12/01/2022) Page 10 of 19

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-122188
School Name: PC Update
School District: PC Update
Date Created: 2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes S/A8. SPRAYED FIRE-RESISTANT MATERIALS: a. Examine structural steel surface conditions, inspect application, take samples, measure thickness and verify compliance...

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes S/A9. ANCHOR BOLTS AND ANCHOR RODS: a. Anchor Bolts and Anchor Rods

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes S/A10. STORAGE RACK SYSTEMS: a. Materials used, to verify compliance with one or more of the material test reports...

DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA
DGS DSA 103-22 (Revised 12/01/2022) Page 13 of 19

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number: 04-122188
School Name: PC Update
School District: PC Update
Date Created: 2023-04-19 08:36:32

Exempt items given in DSA IR A-22 or the 2019 CBC (including DSA amendments) and those items identified below with a check mark by the design professional are NOT subject to DSA requirements for the structural tests / special inspections noted. Items marked as exempt shall be identified on the approved construction documents. The project inspector shall verify all construction complies with the approved construction documents.

Table with 2 columns: SOILS: 1. Deep foundations acting as a cantilever footing with a design based on minimum allowable pressures per CBC Table 1806A.2 and without a geotechnical report...

Table with 2 columns: CONCRETE/MASONRY: 1. Post-installed anchors for the following: A) exempt non-structural components (e.g., mechanical, electrical, plumbing equipment - see item 7 for "Welding" in the Appendix below...

DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA
DGS DSA 103-22 (Revised 12/01/2022) Page 16 of 19

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-122188
School Name: PC Update
School District: PC Update
Date Created: 2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes S/A5. FIELD WELDING (IN ADDITION TO SECTION S/A3): a. Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.

DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA
DGS DSA 103-22 (Revised 12/01/2022) Page 11 of 19

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-122188
School Name: PC Update
School District: PC Update
Date Created: 2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes c. Storage rack anchorage installation.

Table with 2 columns: S/A11. Other Steel. Test or Special Inspection, Type

NOT USED

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number: 04-122188
School Name: PC Update
School District: PC Update
Date Created: 2023-04-19 08:36:32

Table with 2 columns: CONCRETE/MASONRY: 5. Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section.

Table with 2 columns: WELDING: 1. Solid-clad and open-mesh fences, gates with maximum leaf span of 10', and gates with a maximum rolling section of 10' all having an apex height less than 8'-0" above lowest adjacent grade...

DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA
DGS DSA 103-22 (Revised 12/01/2022) Page 17 of 19

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-122188
School Name: PC Update
School District: PC Update
Date Created: 2023-04-19 08:36:32

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes S/A6. NONDESTRUCTIVE TESTING: a. Ultrasonic

Table with 4 columns: Test or Special Inspection, Type, Performed By, Code References and Notes. Includes S/A7. STEEL JOISTS AND TRUSSES: a. Verify size, type and grade for all chord and web members as well as connectors and weld filler material...

DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA
DGS DSA 103-22 (Revised 12/01/2022) Page 12 of 19

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (OTHER), 2022 CBC

Application Number: 04-122188
School Name: PC Update
School District: PC Update
Date Created: 2023-04-19 08:36:32

Table with 4 columns: X1. OTHER: a. Load test for identified product(s); b. Installation torque for non-HS bolts

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SIGNATURE), 2022 CBC

Application Number: 04-122188
School Name: PC Update
School District: PC Update
Date Created: 2023-04-19 08:36:32

Name of Architect or Engineer in general responsible charge:
Name of Structural Engineer (When structural design has been delegated):
Signature of Architect or Structural Engineer: Date:

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

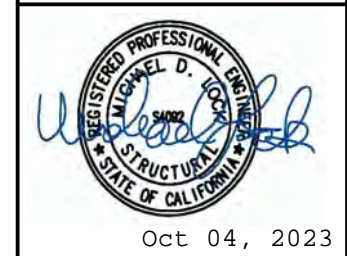
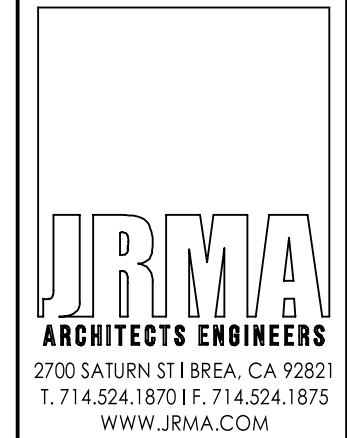
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DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA
DGS DSA 103-22 (Revised 12/01/2022) Page 17 of 19

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required.

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 02-122045 INC.
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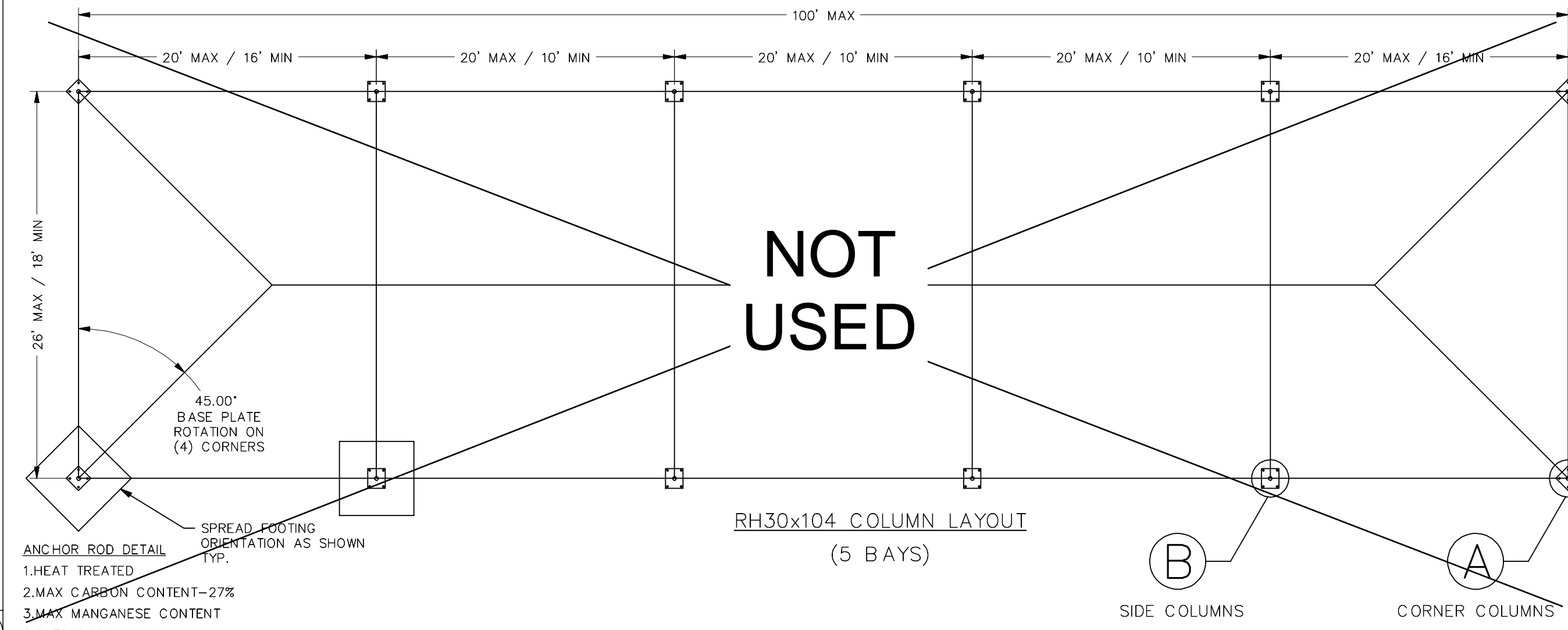
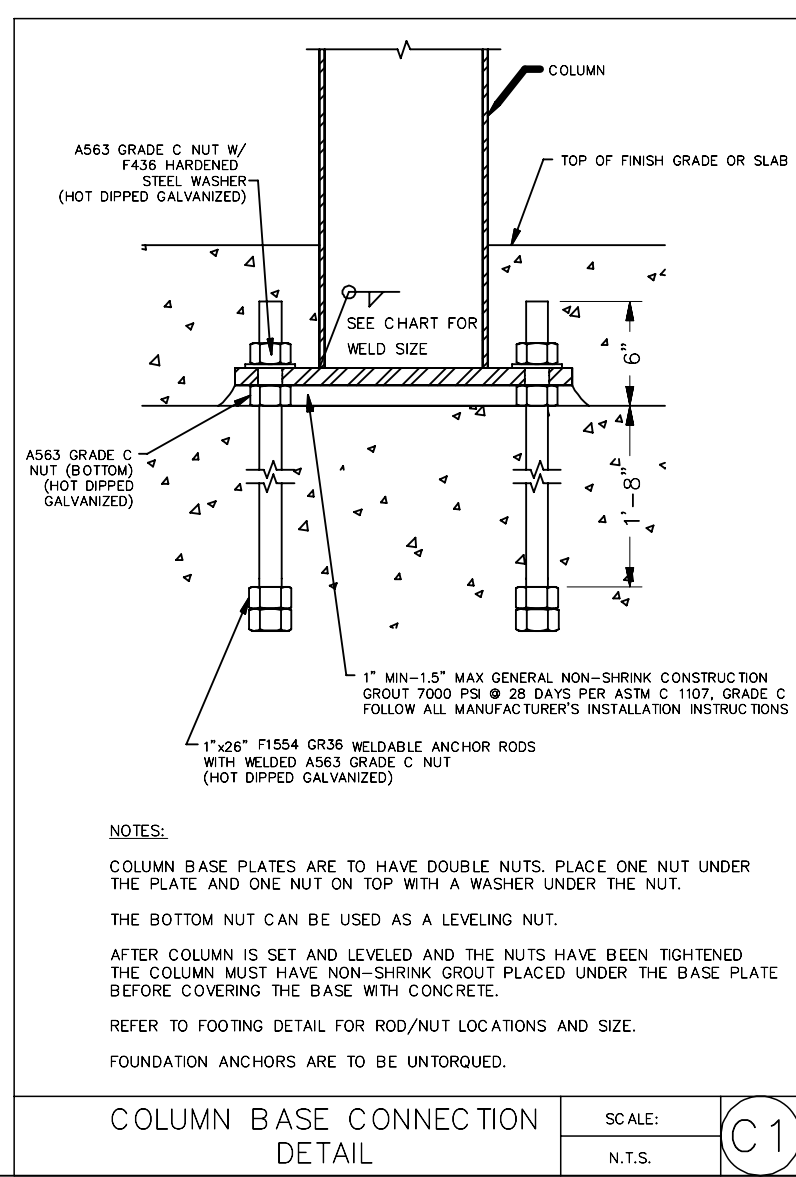
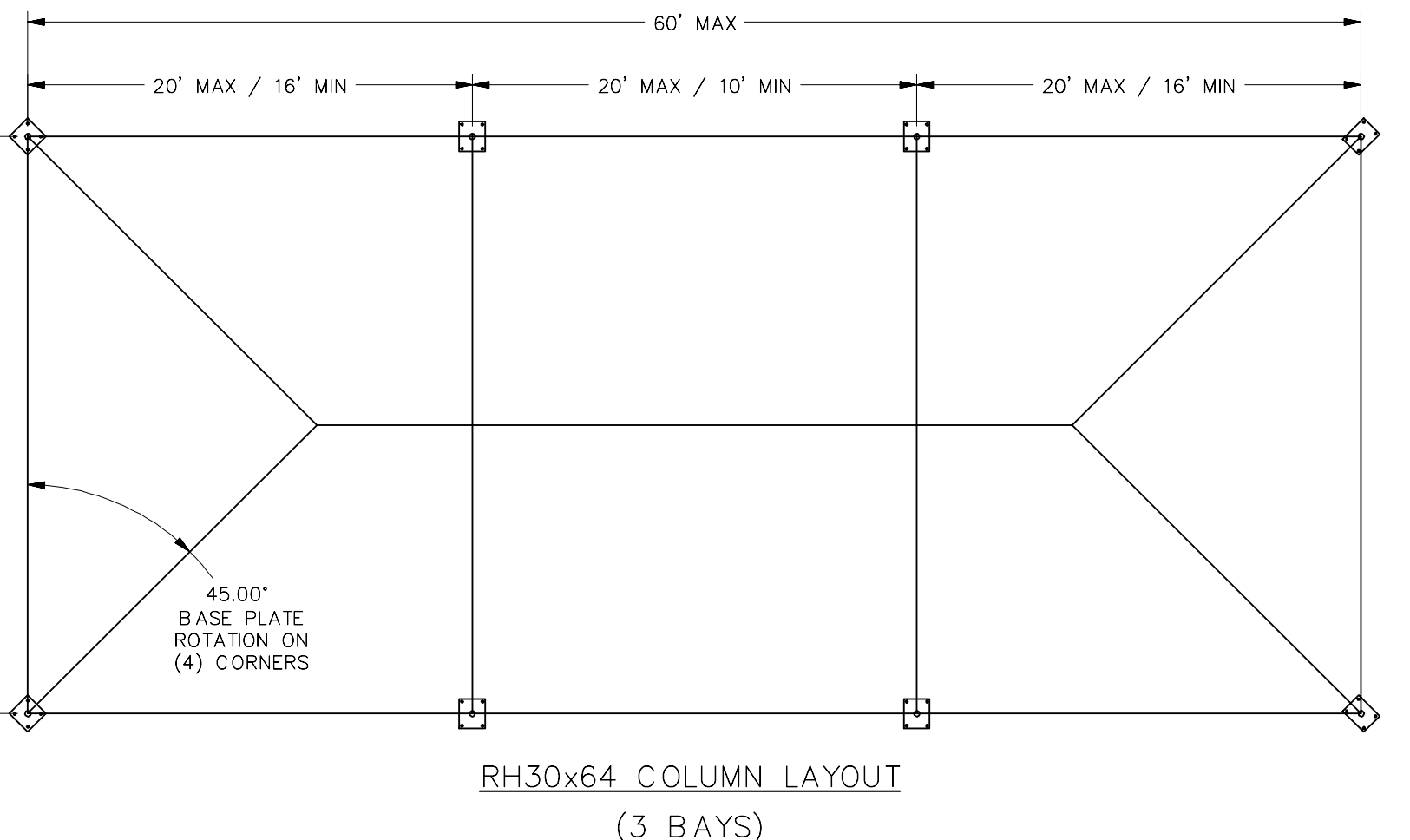
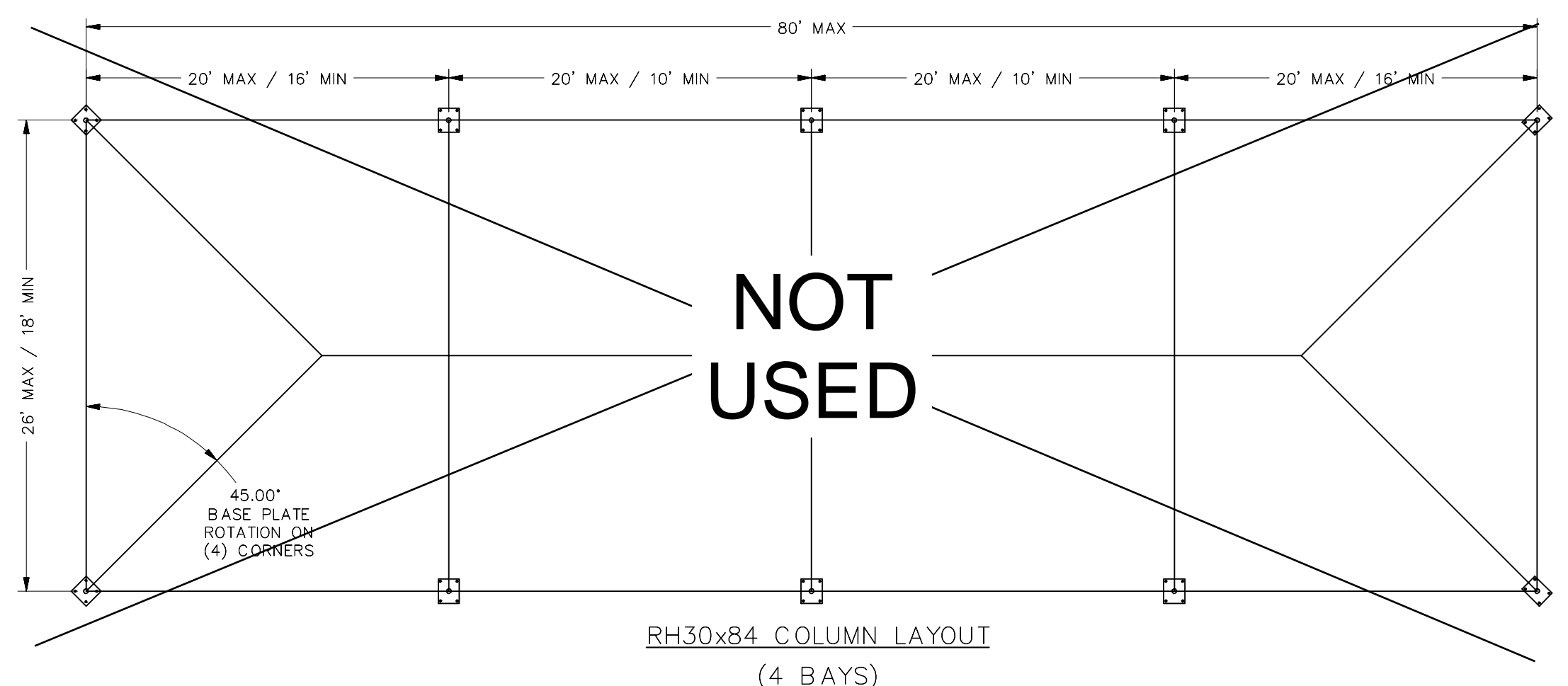
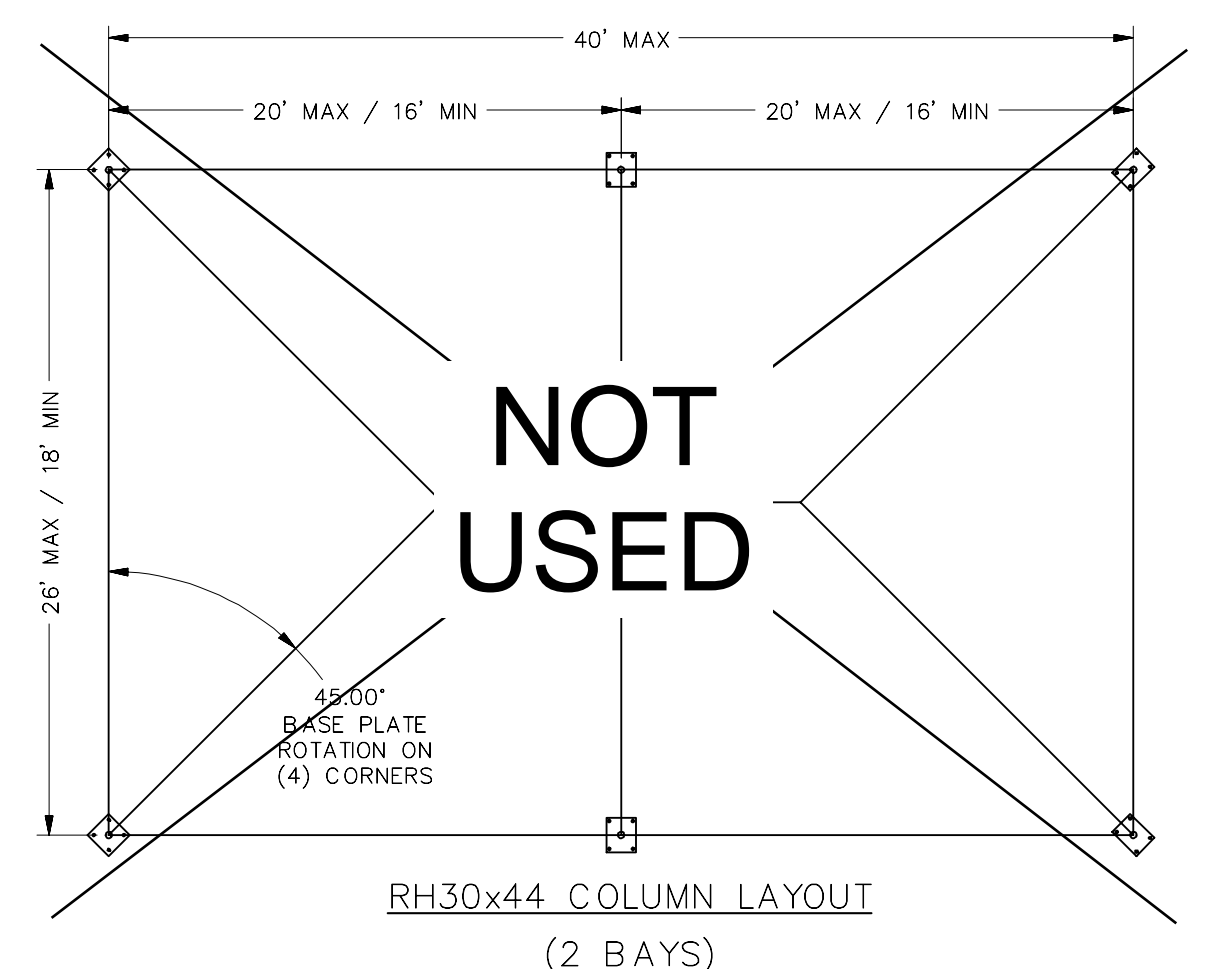
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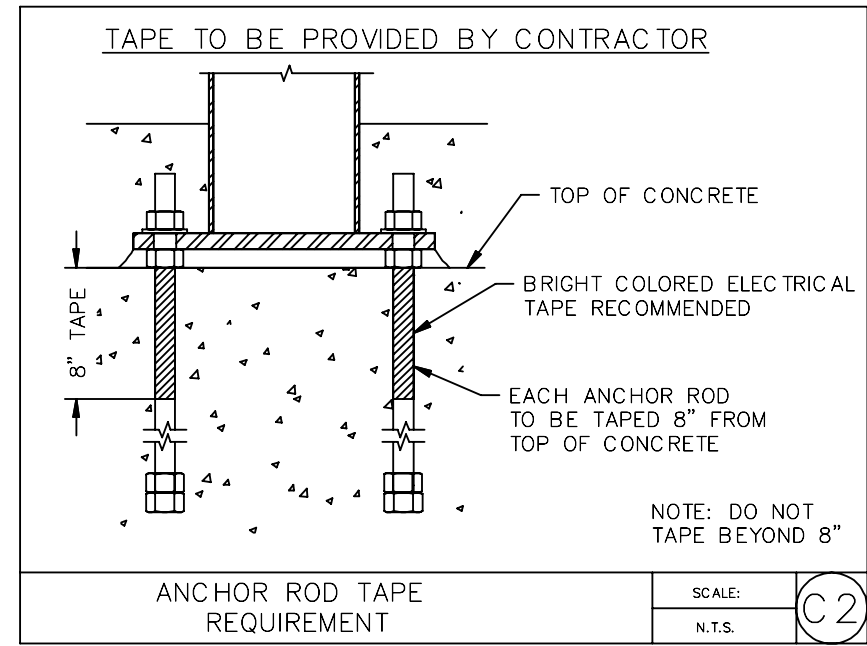
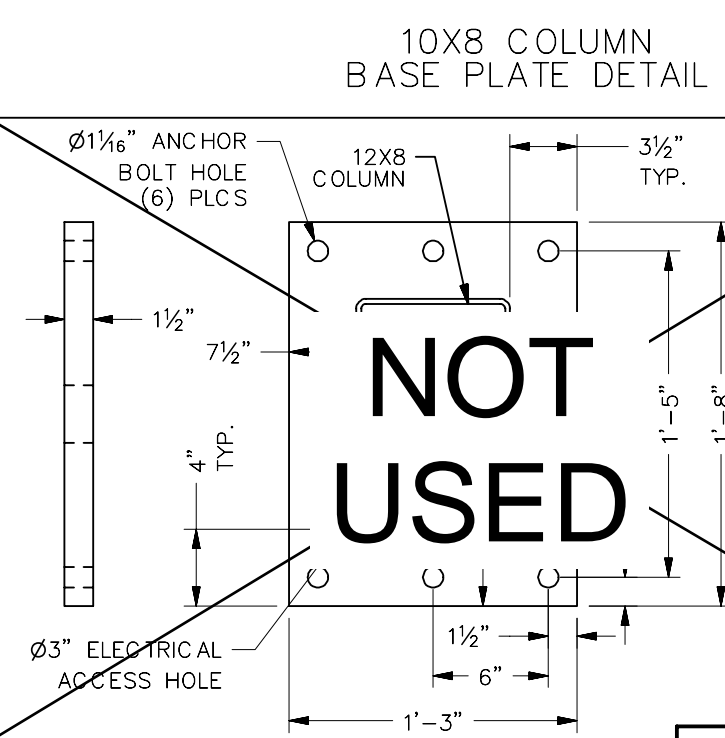
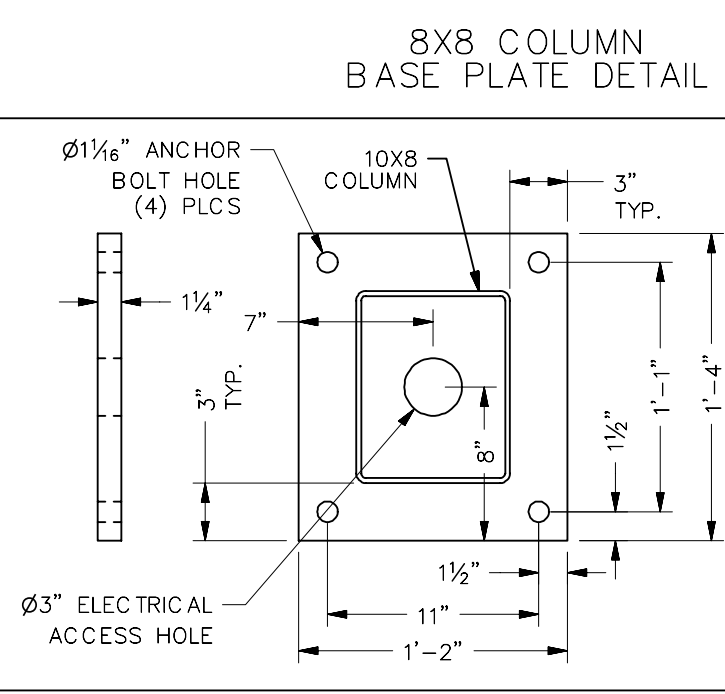
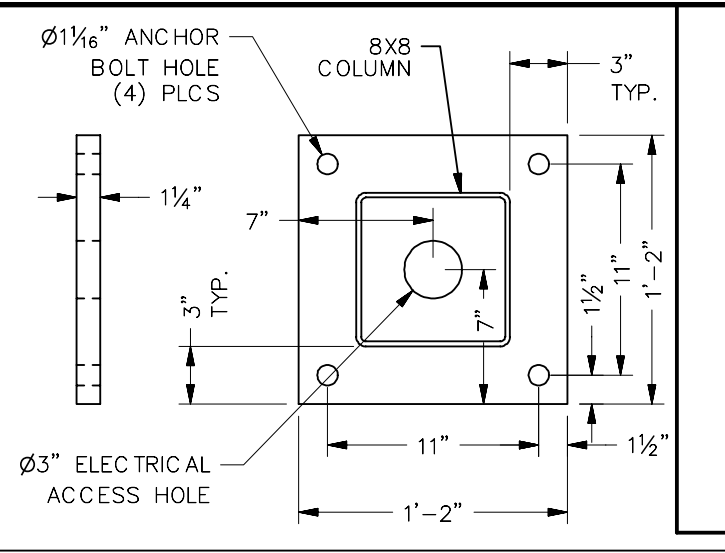
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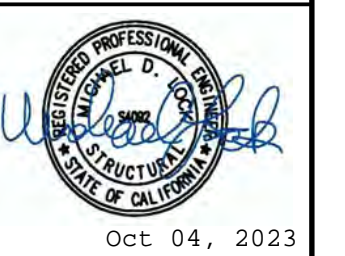
NOTES:  
COLUMN SIZE AND LOCATION WILL VARY DEPENDING ON MODEL TYPE ORDERED. PLEASE REFER TO JOB SPECIFIC BILL OF MATERIALS AND INSTALLATION MANUAL FOR CORRECT PLACEMENT AND SIZE.  
WHERE CONCRETE SLAB SPECIFIED PORTLAND CEMENT CONCRETE PAVING SHALL HAVE A MEDIUM SALTED (MEDIUM BROOM) FINISH ON ALL SURFACES SLOPED LESS THAN 6% AND SLIP RESISTANT (HEAVY BROOM FINISH) ON ALL SURFACES SLOPED GREATER THAN 6% CBC SECTION 1133B.7.1

BASE PLATE LOCATION	
DETAIL A	DETAIL B
BP1	BP2
BP3	



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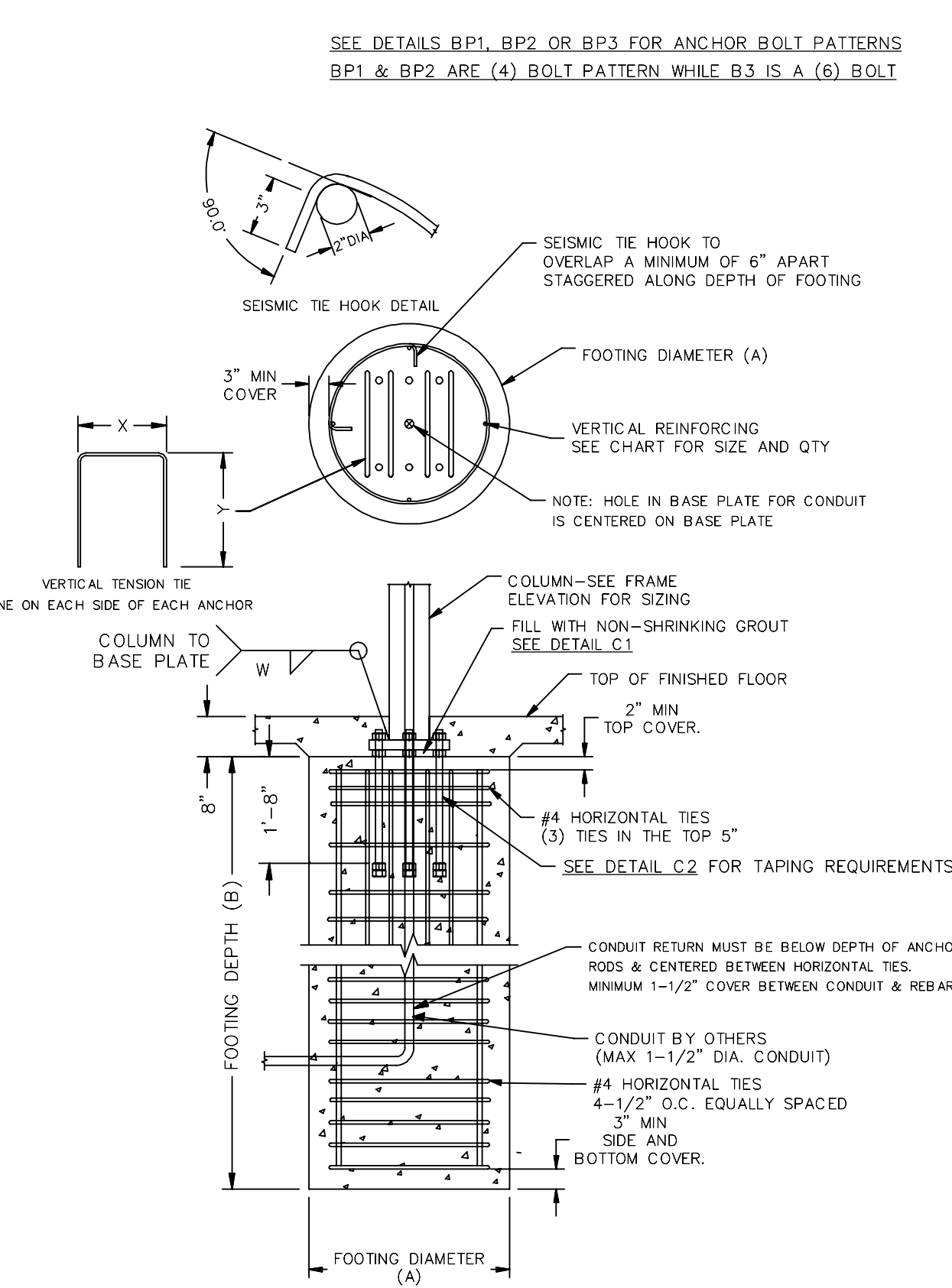


Oct. 04, 2023

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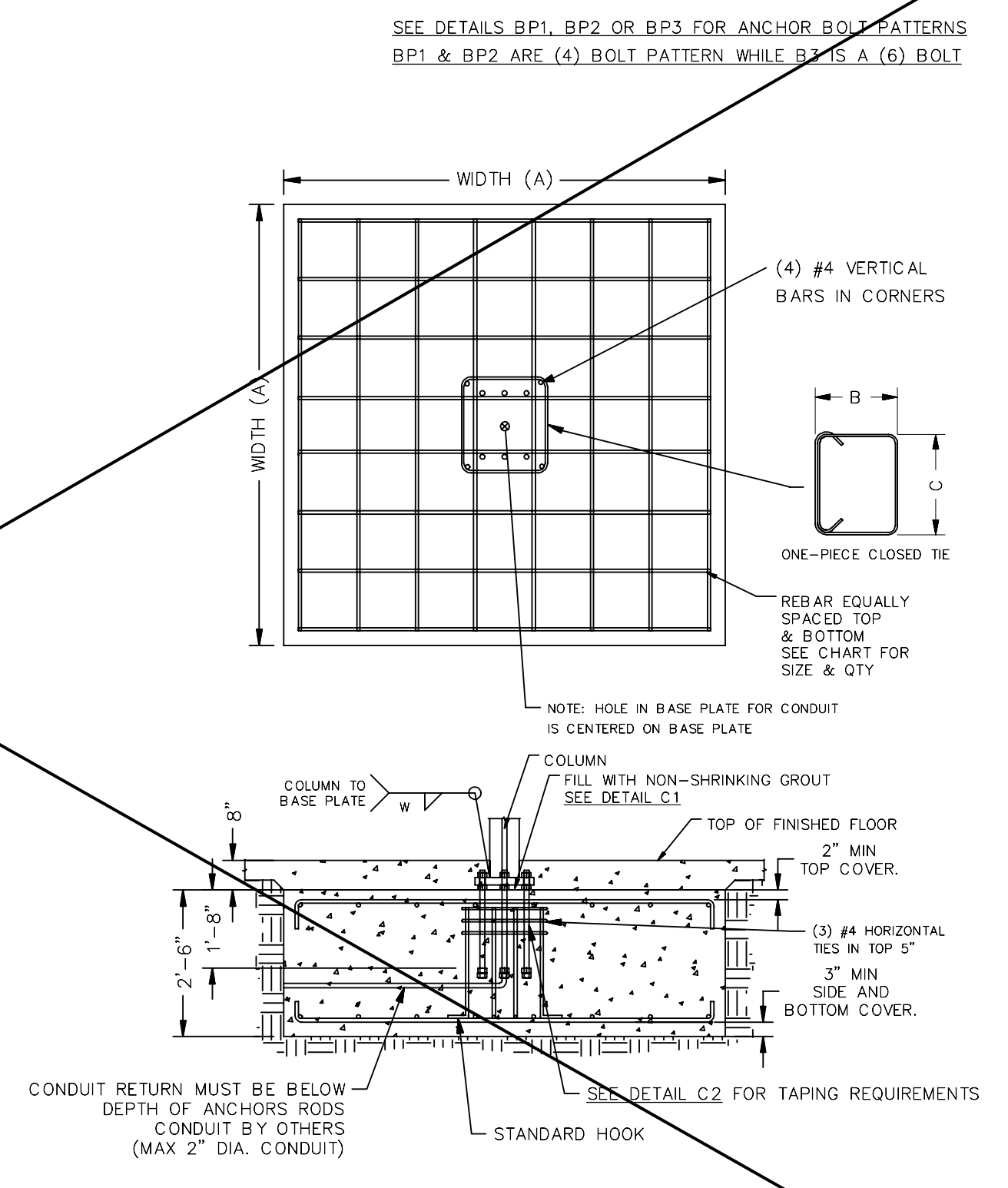
### 30' WIDE RECTANGULAR HIP

RH30 - PIER				RH30 - SPREAD			
8' height - Corner Columns		8' height - Corner Columns		8' height - Corner Columns		8' height - Corner Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size	Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size
30	114	8	6	30	98	8	6
<b>NOT USED</b>				<b>NOT USED</b>			
8' height - Side Columns		8' height - Side Columns		8' height - Side Columns		8' height - Side Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size	Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size
30	120	8	6	30	102	8	6
<b>NOT USED</b>				<b>NOT USED</b>			
10' height - Corner Columns		10' height - Corner Columns		10' height - Corner Columns		10' height - Corner Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size	Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size
30	132	8	6	30	112	8	6
<b>NOT USED</b>				<b>NOT USED</b>			
10' height - Side Columns		10' height - Side Columns		10' height - Side Columns		10' height - Side Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size	Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size
36	136	12	6	36	126	12	6
<b>NOT USED</b>				<b>NOT USED</b>			
12' height - Corner Columns		12' height - Corner Columns		12' height - Corner Columns		12' height - Corner Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size	Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size
36	140	12	6	36	120	12	6
<b>NOT USED</b>				<b>NOT USED</b>			
12' height - Side Columns		12' height - Side Columns		12' height - Side Columns		12' height - Side Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size	Dia (A)	Depth (B)	Vertical Rebar Qty	Rebar Size
36	140	12	6	36	120	12	6



RH30 - SPREAD				RH30 - SPREAD			
8' height - Corner Columns		8' height - Corner Columns		8' height - Corner Columns		8' height - Corner Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size	Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size
60	30	8	6	57	30	7	6
<b>NOT USED</b>				<b>NOT USED</b>			
8' height - Side Columns		8' height - Side Columns		8' height - Side Columns		8' height - Side Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size	Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size
84	30	11	6	81	30	10	6
<b>NOT USED</b>				<b>NOT USED</b>			
10' height - Corner Columns		10' height - Corner Columns		10' height - Corner Columns		10' height - Corner Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size	Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size
66	30	9	6	63	30	8	6
<b>NOT USED</b>				<b>NOT USED</b>			
10' height - Side Columns		10' height - Side Columns		10' height - Side Columns		10' height - Side Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size	Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size
81	30	10	6	75	30	10	6
<b>NOT USED</b>				<b>NOT USED</b>			
12' height - Corner Columns		12' height - Corner Columns		12' height - Corner Columns		12' height - Corner Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size	Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size
78	30	10	6	78	30	10	6
<b>NOT USED</b>				<b>NOT USED</b>			
12' height - Side Columns		12' height - Side Columns		12' height - Side Columns		12' height - Side Columns	
Soil Class 5 - 1500 psf Bearing		Soil Class 4 - 2000 psf Bearing		Soil Class 3 - 3000 psf Bearing		Soil Class 5 - 1500 psf Bearing	
Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size	Size (A)	Depth (B)	T&B Rebar Qty	Rebar Size
84	30	11	6	78	30	10	6

8' - Corner Columns				8' - Corner Columns			
Tie Dimensions		Weld		Tie Dimensions		Weld	
B (in)	C (in)	Rebar Size	Fillet Weld Size	B (in)	C (in)	Rebar Size	Fillet Weld Size
16	17.5	5	1/4	16	17.5	5	1/4
<b>NOT USED</b>				<b>NOT USED</b>			
8' - Side Columns <td colspan="2">8' - Side Columns <td colspan="2">8' - Side Columns <td colspan="2">8' - Side Columns </td></td></td>		8' - Side Columns <td colspan="2">8' - Side Columns <td colspan="2">8' - Side Columns </td></td>		8' - Side Columns <td colspan="2">8' - Side Columns </td>		8' - Side Columns	
Tie Dimensions <td colspan="2">Weld <td colspan="2">Tie Dimensions <td colspan="2">Weld </td></td></td>		Weld <td colspan="2">Tie Dimensions <td colspan="2">Weld </td></td>		Tie Dimensions <td colspan="2">Weld </td>		Weld	
B (in)	C (in)	Rebar Size	Fillet Weld Size	B (in)	C (in)	Rebar Size	Fillet Weld Size
16	19.5	5	1/4	16	19.5	5	1/4
<b>NOT USED</b>				<b>NOT USED</b>			
10' - Corner Columns <td colspan="2">10' - Corner Columns <td colspan="2">10' - Corner Columns <td colspan="2">10' - Corner Columns </td></td></td>		10' - Corner Columns <td colspan="2">10' - Corner Columns <td colspan="2">10' - Corner Columns </td></td>		10' - Corner Columns <td colspan="2">10' - Corner Columns </td>		10' - Corner Columns	
Tie Dimensions <td colspan="2">Weld <td colspan="2">Tie Dimensions <td colspan="2">Weld </td></td></td>		Weld <td colspan="2">Tie Dimensions <td colspan="2">Weld </td></td>		Tie Dimensions <td colspan="2">Weld </td>		Weld	
B (in)	C (in)	Rebar Size	Fillet Weld Size	B (in)	C (in)	Rebar Size	Fillet Weld Size
16	17.5	5	1/4	16	17.5	5	1/4
<b>NOT USED</b>				<b>NOT USED</b>			
10' - Side Columns <td colspan="2">10' - Side Columns <td colspan="2">10' - Side Columns <td colspan="2">10' - Side Columns </td></td></td>		10' - Side Columns <td colspan="2">10' - Side Columns <td colspan="2">10' - Side Columns </td></td>		10' - Side Columns <td colspan="2">10' - Side Columns </td>		10' - Side Columns	
Tie Dimensions <td colspan="2">Weld <td colspan="2">Tie Dimensions <td colspan="2">Weld </td></td></td>		Weld <td colspan="2">Tie Dimensions <td colspan="2">Weld </td></td>		Tie Dimensions <td colspan="2">Weld </td>		Weld	
B (in)	C (in)	Rebar Size	Fillet Weld Size	B (in)	C (in)	Rebar Size	Fillet Weld Size
16	19.5	5	1/4	16	19.5	5	1/4
<b>NOT USED</b>				<b>NOT USED</b>			
12' - Corner Columns <td colspan="2">12' - Corner Columns <td colspan="2">12' - Corner Columns <td colspan="2">12' - Corner Columns </td></td></td>		12' - Corner Columns <td colspan="2">12' - Corner Columns <td colspan="2">12' - Corner Columns </td></td>		12' - Corner Columns <td colspan="2">12' - Corner Columns </td>		12' - Corner Columns	
Tie Dimension <td colspan="2">Weld <td colspan="2">Tie Dimension <td colspan="2">Weld </td></td></td>		Weld <td colspan="2">Tie Dimension <td colspan="2">Weld </td></td>		Tie Dimension <td colspan="2">Weld </td>		Weld	
B (in)	C (in)	Rebar Size	Fillet Weld Size	B (in)	C (in)	Rebar Size	Fillet Weld Size
17	21.5	5	1/4	17	21.5	5	1/4
<b>NOT USED</b>				<b>NOT USED</b>			
12' - Side Columns <td colspan="2">12' - Side Columns <td colspan="2">12' - Side Columns <td colspan="2">12' - Side Columns </td></td></td>		12' - Side Columns <td colspan="2">12' - Side Columns <td colspan="2">12' - Side Columns </td></td>		12' - Side Columns <td colspan="2">12' - Side Columns </td>		12' - Side Columns	
Tie Dimension <td colspan="2">Weld <td colspan="2">Tie Dimension <td colspan="2">Weld </td></td></td>		Weld <td colspan="2">Tie Dimension <td colspan="2">Weld </td></td>		Tie Dimension <td colspan="2">Weld </td>		Weld	
B (in)	C (in)	Rebar Size	Fillet Weld Size	B (in)	C (in)	Rebar Size	Fillet Weld Size
17	21.5	5	1/4	17	21.5	5	1/4

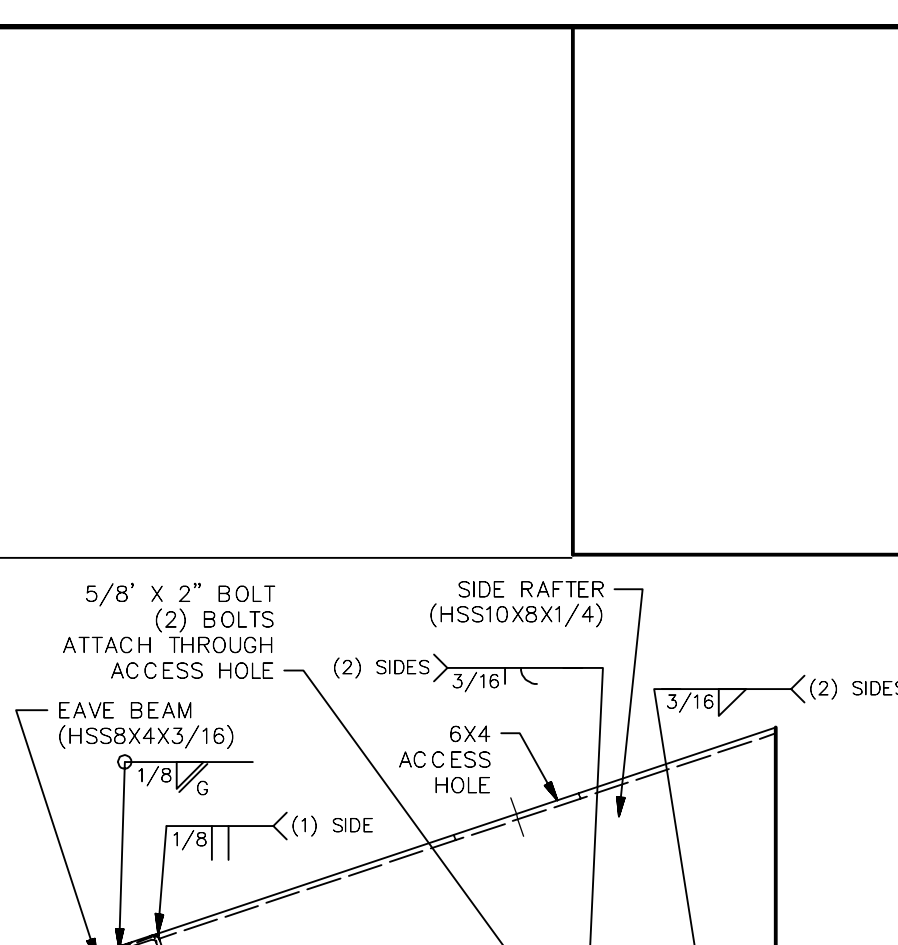
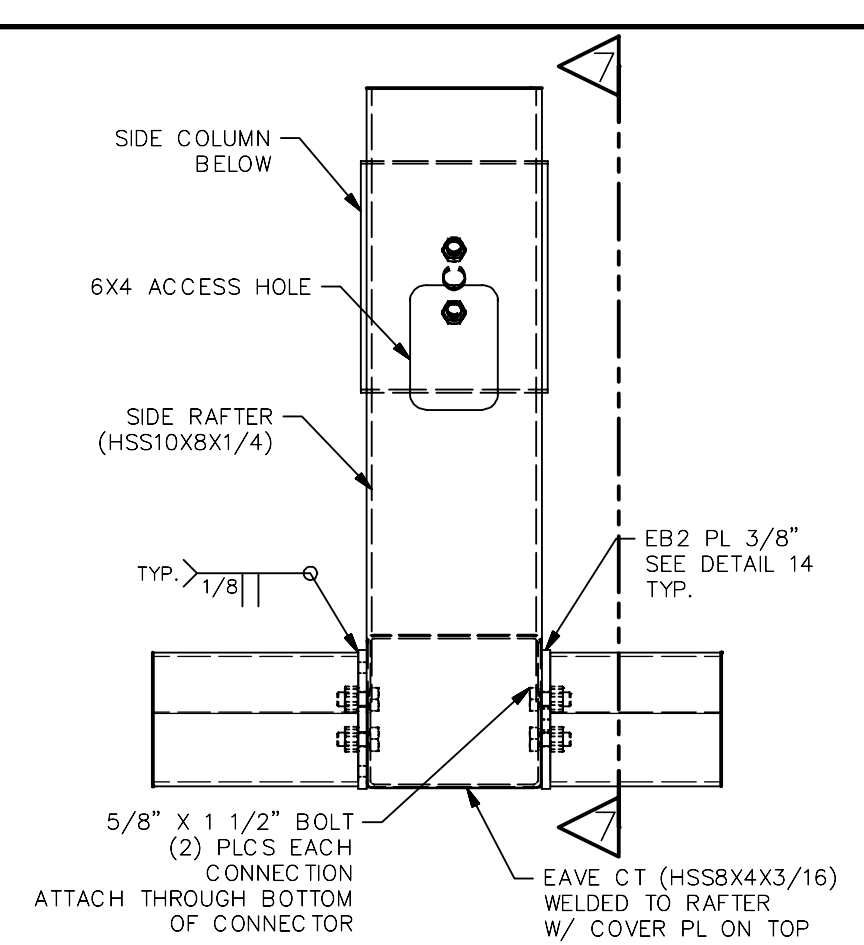
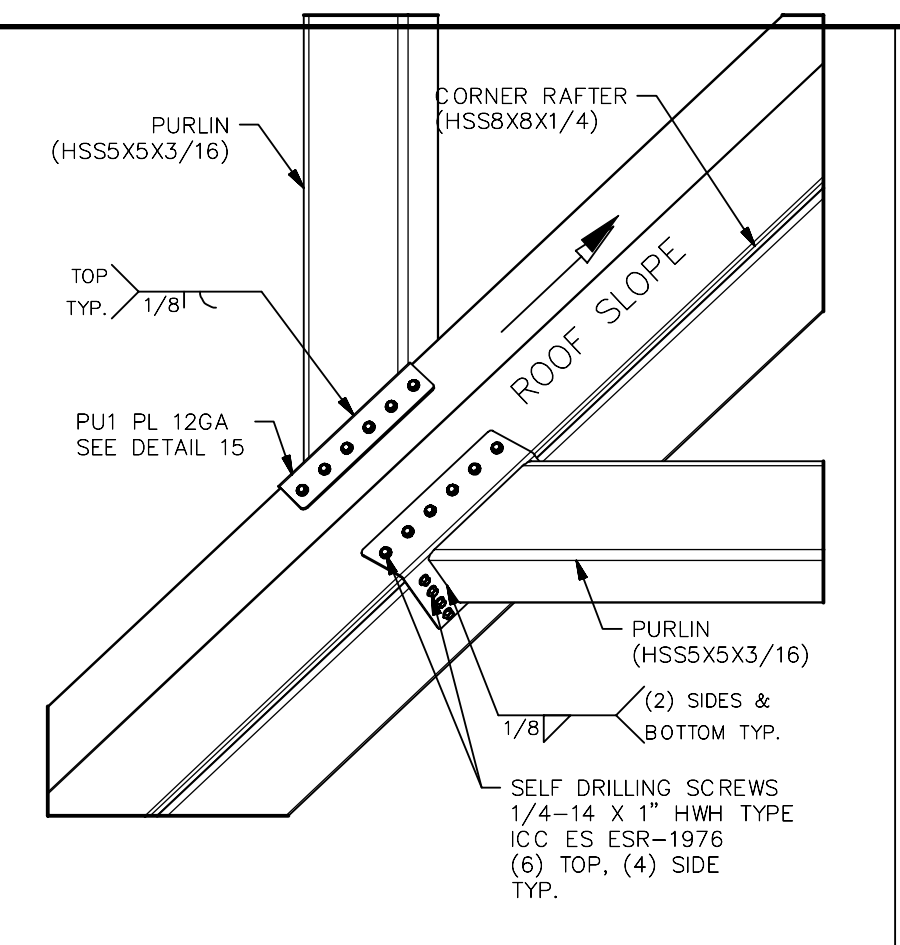
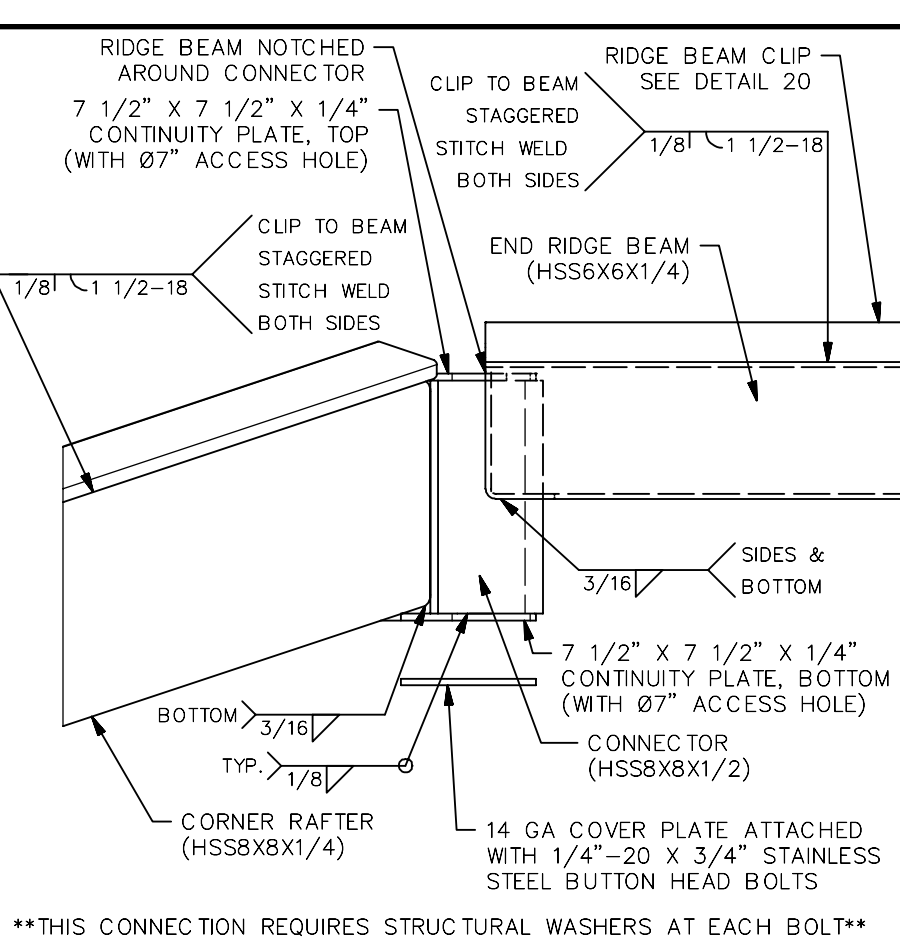
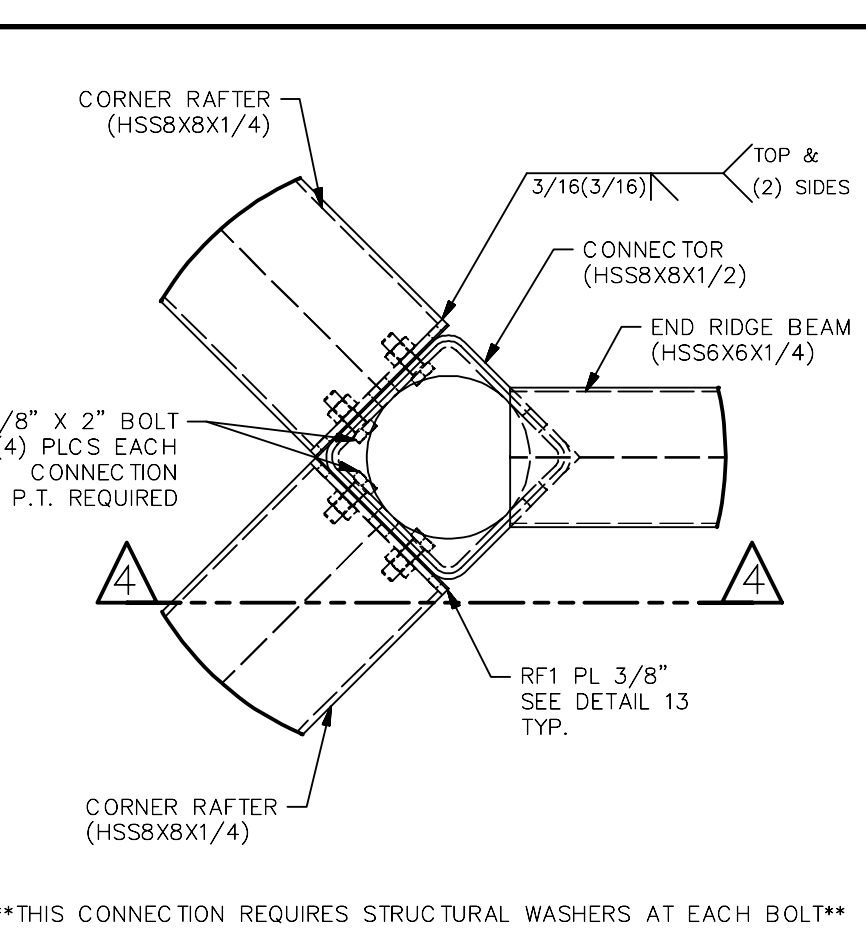
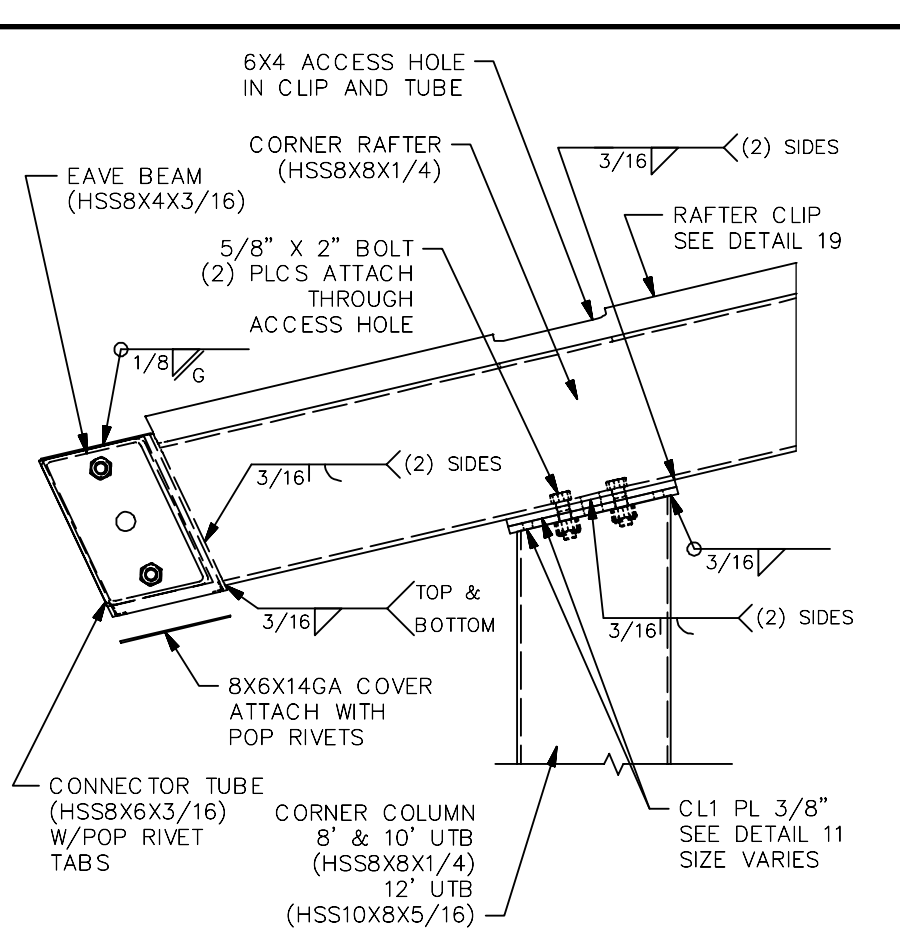
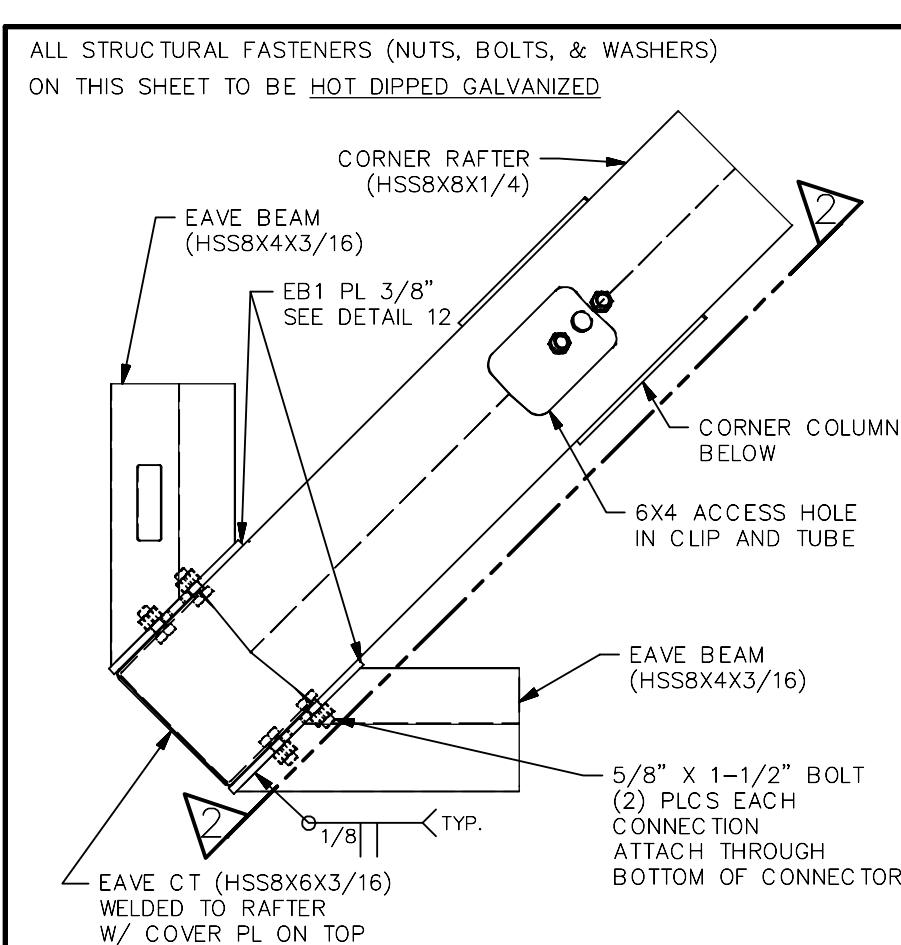


30' WIDE  
RECTANGULAR HIP  
FOUNDATION PLAN

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HOLLAND MI, 49423  
616.396.0919  
800.748.0985  
616.396.0944 FX

PRE-CHECK (PC) DOCUMENT  
Code: 2022 CBC  
A separate project application for construction is required.

LS3.0



PLAN - EAVE BEAMS & CORNER RAFTER CONNECTIONS @ CORNER COLUMN 1

VIEW - EAVE BEAMS & CORNER RAFTER CONNECTIONS @ CORNER COLUMN 2

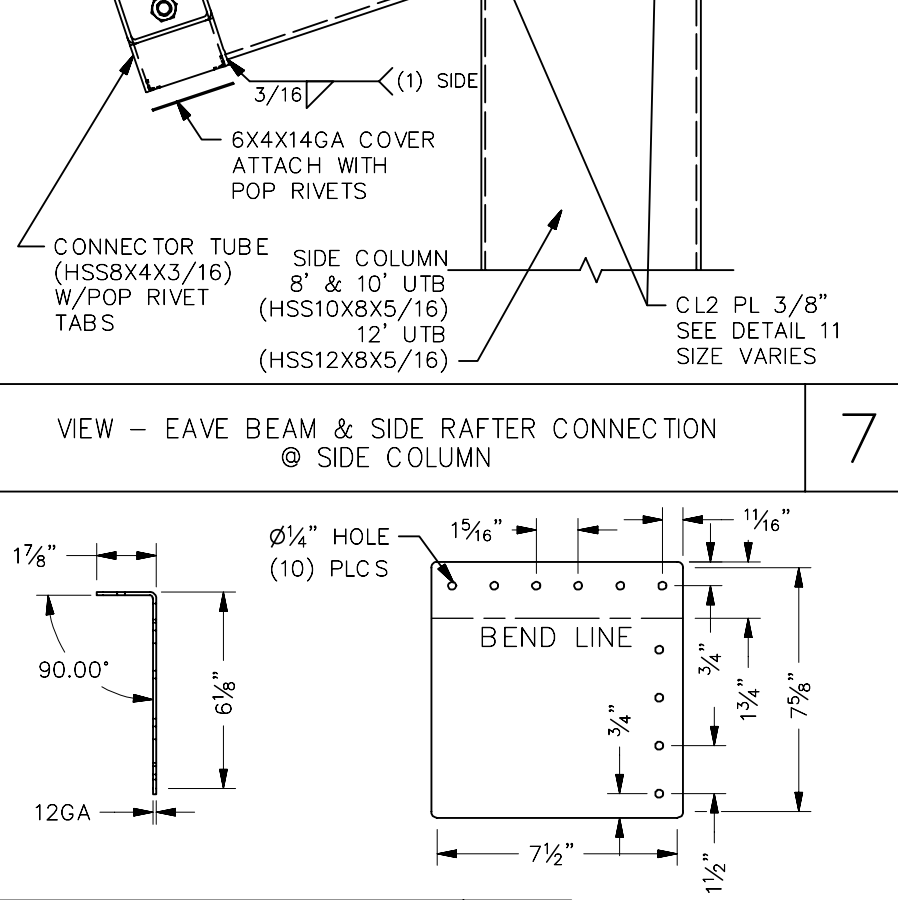
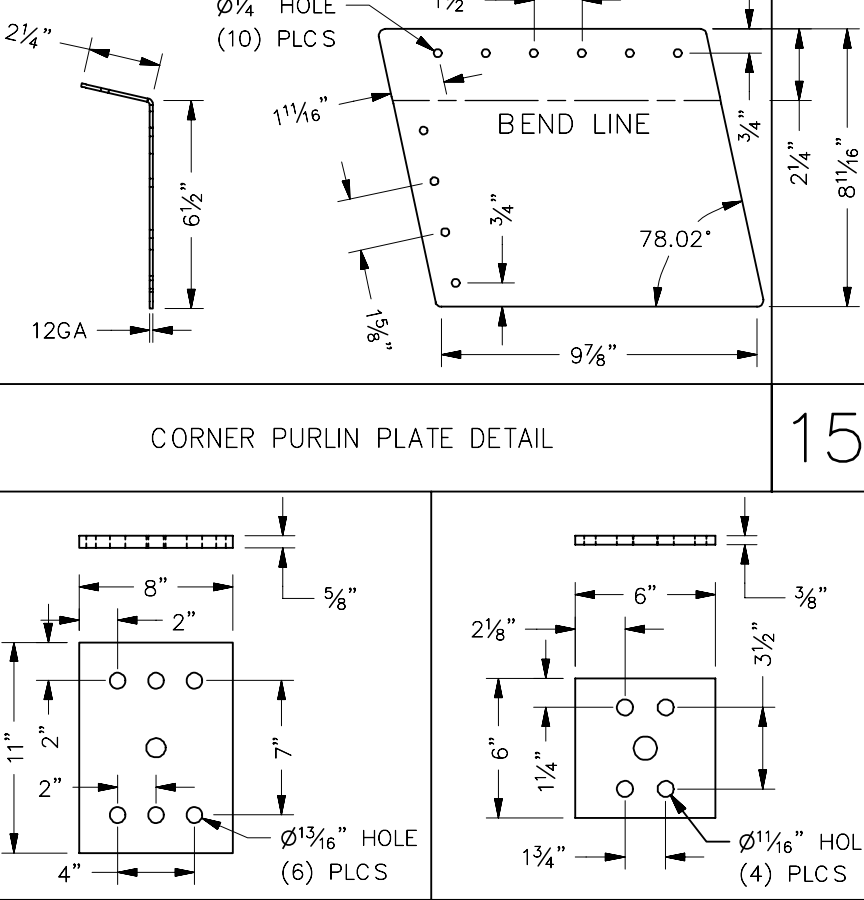
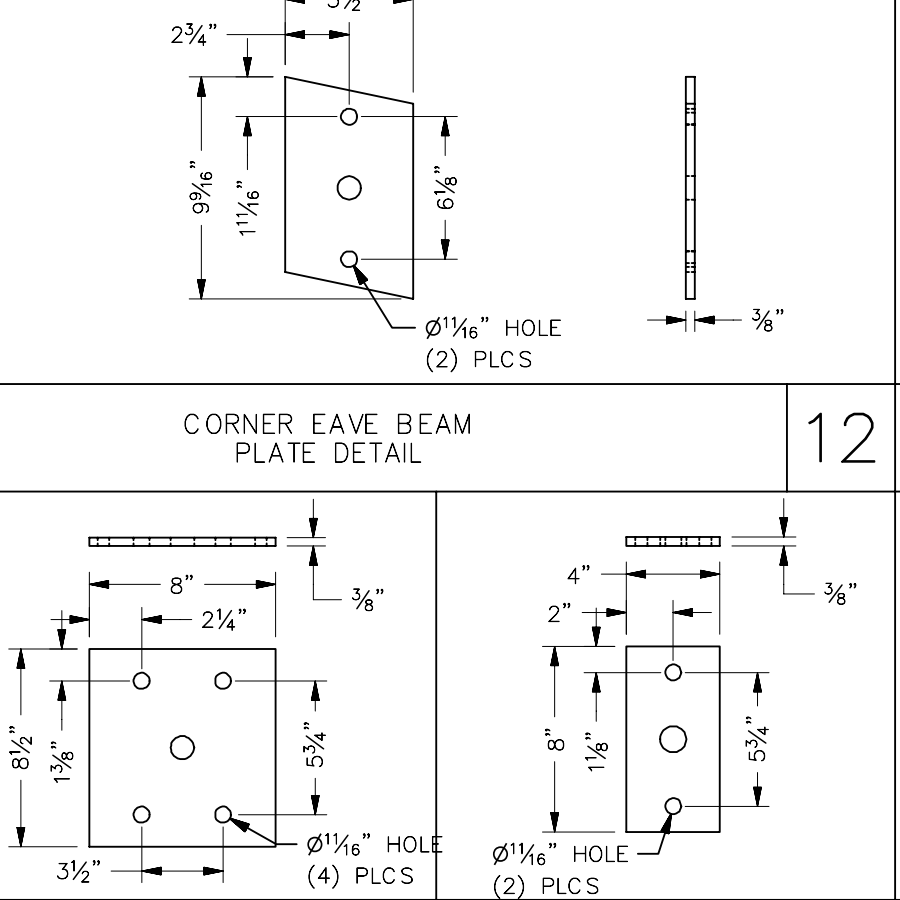
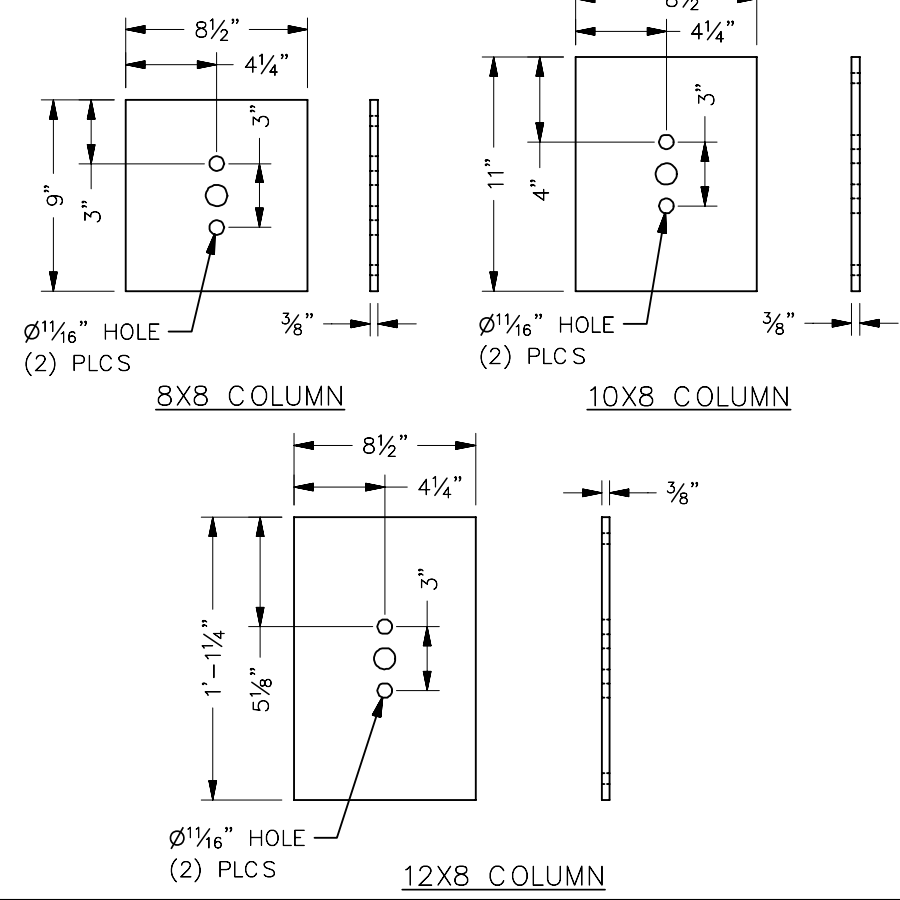
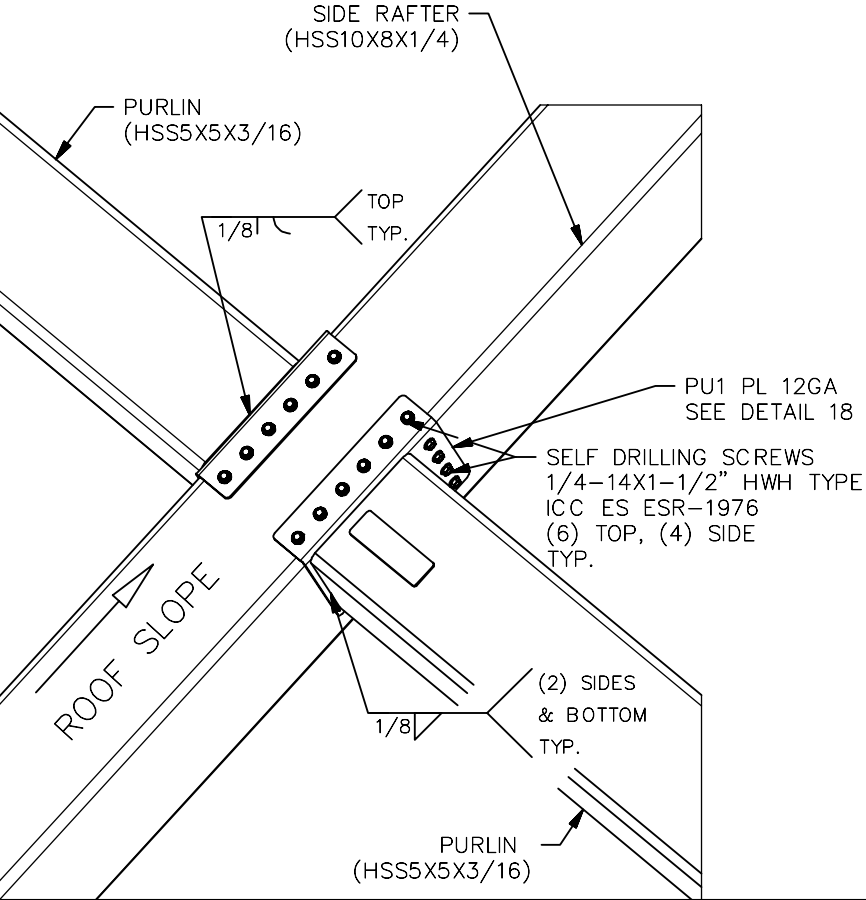
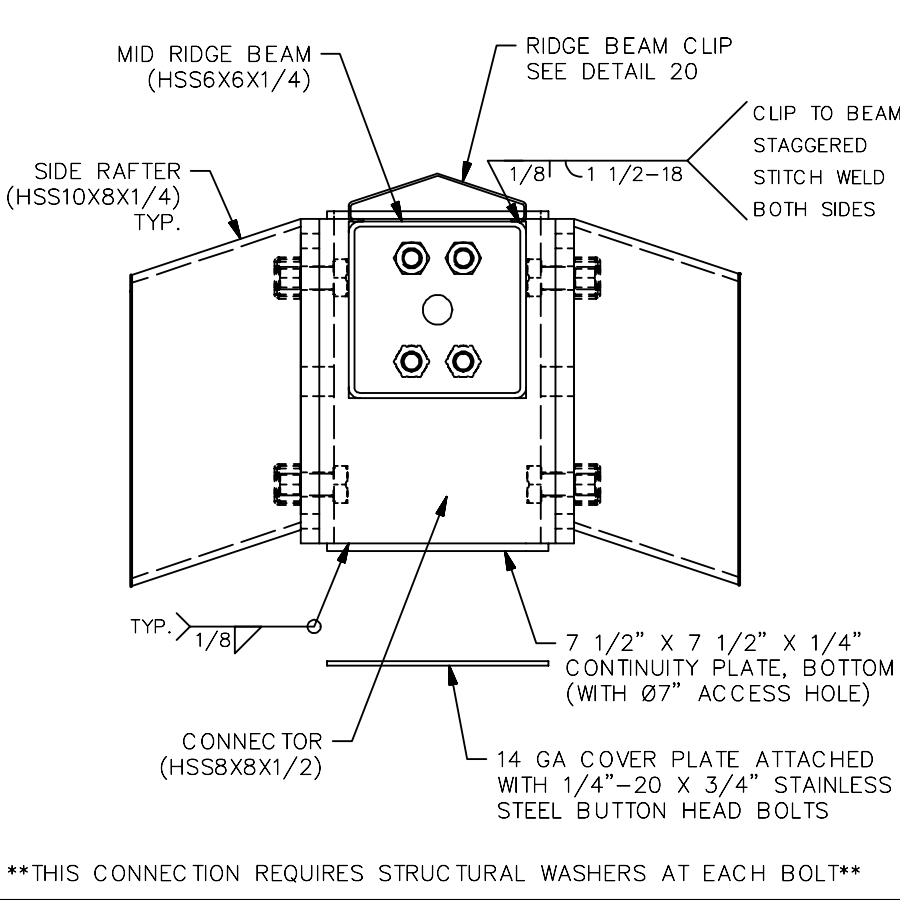
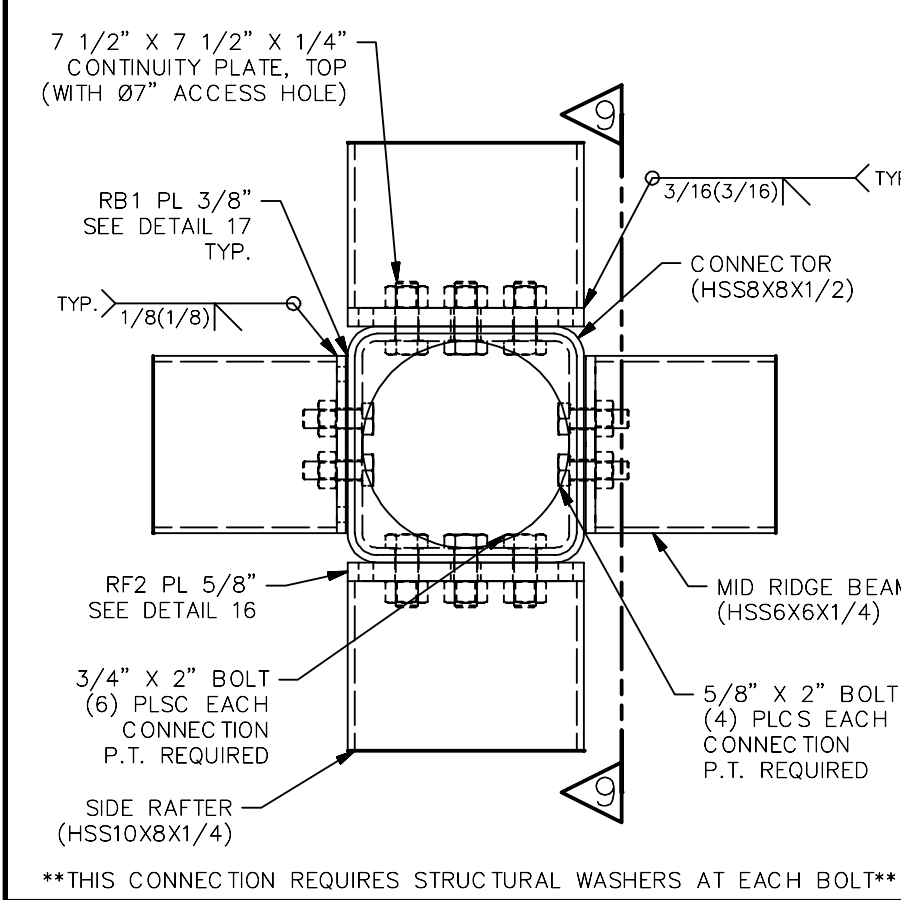
PLAN - CORNER RAFTERS CONNECTIONS @ END RIDGE BEAM 3

VIEW - CORNER RAFTERS CONNECTIONS @ END RIDGE BEAM 4

ISOMETRIC - PURLIN CONNECTIONS @ CORNER RAFTER 5

PLAN - EAVE BEAM & SIDE RAFTER CONNECTION @ SIDE COLUMN 6

VIEW - EAVE BEAM & SIDE RAFTER CONNECTION @ SIDE COLUMN 7



PLAN - SIDE RAFTERS & RIDGE BEAM CONNECTIONS @ CONNECTOR 8

VIEW - SIDE RAFTERS & RIDGE BEAM CONNECTIONS @ CONNECTOR 9

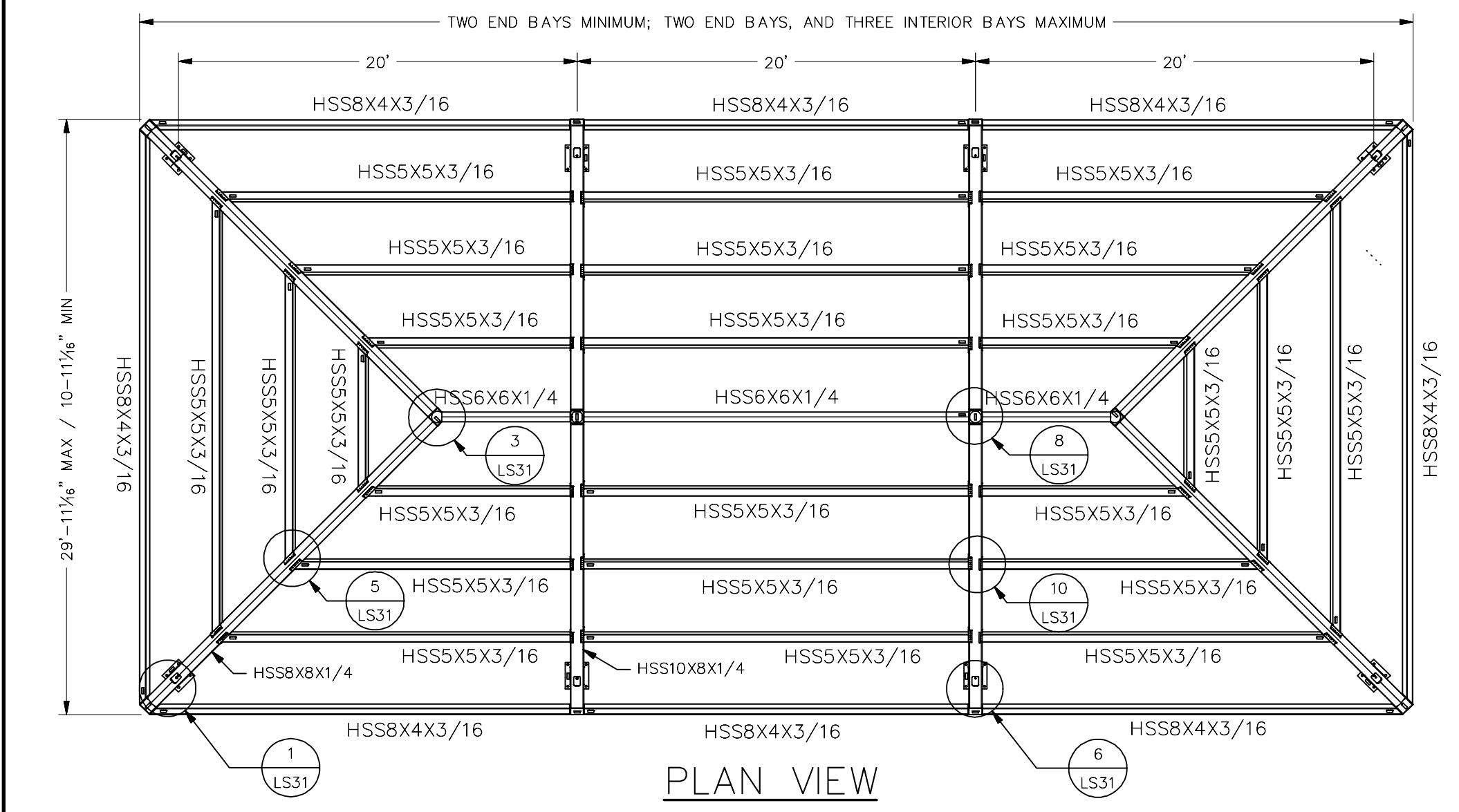
ISOMETRIC - PURLIN CONNECTIONS @ SIDE RAFTER 10

COLUMN TO RAFTER PLATE DETAIL 11

CORNER RAFTER PLATE DETAIL 12

CORNER PURLIN PLATE DETAIL 15

SIDE RAFTER PLATE DETAIL 13



\*NOTE:  
QUANTITIES WILL VARY DEPENDING ON SHELTER SIZE ORDERED, PLEASE REFER TO JOB SPECIFIC BILL OF MATERIALS AND INSTALLATION MANUAL.

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	LENGTH	UNIT WEIGHT
1	4		CORNER COLUMN	**SEE NOTE BELOW		353 lbmass
2	*		SIDE COLUMN	**SEE NOTE BELOW		473 lbmass
3	2		LH SIDE EAVE BEAM	HSS8X4X3/16		311 lbmass
4	2		RH SIDE EAVE BEAM	HSS8X4X3/16		311 lbmass
5	2		END EAVE BEAM	HSS8X4X3/16		422 lbmass
6	*		SIDE EAVE BEAM	HSS8X4X3/16		287 lbmass
7	4		CORNER RAFTER	HSS8X8X1/4		607 lbmass
8	4		SIDE RAFTER	HSS10X8X1/4		473 lbmass
9	2		END RIDGE BEAM	HSS8X6X3/16		149 lbmass
10	*		MID RIDGE BEAM	HSS8X6X3/16		329 lbmass
11	*		CONNECTOR	HSS8X8X1/2		48 lbmass
12	*		LH SIDE PURLIN 1	HSS5X5X3/16		210 lbmass
13	*		RH SIDE PURLIN 1	HSS5X5X3/16		210 lbmass
14	*		END PURLIN 1	HSS5X5X3/16		257 lbmass
15	*		LH SIDE PURLIN 2	HSS5X5X3/16		166 lbmass
16	*		RH SIDE PURLIN 2	HSS5X5X3/16		166 lbmass
17	*		END PURLIN 2	HSS5X5X3/16		169 lbmass
18	*		LH SIDE PURLIN 3	HSS5X5X3/16		122 lbmass
19	*		RH SIDE PURLIN 3	HSS5X5X3/16		122 lbmass
20	*		END PURLIN 3	HSS5X5X3/16		81 lbmass
21	*		MID PURLIN	HSS5X5X3/16		235 lbmass

\*NOTE:  
MATERIAL WILL VARY DEPENDING ON SHELTER SIZE ORDERED.

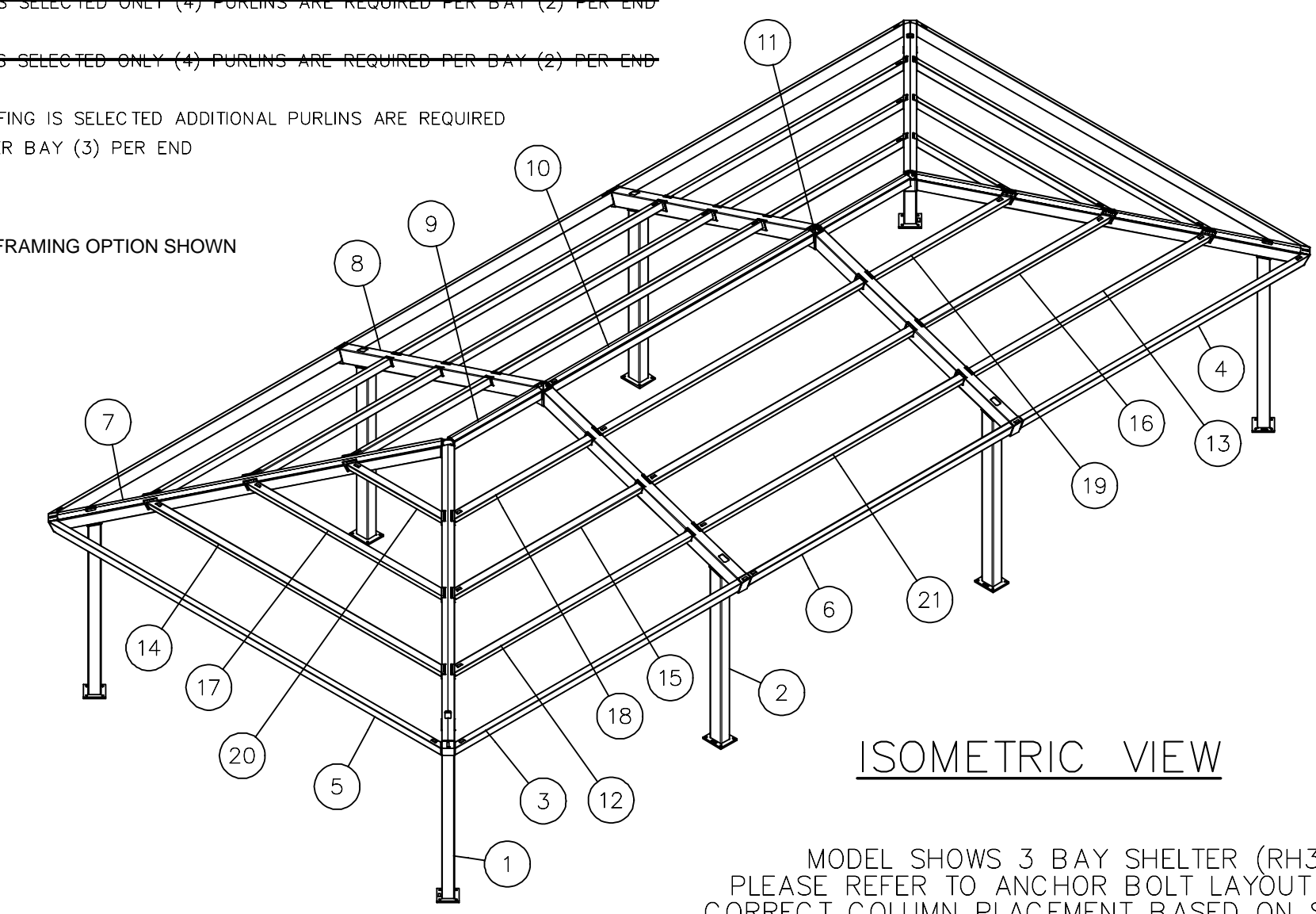
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<input type="checkbox"/>	SIDE COLUMN 8" UTB - (HSS10X8X5/16)
<input checked="" type="checkbox"/>	CORNER COLUMN 10" UTB - (HSS8X8X1/4)
<input checked="" type="checkbox"/>	SIDE COLUMN 10" UTB - (HSS10X8X5/16)
<input type="checkbox"/>	CORNER COLUMN 12" UTB - (HSS10X8X5/16)
<input type="checkbox"/>	SIDE COLUMN 12" UTB - (HSS12X8X5/16)

\*\*IF MULTI-RIB ROOFING IS SELECTED ONLY (4) PURLINS ARE REQUIRED PER BAY (2) PER END

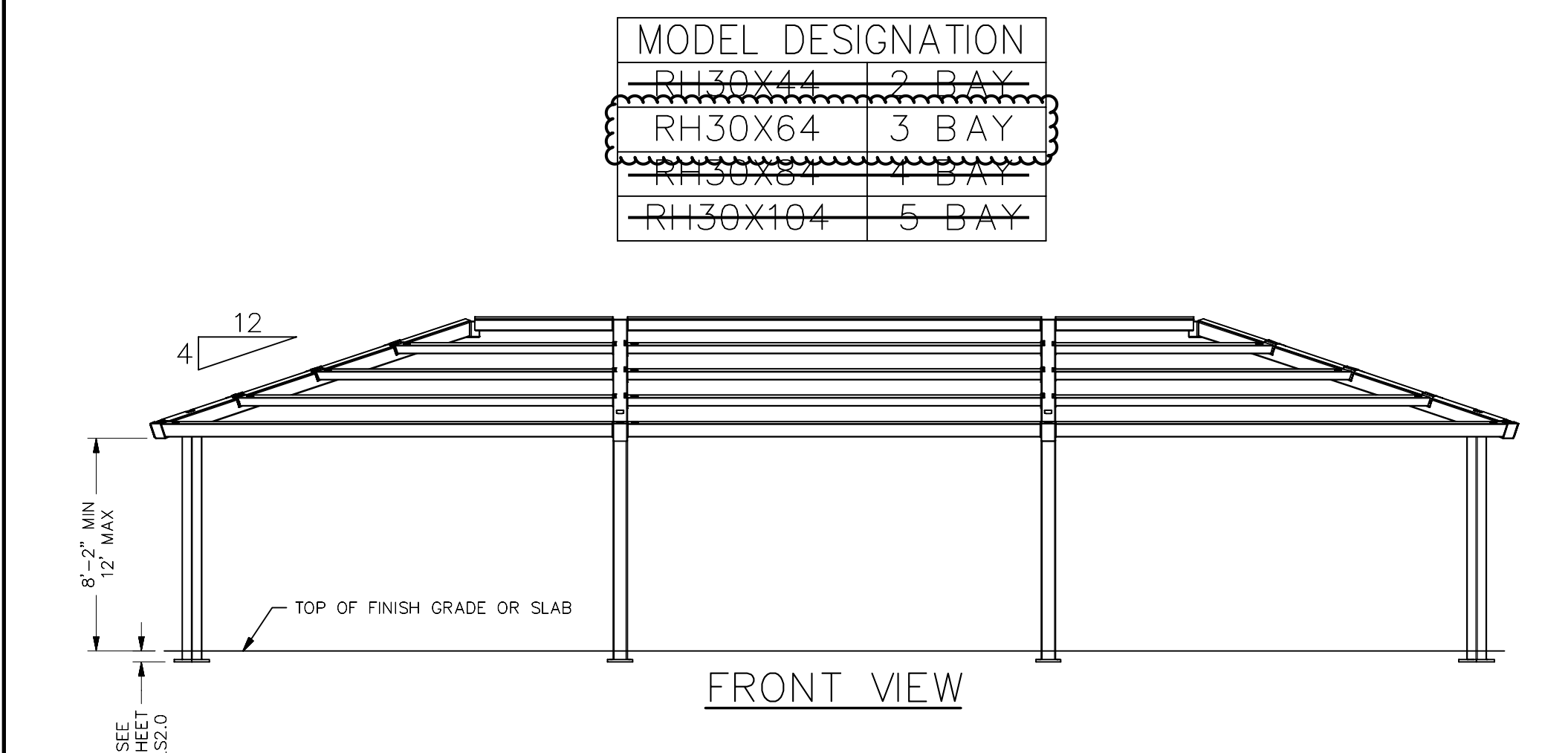
\*\*IF MEGA-RIB ROOFING IS SELECTED ONLY (4) PURLINS ARE REQUIRED PER BAY (2) PER END

\*\*IF STANDING SEAM ROOFING IS SELECTED ADDITIONAL PURLINS ARE REQUIRED (6) PURLINS REQUIRED PER BAY (3) PER END

STANDING SEAM FRAMING OPTION SHOWN



ISOMETRIC VIEW  
MODEL SHOWS 3 BAY SHELTER (RH30X64)  
PLEASE REFER TO ANCHOR BOLT LAYOUT SHEET FOR CORRECT COLUMN PLACEMENT BASED ON SIZE ORDERED

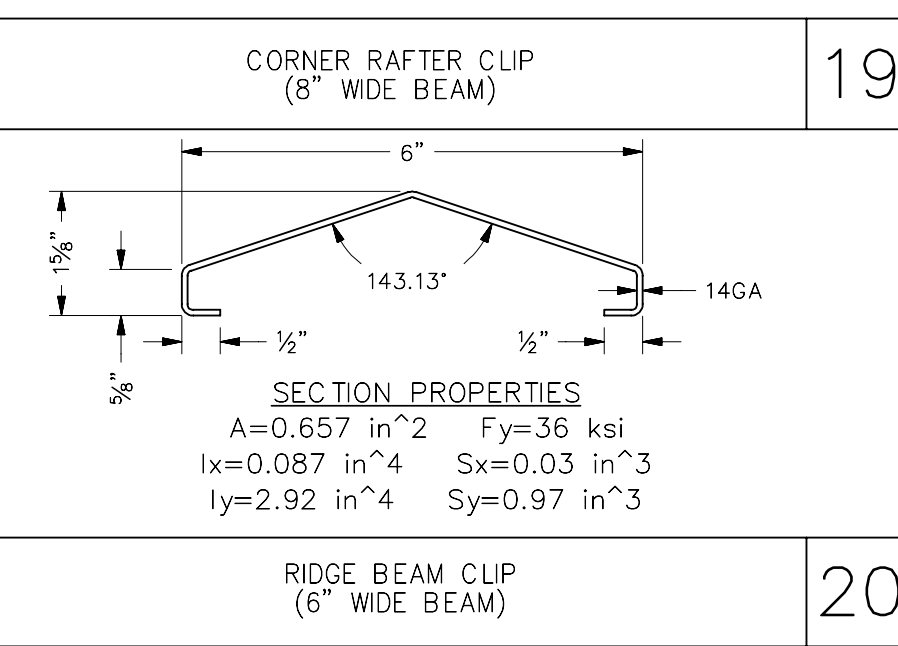


FRONT VIEW

SIDE VIEW

98" MIN IF USED OVER ACCESSIBLE PARKING OR ACCESS AISLES  
114" MIN IF LOCATED OVER ACCESSIBLE PASSENGER LOADING ZONES

30' WIDE RECTANGULAR HIP



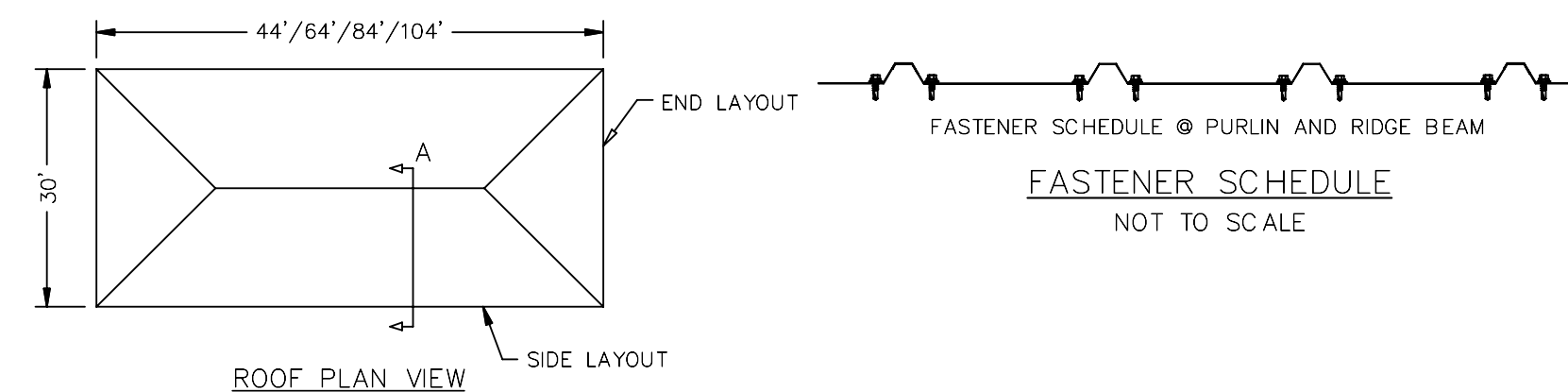
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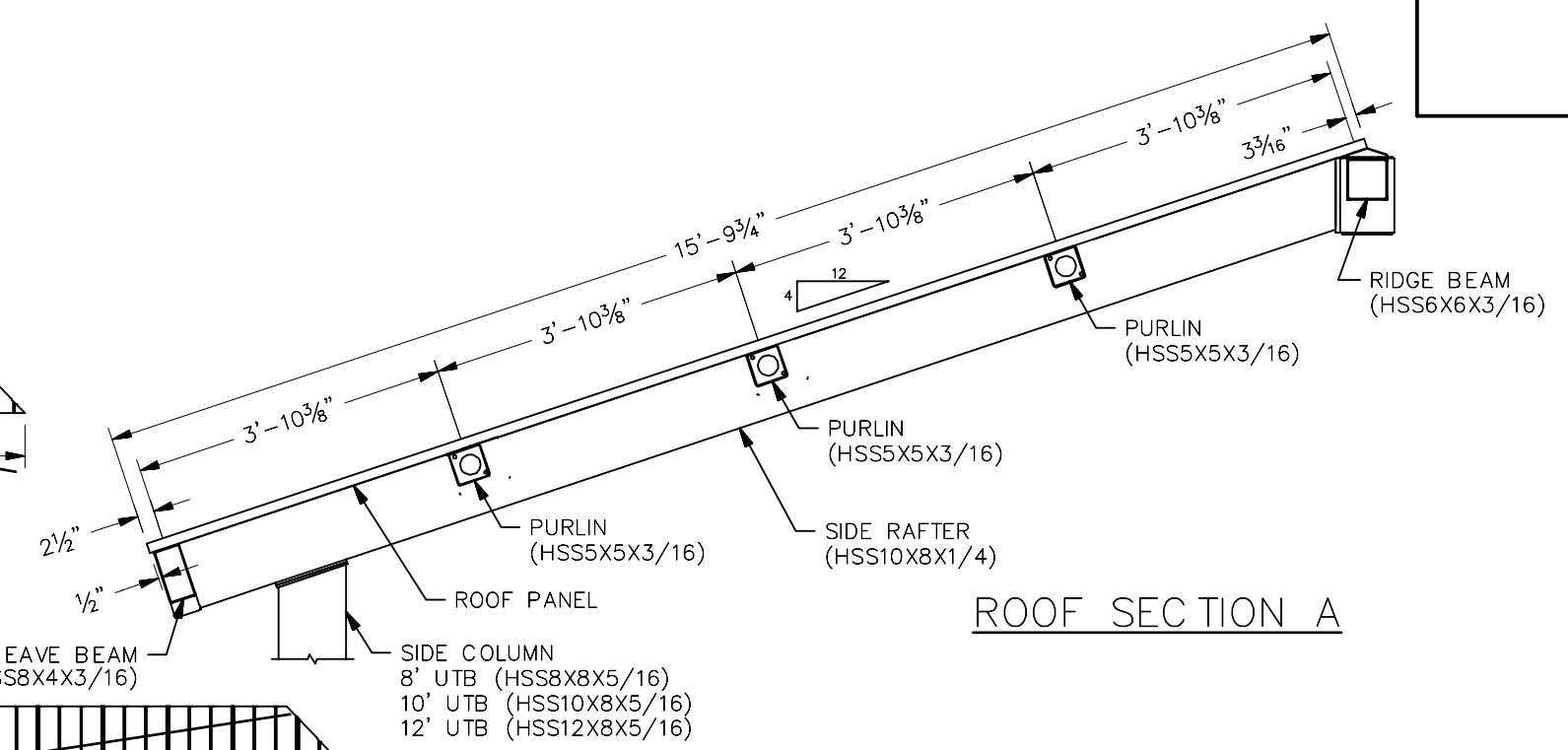
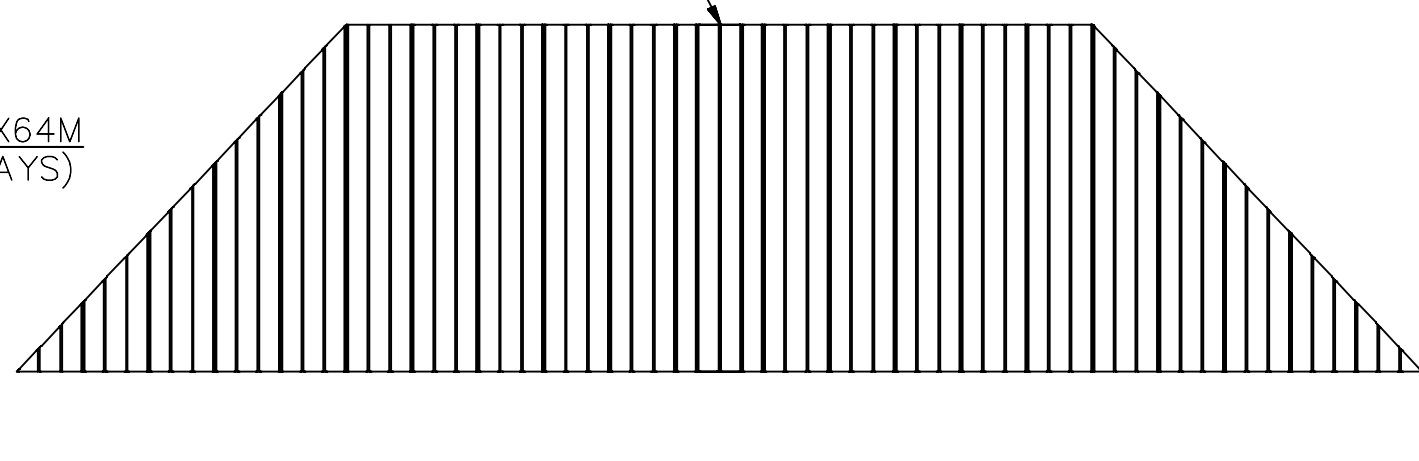
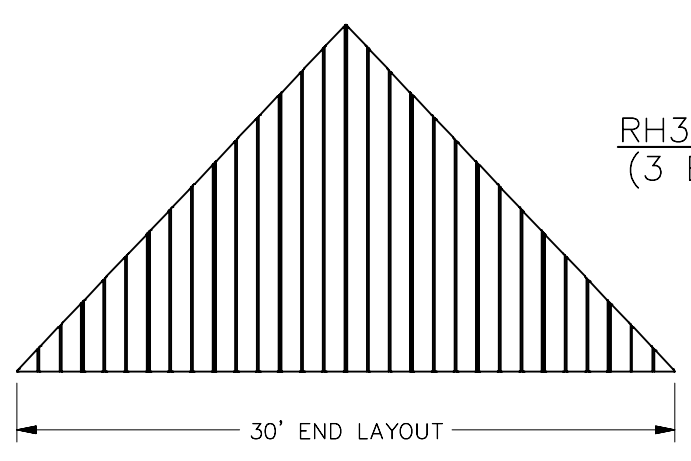
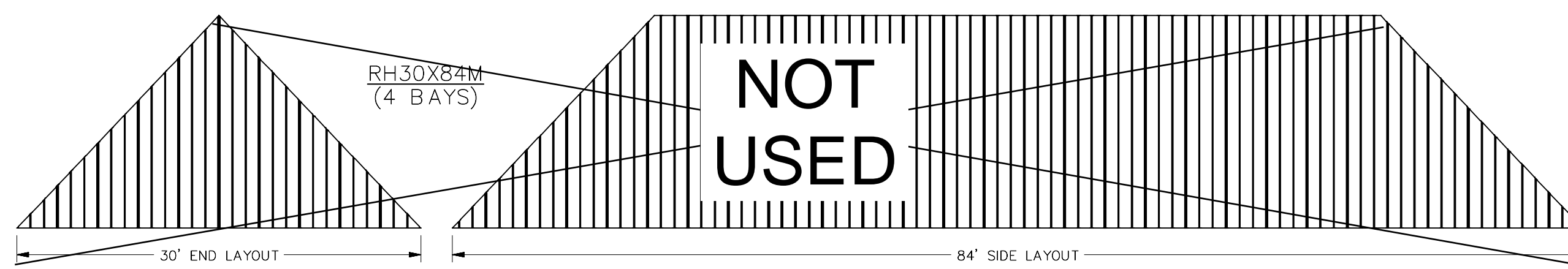
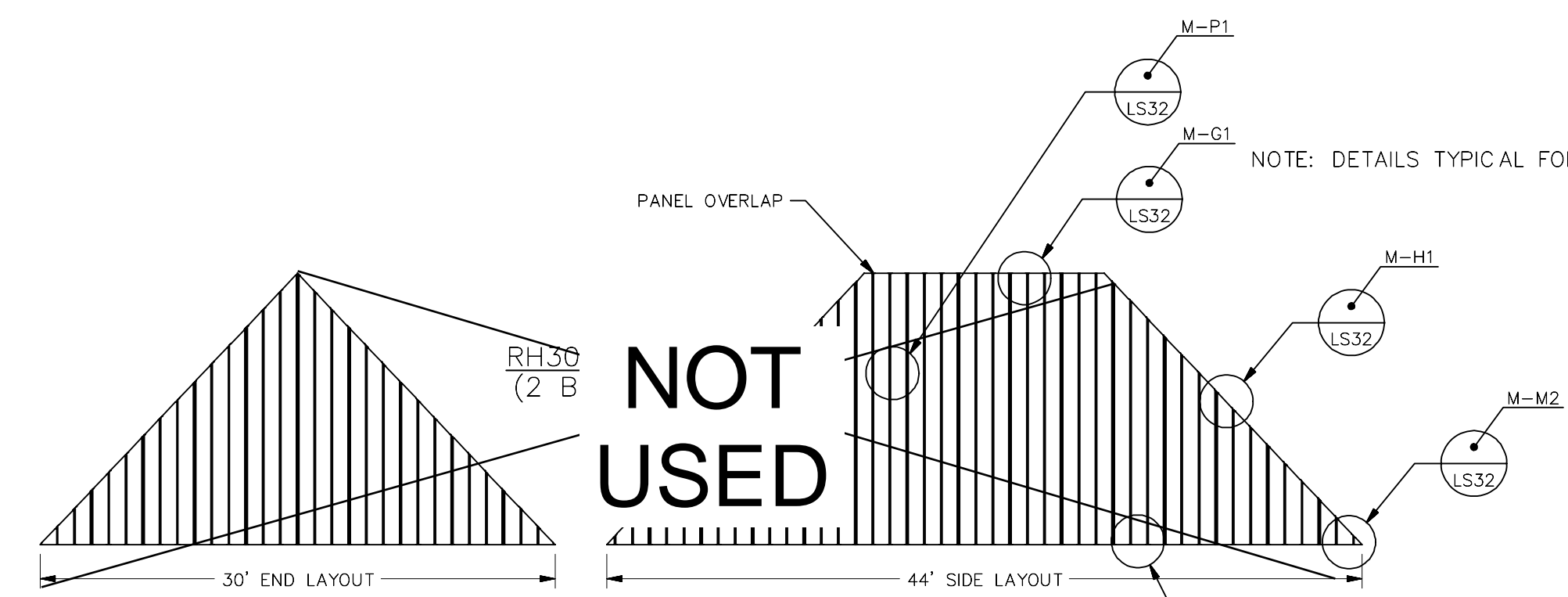
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PRE-CHECK (PC) DOCUMENT  
Code: 2022 CBC  
A separate project application for construction is required.

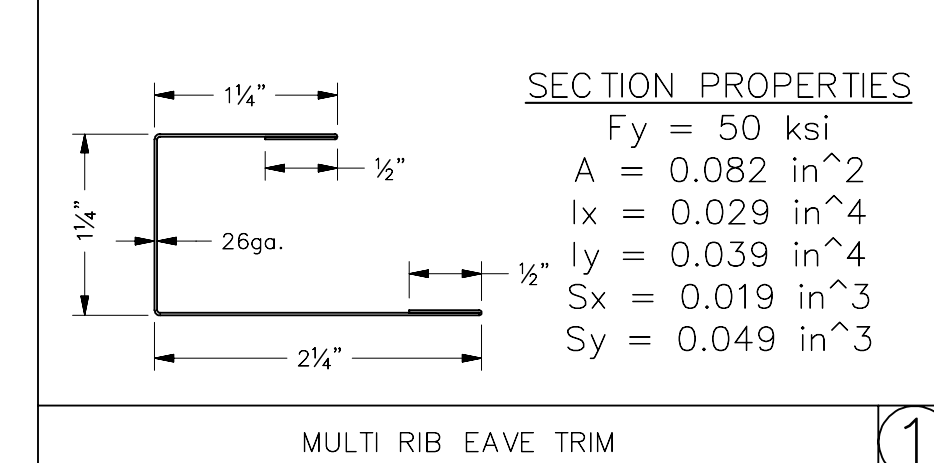




FASTENER SCHEDULE @ PURLIN AND RIDGE BEAM  
 NOT TO SCALE

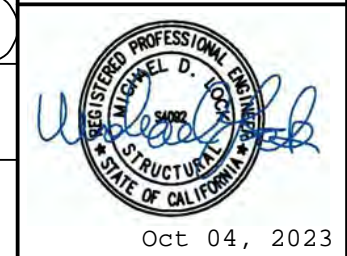


ROOF SECTION A



ICON STD	RH/DSA-PC
DRAWN BY	JD
DATE	7/25/2023
REV	
REV DATE	

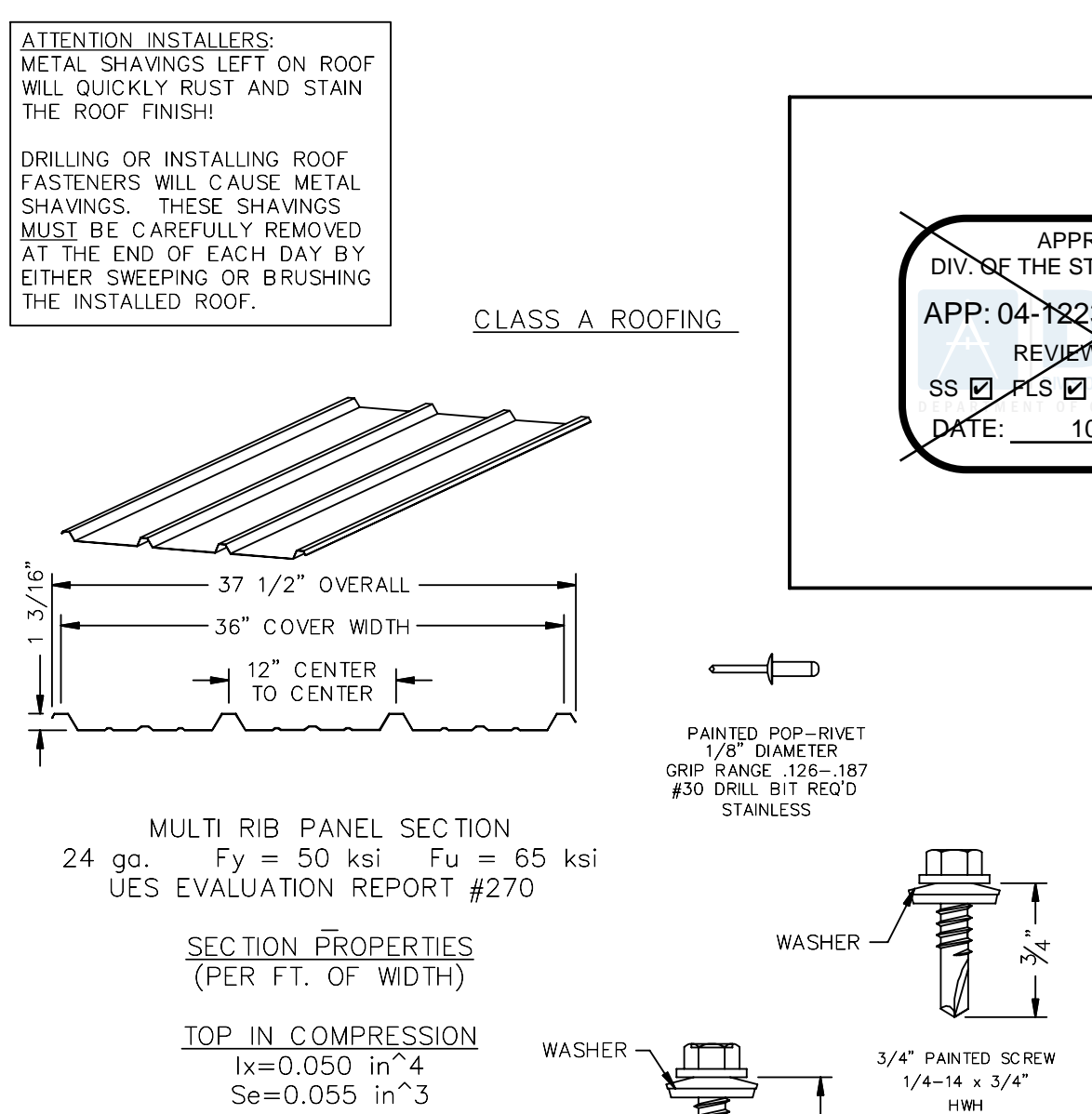
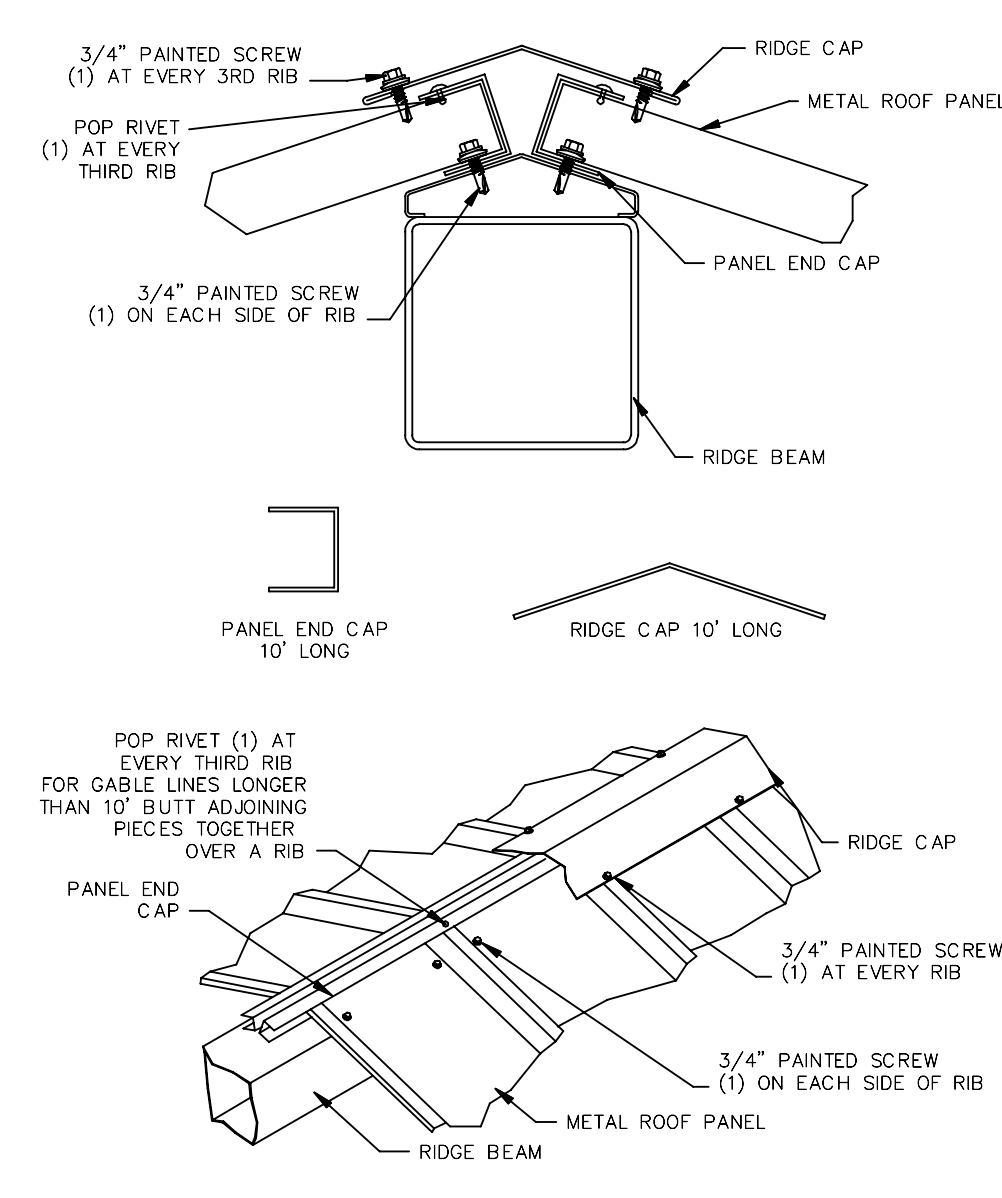
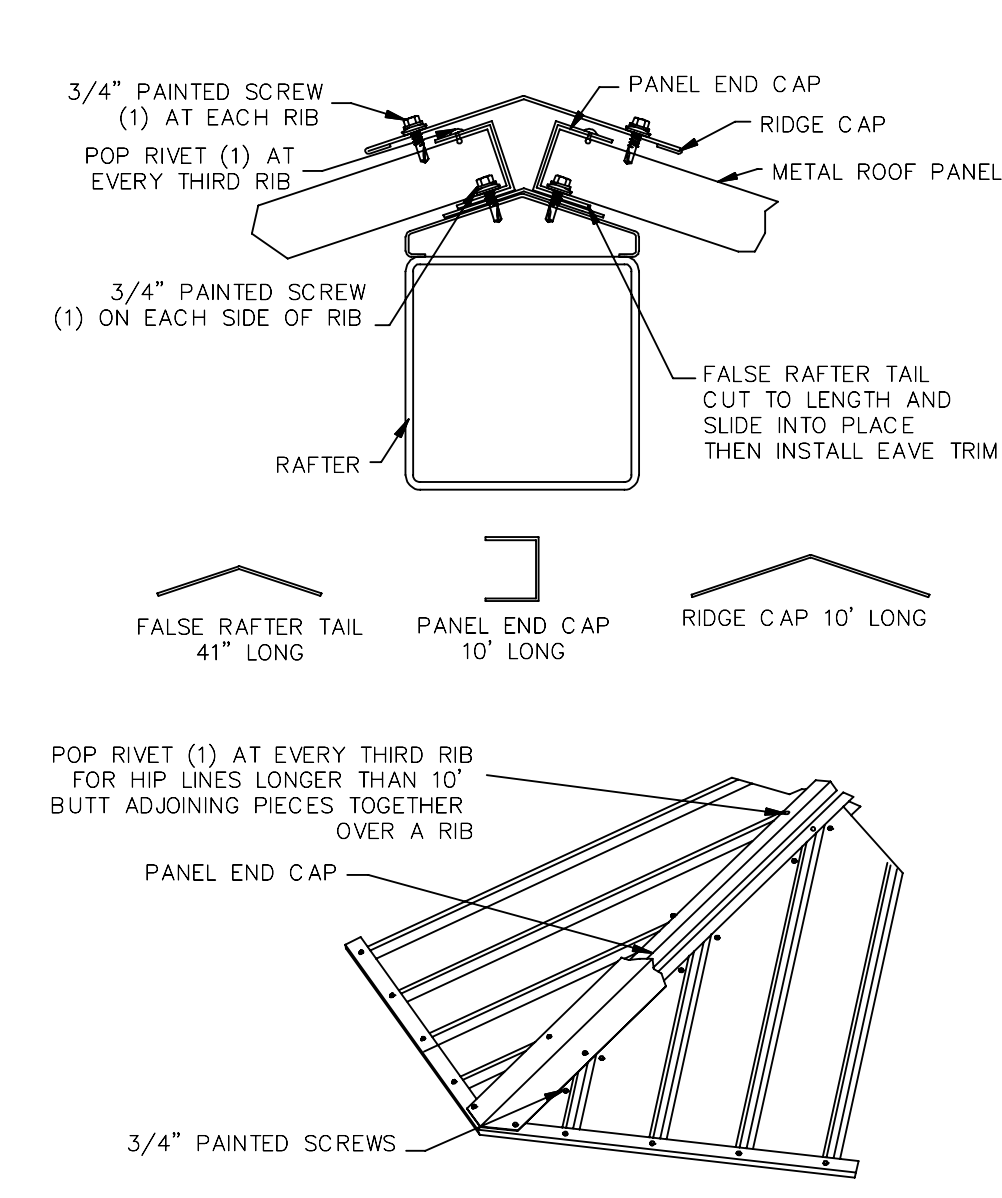
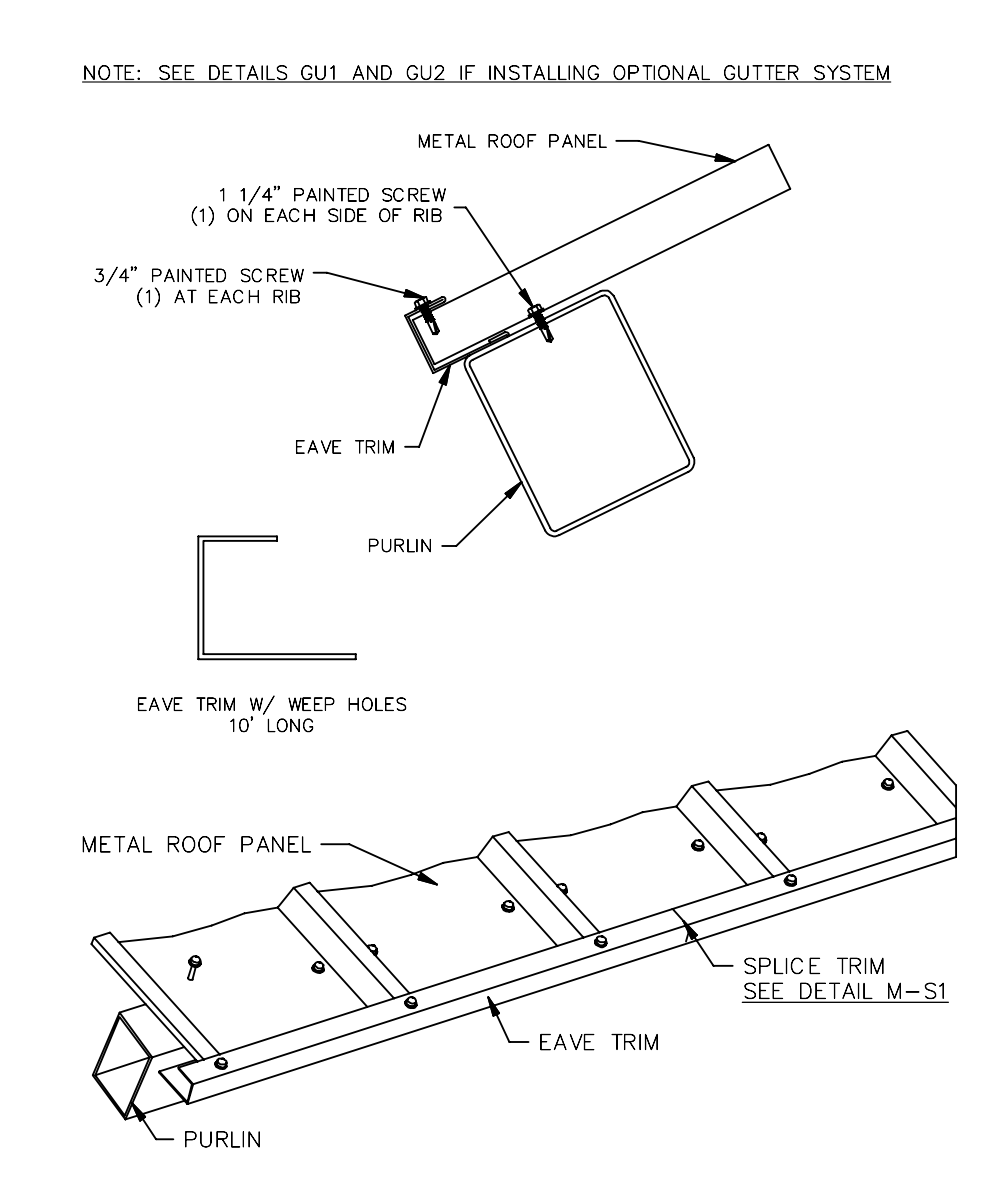
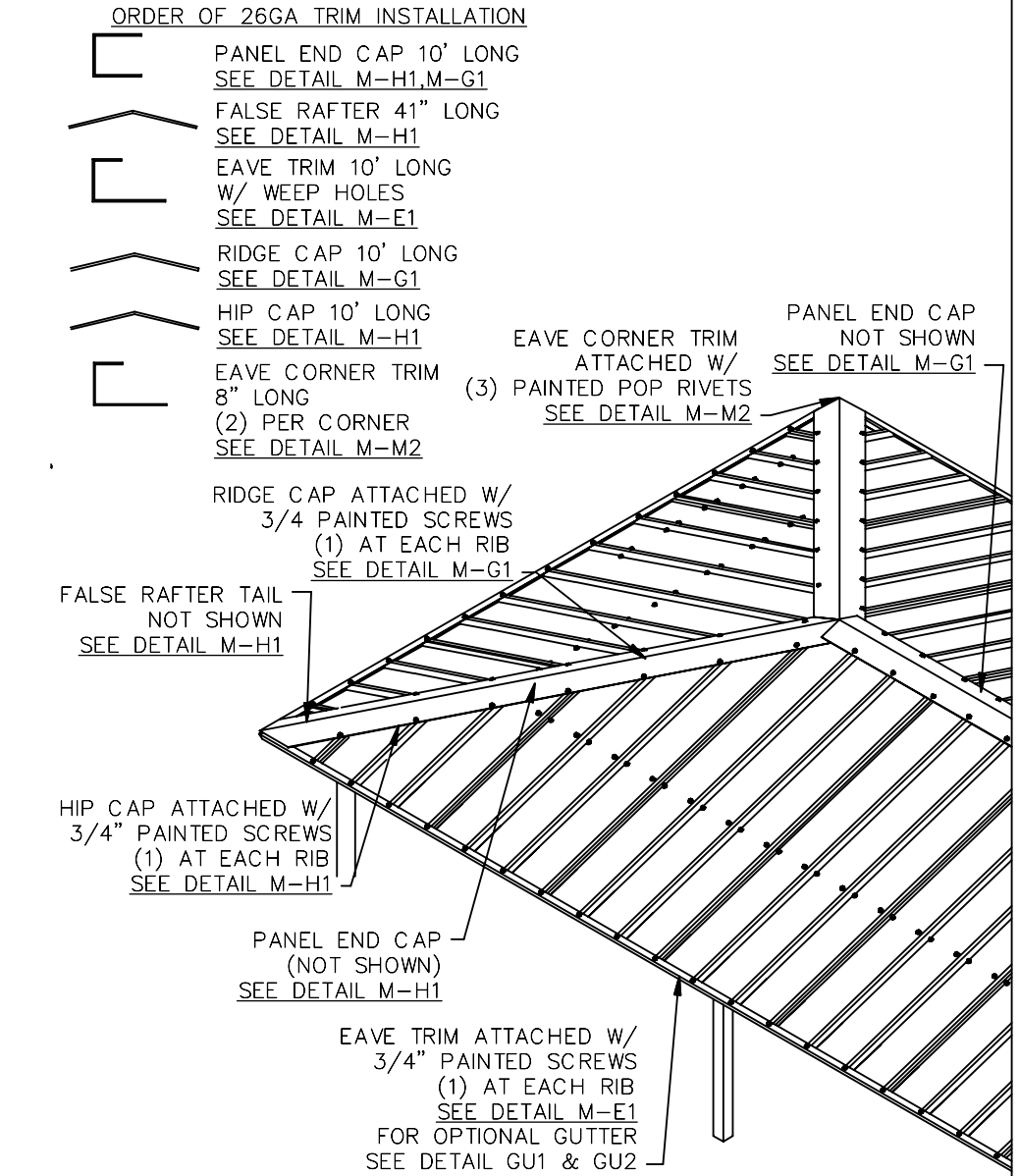
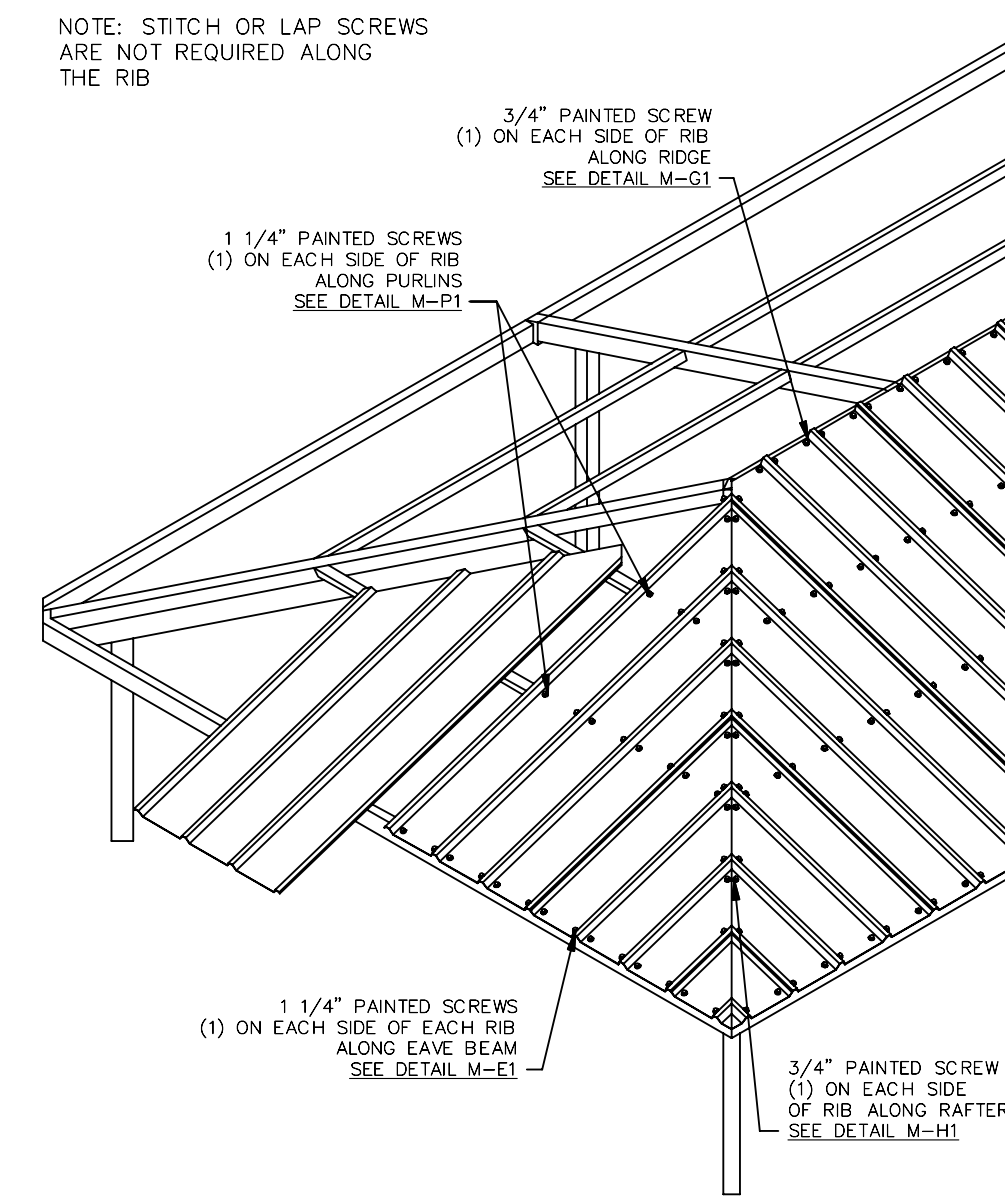
**JRMA**  
 ARCHITECTS ENGINEERS  
 2700 SATURN ST BREA, CA 92821  
 T. 714.524.1870 F. 714.524.1875  
 WWW.JRMA.COM



Oct. 04, 2023

30' WIDE RECTANGULAR HIP MULTI RIB ROOFING

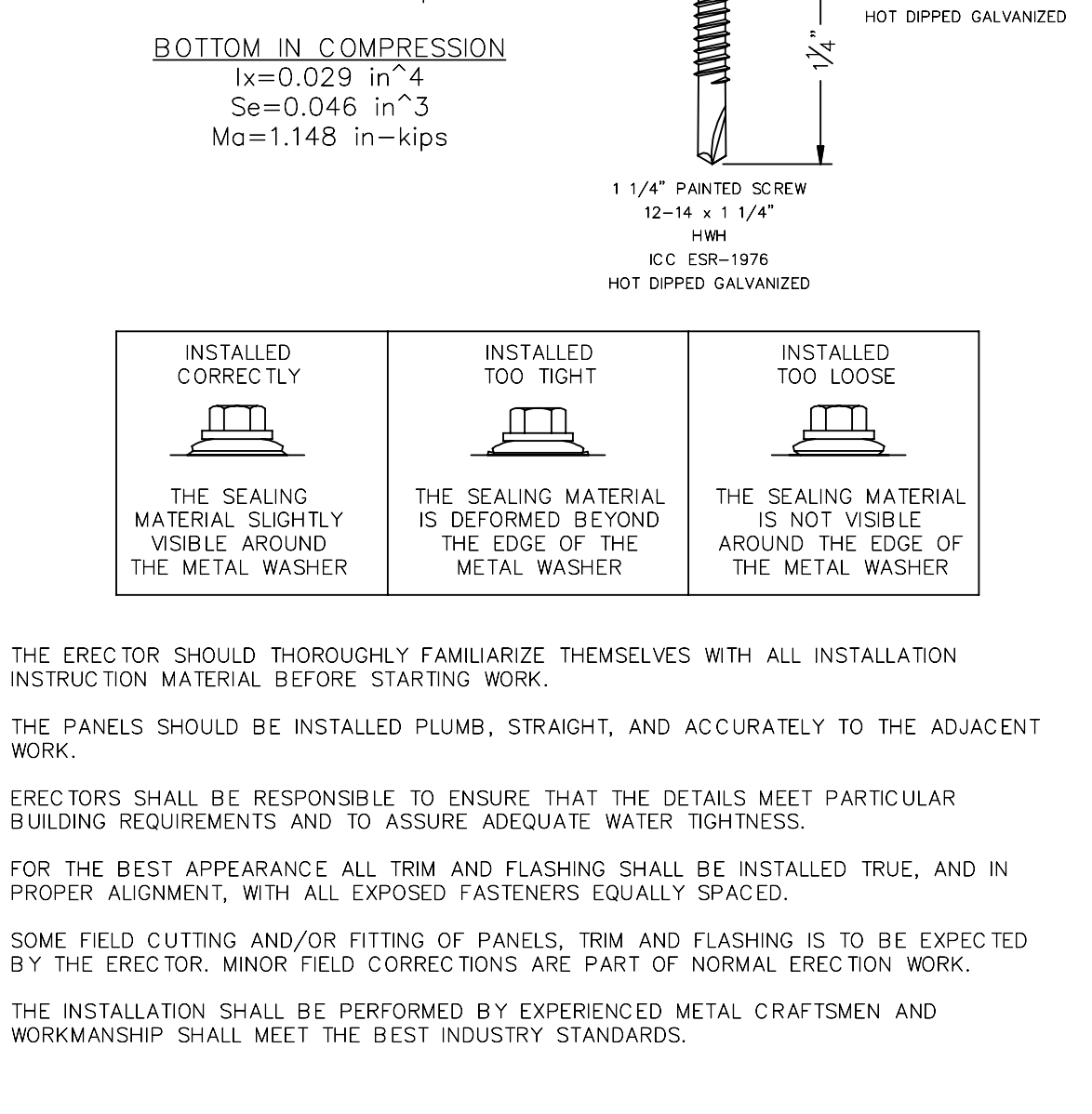
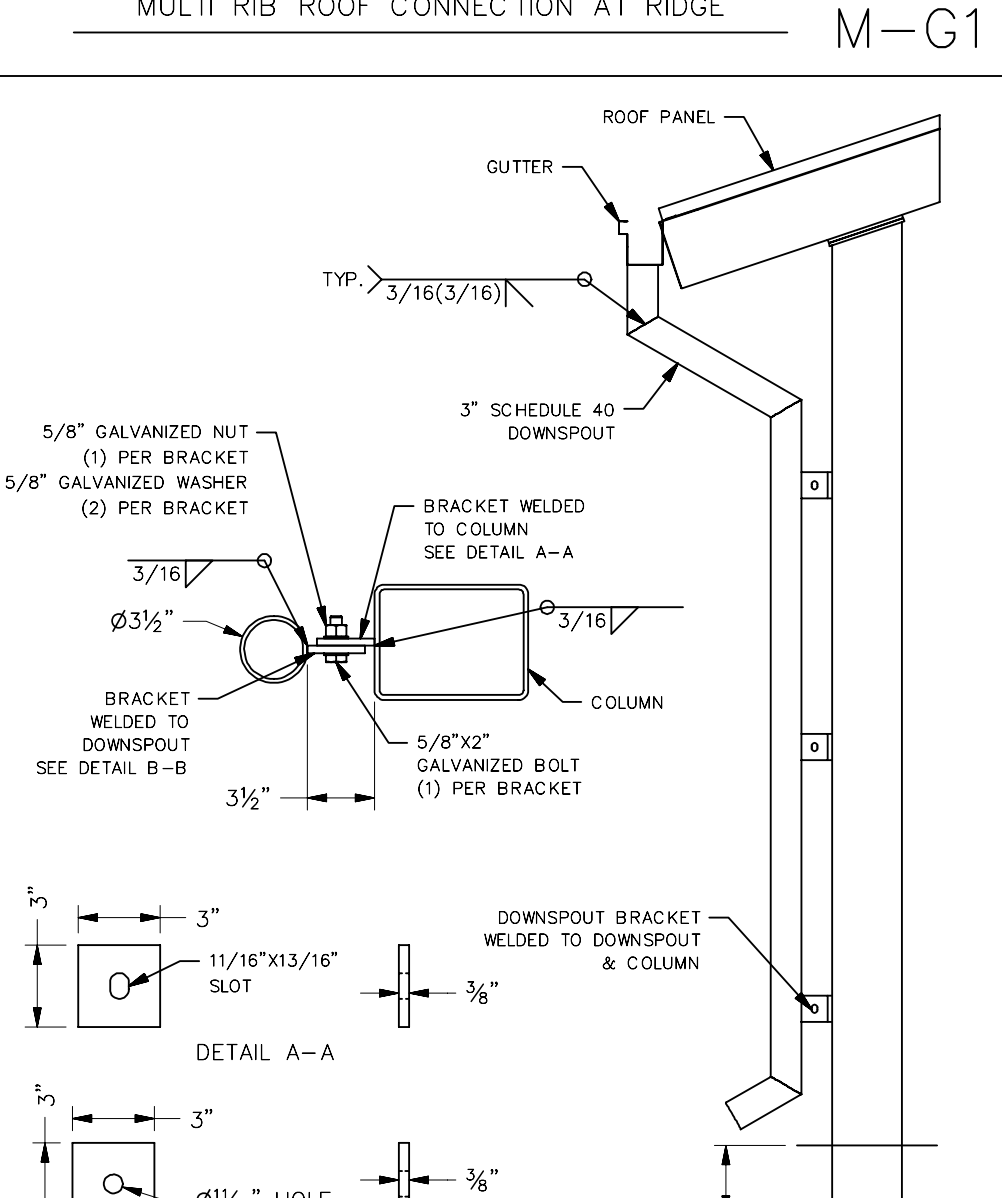
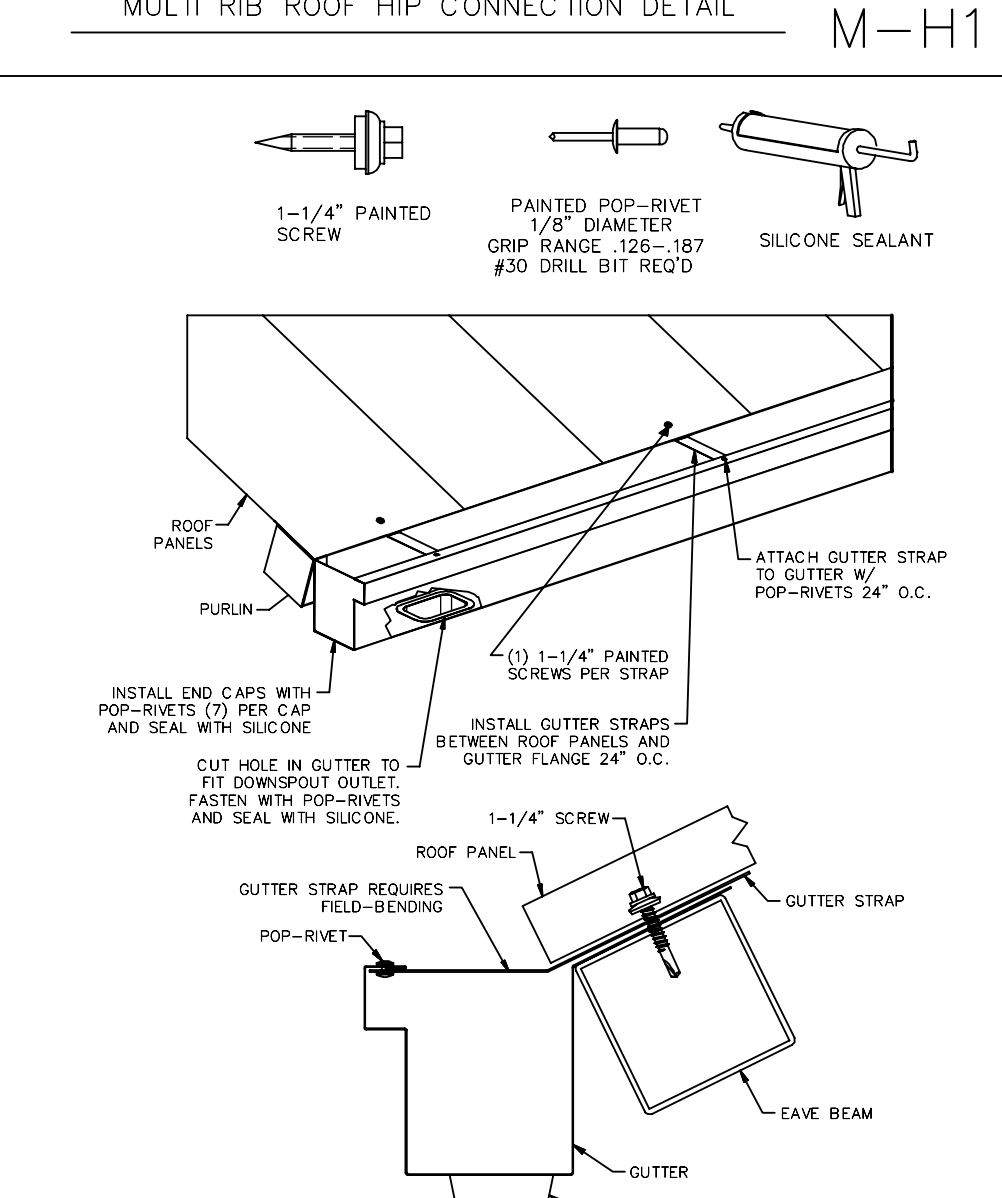
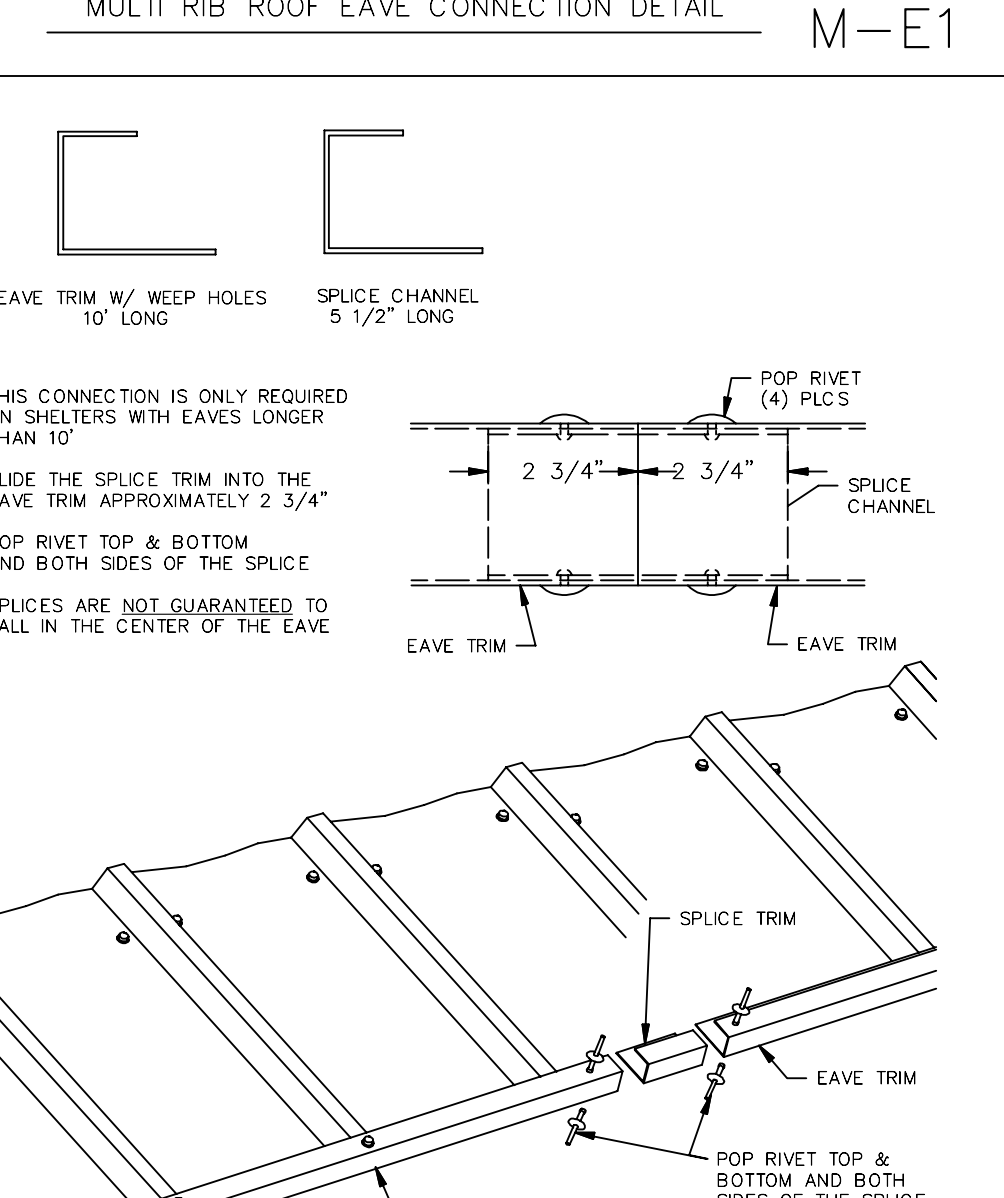
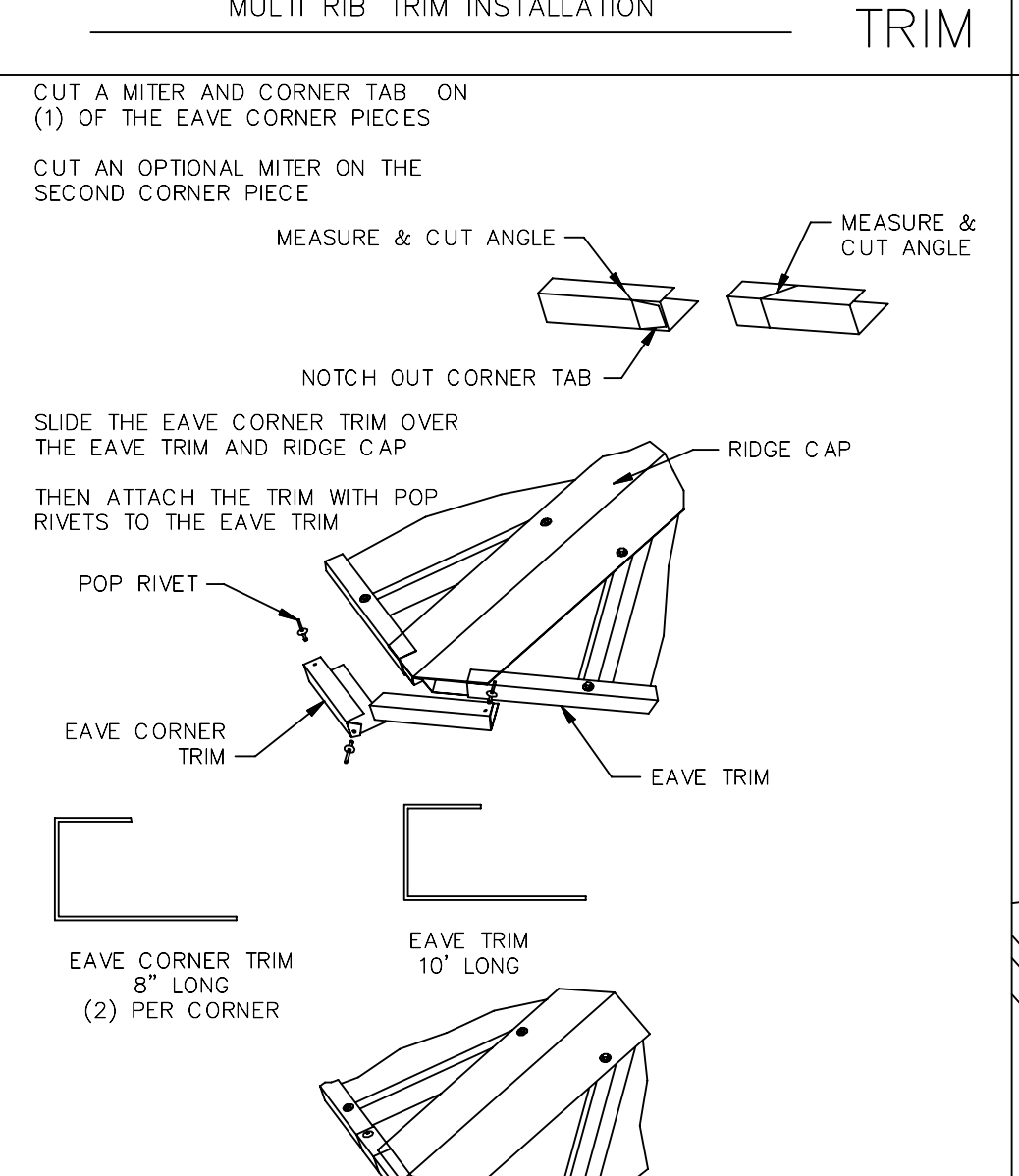
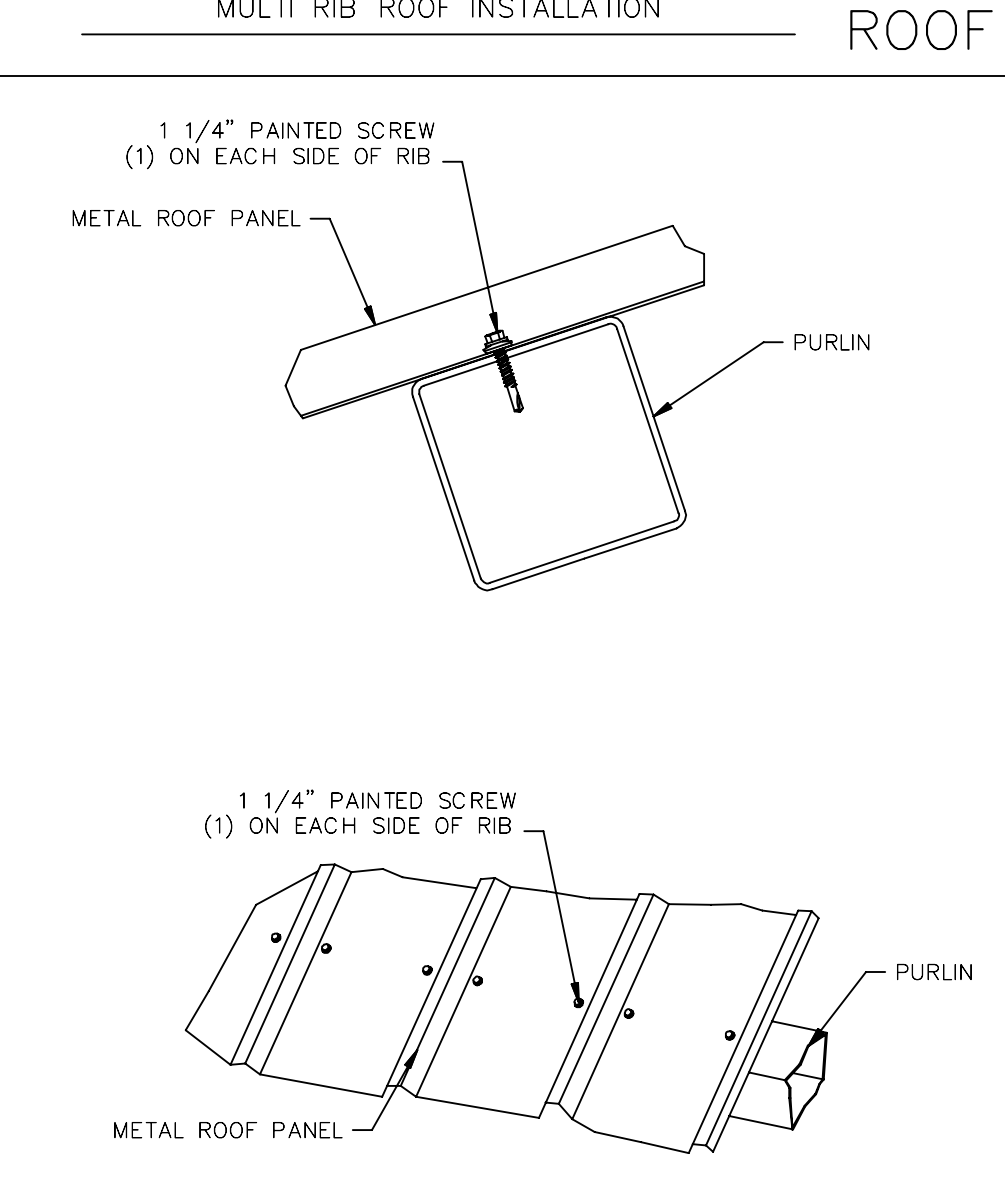
ROOF NOTES



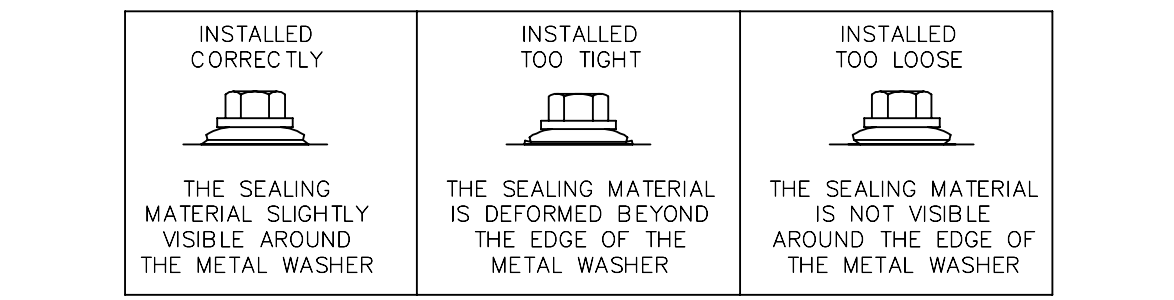
ATTENTION INSTALLERS:  
 METAL SHAVINGS LEFT ON ROOF WILL QUICKLY RUST AND STAIN THE ROOF FINISH!  
 DRILLING OR INSTALLING ROOF FASTENERS WILL CAUSE METAL SHAVINGS. THESE SHAVINGS MUST BE CAREFULLY REMOVED AT THE END OF EACH DAY BY EITHER SWEEPING OR BRUSHING THE INSTALLED ROOF.

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 APP: 04-122375 PC  
 REVIEWED FOR  
 SS FLS ACS CG  
 DATE: 10/10/2023

30' WIDE  
 RECTANGULAR HIP  
 MULTI RIB ROOFING  
 PLAN



CLASS A ROOFING  
 MULTI RIB PANEL SECTION  
 24 ga. Fy = 50 ksi Fu = 65 ksi  
 UES EVALUATION REPORT #270  
 SECTION PROPERTIES (PER FT. OF WIDTH)  
 TOP IN COMPRESSION  
 Ix=0.050 in^4  
 Se=0.055 in^3  
 Ma=1.375 in-kips  
 BOTTOM IN COMPRESSION  
 Ix=0.029 in^4  
 Se=0.046 in^3  
 Ma=1.148 in-kips



THE ERECTOR SHOULD THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL INSTALLATION INSTRUCTION MATERIAL BEFORE STARTING WORK.  
 THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.  
 ERECTORS SHALL BE RESPONSIBLE TO ENSURE THAT THE DETAILS MEET PARTICULAR BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS.  
 FOR THE BEST APPEARANCE ALL TRIM AND FLASHING SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ALL EXPOSED FASTENERS EQUALLY SPACED.  
 SOME FIELD CUTTING AND/OR FITTING OF PANELS, TRIM AND FLASHING IS TO BE EXPECTED BY THE ERECTOR. MINOR FIELD CORRECTIONS ARE PART OF NORMAL ERECTION WORK.  
 THE INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSMEN AND WORKMANSHIP SHALL MEET THE BEST INDUSTRY STANDARDS.

PRE-CHECK (PC) DOCUMENT  
 Code: 2022 CBC  
 A separate project application for construction is required.

**ICON** Shelter Systems Inc  
 DISTINCTIVE STEEL SHELTERS  
 WWW.ICONSHelters.com  
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1455 LINCOLN AVE  
 HOLLAND MI, 49423  
 616.396.0919  
 800.748.0985  
 616.396.0944 FX

LS3.2

# ELECTRICAL INFORMATION - RECTANGULAR HIP

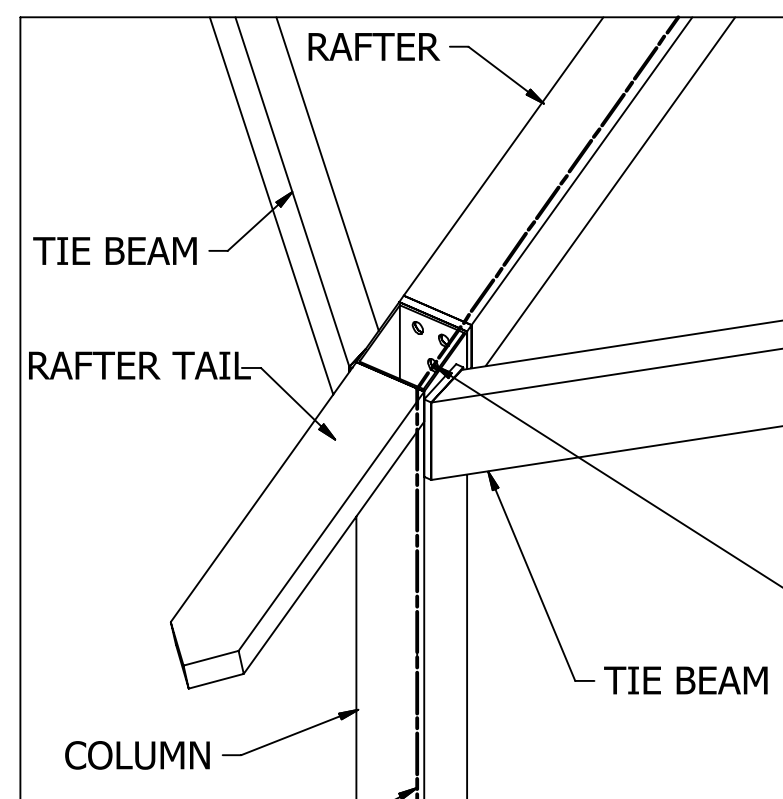
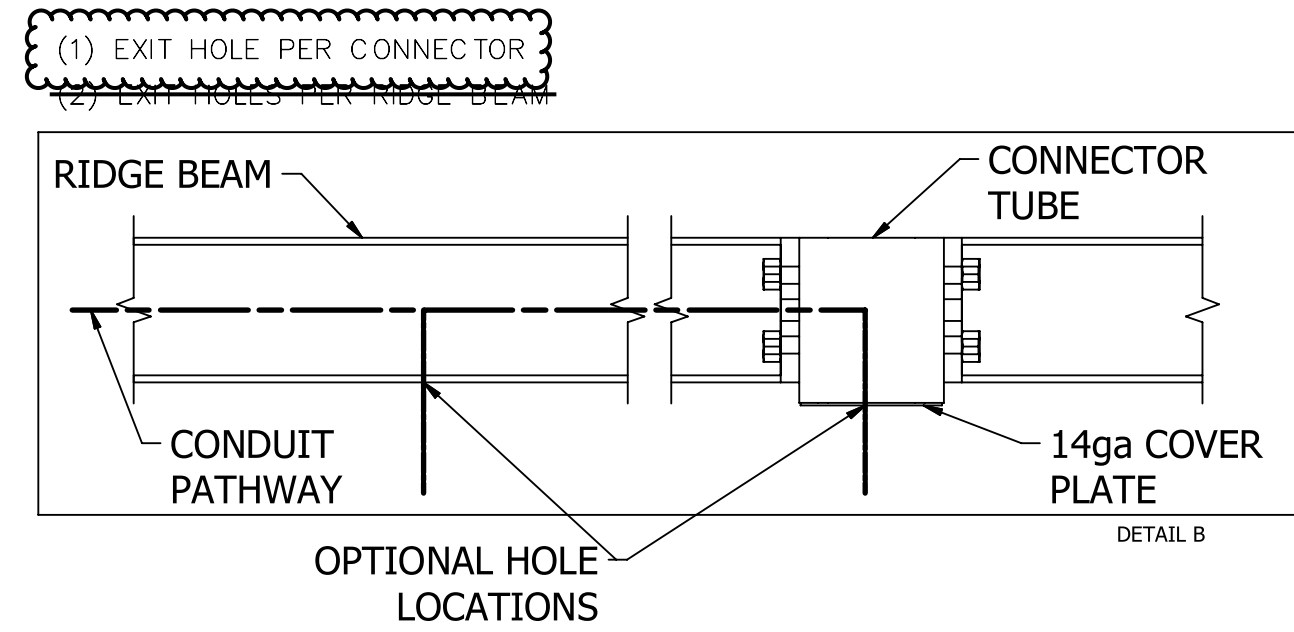
ICON'S STANDARD ELECTRICAL IS DESIGNED TO ACCOMMODATE  $\emptyset 1/2"$  CONDUIT WITH A  $\emptyset 3"$  INLET HOLE ON THE BOTTOM OF EACH COLUMN. THE CONDUIT PATHWAY RUNS THROUGH THE COLUMN, RAFTER, AND RIDGE BEAM THROUGH ALL BOLTED CONNECTIONS AS SHOWN. IF YOU HAVE SPECIAL ELECTRICAL REQUIREMENTS, PLEASE OUTLINE ANY CHANGES BELOW AS DESCRIBED.

**PLEASE NOTE:** DESIGN LIMITATIONS ON HOLE/CUTOUT SIZES MAY APPLY. ICON WILL REACH OUT TO DISCUSS ANY SUCH LIMITATIONS AS NEEDED.

**NOTE:** ICON SHELTER FRAME IS NOT UL LISTED TO ACT AS A CONDUIT FOR ELECTRICAL WIRING. CONSULT LOCAL BUILDING CODES WHEN PLANNING YOUR ELECTRICAL SYSTEM.

## OPTIONAL EXIT HOLES

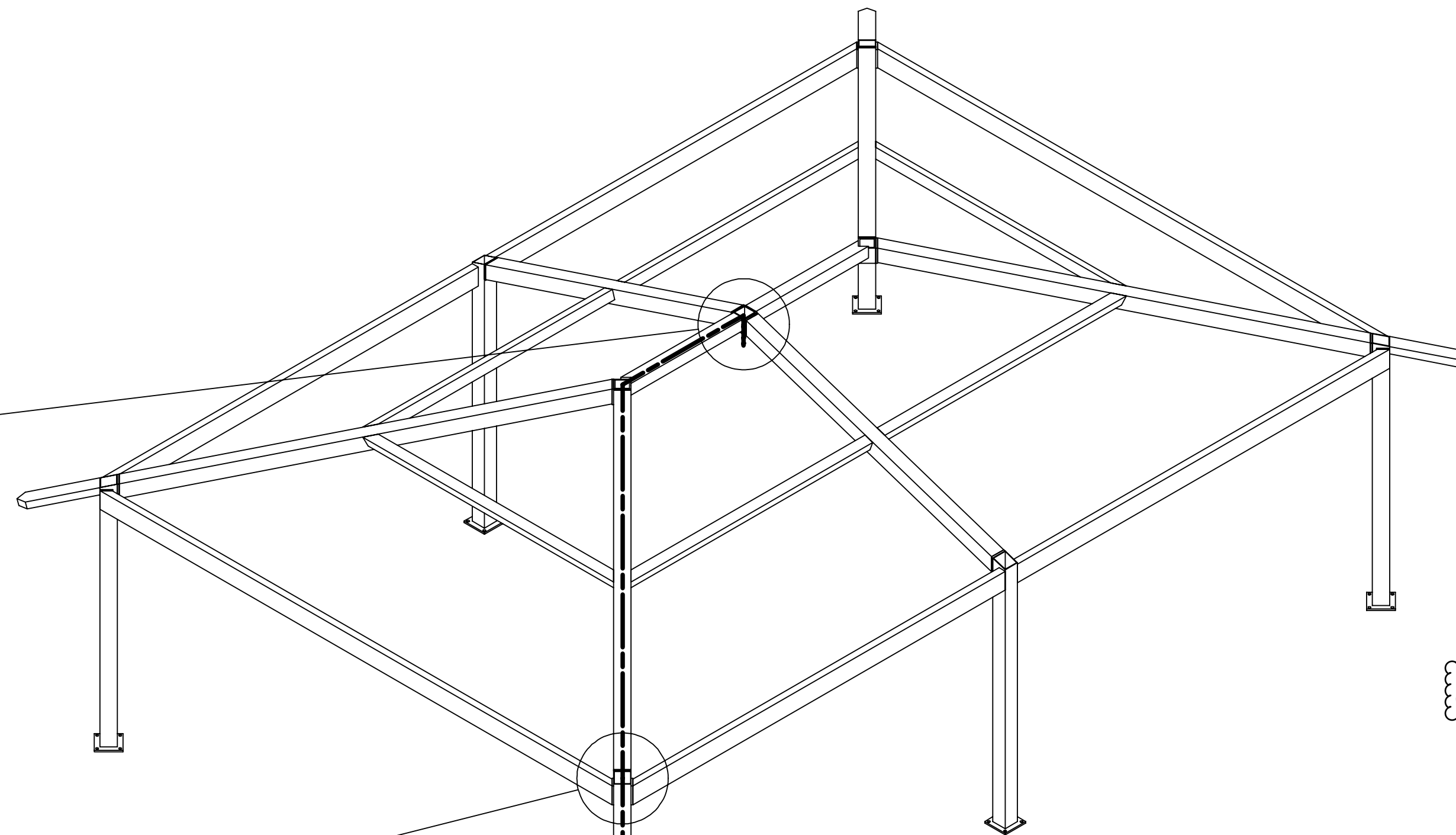
IF REQUIRED, EXIT HOLES FOR LIGHTING, ETC. CAN BE PLACED IN THE RIDGE BEAM AND/OR CONNECTOR TUBE WITH 14ga COVER PLATE AS SHOWN (CHARGES APPLY) USE FRAME SHEET OF THIS PRELIMINARY TO SPECIFY REQUIRED EXIT HOLE LOCATIONS AND SIZE.



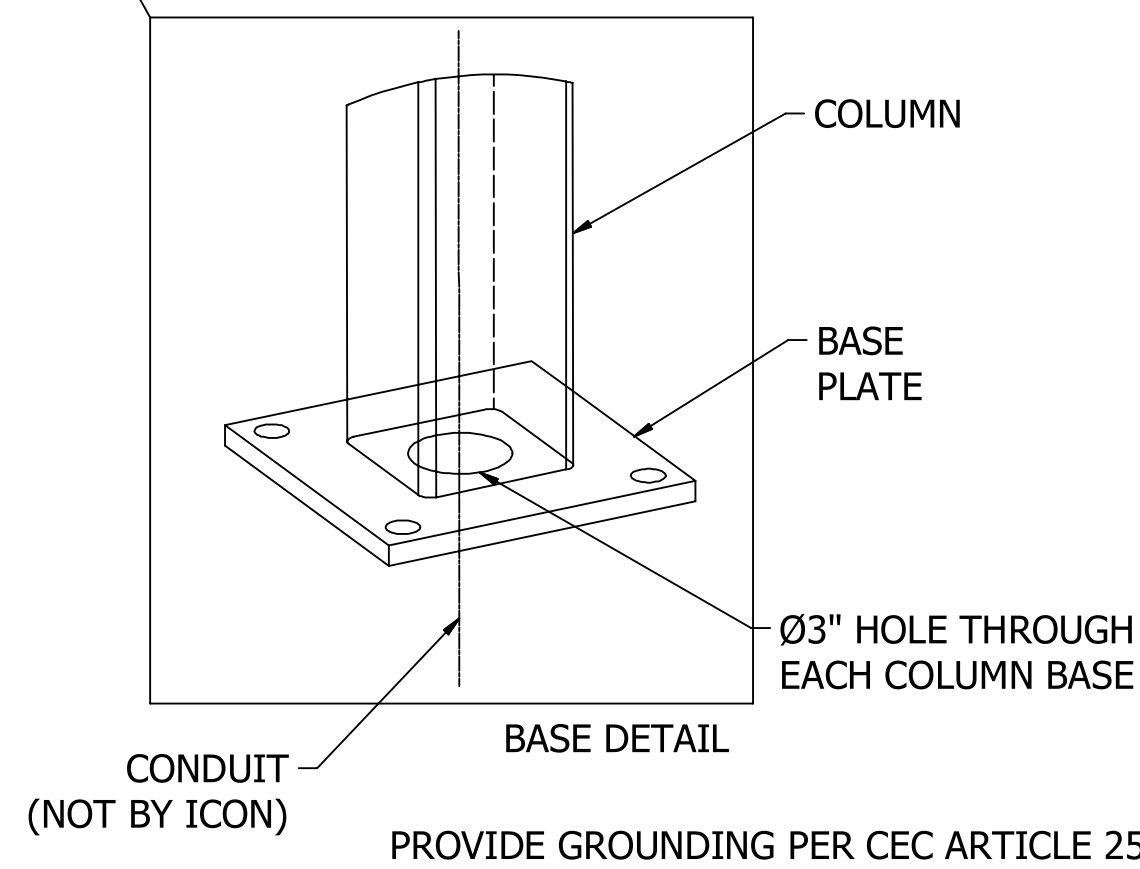
ICON PROVIDES A MINIMUM OF (1) 3/4" HOLE AT EACH CONNECTION FOR 1/2" CONDUIT. IF APPLICABLE, PLEASE SPECIFY REQUIRED CONDUIT SIZE: (CHARGES APPLY)

- 3/4" CONDUIT (1" HOLES)
- 1" CONDUIT (1 1/4" HOLES)

**NOTE:** BUILDING DEPICTED ON THIS SHEET FOR ILLUSTRATION PURPOSES ONLY. ACTUAL LAYOUT AND FRAME MEMBER QUANTITIES VARY BY DESIGN. PLEASE REFER TO ELEVATION AND FRAME SHEETS IN THIS PRELIMINARY FOR ORDER-SPECIFIC CONFIGURATION.

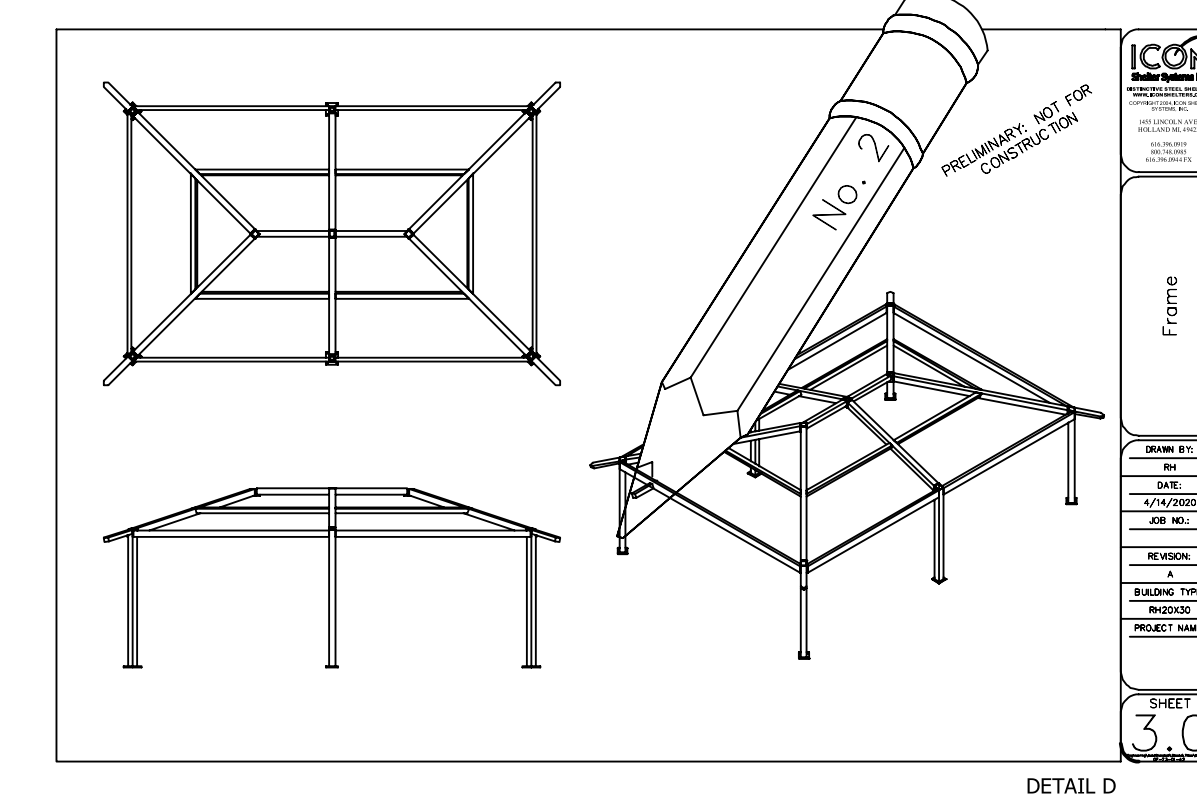


CONDUIT PATHWAY PROVIDED FOR EACH COLUMN.



- STEPS:**
1. CONDUIT HOLE SIZE (DETAIL A)
  2. ELECTRICAL EXIT HOLES (DETAIL B)
  3. ELECTRICAL ACCESS & COVER PLATES (DETAIL C)
  4. ELECTRICAL CONDUIT PATHWAY (DETAIL D)

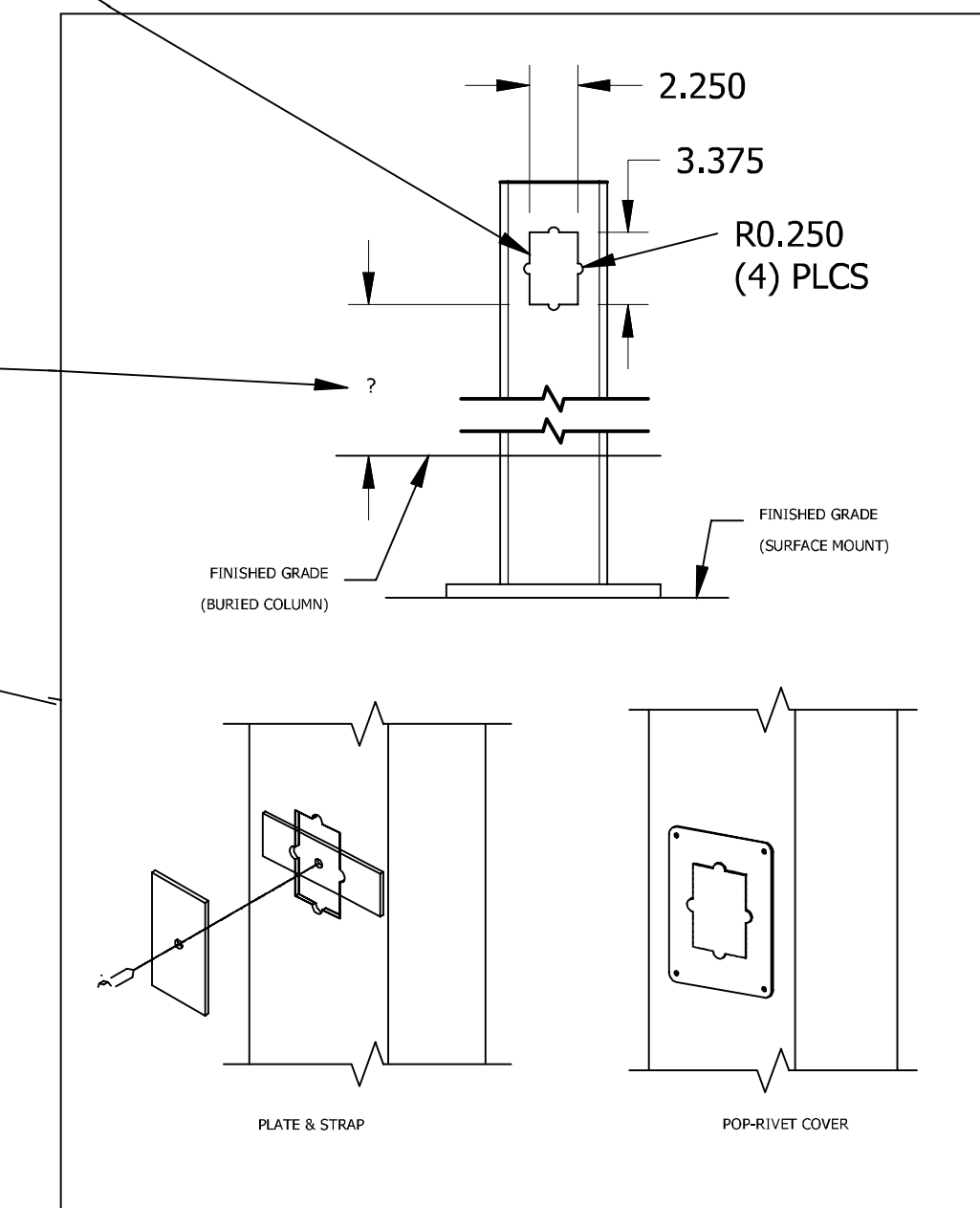
IF REQUIRED, PLEASE DRAW THE NECESSARY ELECTRICAL CONDUIT PATHWAY ON THE FRAME SHEET OF THIS PRELIMINARY.



**OPTIONAL CUTOUTS**  
 USE FRAME SHEET OF THIS PRELIMINARY TO SPECIFY REQUIRED CUTOUT LOCATIONS (CHARGES APPLY) SEE REQUIRED INFO BELOW

POP-RIVET COVER PLATE

+18" @ EACH CORNER COLUMN



(4) COVER PLATES PROVIDED UPON REQUEST (CHARGES APPLY)  
 PLEASE SPECIFY TYPE AND QUANTITY REQUIRED:

- PLATE & STRAP
  - POP-RIVET COVER PLATE (STAINLESS POP RIVET)
- HOW MANY REQUIRED? 4

ICON STD	RH/DSA-PC
DRAWN BY	JD
DATE	7/25/2023
REV	
REV DATE	

**JRMA**  
 ARCHITECTS ENGINEERS  
 2700 SATURN ST BREA, CA 92821  
 T. 714.524.1870 F. 714.524.1875  
 WWW.JRMA.COM



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ELECTRICAL ACCESS

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