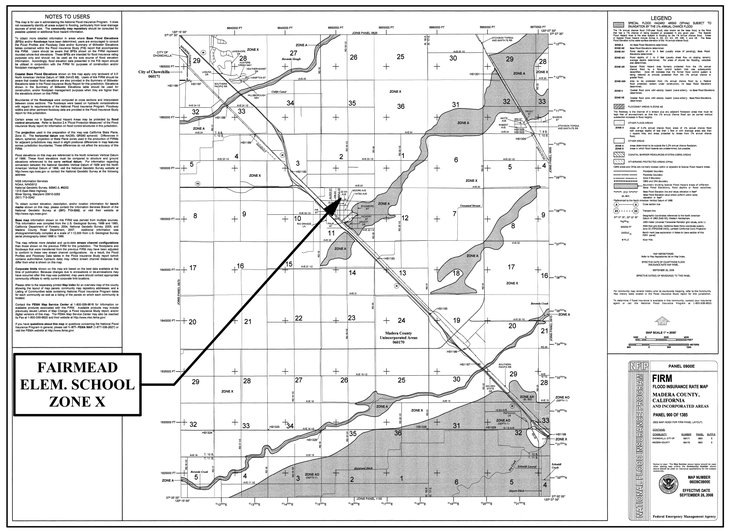
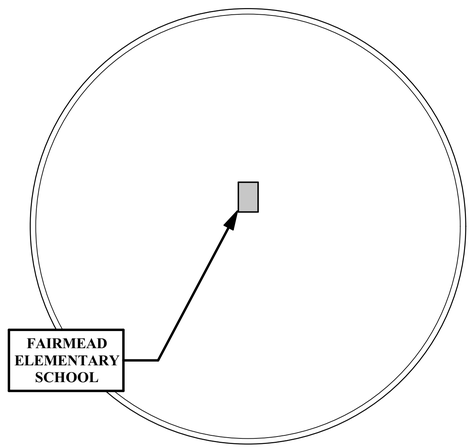
MULTI-PURPOSE BUILDING AT FAIRMEAD E.S.
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
FAIRMEAD, CALIFORNIA



NORTH

FLOOD MAP

N.T.S.



NORTH

VICINITY MAP

N.T.S.

FAIRMEAD ELEMENTARY SCHOOL
19421 Avenue 22 3/4
Chowchilla, California 93610

DEFERRED APPROVALS:

NONE.

NOTES

1. Change orders shall be signed by Architect & Owner.
2. Addenda shall be signed by architect & approved by DSA.
3. Inspector shall be employed by Owner & Approved by Architect & DSA. Provide Inspector as required under section 4-333(b) Title 24, Part 1. Class 1 Project Inspector recommended.
4. Substitutions shall be considered as a change & be approved by DSA prior to fabrication or use.
5. Construcion Change Documents must be signed by Architect/Engineer on Record or delegated Design Professional and approved by DSA. Submittals & Approval Process to comply with DSA IR A-6.
6. 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 noncomplying construction be discovered which is not covered by the DSA approved 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. Per Sec. 4-317 (c), Part 1, Title 24, C.C.R.
7. Signs and indentifications shall be field inspected after installation and approved by the enforcing agency prior to the issuance of a final certificate of occupancy per Appendix Chapter 1, Section 110.2, or final approval where no certificate of occupancy is issued. The inspection shall include, but not be limited to, verification that Braille dots and cells are properly spaced and the size, proportion and type of raised sharacters are in compliance with these regulations. CBC 1117B.5.1 (4,2).
8. Grading plans, drainage improvements, road access requirements and enviromental health considerations shall comply with all local ordinances.
9. Scope of work indicated on these drawings is intended to identify and complete work which was not constructed under DSA Application Numbers 02-103347 and 02-103758. Separate final verified reports (Form DSA-6) shall be submitted for 02-103347 and 02-103758, respectively, upon completion of the work. This Application (02-117865) shall not be certified until Applications 02-103347 and 02-103758 are certified.
10. A DSA accepted testing laboratory directly employed by the District (Owner) shall conduct all the required tests and inspections for the project.
11. A. The California Energy Code Section 10-103 requires Acceptance Testing on all newly installed lighting controls, mechanical systems, envelopes, and process equipment after installation and before project completion. An Acceptance Test is a functional performance test to help ensure that newly installed equipment is operating and in compliance with the Energy Code.

    B. Lighting controls acceptance tests must be performed by a certified lighting controls Acceptance Test Technician (ATT).

    C. Mechanical system acceptance tests must be performed by a certified mechanical ATT for projects submitted on or after October 1, 2021.

    D. Envelope and process equipment acceptance tests shall be performed by the installing contractor, engineer/architect of record or the owner's agent.

    E. A listing of certified ATT can be found at: https://www.energy.ca.gov/programs-and-topics/programs/acceptance-test-technician-certification-provider-program/acceptance.F. The Acceptance Testing procedures must be repeated, and deficiencies must be corrected by the builder or installing contractor until the construction/installation of the specified systems conform and pass the required acceptance criteria.

    G. Project inspectors will collect the forms to confirm that the required Acceptance Tests have been completed.

STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS.

APPLICATION NO. 02-121993 FILE NO. 20-10

☒ THESE DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET
THIS DRAWING, PAGE OF SPECIFICATIONS/CALCULATIONS
HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE IT HAS BEEN EXAMINED BY ME FOR:

1. DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND
2. COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

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

I CERTIFY THAT:
☒ ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX THIS DRAWING OR PAGE

☒ IS/ARE IN GENERAL CONFORMANCE AND HAVE BEEN COORDINATED

3/15/2024
ARCHITECT'S SIGNATURE — DATE
JUAN M. GONZALEZ, ARCHITECT
GONZALEZ ARCHITECTS

C-12865 — 12-31-2025
LICENSE NUMBER — EXPIRATION DATE

SCOPE OF WORK

CONSTRUCTION OF NEW MULTI-USE BUILDING. PROVIDE DATA
LOW VOLTAGE ELECTRICAL WORK ON EXISTING ADMIN. BUILDING.

GOVERNING CODES

Construction shall comply with Title 24, California Code of Regulations (CCR), including the following:
Title 19 CCR, Public Safety, State Fire Marshal Regulations
Title 24 CCR, Part 1 - 2022 Building Standards Administrative Code
Title 24 CCR, Part 2 - 2022 California Building Code, Vol. 1 & 2 (CBC) (2021 IBC, as amended by CA)
Title 24 CCR, Part 3 - 2022 California Electrical Code (CEC) (2020 NEC, as amended by CA)
Title 24 CCR, Part 4 - 2022 California Mechanical Code (CMC) (2021 UMC, as amended by CA)
Title 24 CCR, Part 5 - 2022 California Plumbing Code (CPC) (2021 UPC, as amended by CA)
Title 24 CCR, Part 6 - 2022 California Energy Code
Title 24 CCR, Part 9 - 2022 California Fire Code (CFC) (2021 IFC, as amended by CA)
Title 24 CCR, Part 11 - 2022 California Green Building Stds Code
Title 24 CCR, Part 12 - 2022 California Referenced Standards
Comply with CFC Chapter 33 - Fire Safety during Construction & Demolition.

List of Applicable Standards:
2022 NFPA 13, Installation of Sprinkler Systems (CA amended)
2022 NFPA 72, National Fire Alarm Code (CA amended); See UL Standard 1971for "Visual Devices"

Comply with CFC chapter 33 and CBC Chapter 33 for Fire Safety during demolition and construction.

Provide Class 1 Inspector as required under section 4-333(b) Title 24, Part 1.
The Inspector shall be approved by the Architect and Divisions of the State Architect and shall be employed by the Owner.

MULTI-USE BUILDING

BUILDING DATA & ALLOWABLE AREA CALCULATION

DESCRIPTION	OCCUPANCY GROUP	TYPE OF CONSTRUCTION	FLOOR AREA SQ. FT.	ALLOWANCE AREA SQ. FT.
New Multi-Use Building with Kitchen	A3 / A4 / B	V-B	13,600	6,000
Covered Area			1,350	
NOTE: Allowable Building Height is 40'-0" maximum.		Total Bldg. Area:	14,950	6,000

MULTI-USE BLDG: AREA INCREASE DUE TO FIRE SPRINKLER SYSTEM

Area Increase FSS = 24,000 s.f. per Table 506.2

= 24,000 s.f. > 14,950 s.f. THEREFORE, OK

ABBREVIATIONS

(E)	=	Existing	Conc.	=	Concrete
(N)	=	New	C.J.	=	Control Joint
(R)	=	Relocated	E.J.	=	Expansion Joint
TC	=	Top of Concrete	A.C.	=	Asphalt Concrete
PD	=	Top of Pad	PL	=	Property Line
F.F.	=	Finish Floor	M.E.	=	Match Existing
Typ.	=	Typical	Max.	=	Maximum
O.H.	=	Overhang	Min.	=	Minimum
F.H.	=	Fire Hydrant	F.V.	=	Field Verify
B.O.	=	By Others	TP	=	Top of Paving
F.S.	=	Face of Stud	LP	=	Laminated Plastic
N.I.C.	=	Not in Contract	VCT	=	Vinyl Composition Tile
T. Gl.	=	Tempered Glazing/Safety Glass	VCTB	=	Vinyly Covered Tackboard
C	=	Concrete	U.O.N	=	Unless Otherwise Noted
T.O.S.	=	Top of Seat	P	=	Paving
			S.P.R.	=	Single Ply Roofing

CONSULTANTS

STRUCTURAL
Brooks Ransom & Associates
7415 N. Palm Ste. 100
Fresno, California 93711
Ph. (559) 449-8444
Fax. (559) 449-8404

MECHANICAL
Lawrence Engineering Group, Inc.
4910 E Clinton Way
Fresno, California 93727
Ph. (559) 431-0101
Fax. (559) 431-1362

ELECTRICAL
Hardin-Davidson Engineering Group, Inc.
356 Pollasky Ave. Suite 200
Clovis, California 93612
Ph. (559) 323-4995
Fax. (559) 323-4928

OWNER

CHOWCHILLA ELEMENTARY SCHOOL DISTRICT:
355 N 5th Street
Chowchilla, California 93610
Ph. (559) 665-8000

LEGEND

SECTION — OPENING NUMBER
Detail number (typ.) — DETAIL — KEY NOTE / GRID NUMBER
Sheet number (typ.)
ROOM NUMBER

SHEET INDEX

144 TOTAL SHEETS

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL.: 559-497-1542 ARCHITECTURE PLANNING
FAX.: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
COVER SHEET

C

Hydrant Flow Test Report

Test Date 12/04/2023 **Test Time** 13:00

Location
22852 RD 19-1/2 (Fairmead Headstart)
Fairmead, California

Tested by
MS Fire Protection: C-16 986234
Jacob Brawley
Kevin Sherbon

Witness: Jason Mitchell, Madera Co. Public Works

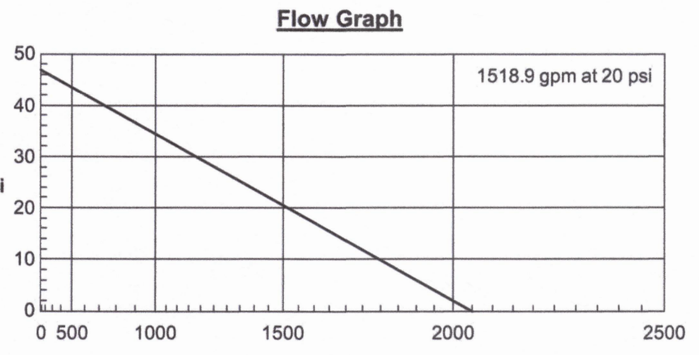
Notes
Hydrant #1 (Flow) 22852 Rd 19-1/2
Hydrant #2 (Pressure) Intersection RD 19-1/2 & AVE 22-3/4

Read Hydrant
47 psi **static pressure**
39 psi **residual pressure**
2 ft **hydrant elevation**

Flow Hydrant(s)

Outlet	Elev	Size	C	Pitot Pressure	Flow
#1	2	2.5	.9	22	787 gpm

Flow Graph



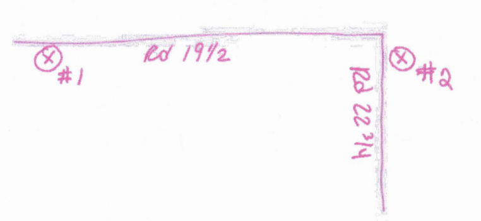
MS FIRE PROTECTION

Flow Test Information Sheet

Please note: A two-hydrant test is recommended

1. Reason For Test: Design Base ☒ Other O
2. Address of Property: 22914 Rd. 19½ Fairmead
3. Date & Time of Test: Date: 12-4-23 Time: 1:00pm
4. Test Conducted by: Jacob Brawley (Name) Super (Title) MS Fire Protection (Affiliation)
5. Test Witnessed By: Jason (Name) Mitchell (Title) Madera Co. (Affiliation)
6. Source of Water Supply: Gravity O Pump O Other:
7. Name of Water District: M033W Fairmead
8. Fire District: Madera County Fire Protection District
9. Is the Supply provided with PRV STA's? Yes O No ☒
10. Area Map: Draw sketch showing property location; streets and names, north arrow, location of fire hydrants with identification numbers, proposed building, distances, etc.

MAP



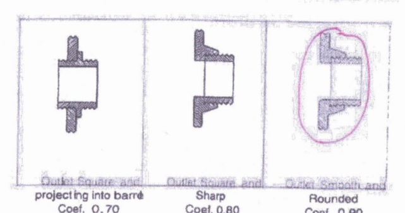
11. Flow Test Data

11. Date Gauges Last Calibrated:

Flow at Hydrant Number	Static at Hydrant Number	Static PSIG	Residual PSIG	Outlet Size	Pitot PSI	Flow GPM	Outlet Coefficient	Adjusted GPM
#1				2½	22	875	0.90	787.5
	#2	47	39	2½			0.90	

Signed: [signature]

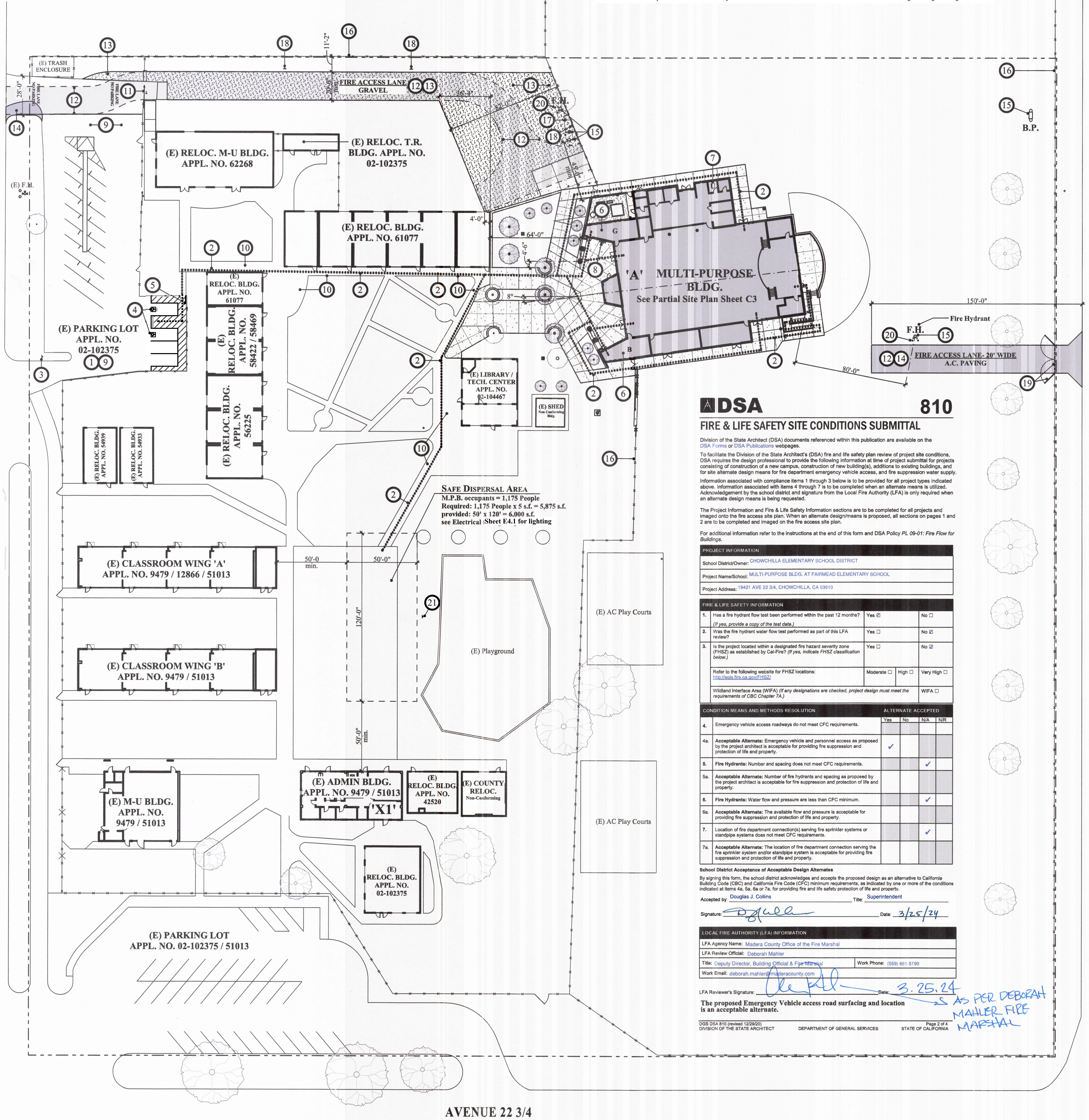
Witness: [signature]



At completion of test, hydrants were verified to be in the off position, and observed to drain down. Initials: JB

NOTE:
REFER CONSTRUCTION SITE SAFETY PLAN ON SHEET X9

Per CFC 510.1 exception #2 as determined by Fire Chief indicated that ERRC is waived as the area has strong existing coverage.



DSA **810**

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply.

Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the Local Fire Authority (LFA) is only required when an alternate design means is being requested.

The Project Information and Fire & Life Safety Information sections are to be completed for all projects and imaged onto the fire access site plan. When an alternate design/means is proposed, all sections on pages 1 and 2 are to be completed and imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy *PL 09-01: Fire Flow for Buildings.*

PROJECT INFORMATION
School District/Owner: CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
Project Name/School: MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
Project Address: 19421 AVE 22 3/4, CHOWCHILLA, CA 93610

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.)*	Yes ☑		No ☐
2.	Was the fire hydrant water flow test performed as part of this LFA review?	Yes ☐		No ☑
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 ☐		No ☑
	Refer to the following website for FHSZ locations: http://egis.fire.ca.gov/FHSZ/	Moderate ☐	High ☐	Very High ☐
	Wildland Interface Area (WIFA) *(If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)*			WIFA ☐

CONDITION MEANS AND METHODS RESOLUTION		ALTERNATE ACCEPTED Yes	No	N/A	N/R
4.	Emergency vehicle access roadways do not meet CFC requirements.				
4a.	**Acceptable Alternate:** Emergency vehicle and personnel access as proposed by the project architect is acceptable for providing fire suppression and protection of life and property.	✓			
5.	**Fire Hydrants:** Number and spacing does not meet CFC requirements.			✓	
5a.	**Acceptable Alternate:** Number of fire hydrants and spacing as proposed by the project architect is acceptable for fire suppression and protection of life and property.				
6.	**Fire Hydrants:** Water flow and pressure are less than CFC minimum.			✓	
6a.	**Acceptable Alternate:** The available flow and pressure is acceptable for providing fire suppression and protection of life and property.				
7.	Location of fire department connection(s) serving fire sprinkler systems or standpipe systems does not meet CFC requirements.			✓	
7a.	**Acceptable Alternate:** The location of fire department connection serving the fire sprinkler system and/or standpipe system is acceptable for providing fire suppression and protection of life and property.				

School District Acceptance of Acceptable Design Alternates

By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements, as indicated by one or more of the conditions indicated at items 4a, 5a, 6a or 7a, for providing fire and life safety protection of life and property.

Accepted by: Douglas J. Collins Title: Superintendent

Signature: [signature] Date: 3/25/24

LOCAL FIRE AUTHORITY (LFA) INFORMATION	
LFA Agency Name: Madera County Office of the Fire Marshal	
LFA Review Official: Deborah Mahler	
Title: Deputy Director, Building Official & Fire Marshal	Work Phone: (559) 661-5190
Work Email: deborah.mahler@maderacounty.com	

LFA Reviewer's Signature: [signature] Date: 3.25.24 → AS PER DEBORAH MAHLER FIRE MARSHAL

The proposed Emergency Vehicle access road surfacing and location is an acceptable alternate.

DGS DSA 810 (revised 12/29/20) DIVISION OF THE STATE ARCHITECT — DEPARTMENT OF GENERAL SERVICES — Page 2 of 4 STATE OF CALIFORNIA

SITE PLAN KEY NOTES

1. (E) Parking Stalls, DSA #02-102375
   23 (E) Standard Parking Stalls
   1-25 Parking Stalls requires 1 Accessible Stall
   2 Accessible Stalls provided.
   1 Van Accessible Parking Stall provided.
2. Barrier Free Path of Travel, typ. See Site Plan Note #1.
3. Pole mounted Tow Away Signage (2/C5)
4. Accessible Parking stalls (18/C6)
5. 48" wide chain link accessible gate (12/C5)
6. Accessible Student Toilet Rooms, see Sheet A4
7. Accessible Staff Toilet Room, see Sheet A1
8. Accessible Hi-lo Drinking fountain (10/X2)
9. (E) A.C. Paving, typ.
10. (E) Concrete Walk, typ.
11. 20'-0" wide rolling c.l. gate with knox box or local fire approved equivalent. (18/C5)
12. 20' wide Fire Access Lane, (typ.)
13. 3" thick Gravel Class 2 Surfacing (7/C5) per Local Fire Standards, (typ.)
14. A.C. Paving, (typ.) (6/C5)
15. Fire Hydrant, Backflow Preventer, PIV & FDC; see Fire Sprinkler Drawings.
16. (E) 6' high chain link fence, (typ.)
17. 4'-0" wide c.l. utility gate with knox box or local fire approved equivalent;
18. "FIRE LANE NO PARKING" Signage (typ.) (2/X2)
19. 20'-0" wide 6' high dbl. c.l. gate with knox box or local fire approved equivalent; Remove 6' high c.l. fence as required for improvements.
20. Steel Bollard, (typ.) (16/C5)
21. "SAFE DISPERSAL AREA" Signage (7/X2)

SITE PLAN NOTES

1. BARRIER FREE PATHOF TRAVEL:
   Accessible Path of Travel (P.O.T.)as indicated on plan is a barrier free access P.O.T. without any abrupt level changes exceeding 1/2" beveled at 1:2 max. slope, or vertical level changes not exceeding 1/4" max. and at least 48" wide. Surface is slip resistant, stable, firm, and smooth. Cross slope does not exceed 2% and slope in the direction of travel is less than 5% unless otherwise indicated. POT shall maintain free of overhanging obstructions to minimum 80" and protruding objects greater than 4" projection from wall and above 27" and less than 80 (11B-307.3) Passing Spaces at least 60"x60" are located not more than 200' apart (11B-403.5.3) and continuous gradients have 60" level areas not more than 400' apart (11B-403.7).

   The Architect has inspected / surveyed the Path of Travel (P.O.T.) as indicated on the plans and has found it to be, or has indicated on the plans remedial work which will cause it to be, a barrier-free accessible route.

2. Where works abuts existing concrete curb and or walk match existing concrete elevation. (U.O.N.)

3. Design Professional in General Responsible Charge Statement: The POT identified in these construction documents meets the requirements of the current applicable California Building Code (CBC) 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 with the CBC have been identified and 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 indicated in these construction documents.

   During construction, if POT items within the scope of the project represented as CBC compliant are found to be nonconforming beyond reasonable construction tolerances, the items shall be brought into compliance with the CBC as a part of this project by means of a construction change document.

PROJECT NORTH

CAMPUS SITE PLAN

SCALE: 1" = 40'-0"

FAIRMEAD ELEMENTARY SCHOOL
19421 AVE 22 3/4
CHOWCHILLA, CA 93610

LEGEND

- Existing Buildings
- New Building
- ········ Barrier Free Path of Travel

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2025 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

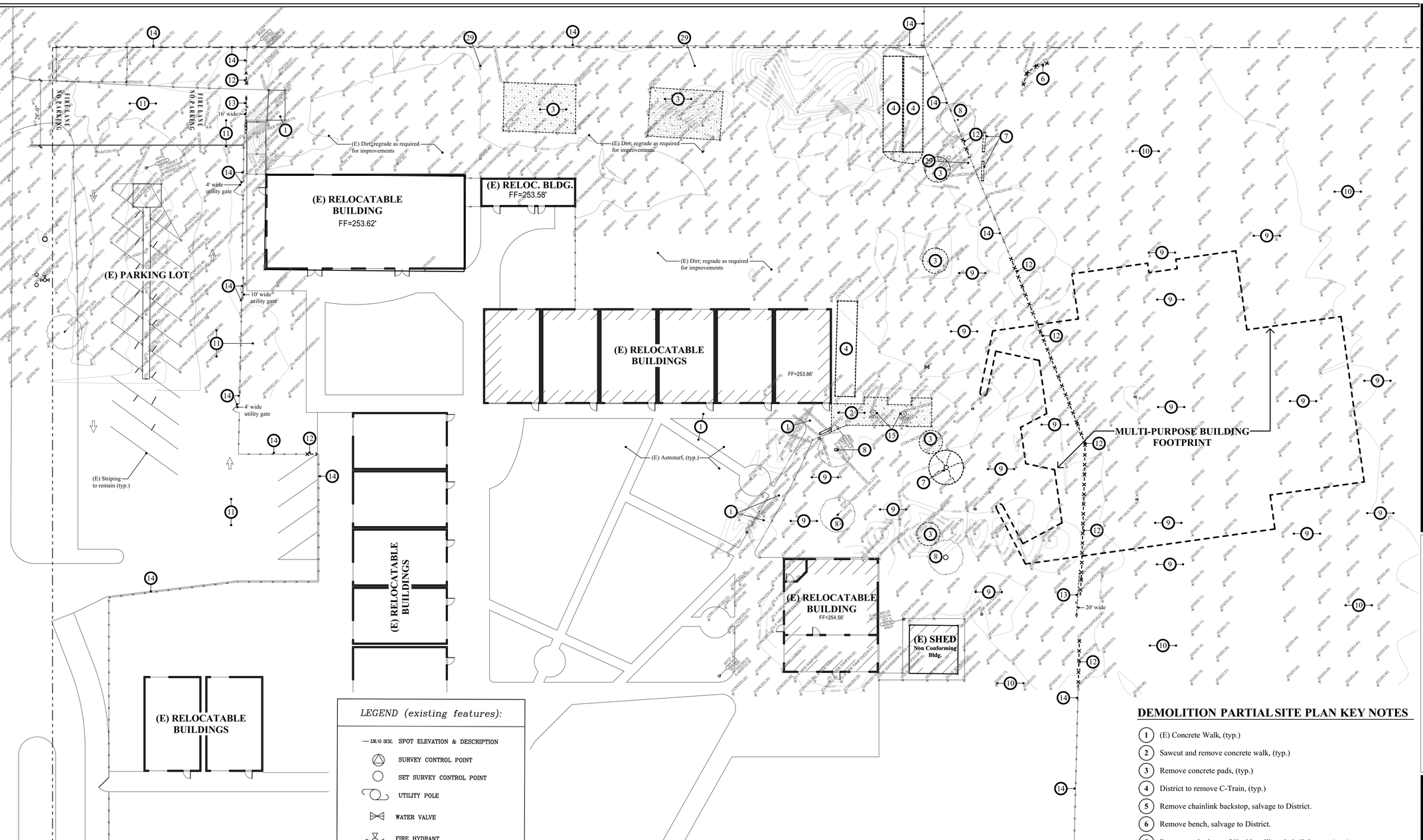
MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 3/25/2024

SHEET TITLE: CAMPUS SITE PLAN

C1



LEGEND (existing features):

336.10 DESC.	SPOT ELEVATION & DESCRIPTION
	SURVEY CONTROL POINT
	SET SURVEY CONTROL POINT
	UTILITY POLE
	WATER VALVE
	FIRE HYDRANT
SS	SANITARY SEWER MANHOLE
SD	STORM DRAIN MANHOLE
	LIGHT POLE
	GUY POLE
AC	ASPHAULT
CL	CENTER LINE
LP	LIGHT POLE
SDMH	STORM DRAINAGE MANHOLE
SSMH	SANITARY SEWER MANHOLE
SW	SIDEWALK
FS	FINISH SURFACE
E. CONC	EXISTING CONCRETE
FL	FLOW LINE
TC	TALL FACE CURB
EP	EDGE OF PAVEMENT
BW	BACK OF WALK
BLDG	BUILDING
BLDG COR	BLDG CORNER

NORTH

DEMOLITION PARTIAL SITE PLAN

SCALE: 1" = 20'-0"

NOTES:

1. Refer Plumbing, Fire Sprinkler and Elect'l Plans for Demo. and Elect'l Plans for Demo. and ite Improvements.
2. Where new work abutts existing a.c. paving, concrete walk and curb, match existing concrete elevation, U.O.N.
3. Patch concrete paving and a.c. paving as required for new improvements.

DEMOLITION PARTIAL SITE PLAN KEY NOTES

1. (E) Concrete Walk, (typ.)
2. Sawcut and remove concrete walk, (typ.)
3. Remove concrete pads, (typ.)
4. District to remove C-Train, (typ.)
5. Remove chainlink backstop, salvage to District.
6. Remove bench, salvage to District.
7. Remove and relocate 20' wide rolling chain link gate, (typ.)
8. (E) Tree, (typ.)
9. Remove Turf and sprinkler system as required for new building and site improvements, (typ.)
10. (E) Turf (typ.)
11. (E) A.C. paving to remain; sawcut and remove as required for improvements
12. Remove chain link fence, posts & footings
13. Remove rolling chain link gate, (typ.)
14. (E) Chain link fence, (typ.)
15. (E) Sewer lid, see Sheet C3 for improvements, (typ.)

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

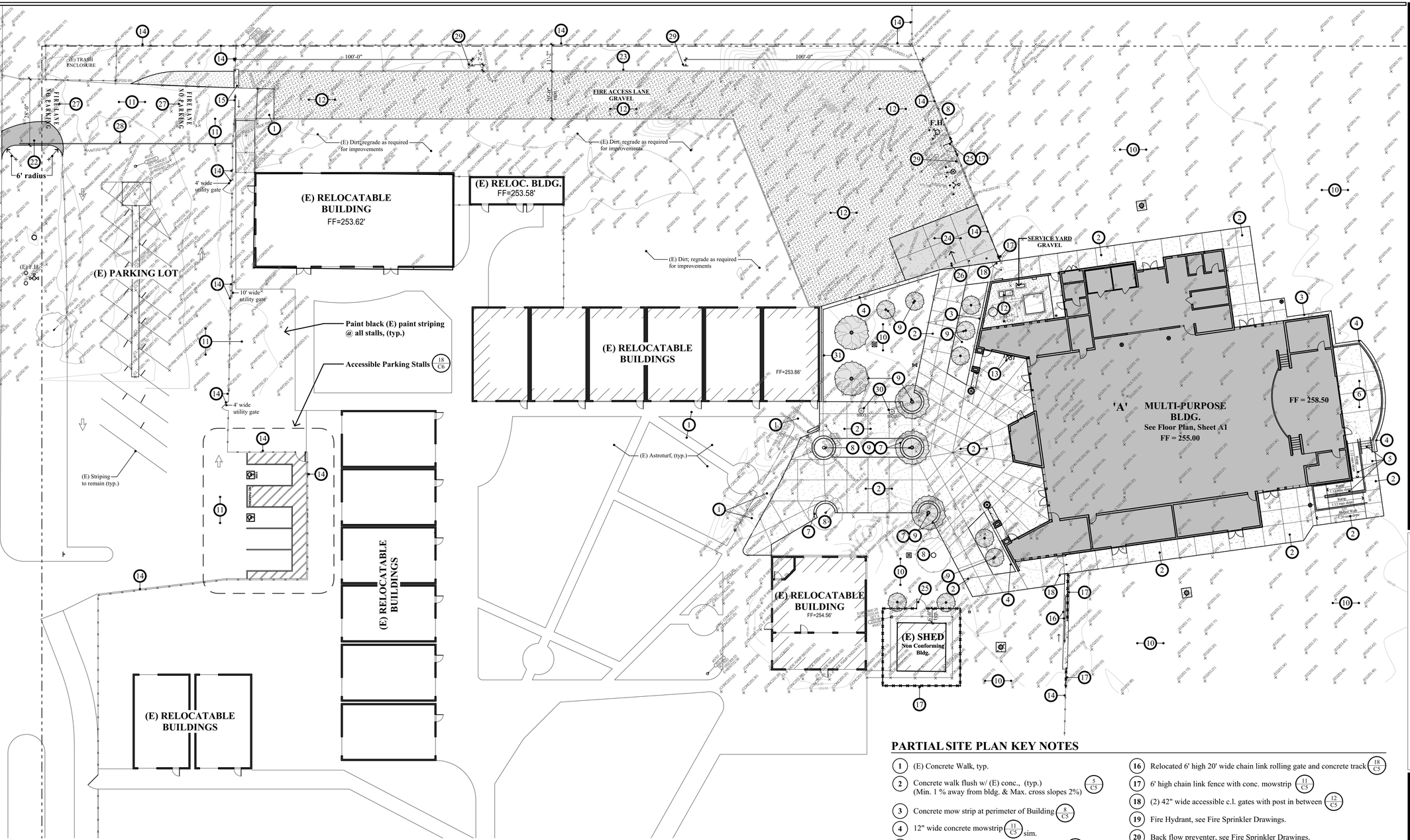
GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
DEMO. SITE PLAN - TOPOGRAPHIC SURVEY

C2



NORTH

PARTIAL SITE PLAN

SCALE: 1" = 20'-0"

BUILDING LEGEND:

- Existing Building without improvements
- New Building
- New Gravel Surfacing
- New Concrete Paving

NOTES:

1. Refer Plumbing, Fire Sprinkler, Elect'l Plans for Demo. and site Improvements.
2. Where new work abutts existing a.c. paving, concrete walk and curb, match existing concrete elevation, U.O.N.
3. Patch concrete paving and a.c. paving as required for new improvements.

PARTIAL SITE PLAN KEY NOTES

1. (E) Concrete Walk, typ.
2. Concrete walk flush w/ (E) conc., (typ.) (Min. 1 % away from bldg. & Max. cross slopes 2%) 5/C5
3. Concrete mow strip at perimeter of Building 8/C5
4. 12" wide concrete mowstrip 11/C5 sim.
5. Concrete ramp, steps, landing and metal railing 19/C6
6. Concrete Platform, See Arch'l. & Structural dwgs.
7. 8' inside dia. Concrete Curb and Planter, (typ.) 16/C6
8. (E) Tree, typ.
9. Tree and planter, typ. 9/C5
10. (E) Turf; regrade and returf as required for improvements, (typ.)
11. (E) A.C. paving; patch as required for improvements, typ.
12. 3" Compacted Class 2 Aggregate Surfacing, (typ.) 7/C5
13. Wall mounted Hi-Lo Drinking Fountain with metal railing 10/X2
14. (E) 6' high chain link fence, post and gate, typ.
15. 6' high 20' wide chain link rolling gate and concrete track 18/C5
16. Relocated 6' high 20' wide chain link rolling gate and concrete track 18/C5
17. 6' high chain link fence with conc. mowstrip 11/C5
18. (2) 42" wide accessible c.l. gates with post in between 12/C5
19. Fire Hydrant, see Fire Sprinkler Drawings.
20. Back flow preventer, see Fire Sprinkler Drawings.
21. PIV & FDC, see Fire Sprinkler Drawings.
22. A.C. Paving, (typ.) 6/C5
23. Fire lane edging, (typ.) 7/C5
24. 6" Concrete Paving, (typ.) 5/C5 sim.
25. 4' wide utility c.l. gate, (typ.)
26. Steel Bollard, (typ.) of 3 16/C5
27. Paint 24" high "FIRE LANE NO PARKING" lettering white (typ.)
28. Paint 4" wide 'Red' Line (typ.)
29. "NO PARKING FIRE LANE" sign (typ.) 2/X2
30. Elevate existing 30" dia. manhole to flush with new paving. Existing septic tank below.
31. Concrete curb (typ.) 4/X2

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE 12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

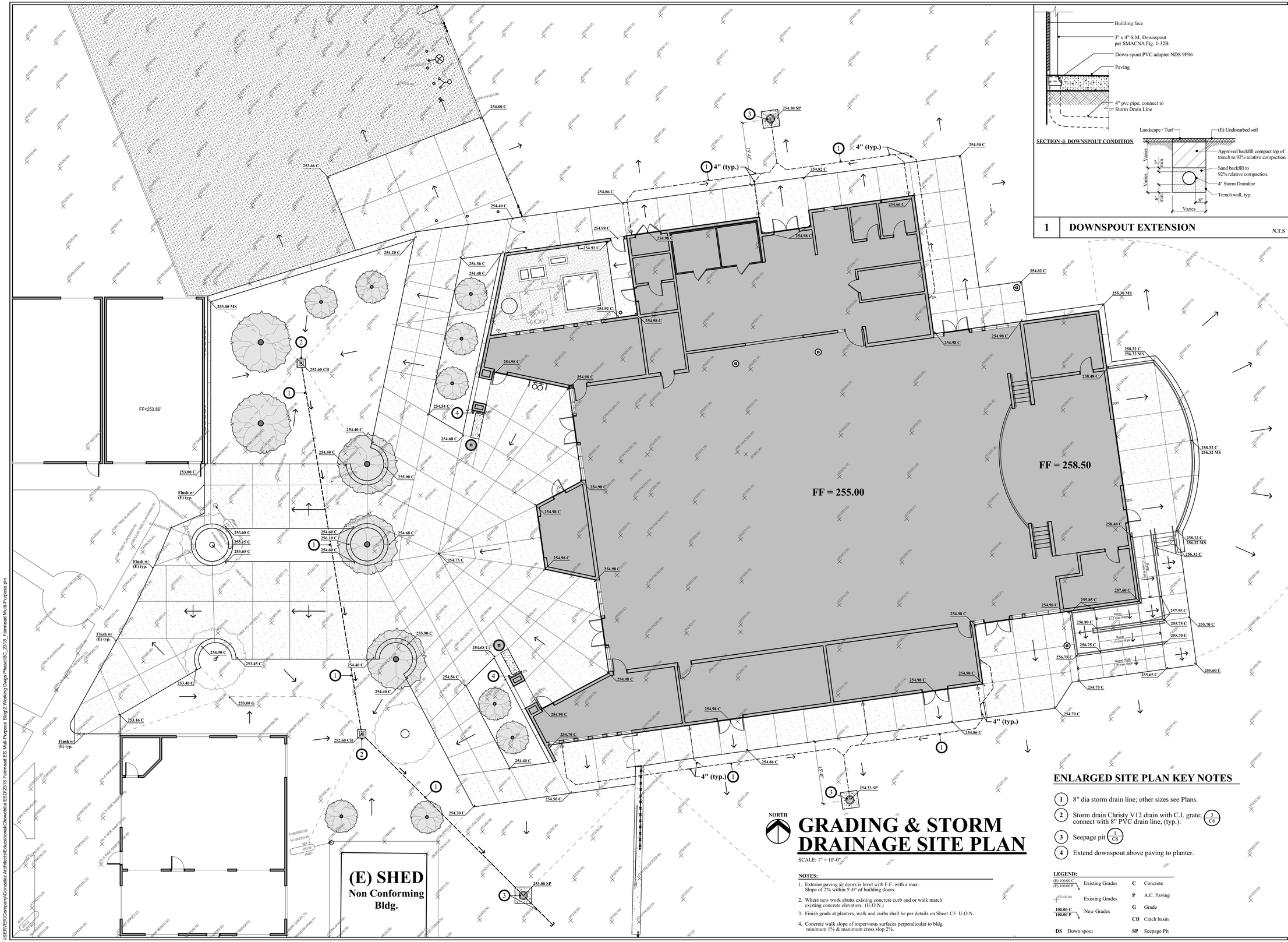
GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
PARTIAL SITE PLAN

C3



SECTION @ DOWNSPOUT CONDITION

1 DOWNSPOUT EXTENSION N.T.S

NORTH

GRADING & STORM DRAINAGE SITE PLAN

SCALE: 1" = 10'-0"

NOTES:

1. Exterior paving @ doors is level with F.F. with a max. Slope of 2% within 5'-0" of building doors.
2. Where new work abutts existing concrete curb and or walk match existing concrete elevation. (U.O.N.)
3. Finish grade at planters, walk and curbs shall be per details on Sheet C5 U.O.N.
4. Concrete walk slope of impervious surfaces perpendicular to bldg. minimum 1% & maximum cross slop 2%.

ENLARGED SITE PLAN KEY NOTES

1. 8" dia storm drain line; other sizes see Plans.
2. Storm drain Christy V12 drain with C.I. grate; connect with 8" PVC drain line, (typ.). (3/C6)
3. Seepage pit (1/C6)
4. Extend downspout above paving to planter.

LEGEND:

(E) 100.00 C / (E) 100.00 P	Existing Grades	C	Concrete
(EG100.00)	Existing Grades	P	A.C. Paving
100.00 C / 100.00 P	New Grades	G	Grade
		CB	Catch basin
DS	Down spout	SP	Seepage Pit

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CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

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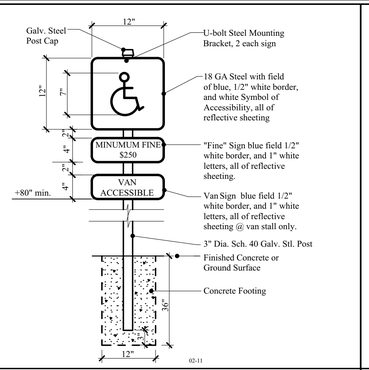
FRESNO CALIFORNIA 93711 JUAN M. GONZALEZ, A.I.A.
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318

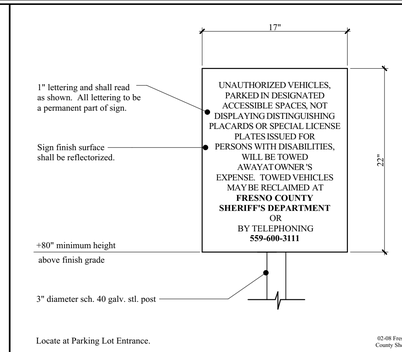
DATE: 4/12/2024

SHEET TITLE:
GRADING & STORM DRAINAGE SITE PLAN

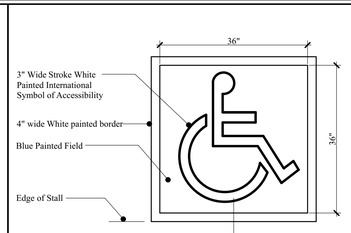
C4



1 ACCESSIBLE STALL SIGN & VAN ACCESS N.T.S

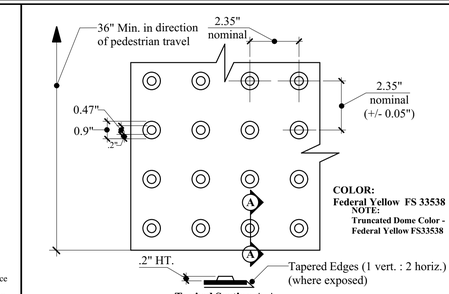


2 TOW AWAY SIGNAGE N.T.S



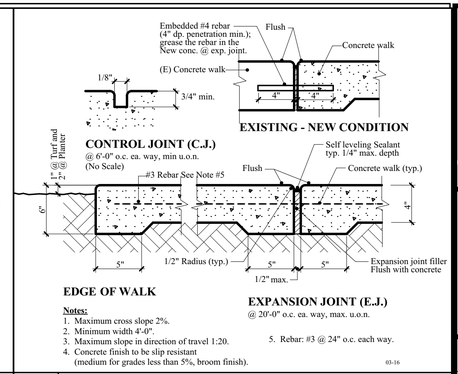
2019 CBC 11B-502.6.4 & 11B-703.7.2.1
PAVEMENT SYMBOL:
Identification of Parking Spaces for Off-Street Parking Facilities. The surface of each accessible parking space or stall shall have a surface identification duplicating the following scheme:
By outlining a profile view of a wheelchair with occupant in white on blue background. The profile view shall be located so that it is visible to a traffic enforcement officer when a vehicle is properly parked in the space centered & aligned @ end of stall and shall be 36 inches high by 36 inches wide.
02-03

3 ACCESSIBLE PARKING SYMBOL N.T.S

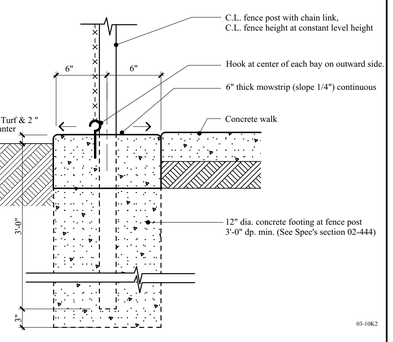


Typical Section A-A
2016 CBC 11B-705
DETECTABLE WARNING DETAIL
(IN-LINE TRUNCATED DOMES)
See Spec. Section 10-050
02-22C

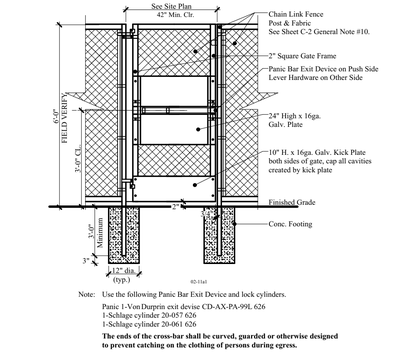
4 TRUNCATED DOMES N.T.S



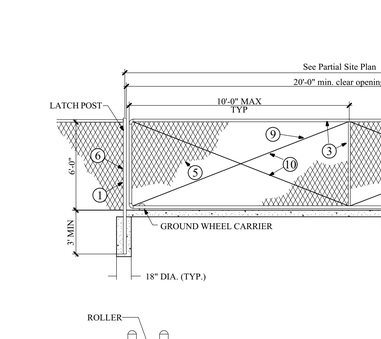
5 CONCRETE WALK N.T.S



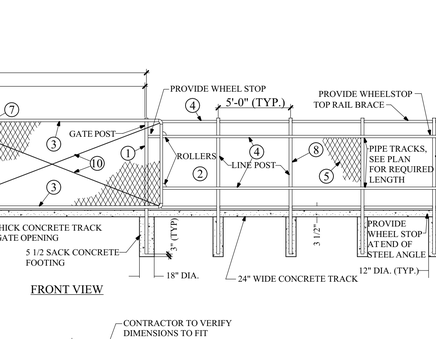
6 AC PAVING N.T.S



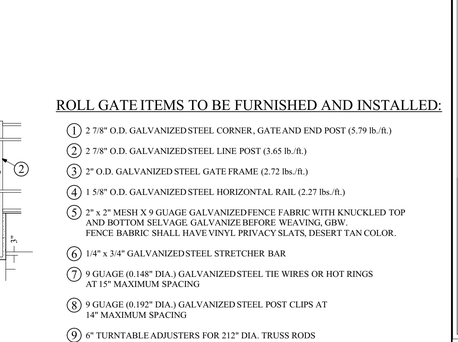
7 FIRE LANE SURFACING N.T.S



8 CONC. MOWSTRIP @ BLDG. PERIMETER N.T.S



9 CONCRETE PLANTER N.T.S

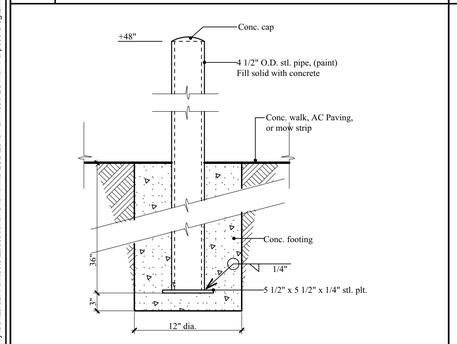


10 CONCRETE BENCH N.T.S

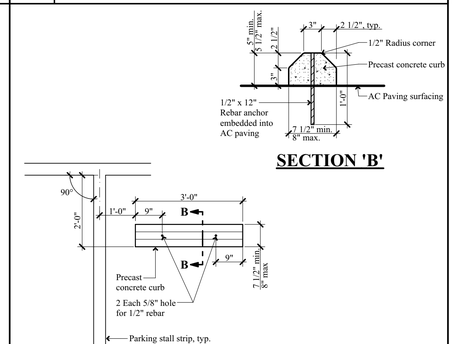
11 C.L. FENCE & CONC. MOWSTRIP N.T.S

Note: Use the following Panic Bar Exit Device and lock cylinders.
Panic 1-Von Durprin exit devise CD-AX-PA-99L 626
1-Schlage cylinder 20-057 626
1-Schlage cylinder 20-061 626
The ends of the cross-bar shall be curved, guarded or otherwise designed to prevent catching on the clothing of persons during egress.

12 ACCESSIBLE C.L. GATE N.T.S

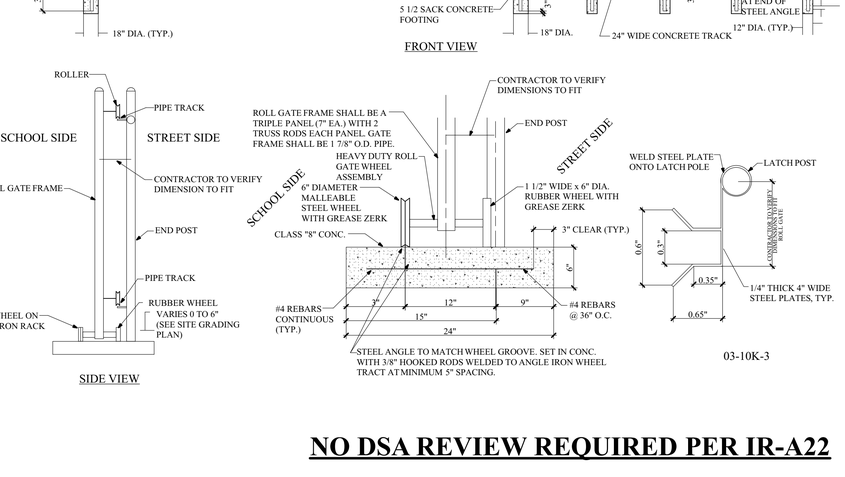


16 STEEL PIPE BOLLARD N.T.S



SECTION 'B'

17 CONCRETE WHEELSTOP N.T.S



18 ROLLING CHAIN LINK GATE N.T.S

ROLL GATE ITEMS TO BE FURNISHED AND INSTALLED:

1. 2 7/8" O.D. GALVANIZED STEEL CORNER, GATE AND END POST (5.79 lb./ft.)
2. 2 7/8" O.D. GALVANIZED STEEL LINE POST (3.65 lb./ft.)
3. 2" O.D. GALVANIZED STEEL GATE FRAME (2.72 lbs./ft.)
4. 1 5/8" O.D. GALVANIZED STEEL HORIZONTAL RAIL (2.27 lbs./ft.)
5. 2" x 2" MESH X 9 GUAGE GALVANIZED FENCE FABRIC WITH KNUCKLED TOP AND BOTTOM SELVAGE. GALVANIZE BEFORE WEAVING, GBW. FENCE BABRIC SHALL HAVE VINYL PRIVACY SLATS, DESERT TAN COLOR.
6. 1/4" x 3/4" GALVANIZED STEEL STRETCHER BAR
7. 9 GUAGE (0.148" DIA.) GALVANIZED STEEL TIE WIRES OR HOT RINGS AT 15" MAXIMUM SPACING
8. 9 GUAGE (0.192" DIA.) GALVANIZED STEEL POST CLIPS AT 14" MAXIMUM SPACING
9. 6" TURNTABLE ADJUSTERS FOR 212" DIA. TRUSS RODS
10. 3/8" DIA. GALVANIZED STEEL ADJUSTABLE TRUSS RODS

NOTES ON ROLL GATES

1. THE ROLL GATE FRAME IS SHOWN AS NEW FOR REFERENCE PURPOSE ONLY. IN THE EVENT THE FRAME IS DAMAGED AND IS UNSALVAGEABLE AS DETERMINED BY THE DISTRICT, THE CONTRACTOR SHALL FURNISH AND INSTALL A NEW ROLL GATE FRAME.

NO DSA REVIEW REQUIRED PER IR-A22

FILE NO.: 20-10 APPL. NO.: 02-121993

JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
LICENSED ARCHITECT
STATE OF CALIFORNIA

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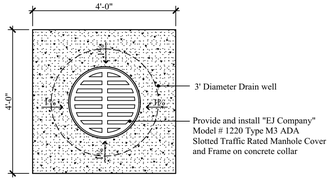
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 JUAN M. GONZALEZ, A.I.A.
TEL: 559-497-1542
FAX: 559-497-1549

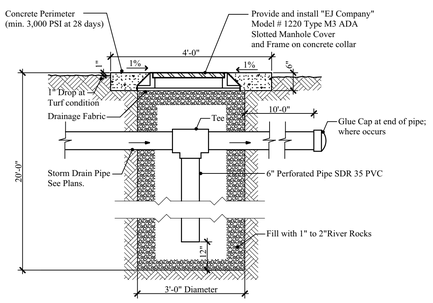
PROJECT NO: 2318
DATE: 4/12/2024

SHEET TITLE:
SITE DETAILS

C5

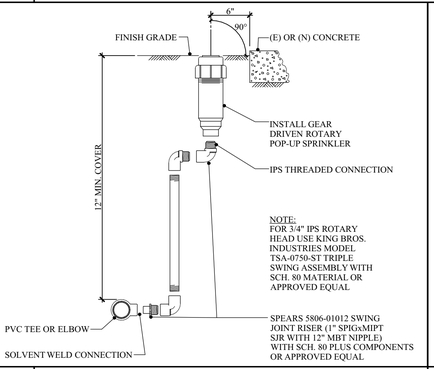


PLAN

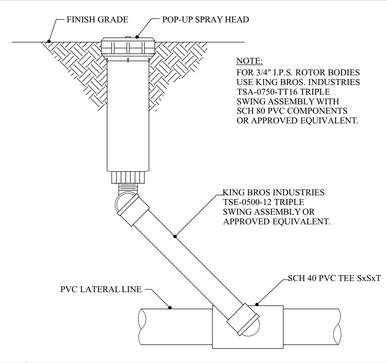


SECTION

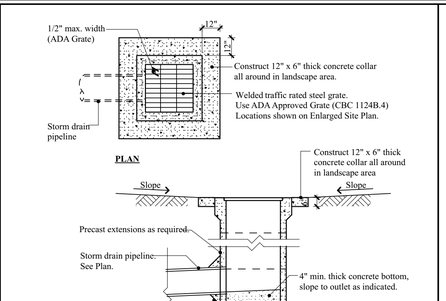
1 SEEPAGE PIT N.T.S



6 ROTARY SPRINKLER N.T.S

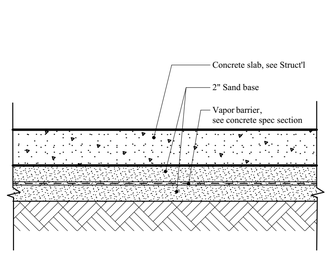


7 SPRAY POP-UP N.T.S

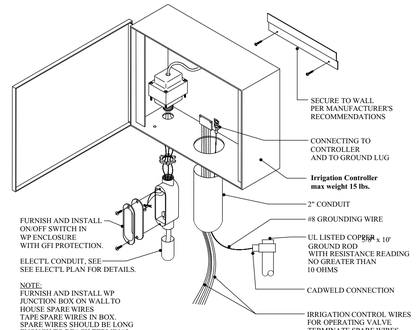


SECTION

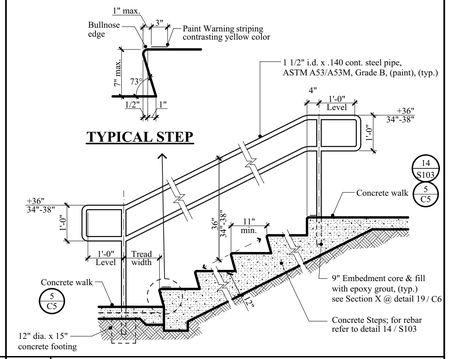
3 CATCH BASIN N.T.S



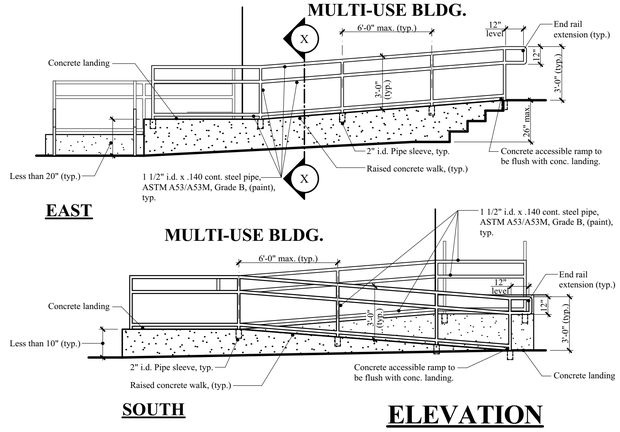
4 SLAB & VAPOR BARRIER N.T.S



5 IRRIGATION CONTROLLER N.T.S

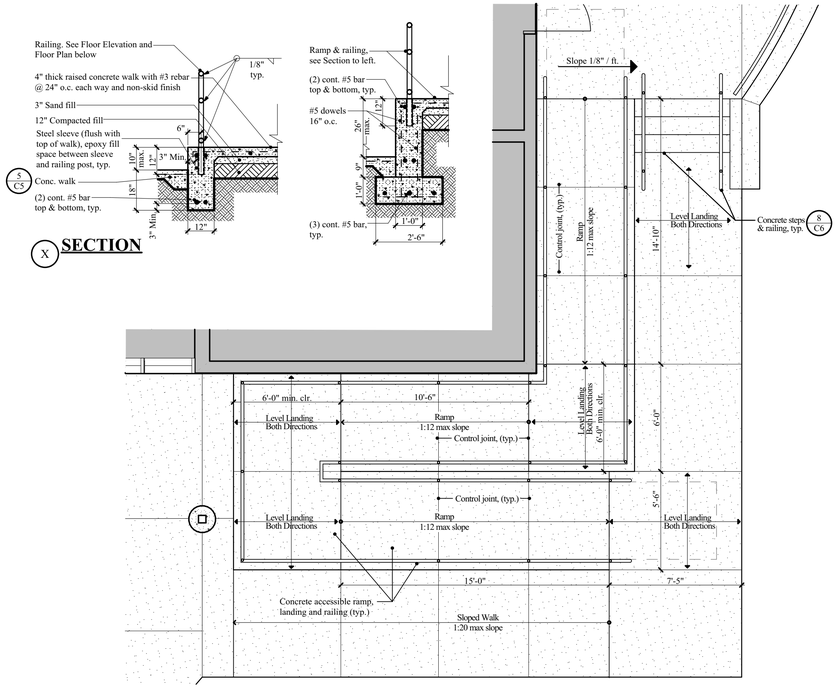


8 CONCRETE STEPS & RAILING N.T.S

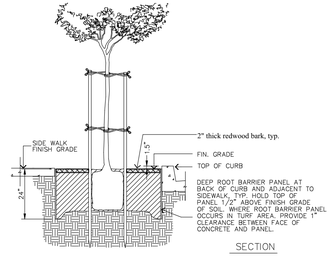


ELEVATION

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

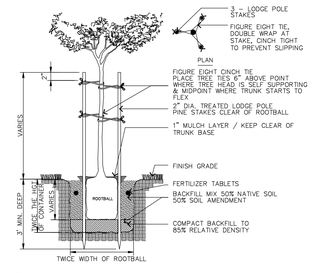


19 CONCRETE RAMP & ELEVATION N.T.S



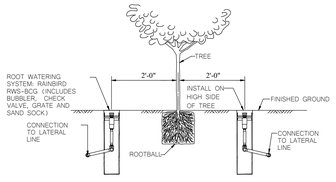
A ROOT BARRIER INSTALLATION

SCALE: N.T.S.



C TREE PLANTING / TRIPLE STAKE

SCALE: N.T.S.



B TREE BUBBLER (3 per tree)

SCALE: N.T.S.

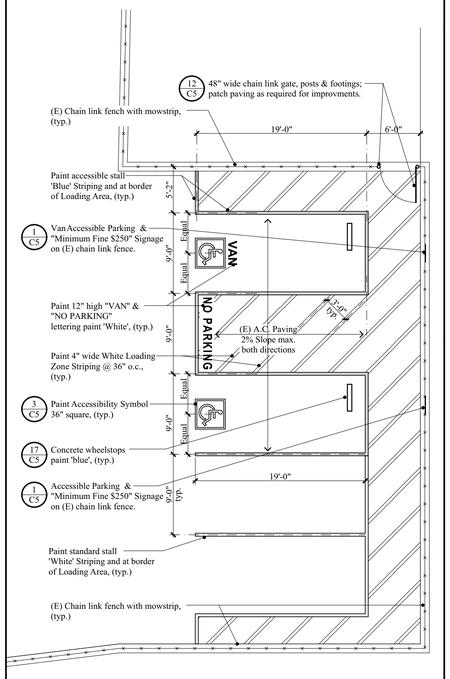
LANDSCAPING & IRRIGATION IMPROVEMENTS:

A. Provide all labor and materials necessary to interface new landscaping planters and existing landscaping. Landscaping interfacing is defined as all work necessary to provide a complete finished product; A 60 day maintenance period is required for this work. Battery operated timers at valves may be used to assist with maintenance watering. Contractor shall provide written verification to Architect in the form of signatures from the Inspector and District Irrigation Representative indicating completion to their satisfaction.
Provide and plant 5 (15 gal.) Chinese Pistache Keith Davey trees per Plans.
Provide and plant 9 (15 gal.) Crape Myrtle Red trees per Plans.

B. Contractor shall remove and or modify existing landscape irrigation system affected as required to perform new work. Field verify with Campus Plant Coordinator. Modify system as required to continue use of campus irrigation system while construction is being performed. Modify and provide a complete irrigation system; including lines, quick couplers, sprinkler heads, christy boxes etc.... Adjust new and existing spray patterns effecting new and adjacent work areas as required; Contractor shall provide written verification to Architect in the form of signatures from the Inspector and District Irrigation Representative indicating completion and system performance to their satisfaction. The Contractor shall visit site prior to Bidding to evaluate the existing irrigation systems and to determine the extent of the irrigation system improvements.

C. Contractor to field verify location of existing water sources for P.O.C. of irrigation of planters with controllers, valves, piping, bubblers, etc. to (E) Irrigation system.

16 PLANTER LANDSCAPING & IRRIGATION N.T.S



Note : Paint black existing paint striping @ all stalls, (typ.)

18 ACCESSIBLE PARKING N.T.S

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

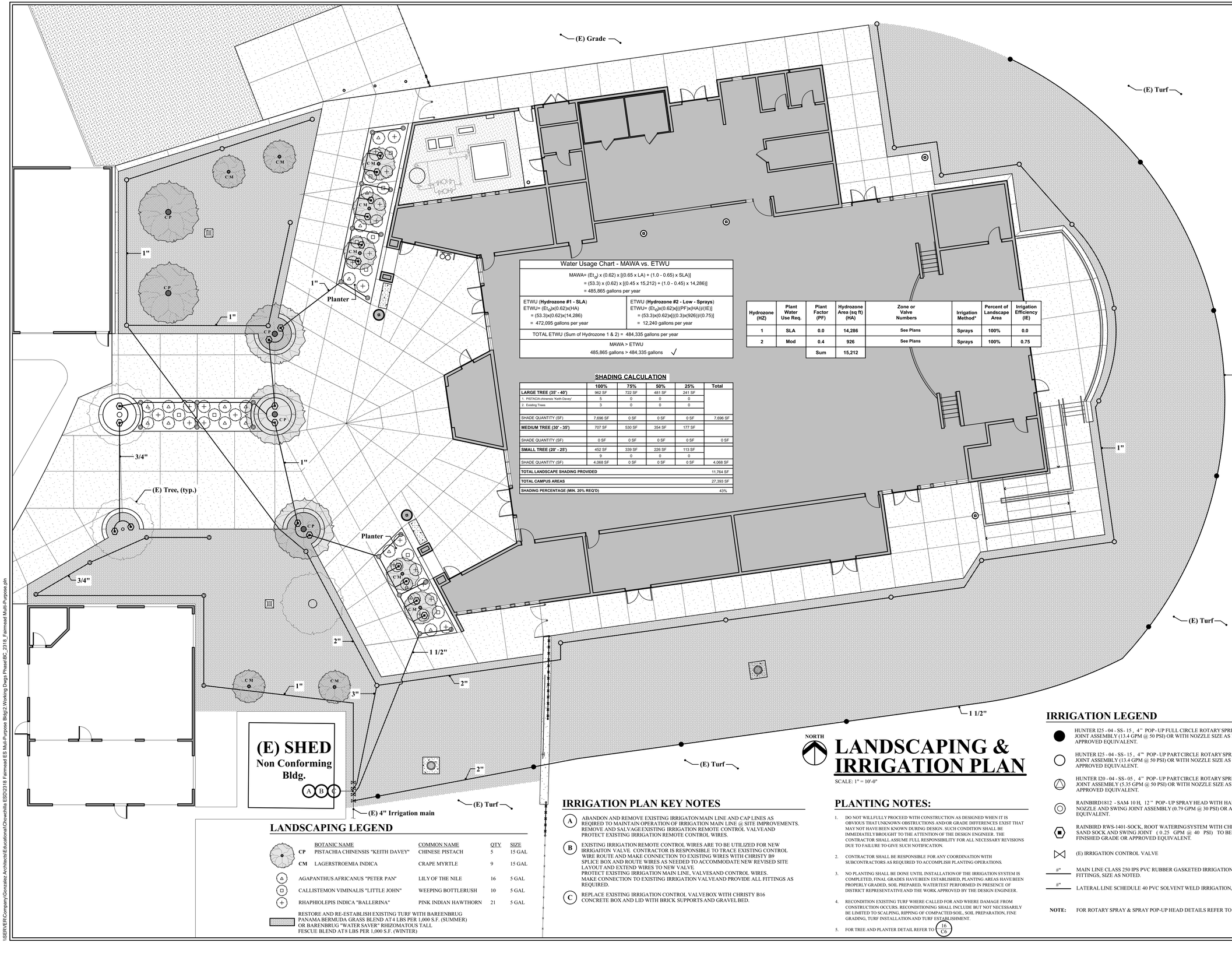
PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
SITE DETAILS

C6

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2 Working Dwgs Phase\BC_2318_Fairmead Multi-Purpose.pln



Water Usage Chart - MAWA vs. ETWU

MAWA= (Et_o) x (0.62) x [(0.65 x LA) + (1.0 - 0.65) x SLA)]
= (53.3) x (0.62) x [(0.45 x 15,212) + (1.0 - 0.45) x 14,286)]
= 485,865 gallons per year

ETWU (**Hydrozone #1 - SLA**)	ETWU (**Hydrozone #2 - Low - Sprays**)
ETWU= (Et_o)x(0.62)x(HA)	ETWU= (Et_o)x(0.62)x[((PF)x(HA))/(IE)]
= (53.3)x(0.62)x(14,286)	= (53.3)x(0.62)x[((0.3)x(926))/(0.75)]
= 472,095 gallons per year	= 12,240 gallons per year

TOTAL ETWU (Sum of Hydrozone 1 & 2) = 484,335 gallons per year

MAWA > ETWU
485,865 gallons > 484,335 gallons ✓

Hydrozone (HZ)	Plant Water Use Req.	Plant Factor (PF)	Hydrozone Area (sq ft) (HA)	Zone or Valve Numbers	Irrigation Method*	Percent of Landscape Area	Irrigation Efficiency (IE)
1	SLA	0.0	14,286	See Plans	Sprays	100%	0.0
2	Mod	0.4	926	See Plans	Sprays	100%	0.75
		Sum	15,212				

SHADING CALCULATION

	100%	75%	50%	25%	Total
LARGE TREE (35' - 40')	962 SF	722 SF	481 SF	241 SF	
1. PISTACIA chinensis 'Keith Davey'	5	0	0	0	
2. Existing Trees	3	0	0	0	
SHADE QUANTITY (SF)	7,696 SF	0 SF	0 SF	0 SF	7,696 SF
MEDIUM TREE (30' - 35')	707 SF	530 SF	354 SF	177 SF	
SHADE QUANTITY (SF)	0 SF	0 SF	0 SF	0 SF	0 SF
SMALL TREE (20' - 25')	452 SF	339 SF	226 SF	113 SF	
	9	0	0	0	
SHADE QUANTITY (SF)	4,068 SF	0 SF	0 SF	0 SF	4,068 SF
TOTAL LANDSCAPE SHADING PROVIDED					11,764 SF
TOTAL CAMPUS AREAS					27,393 SF
SHADING PERCENTAGE (MIN. 20% REQ'D)					43%

LANDSCAPING LEGEND

	BOTANIC NAME	COMMON NAME	QTY	SIZE
CP	PISTACHIA CHINENSIS "KEITH DAVEY"	CHINESE PISTACH	5	15 GAL
CM	LAGERSTROEMIA INDICA	CRAPE MYRTLE	9	15 GAL
	AGAPANTHUS AFRICANUS "PETER PAN"	LILY OF THE NILE	16	5 GAL
	CALLISTEMON VIMINALIS "LITTLE JOHN"	WEEPING BOTTLERUSH	10	5 GAL
	RHAPHIOLEPIS INDICA "BALLERINA"	PINK INDIAN HAWTHORN	21	5 GAL
	RESTORE AND RE-ESTABLISH EXISTING TURF WITH BAREENBRUG PANAMA BERMUDA GRASS BLEND AT 4 LBS PER 1,000 S.F. (SUMMER) OR BARENBRUG "WATER SAVER" RHIZOMATOUS TALL FESCUE BLEND AT 8 LBS PER 1,000 S.F. (WINTER)			

IRRIGATION PLAN KEY NOTES

(A) ABANDON AND REMOVE EXISTING IRRIGATON MAIN LINE AND CAP LINES AS REQIRED TO MAINTAIN OPERATION OF IRRIGATION MAIN LINE @ SITE IMPROVEMENTS. REMOVE AND SALVAGE EXISTING IRRIGATION REMOTE CONTROL VALVE AND PROTECT EXISTING IRRIGATION REMOTE CONTROL WIRES.

(B) EXISTING IRRIGATION REMOTE CONTROL WIRES ARE TO BE UTILIZED FOR NEW IRRIGAITON VALVE. CONTRACTOR IS RESPONSIBLE TO TRACE EXISTING CONTROL WIRE ROUTE AND MAKE CONNECTION TO EXISTING WIRES WITH CHRISTY B9 SPLICE BOX AND ROUTE WIRES AS NEEDED TO ACCOMMODATE NEW REVISED SITE LAYOUT AND EXTEND WIRES TO NEW VALVE. PROTECT EXISTING IRRIGATION MAIN LINE, VALVES AND CONTROL WIRES. MAKE CONNECTION TO EXISTING IRRIGATION VALVE AND PROVIDE ALL FITTINGS AS REQUIRED.

(C) REPLACE EXISTING IRRIGATION CONTROL VALVE BOX WITH CHRISTY B16 CONCRETE BOX AND LID WITH BRICK SUPPORTS AND GRAVEL BED.

LANDSCAPING & IRRIGATION PLAN

SCALE: 1" = 10'-0"

PLANTING NOTES:

1. DO NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITION SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.
3. NO PLANTING SHALL BE DONE UNTIL INSTALLATION OF THE IRRIGATION SYSTEM IS COMPLETED, FINAL GRADES HAVE BEEN ESTABLISHED, PLANTING AREAS HAVE BEEN PROPERLY GRADED, SOIL PREPARED, WATER TEST PERFORMED IN PRESENCE OF DISTRICT REPRESENTATIVE AND THE WORK APPROVED BY THE DESIGN ENGINEER.
4. RECONDITION EXISTING TURF WHERE CALLED FOR AND WHERE DAMAGE FROM CONSTRUCTION OCCURS. RECONDITIONING SHALL INCLUDE BUT NOT NECESSARILY BE LIMITED TO SCALPING, RIPPING OF COMPACTED SOIL, SOIL PREPARATION, FINE GRADING, TURF INSTALLATION AND TURF ESTABLISHMENT.
5. FOR TREE AND PLANTER DETAIL REFER TO (16 / C6)

IRRIGATION LEGEND

- HUNTER I25 - 04 - SS - 15 , 4" POP - UP FULL CIRCLE ROTARY SPRINKLER AND SWING JOINT ASSEMBLY (13.4 GPM @ 50 PSI) OR WITH NOZZLE SIZE AS NOTED OR APPROVED EQUIVALENT.
- HUNTER I25 - 04 - SS - 15 , 4" POP - UP PART CIRCLE ROTARY SPRINKLER AND SWING JOINT ASSEMBLY (13.4 GPM @ 50 PSI) OR WITH NOZZLE SIZE AS NOTED OR APPROVED EQUIVALENT.
- HUNTER I20 - 04 - SS - 05 , 4" POP - UP PART CIRCLE ROTARY SPRINKLER AND SWING JOINT ASSEMBLY (5.35 GPM @ 50 PSI) OR WITH NOZZLE SIZE AS NOTED OR APPROVED EQUIVALENT.
- RAINBIRD 1812 - SAM- 10 FH, 12" POP - UP SPRAY HEAD WITH HALF CIRCLE MPR NOZZLE AND SWING JOINT ASSEMBLY (0.79 GPM @ 30 PSI) OR APPROVED EQUIVALENT.
- RAINBIRD RWS-140I-SOCK, ROOT WATERING SYSTEM WITH CHECK VALVE AND SAND SOCK AND SWING JOINT (0.25 GPM @ 40 PSI) TO BE SET 1.5" ABOVE FINISHED GRADE OR APPROVED EQUIVALENT.
- (E) IRRIGATION CONTROL VALVE
- #" MAIN LINE CLASS 250 IPS PVC RUBBER GASKETED IRRIGATION WITH DUCTILE IRON FITTINGS, SIZE AS NOTED.
- #" LATERAL LINE SCHEDULE 40 PVC SOLVENT WELD IRRIGATION, SIZE AS NOTED.

NOTE: FOR ROTARY SPRAY & SPRAY POP-UP HEAD DETAILS REFER TO (6 / C6) (7 / C6)

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

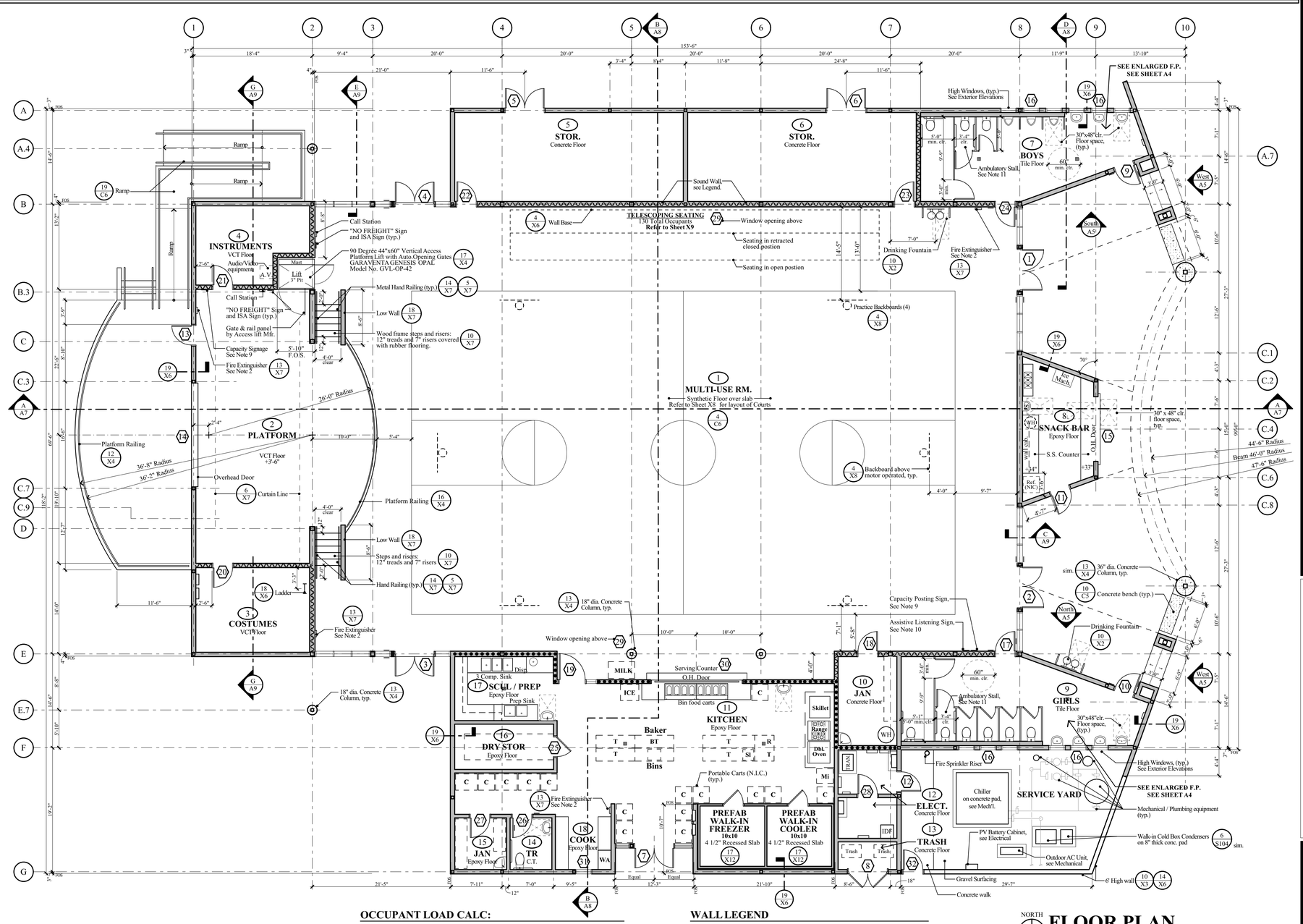
GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 JUAN M. GONZALEZ, A.I.A.
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
LANDSCAPING & IRRIGATION PLAN

C7



FLOOR PLAN

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

OCCUPANT LOAD CALC:

M.U. Room #1:	Telescoping Seating of 130 + (Remaining Floor Area 6683 S.F.) = 130 + (6,830 S.F. - 7 net. / Occup) = 130 + 976 =		1,106	**Occupants**
Platform #2:	923 S.F. - 15 net x Occup.	=	62	**Occupants**
Instrument Room #4:	275 S.F. - 300 gross / Occup.	=	1	**Occupants**
Costumes #3:	295 S.F. - 300 gross / Occup.	=	1	**Occupants**

EGRESS WIDTH CALC:

1,106 Occup. x 0.2" / occup. = 222" Required
4 dbl. door exits x 72" per door = 288" Provided, therefore okay.

WALL LEGEND

▭ 6" x 18 ga. metal studs @ 16" o.c., u.o.n.
Note: 8" x 18 ga. metal studs:
- on Grid Line #2, between Grid Line 'B' & 'E'.
- on Grid Line #8, between Grid Line 'B' & 'E'.
- on Grid Line B, between Grid Line #2' & #8.
- on Grid Line E, between Grid Line #2' & #8.

14/S110 2/S110

●●●●●●● **1 Hour Fire Barrier Wall**
6" x 18 ga. metal studs @ 16" o.c. with 5/8" Type 'X' Gypsum board on both faces of wall. Extend interrupted from Platform Floor to Roof Deck, per CBC Table 721.1(2): Item #13-1.1 #/X4

Table 721.1(2)

13-1.1 0.018" (No. 25 carbon sheet steel gage) channel-shaped studs 24" on center with one full-legnth layer of 5/8" Type X gypsum wallboard applied vertically attached with 1" long No.6 drywall screws to each stud. Screws are 8" on center around the perimeter and 12" on center on the intermediate stud. The wallboard may be applied horizontally when attached to 3 5/8" studs and the horizontal joints are staggered with those on the opposite side. Screws for the horizontal application shall be 8" on center at vertical edges and 12" on center at intermediate studs.

∿∿∿ Sound Walls: See Note #1

FLOOR PLAN NOTES

1. At all sound walls (those with sound insulation) install sound deadening. board full height (on T.R. side only) & acoustical sealant @ perimeter. See Spec. Section 07-900.
2. Provide and install fire extinguisher cabinet Type FEC-1; mount @ +48" max. to top of handle above FF, see Specs., (typical.) See Detail 13/X7
3. There shall be no sharp or abrasive surfaces under sinks, typical.
4. All rooms with Floor Drains shall have a maximum floor slope of 2% max.
5. Provide Tactile Exit signs to openings #1, 2, 3, 4 & 13 per detail 6 /X2
6. Provide I.D. signs to openings #1,2,3,4,5,6,7,11,12,13,19,20,21,22,23,25 and 27; per detail 11/X2
7. Provide Bldg. Entrance / ISA signage to opening #1,2,3 & 4 per detail 16/X2
8. Provide Toilet Room signage at openings #9, 10, 17, 24 & 26 per detail 1 /X2
9. Capacity posting sign "The number of persons permitted in this room shall not exceed Room #1: 1,106, Room #2: 64, by the order of the state Fire Marshall." Provide sign similar to Room I.D. Sign (no braille) per detail 12/X2
10. Provide Assistive Listening System Signage per detail 17/X2 . Provide 44 headsets (4% of seating capacity), refer to Electrical plans.
11. Ambulatory Stalls: 35"-37" wide by 60" min. clr. length with grab bars and self closing door.
12. Floor transitions; See Detail 15/X2
13. Recess slab 2" at Ceramic Tile floor in Rooms 7 & 9.
14. Provide lock-down from inside to Door openings #1,2,3,4,5,6,7,9,10,11,13 per CBC 1010.2.8.

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CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
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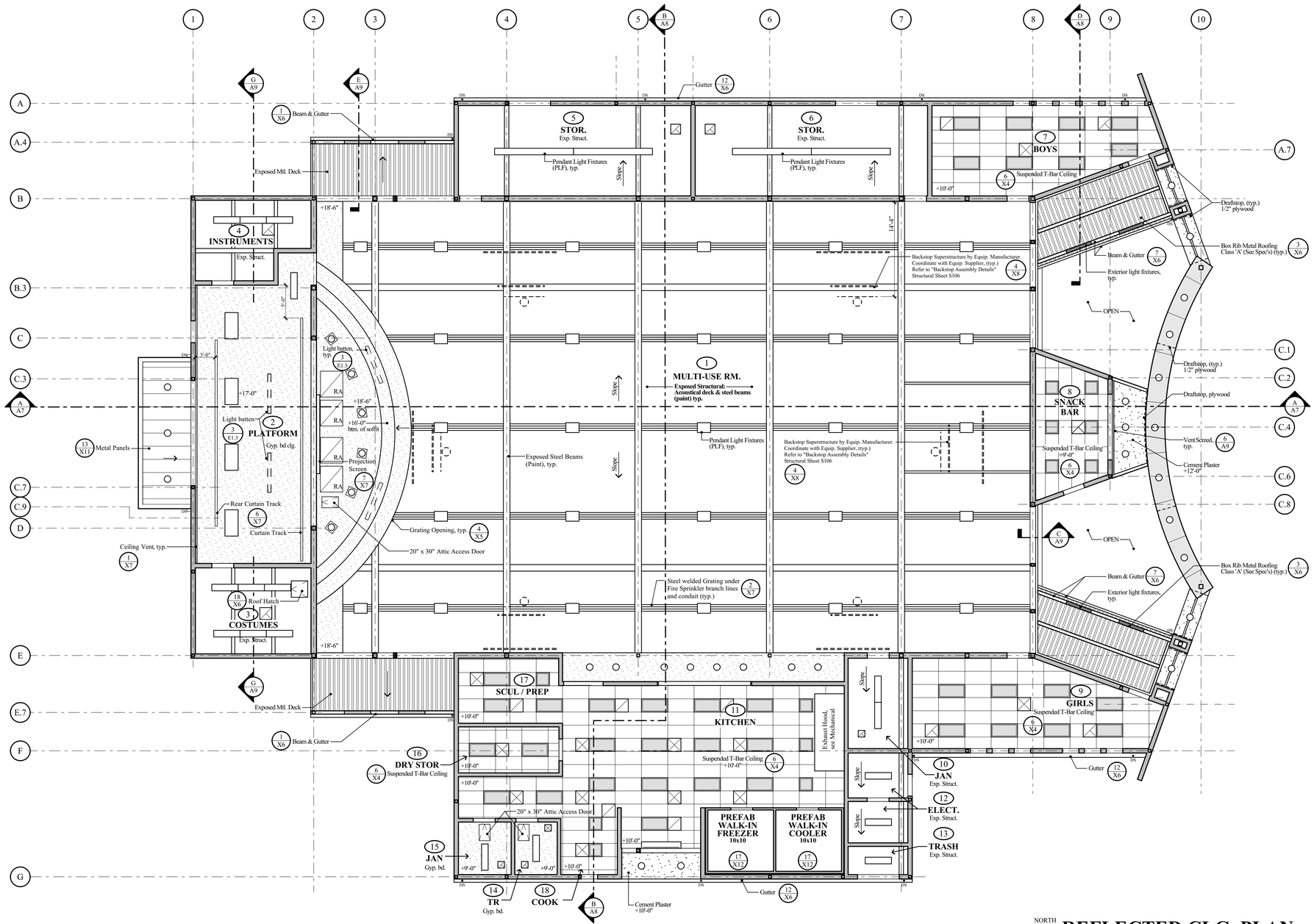
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 4/12/2024

SHEET TITLE:
FLOOR PLAN

A1

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2.Working Dwgs Phase\BC_2318_Fairmead Multi-Purpose.pln



NORTH

REFLECTED CLG. PLAN

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

FILE NO.: 20-10 APPL. NO.: 02-121993

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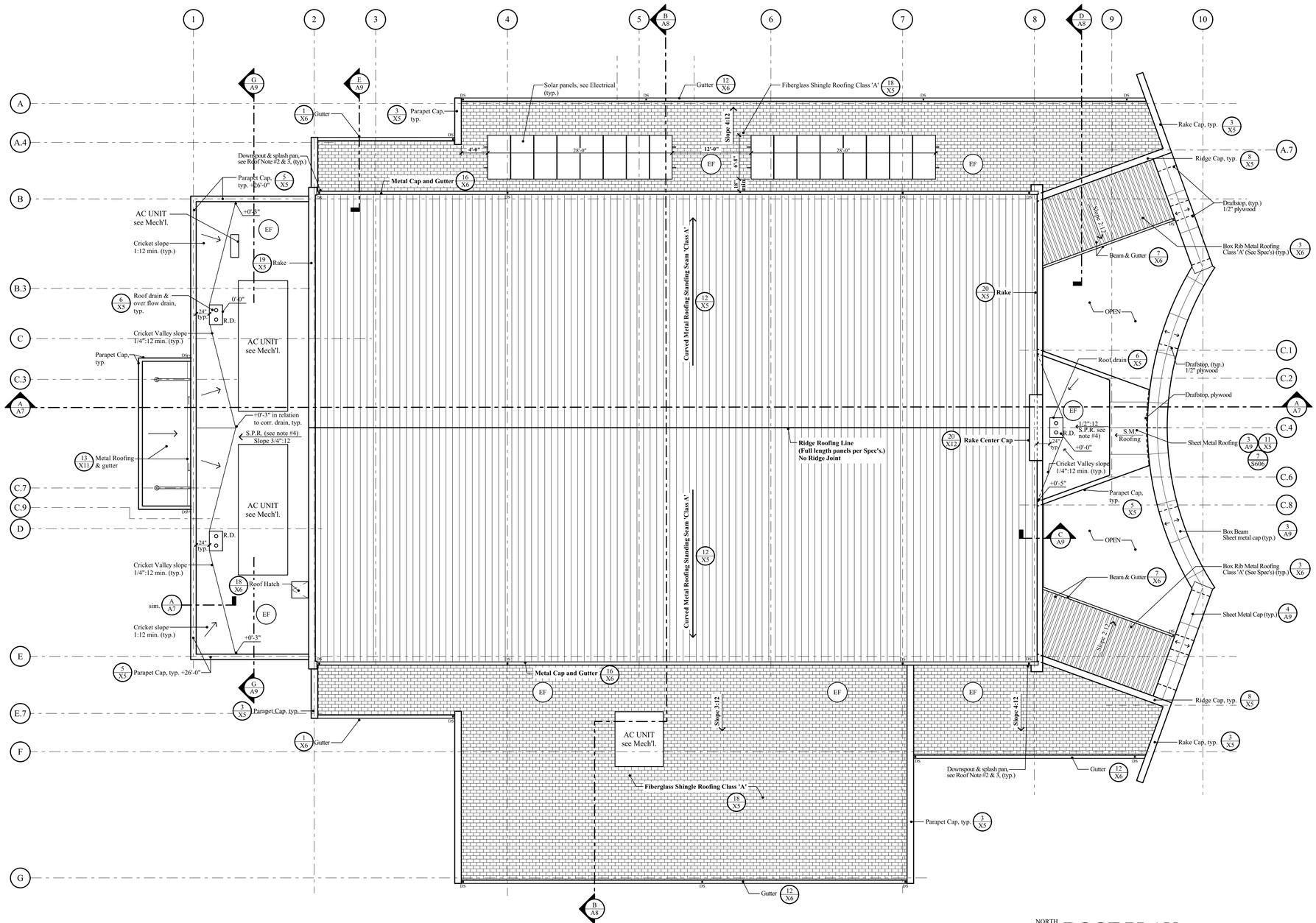
PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
REFLECTED CEILING PLAN

A2



NORTH

ROOF PLAN

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

NOTES:

1. Cricket framing shall be 6" - 18ga. metal stud framing @ 24" o.c. with 5/8" plywood sheathing.
2. Gutter opening, provide rectangular 3"x4"x 20ga. downspout per SMACNA Fig. 1-32B & 1-35H drop to 2" above roof finish, provide splash pan with (2) corrugations per SMACNA Fig. 1-36 installation & fabrication per SMACNA standards, paint (typ.)
3. Splash pan tapered from 4" to 1" with 18" wide front x 30" long per SMACNA Fig. 1-36; downspout elbow to terminate approximately 1" above back of pan. Splash pan to have 2 corrugations per alternate sections on SMACNA Fig. 1-36.
4. Single Ply Roofing (S.P.R.): Refer to Detail 5, Sheet X10 and Spec. Section 07-531.
5. Refer to Storm Drainage Plan C4 for downspout connections.

FILE NO.: 20-10 APPL. NO.: 02-121993

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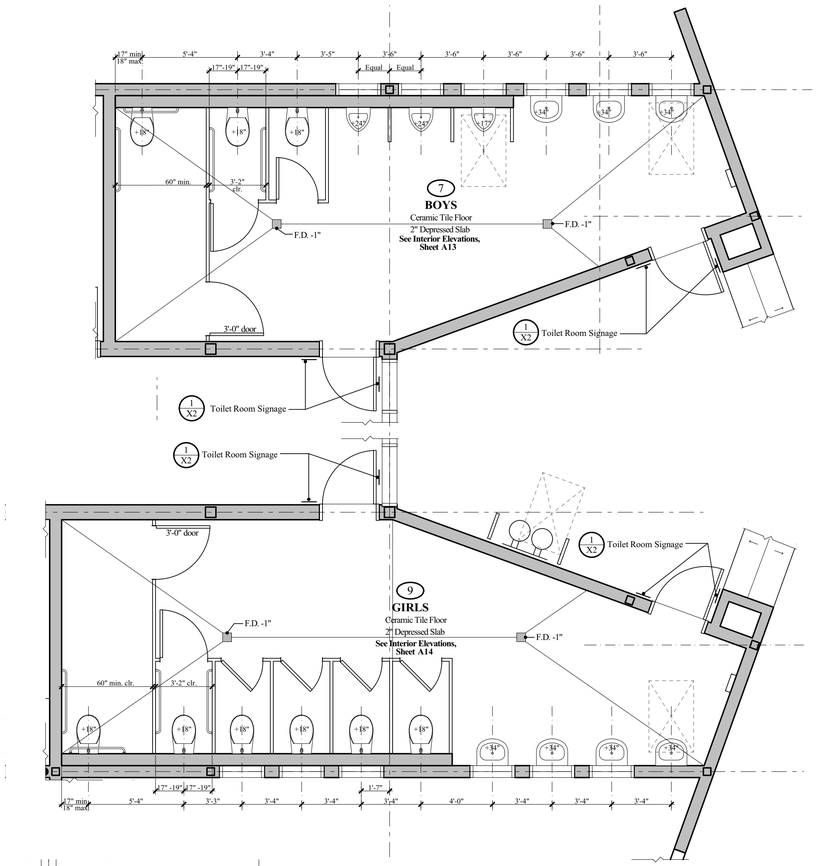
PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
ROOF PLAN

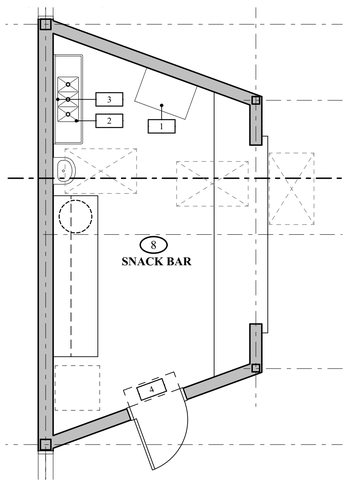
A3



NORTH

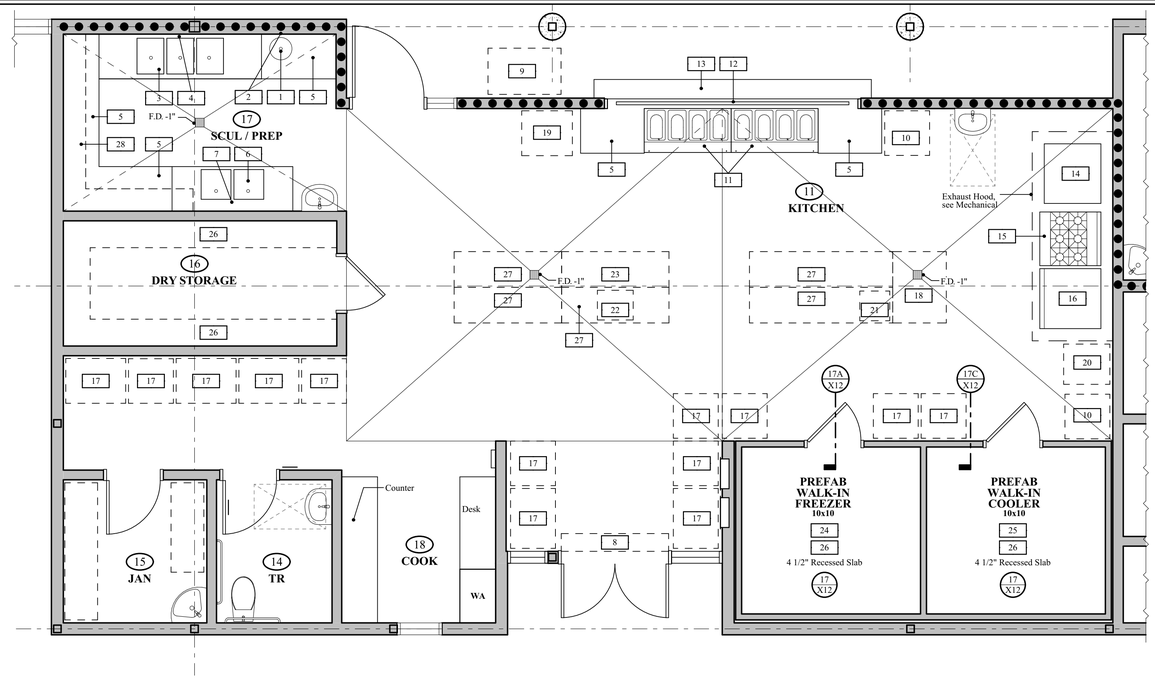
ENLARGED T.R. PLANS

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



ENLARGED TOILET ROOM NOTES

1. There shall be no sharp or abrasive surfaces under sinks, typical.
2. Contractor to inform Architect of any discrepancies found in field for review and instructions.
3. For Toilet Room Accessories, See Interior Elevations.
4. Ceramic Tile Flooring shall slope a maximum of 1/8" per foot towards Drain location.



NORTH

KITCHEN EQUIPMENT FLOOR PLAN

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

KITCHEN EQUIPMENT SCHEDULE

ANCHOR OPTION PER 13 / S104.

ITEM	QTY.	DESCRIPTION	MANUFACTURER	MODEL NUMBER	NOTES	WEIGHT	ANCHOR	REMARKS
1	1	DISPOSER	IN SINK ERATOR	DISPOSER: SS-300 3HP SINK COLLAR: #7 ADAPTOR KIT CONTROLS: CC-202 BOWL: 15" KIT: TYPE 'C'	C F C 1	Not Applicable	——	SYPHON BREAKER W/ 1/2" NPT CONNECTIONS; FLOW CONTROL VALVE; (1) 24V WATERSOLENOID
2	1	PRE-RINSE FAUCET/REELS	FISHER	2985 HOSE REEL PRE-RINSE UNIT WITH (2) MODEL 14540 PRESSURE VACCUM BREAKERS & MODEL1801 RECESSED REEL RINSE CONTROL UNIT	C F C 1	Not Applicable	——	
3	1	THREE COMPARTMENT SINK & 3 DRAINS	ADVANCE TABCO & FISHER	T9-63-54-24RL & (3) - 22349 ROTARY WASTE VALVE DRAINS	C F C 1	232	Option B	
4	1	SWING SPOUT	CHICAGO	445-DJ13-R	C F C 1	Not Applicable	——	
5	--	S.S. COUNTER & SHELVING	ADVANCE TABCO	CUSTOM	C F C 1	Not Applicable	——	
6	1	FOOD PREP SINK	ADVANCE TABCO & FISHER	T9-63-54-24RL & (3) - 22349 ROTARY WASTE VALVE DRAINS	C F C 1	232	Option B	
7	1	SWING SPOUT	CHICAGO	445-DJ13-R	C F C 1	Not Applicable	——	
8	2	FLY FAN	MARS	NH272-2U-TS	C F C 1	125	——	SEE DETAIL 3 /X3
9	1	(E) MILK COOLER			O F O 1	262	——	PORTABLE
10	1	(E) WARMING OVEN CART			O F O 1	Not Applicable	——	PORTABLE
11	2	ELECT'L. HOT FOOD TABLE	VOLLRATH	FOUR-WELL SERVEWELL	O F O 1	185	——	
12	--	SNEEZEGUARD	ADM SNEEZEGUARDS	EP-5 CUSTOM: (2) EQUAL SIZE UNITS, S.S. SUPPORTS	C F C 1	Not Applicable	——	
13	2	SLIDING TRAY	ADVANCE TABCO	TTS-6 STATIONARY : 8 FEET LONG	C F C 1	Not Applicable	——	
14	1	TILT SKILLET	CLEVELAND	SEL-30-TR	O F C 1	503	Option B	
15	1	GAS RANGE	VULCAN	36S-6BN	O F C 1	520	Option B	
16	1	STACKED DOUBLE OVENS	VULCAN	VC44GD	O F C 1	820	Option B	
17	--	ROLLING CART			O F O 1	Not Applicable	——	
18	1	S.S. TABLE	ADVANCE TABCO	TABLE: SPT-305 MID MOUNT: (1) TA-228 N/C UTENSILS:(1) AUR-60 POT RACK:(1) SCT-60	O F O 1	Not Applicable	——	
19	1	ICE MACHINE	MANITOWOC	iT0450	O F C 1	384	Option B	
20	1	MIXER	HOBART	LEGACY HL 400	O F C 1	404	Option B	
21	1	SLICER			O F O 1	Not Applicable	——	
22	1	SPICE BINS			O F O 1	Not Applicable	——	
23	1	BAKER'S TABLE	ADVANCE TABCO	CUSTOM	O F O 1	Not Applicable	——	
24	1	FREEZER UNIT: 10' x 10'	MASTER-BILT	CUSTOM	C F C 1	Not Applicable	——	
25	1	REFRIGERATOR UNIT: 10' x 10'	MASTER-BILT	CUSTOM	C F C 1	Not Applicable	——	
26	8	EPOXY WIRE SHELVING	NEXEL	WR798766 36"W x 24"D x 74" H Green Epoxy	O F O 1	85	——	
27	--	S.S. TABLE	ADVANCE TABCO	CUSTOM	O F O 1	Not Applicable	——	
28		LAM. PLASTIC WALL SHELVING	SEE SPECIFICATIONS		C F C 1	Not Applicable	——	

NOTES :

1. **SCOPE OF WORK**
   - **CFCI CONTRACTOR FURNISHED CONTRACTOR INSTALLED**
   - **OFCI OWNER FURNISHED CONTRACTOR INSTALLED**
   - **OFOI OWNER FURNISHED OWNER INSTALLED**

SNACK BAR EQUIPMENT SCHEDULE

ANCHOR OPTION PER 13 / S104.

ITEM	QTY.	DESCRIPTION	MANUFACTURER	MODEL NUMBER	NOTES	WEIGHT	ANCHOR	REMARKS
1	1	ICE MACHINE	MANITOWOC	iT0450	C F C 1	384	Option B	
2	1	THREE COMPARTMENT SINK & 3 DRAINS	ADVANCE TABCO & FISHER	FE-3-1014-15RL (2) - 22349 ROTARY WASTE VALVE DRAINS	C F C 1	Not Applicable	Option B	
3	1	SWING SPOUT	CHICAGO	445-DJ13-R	C F C 1	Not Applicable	——	
4	1	FLY FAN	POWERED AIR	CED 1-36	C F C 1	100	——	SEE DETAIL 3 /X3

NORTH

SNACK BAR EQUIPMENT FLOOR PLAN

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

FILE NO.: 20-10 APPL. NO.: 02-121993

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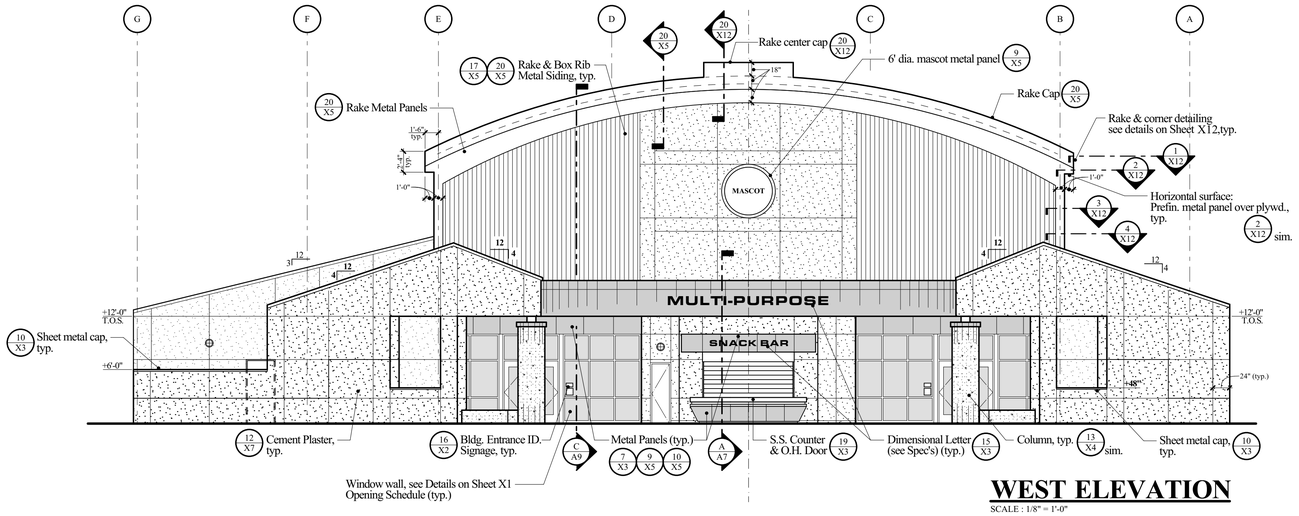
PROJECT NO: 2318

DATE: 4/12/2024

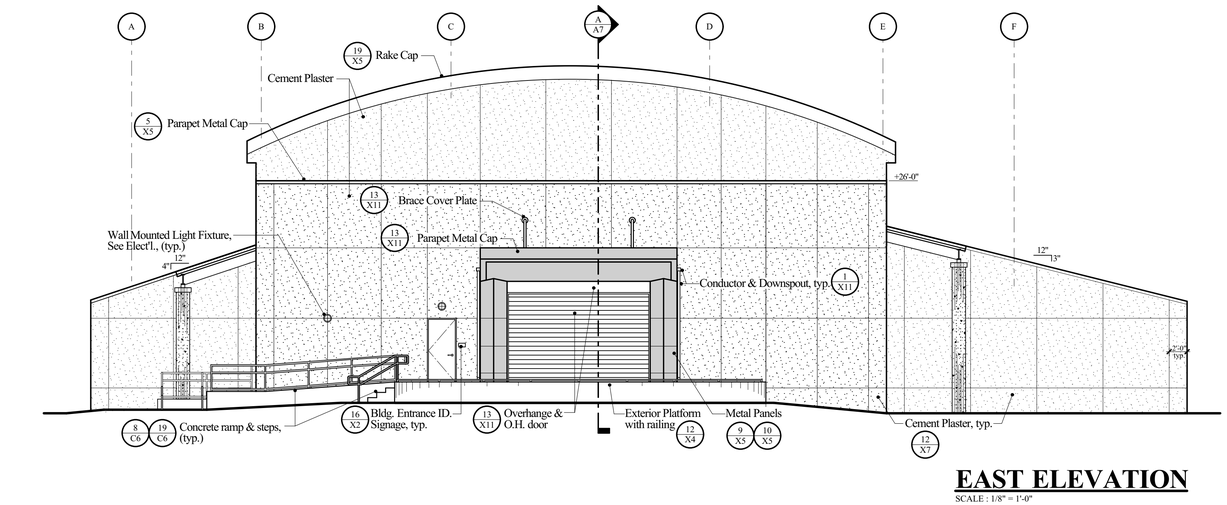
SHEET TITLE:
KITCHEN EQT. FLOOR PLAN & T.R. PLANS

A4



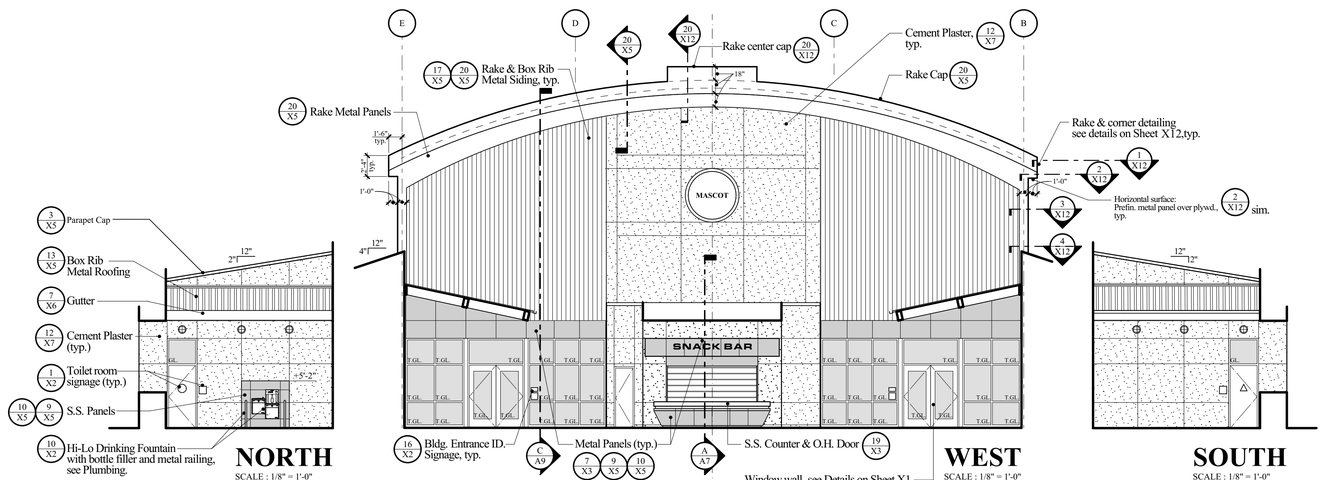
WEST ELEVATION

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



EAST ELEVATION

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



NORTH

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

WEST

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

SOUTH

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

PARTIALS

FILE NO.: 20-10 APPL. NO.: 02-121993

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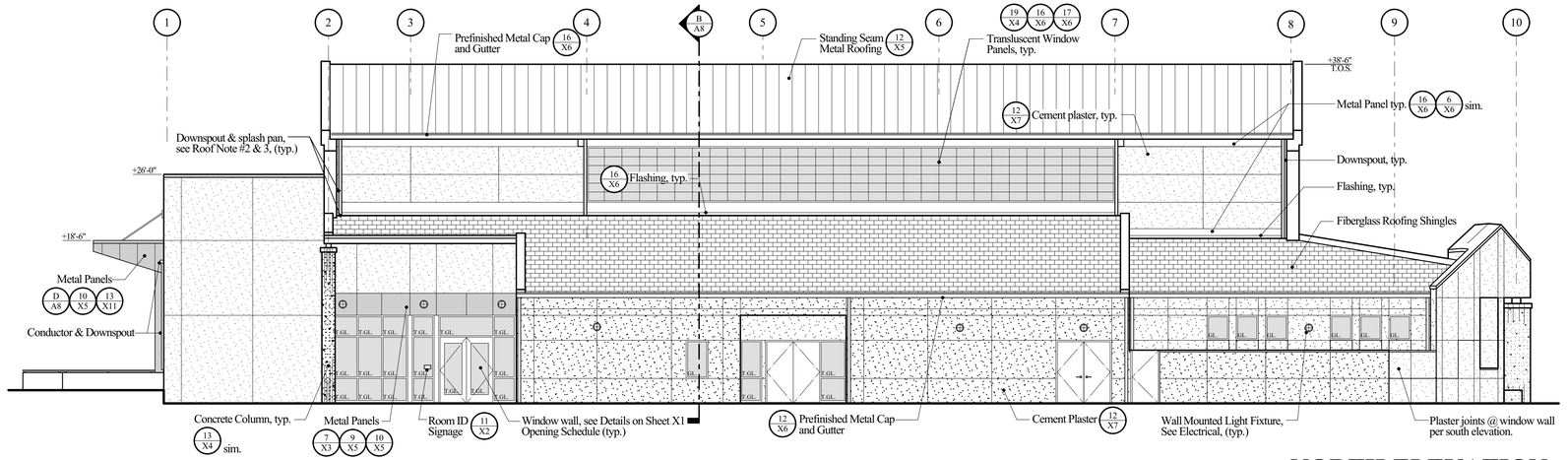
PROJECT NO: 2318

DATE: 4/12/2024

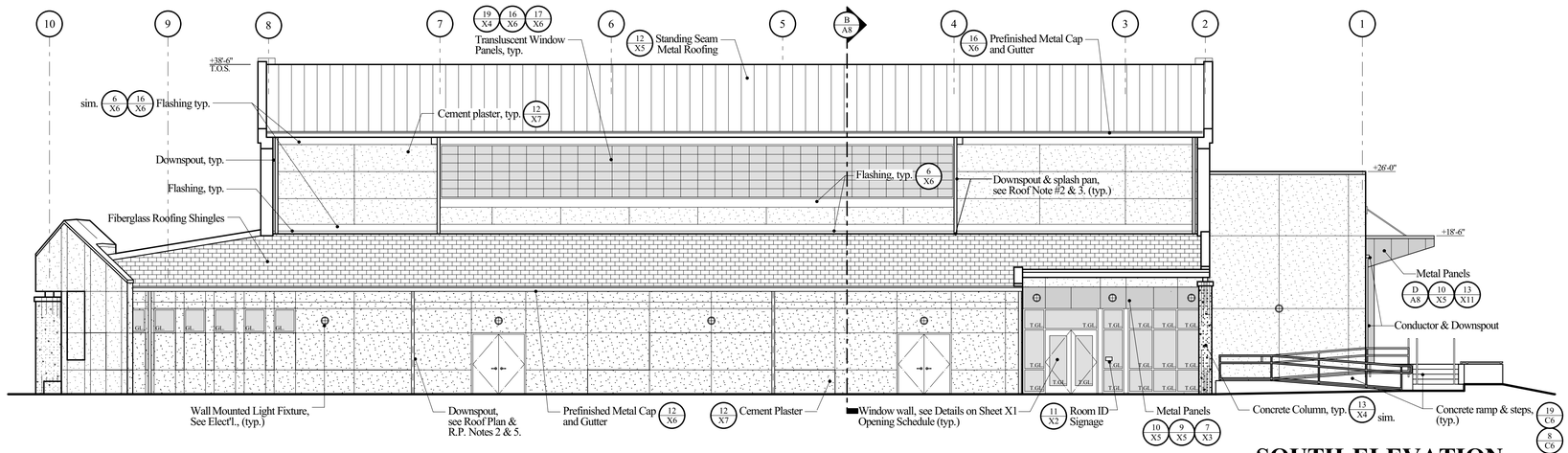
SHEET TITLE:
EXTERIOR ELEVATIONS

A5



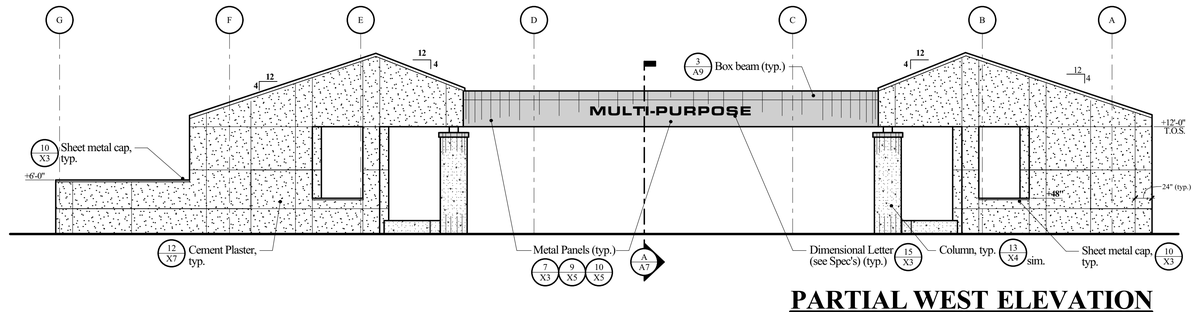
NORTH ELEVATION

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



SOUTH ELEVATION

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



PARTIAL WEST ELEVATION

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

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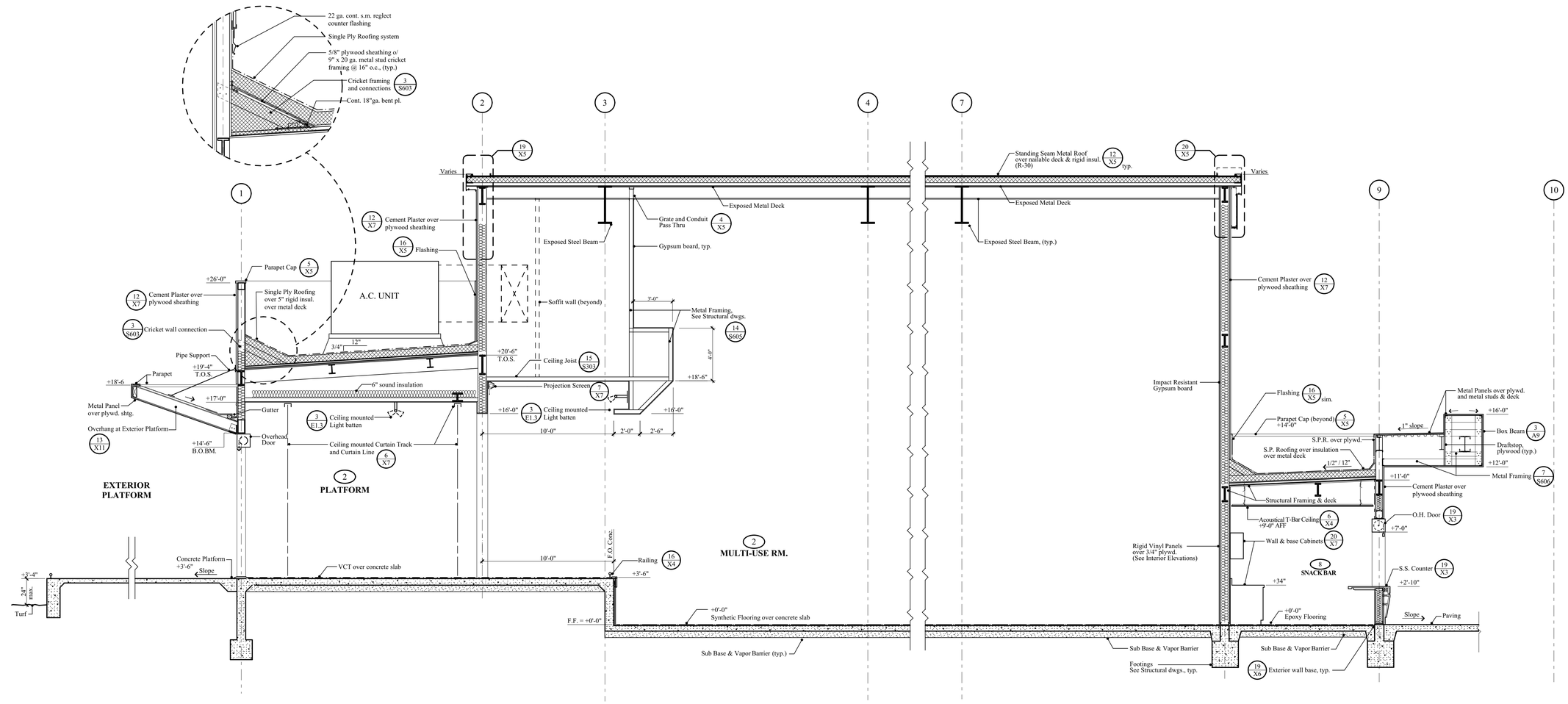
SHEET TITLE:
EXTERIOR ELEVATIONS

A6



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

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

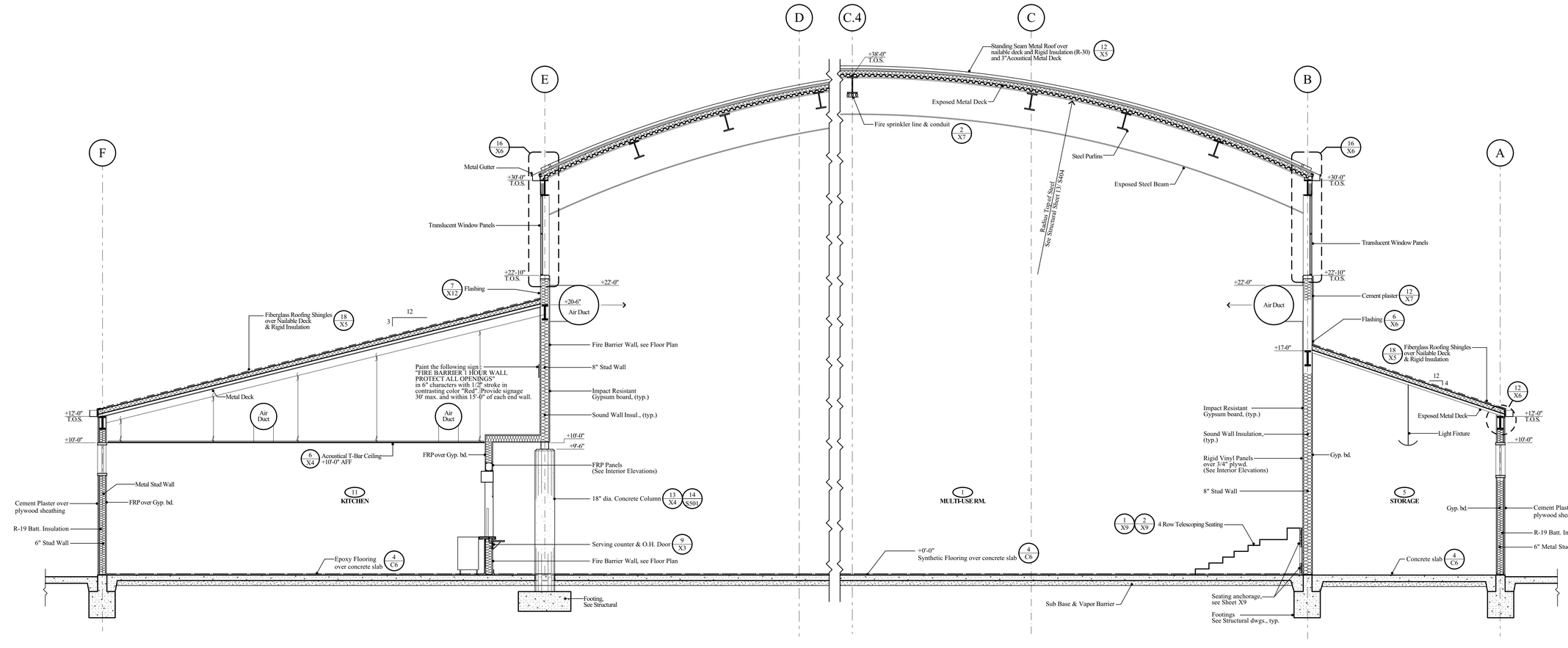
MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

ARCHITECTS
GONZALEZ
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 4/12/2024

SHEET TITLE:
SECTIONS

A7



B SECTION

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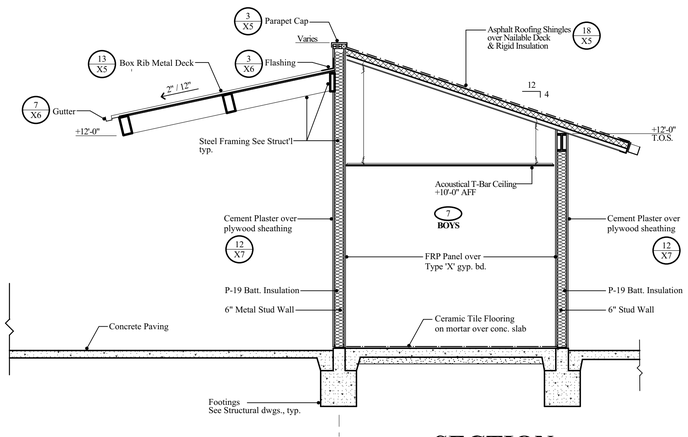

D SECTION

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

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
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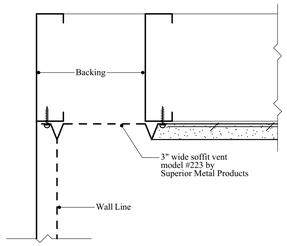
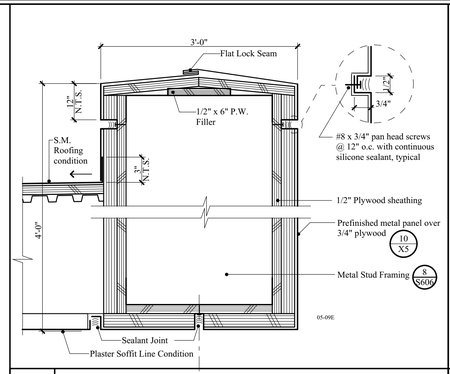
SHEET TITLE:
SECTIONS

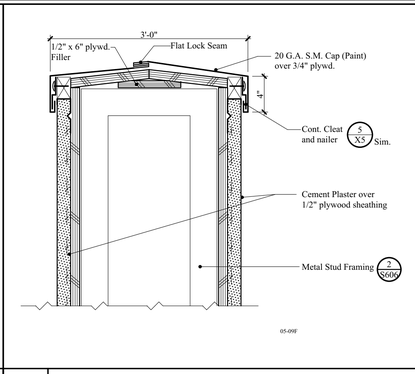
A8



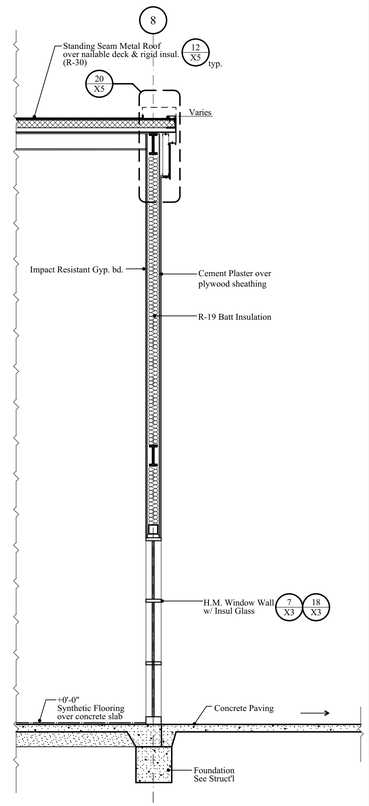
6 VENT SCREET N.T.S



3 BOX BEAM N.T.S



4 WALL CAP N.T.S



C SECTION
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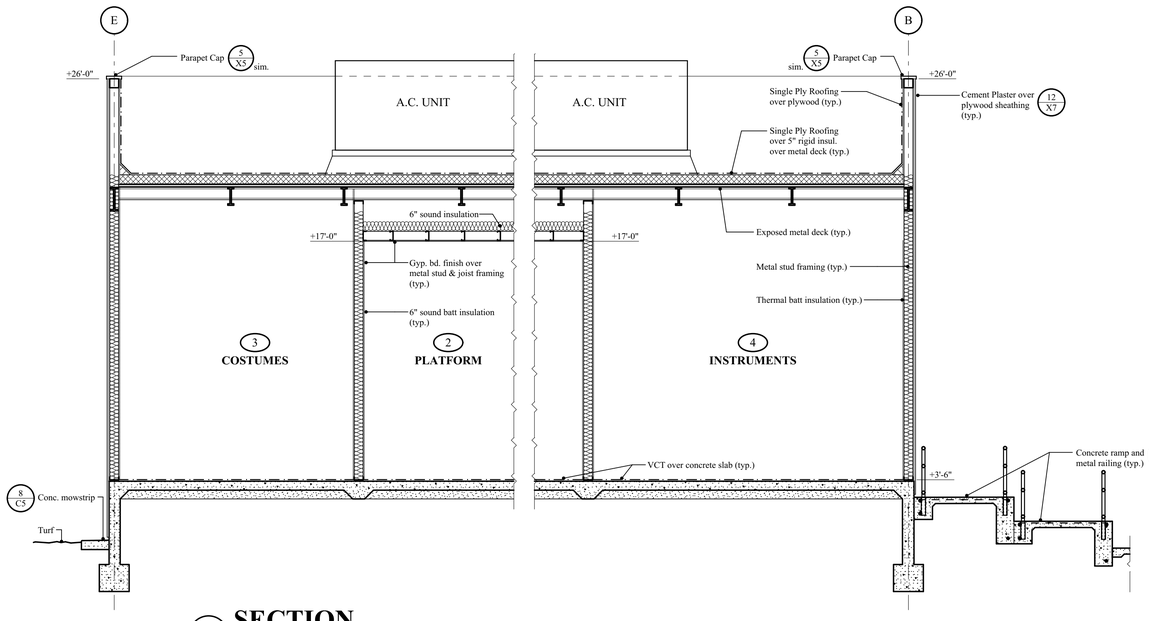

G SECTION
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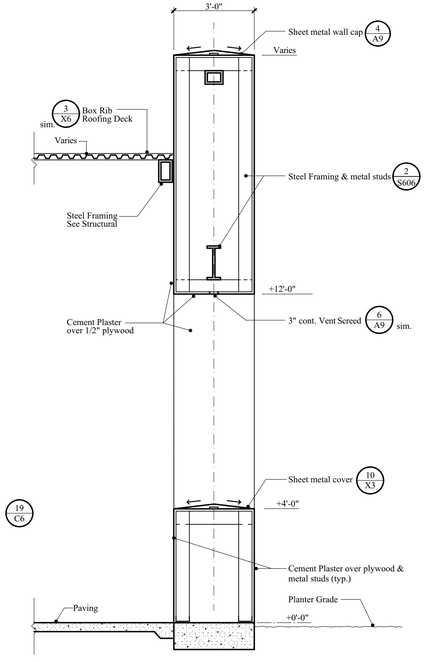
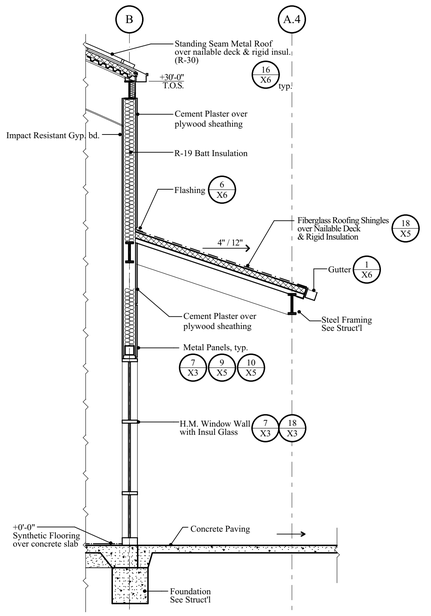


F SECTION
SCALE: 3/8" = 1'-0"



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

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GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
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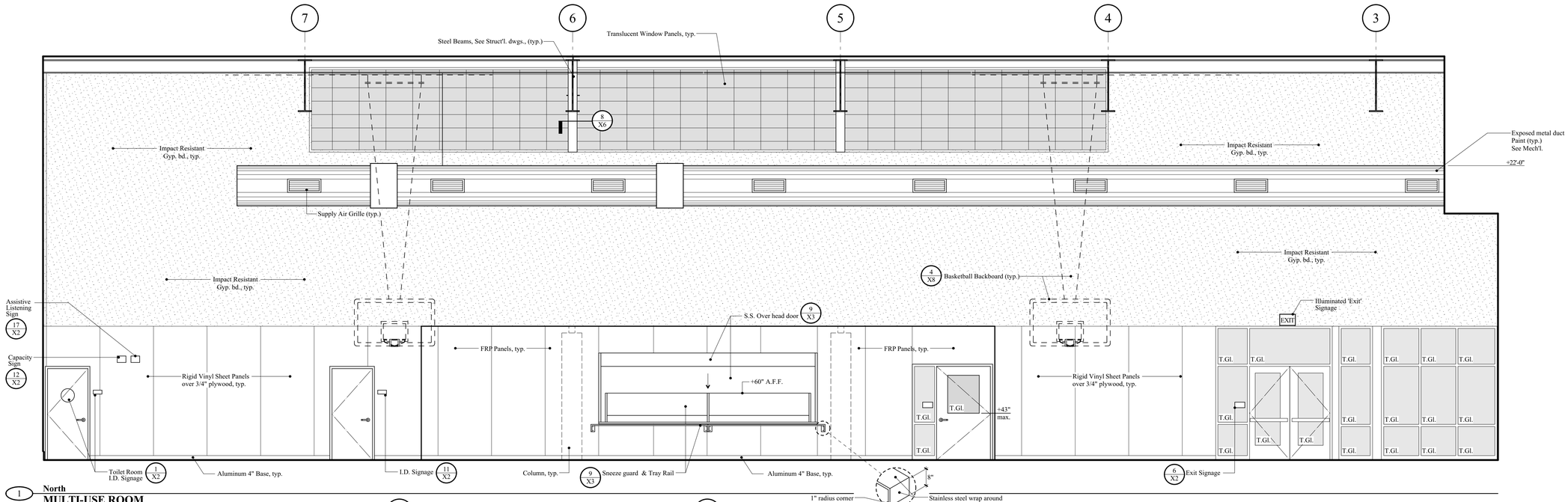
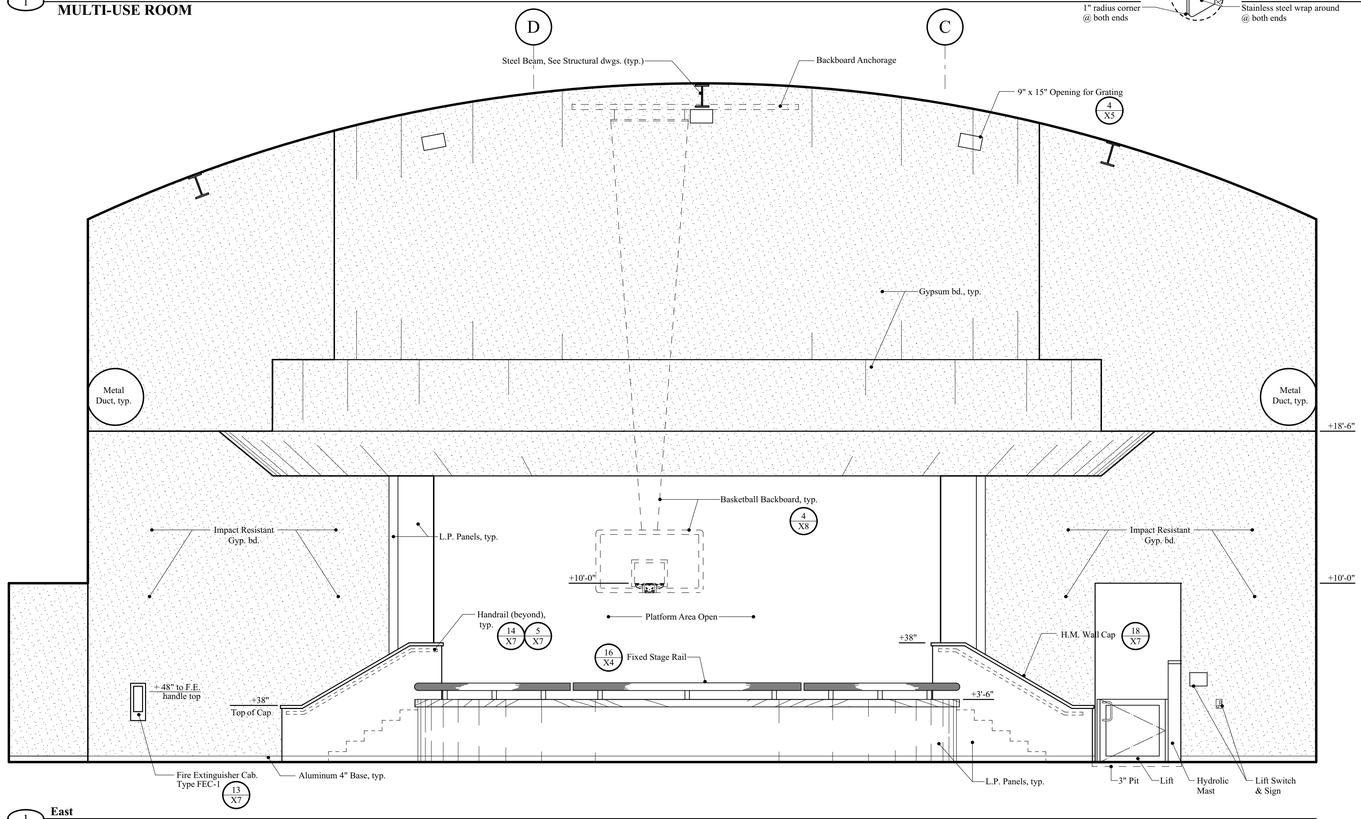
SHEET TITLE:
SECTIONS

A9



1 **North**
MULTI-USE ROOM



1 **East**
MULTI-USE ROOM

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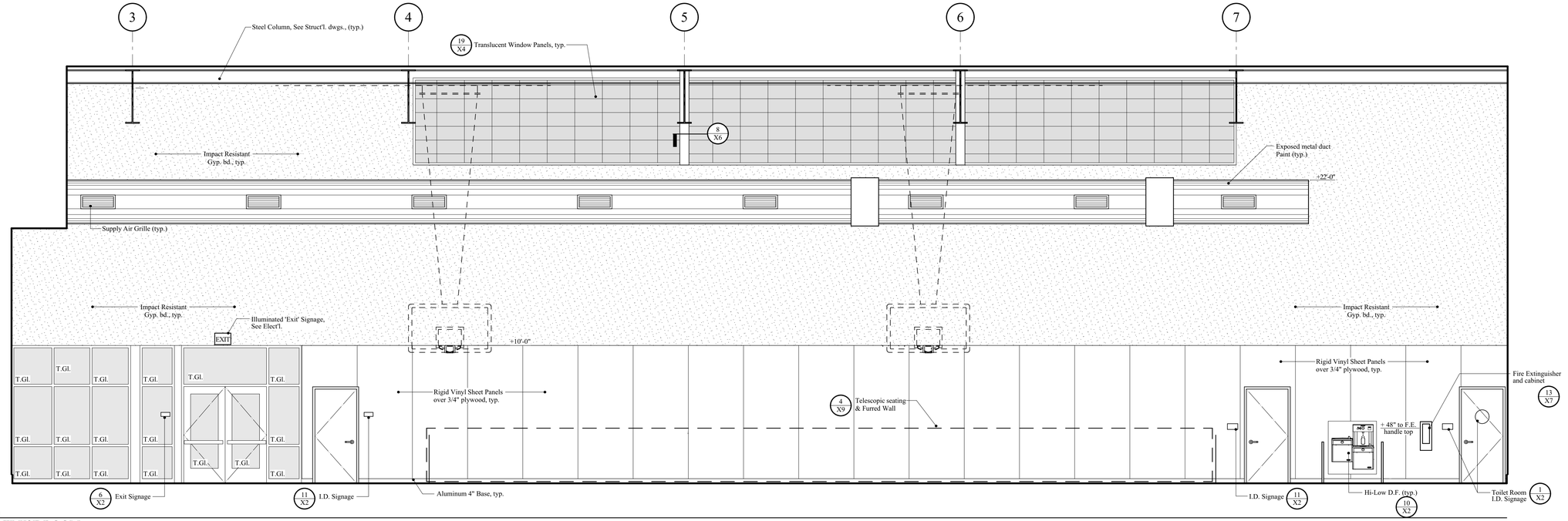
GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 JUAN M. GONZALEZ, A.I.A.
TEL: 559-497-1542
FAX: 559-497-1549

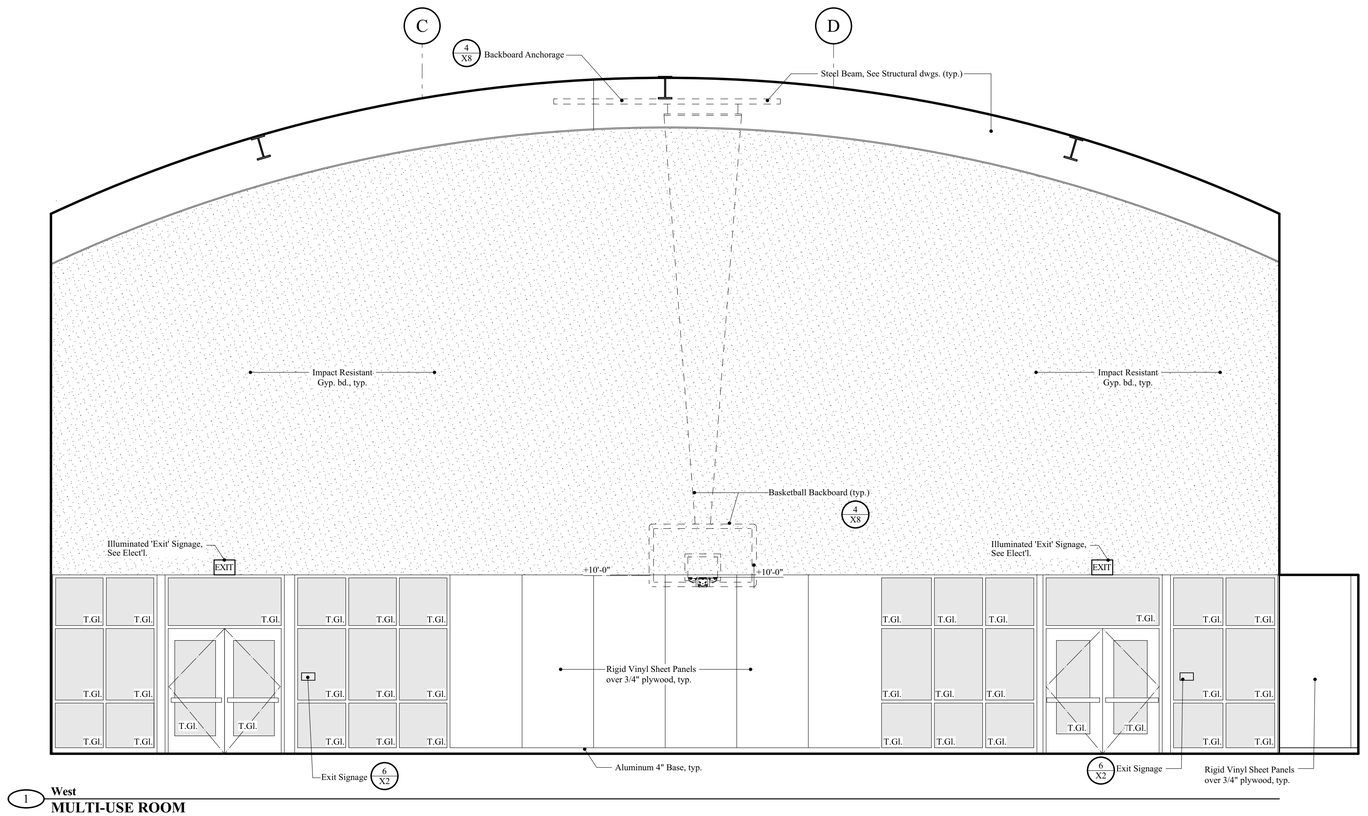
PROJECT NO: 2318
DATE: 4/12/2024

SHEET TITLE:
INTERIOR ELEVATIONS

A10



1 **South**
MULTI-USE ROOM



1 **West**
MULTI-USE ROOM

NOTE: GYP BD WALLS TO BE PAINTED A MAX. OF 2 COLORS IN ROOM 1, PATTERN TO BE PROVIDED BY ARCHITECT

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
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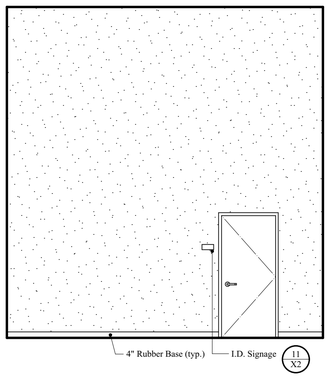
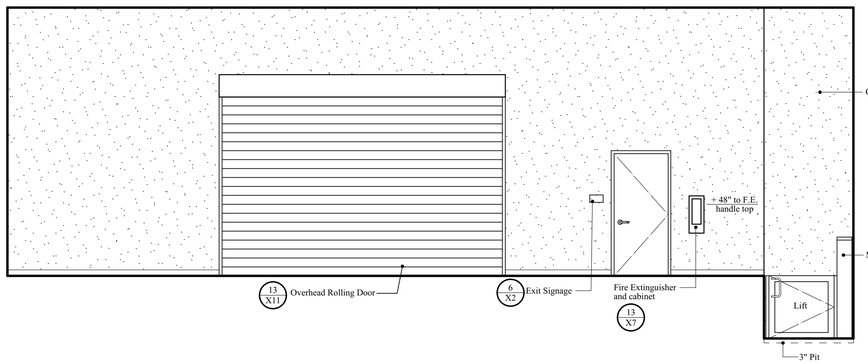
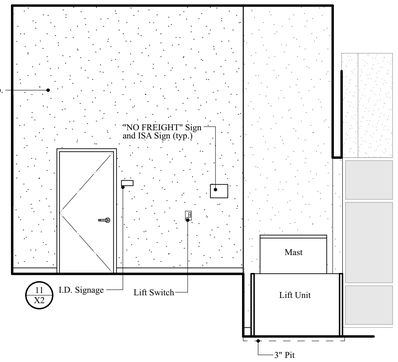
SHEET TITLE:
INTERIOR ELEVATIONS

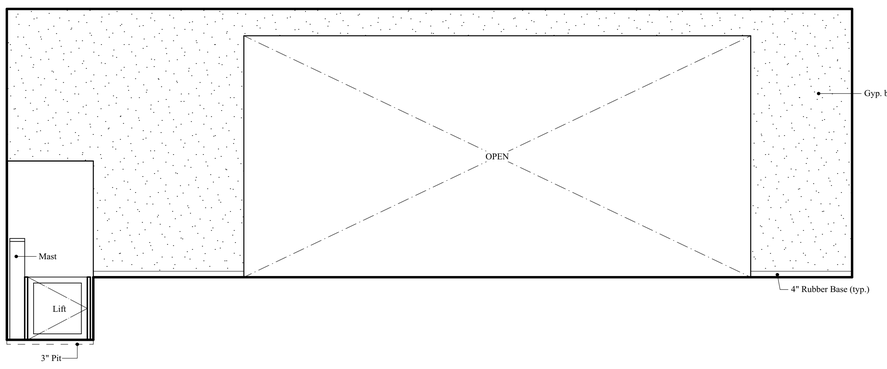
A11



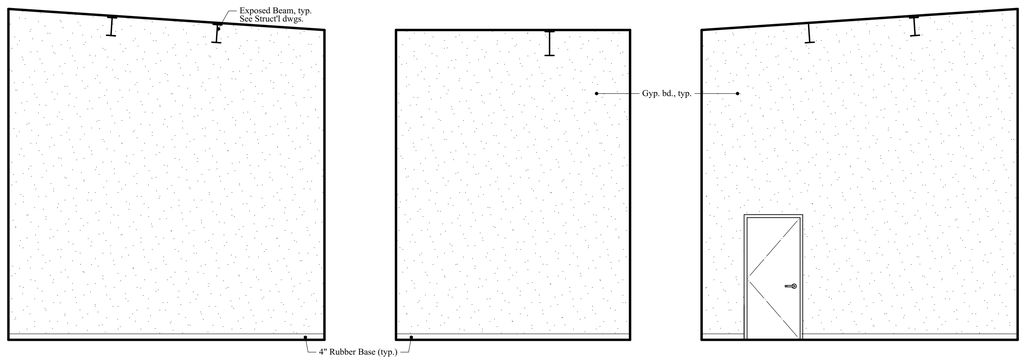




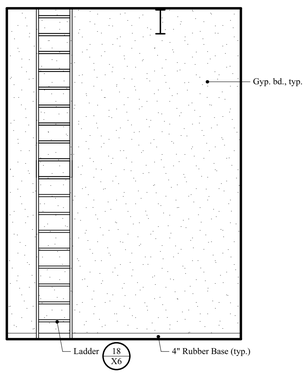
2 **North** **East** **South**
PLATFORM



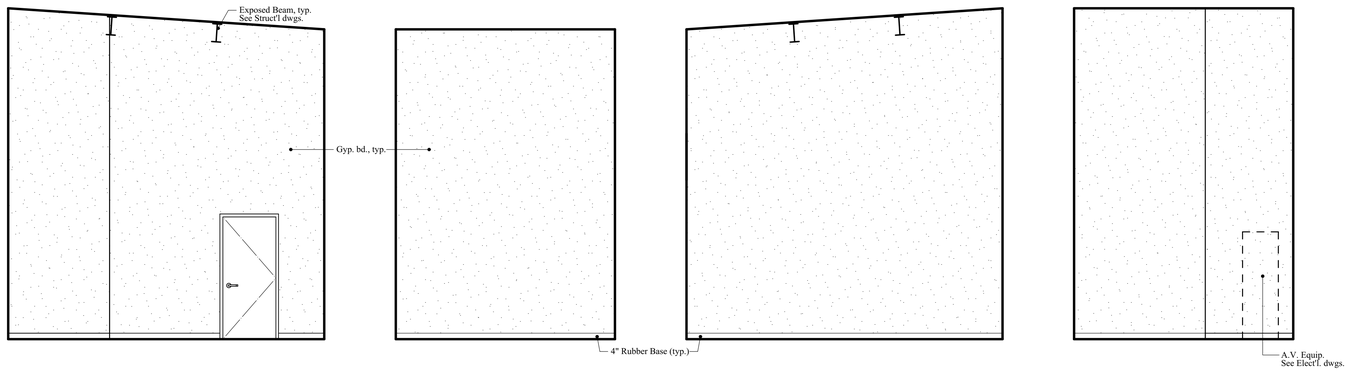
2 **West**
STAGE



3 **North** **East** **South**
COSTUMES



3 **West**
COSTUMES



4 **North** **East** **South** **West**
INSTRUMENTS

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2 Working Dwgs Phase\BC_2318_Fairmead Multi-Purpose.pln

FILE NO.: 20-10 APPL. NO.: 02-121993

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TEL: 559-497-1542
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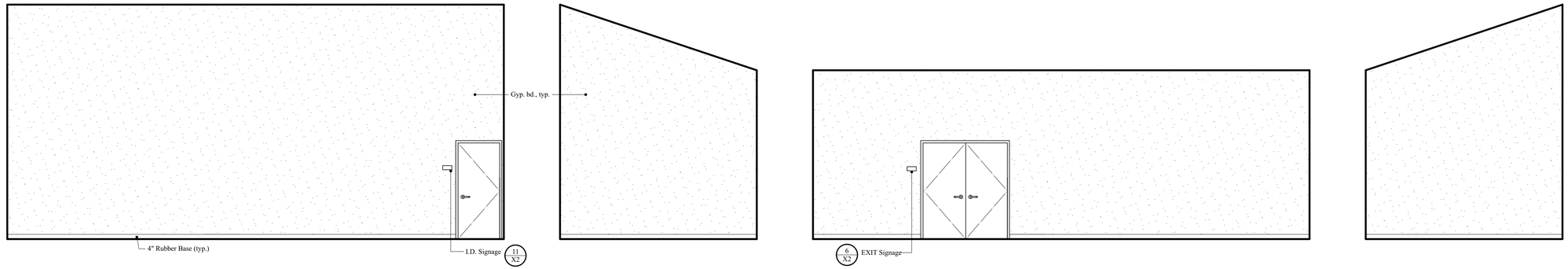
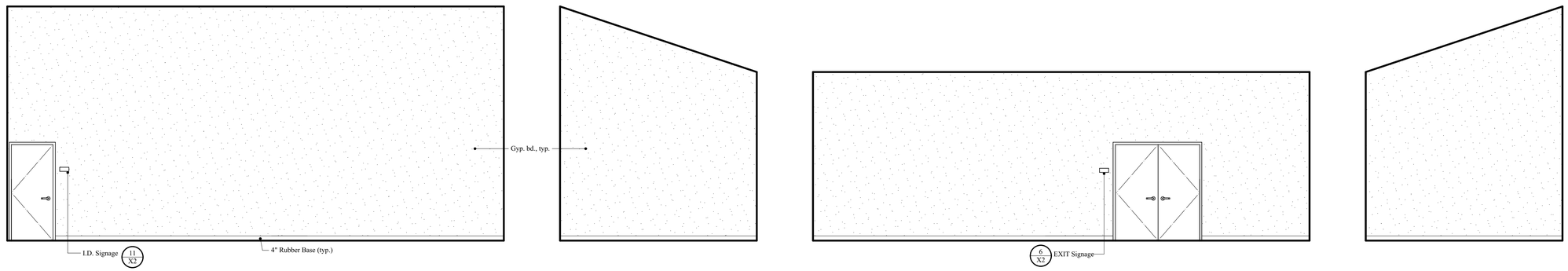
SHEET TITLE:
INTERIOR ELEVATIONS

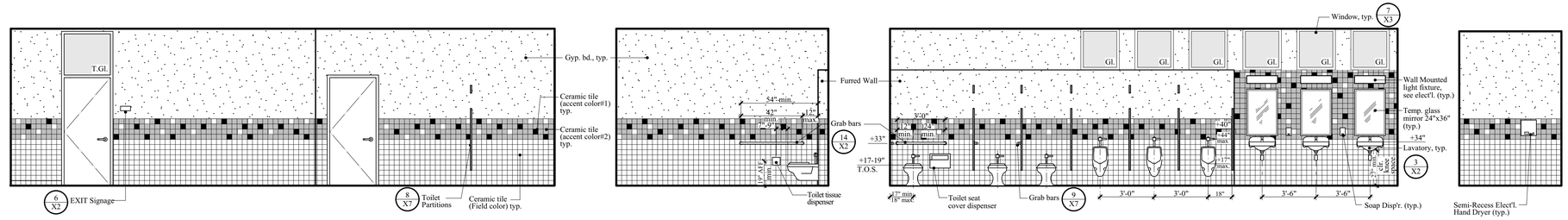
A12



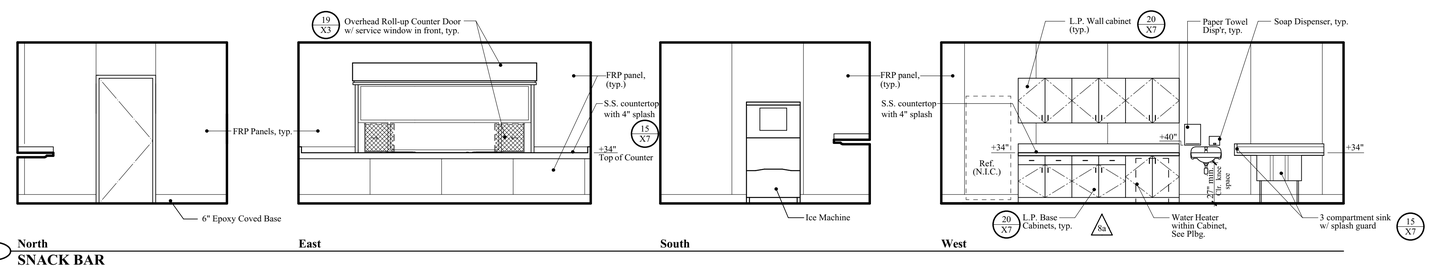
5 **STORAGE**



6 **STORAGE**



7 **BOY'S TOILET ROOM** **NOTE: For Toilet Room Accessory Adult Heights, See Detail 8 / X2.**



8 **SNACK BAR**

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
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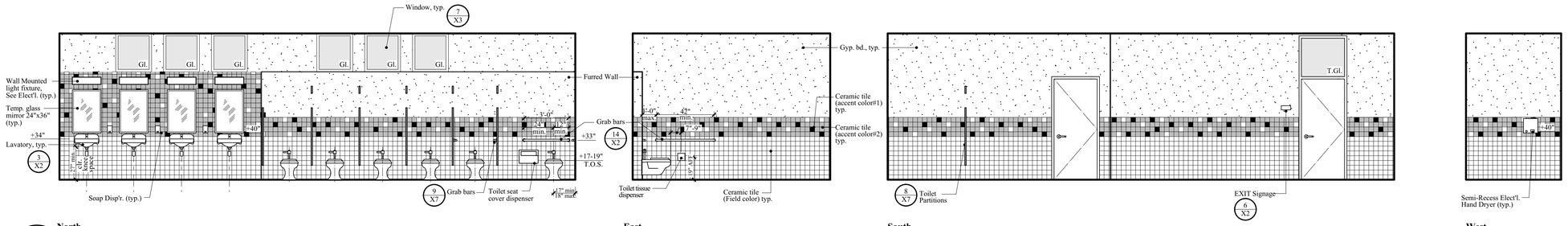
DATE: 4/12/2024

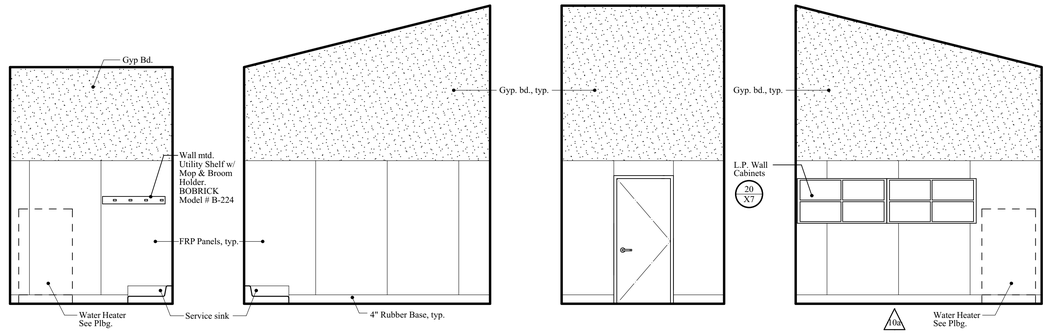
SHEET TITLE:
INTERIOR ELEVATIONS

A13



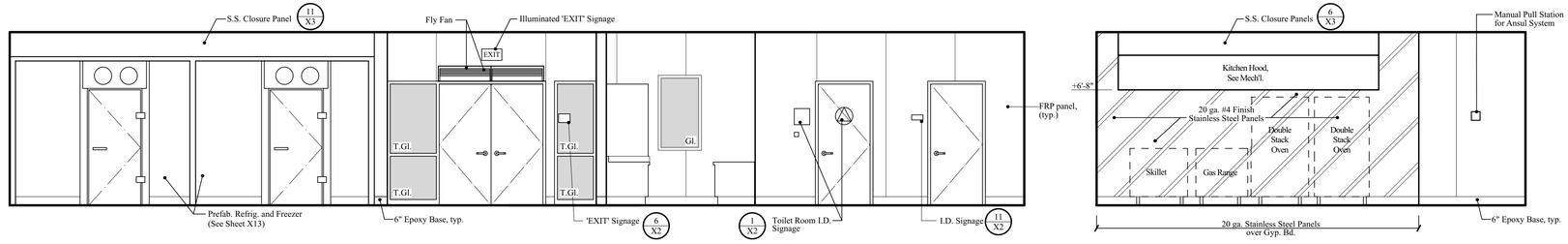
9 **North** **East** **South** **West**

GIRL'S TOILET ROOM **NOTE: For Toilet Room Accessory Adult Heights, See Detail 8 / X2.**



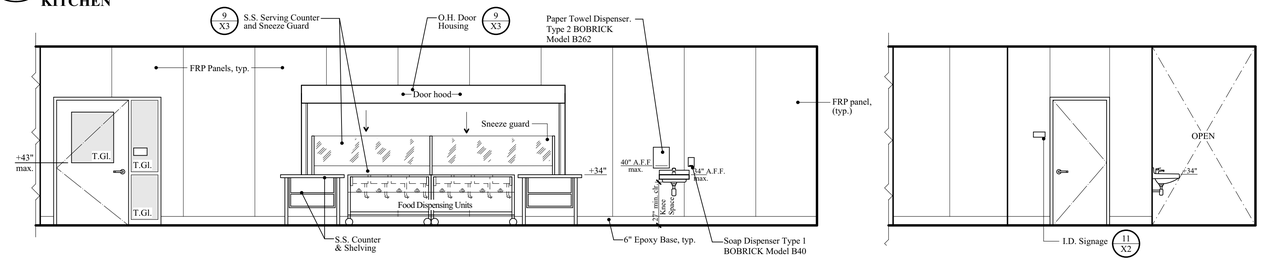
10 **North** **East** **South** **West**

JANITOR



11 **North** **East**

KITCHEN



11 **South** **West**

KITCHEN

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MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
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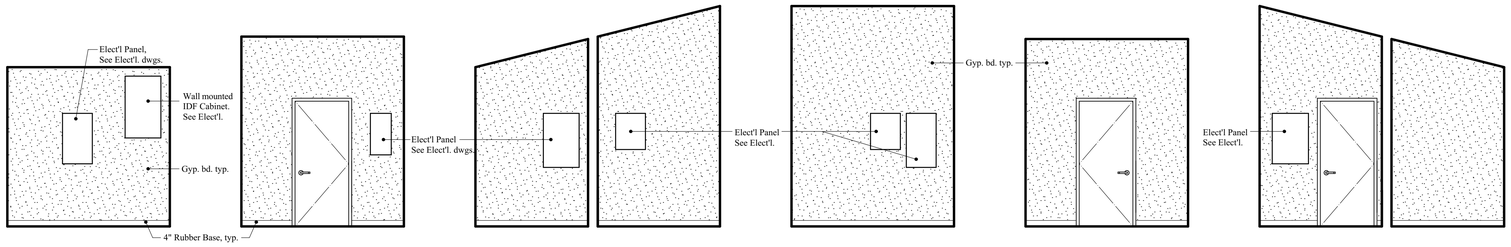
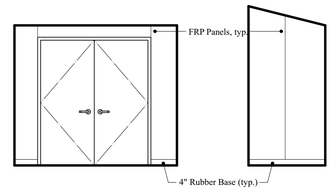
SHEET TITLE:
INTERIOR ELEVATIONS

A14



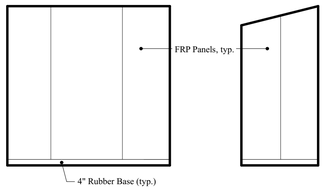
12 **North** **North** **East** **South** **South** **West**

ELECTRICAL



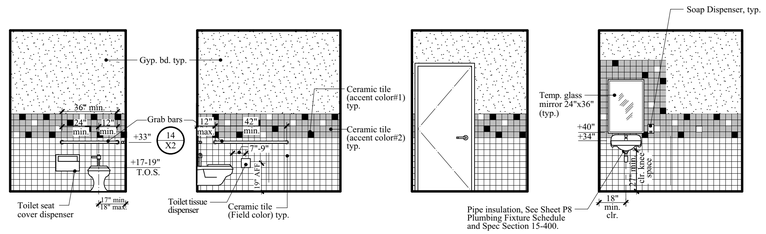
13 **North** **East**

TRASH ENCLOSURE



13 **South** **West**

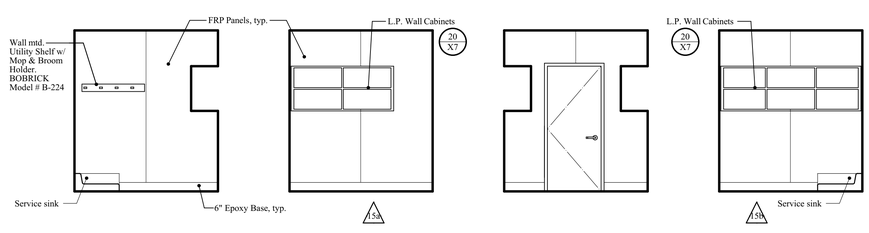
TRASH ENCLOSURE



14 **North** **East** **South** **West**

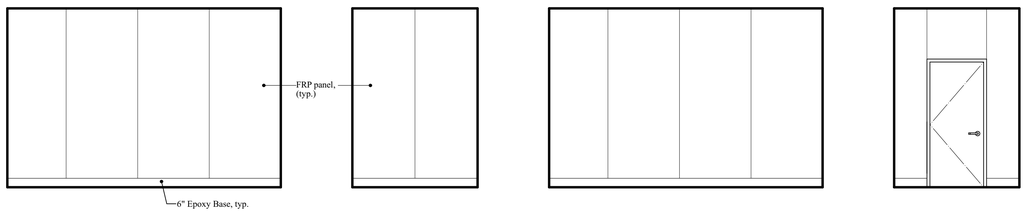
TOILET ROOM

NOTE: For Toilet Room Accessory Adult Heights, See Detail 8 / X2.



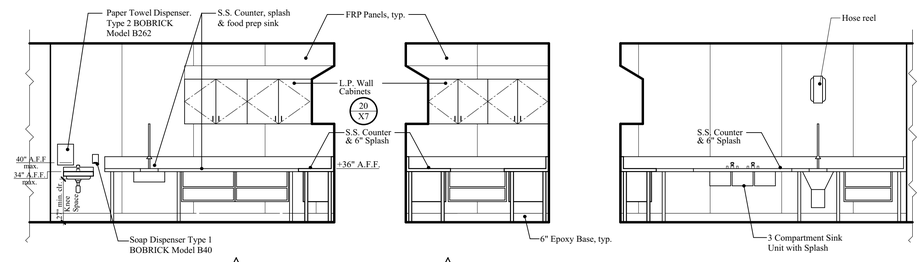
15 **North** **East** **South** **West**

JANITOR



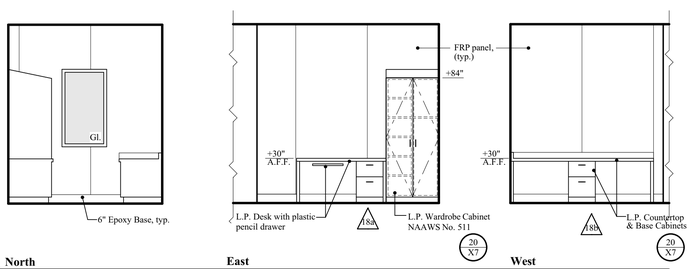
16 **North** **East** **South** **West**

DRY STORAGE



17 **North** **East** **South**

SCULLERY



18 **North** **East** **West**

COOK

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
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CHOWCHILLA, CALIFORNIA

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SHEET TITLE:
INTERIOR ELEVATIONS

A15

MODULAR CASEWORK SCHEDULE

BLDG.	RM. & No.	GROUP NO.	DESCRIPTION	AWS NO.	NO. REQ.	L	H	D	GRADE	LOCKS	REMARKS
MULTI-PURPOSE BUILDING	8	8a	Base Cabinets	212	2	36"	34"	30"	C		
			Base Cabinets	162	1	36"	34"	30"	C		Water Heater within cabinet
			Wall Cabinets	302	3	36"	30"	15"	C		Sloped Top
	10	10a	Wall Cabinets	300	2	60"	30"	15"	C		
	15	15a	Wall Cabinet	300	2	36"	30"	15"	C		
		15b	Wall Cabinet	300	3	30"	30"	15"	C		
	17	17a	Wall Cabinets	302	2	42"	30"	15"	C		Sloped Top
		17b	Wall Cabinets	302	2	40"	30"	15"	C		Sloped Top
	18	18a	Wardrobe Cabinet	511	1	36"	84"	24"	C		Sloped Top
			Base Cabinet / Desk	223	1	18"	34"	24"	C		See Interior Elevations
		18b	Base Cabinets / Desk	223	1	18"	34"	24"	C		See Interior Elevations

CASEWORK SCHEDULE NOTES:

1. Contractor shall field verify all dimensions prior to fabrication.
2. See Detail 20/X7 for anchorage.
3. Provide adjustable shelves to all casework u.o.n.
4. Refer to Floor Plan and Interior Elevations for additional laminated plastic work.

INTERIOR FINISH SCHEDULE

BLDG.	NO.	ROOM NAME	FLOOR						BASE					WALLS				CEILING			MISC.		REMARKS
			Resilient Sheet Athletic Flooring	Concrete Floor	Epoxy Floor	Ceramic Tile CT-1	Vinyl Composition Tile		6" Epoxy Base	4" Rubber Topset Base	Ceramic Tile CT-2 & CT-4; Sanitary Coved Base (slim foot)	Aluminum 4" Base		5/8 gyp. bd. Type X	Ceramic Tile CT-2 & CT-4 See Note 7	Rigid Vinyl Panels over 3/4" Plywood	FRP Panel o/ 5/8" Type X gyp. bd.		Acoustical Panel 2x4 T-bar Suspd Systems; See Note #9	5/8" Gyp bd. Type X	Exposed metal deck	Metal Doors & Frames, Misc. Metals, Structural Frame		
MULTI-PURPOSE BLDG.	1	MULTI-PURPOSE ROOM	FF									FF		DW2		FF	FF			DW2	M2	M2	
	2	PLATFORM					FF			FF				DW2						DW2		M2	
	3	COSTUMES					FF			FF				DW2							M2	M2	
	4	INSTRUMENTS					FF			FF				DW2							M2	M2	
	5	STORAGE		N						FF				DW2							M2	M2	
	6	STORAGE		N						FF				DW2							M2	M2	
	7	BOYS T.R.				SYS. C					Sys. B			DW2	Sys. B				FF			M2	
	8	SNACK BAR			FF				FF								FF		FF			M2	
	9	GIRLS T.R.				SYS. C					Sys. B			DW2	Sys. B				FF			M2	
	10	JANITOR		N						FF				DW2			FF				M2	M2	
	11	KITCHEN			FF				FF								FF		FF			M2	
	12	ELECTRICAL ROOM		N						FF				DW2							M2	M2	
	13	TRASH		N						FF							FF				M2	M2	
	14	TOILET ROOM				SYS. G					Sys. A			DW2	Sys. A					DW2		M2	
	15	JANITOR			FF				FF								FF			DW2		M2	
	16	DRY STORAGE			FF				FF								FF		FF			M2	
	17	SCULLERY			FF				FF								FF		FF			M2	
	18	COOK			FF				FF								FF		FF			M2	

INTERIOR FINISH SCHEDULE NOTES:

1. Provide Concrete Floor in the following rooms: Room# 5, 6, 10, 12 &13.
   N =No special finish other than Floor Hardener and Industrial Sealer. See Concrete Specifications.
2. FF means Factory Finish
3. Wall and ceiling materials shall not exceed the flame spread classifications per CBC section 803
4. Provide water-resistant type gyp. bd. in Toilet Rooms, Janitor and Kitchen.
5. The Architect will select a maximum of 2 paint colors to be used on the interior of the building and will provide color locations to the Contractor prior to painting. Framing Members will be painted a different color than metal deck or walls.
6. The Architect will select a maximum of 6 wall ceramic tile colors to be used on the project. See Interior Elevations for wall tile patterns.
7. All interior finish material shall meet the testing & performance requirements of CBC Chapter 8.
8. At exposed metal decking, surface shall be smooth and painted with Semi-Gloss, See Specifications.
9. Acoustical Panel Types: Use Type ACT-V in Rooms 7 & 9; Use Type -X1 @ other rooms.

OPENING SCHEDULE

Details are on Sheet X3

Details are on Sheet X3 U.O.N.

	No.	FRAME TYPE	FRAME DEPTH	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	DOOR MAT.	DOOR TYPE	DOOR GLASS	DOOR LOCK DOWN	DOOR THRLD.	DOOR HRDWE. GRP. NO.	DOOR FIRE RATING (mins.)	WINDOW TYPE	WINDOW NOTE	DETAILS HEAD	DETAILS JAMB	DETAILS SILL AND/OR MULLION	REMARKS
MULTI-USE BUILDING	1	HM5	-	(2) 3'-0"	7'-0"	1 3/4"	HM	A	VII	*	20	1		VII		7	2 Sim. 13	12& 18	
	2	HM5	-	(2) 3'-0"	7'-0"	1 3/4"	HM	A	VII	*	20	1		VII		7	2 Sim. 13	12& 18	
	3	HM6	-	(2) 3'-0"	7'-0"	1 3/4"	HM	A	VII	*	20	1		VII		7	2 Sim. 13	12& 18	
	4	HM6	-	(2) 3'-0"	7'-0"	1 3/4"	HM	A	VII	*	20	1		VII		7	2 Sim. 13	12& 18	
	5	HM4	-	(2) 3'-0"	7'-0"	1 3/4"	HM	B		*	20	2				2	2 Sim.		
	6	HM4	-	(2) 3'-0"	7'-0"	1 3/4"	HM	B		*	20	2				2	2 Sim.		
	7	HM13	-	(2) 3'-0"	7'-0"	1 3/4"	HM	B	VII	*	20	3		VII		2	2 Sim. 13	12& 18	
	8	HM4	-	(2) 3'-0"	7'-0"	1 3/4"	HM	B			20	2				2	2 Sim.		
	9	HM1	-	3'-0"	7'-0"	1 3/4"	HM	B		*	20	4		VII		2	2 Sim.		
	10	HM1	-	3'-0"	7'-0"	1 3/4"	HM	B		*	20	4		VII		2	2 Sim.		
	11	HM12	-	3'-0"	6'-8"	1 3/4"	HM	F		*	20	5				2	2 Sim.		
	12	HM1	-	3'-0"	7'-0"	1 3/4"	HM	B			20	6				2	2 Sim.		
	13	HM1	-	3'-0"	7'-0"	1 3/4"	HM	B		*	20 Sim.	7				2	2 Sim.		
	14	HM8	-	PLATFORM OVERHEAD DOOR												13/X11	13/X11		
	15	HM11		SNACK BAR OVERHEAD DOOR												19	19		
	16	HM3	-											VII		2	2 Sim.	12 Sim.	12 WINDOWS
	17	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				8				16	16		
	18	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				9				16 Sim.	16 Sim.		
	19	HM2	-	4'-0"	7'-0"	1 3/4"	Wd	E	IV			10	60	IV		16 Sim.	16 Sim.	12& 18	
	20	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				11				16 Sim.	16 Sim.		
	21	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				11				16 Sim.	16 Sim.		
	22	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				12				16	16		
	23	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				12				16	16		
	24	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				8				16	16		
	25	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				13				16 Sim.	16 Sim.		
	26	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				14				16 Sim.	16 Sim.		
	27	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				9				16 Sim.	16 Sim.		
	28	HM1	-	3'-0"	7'-0"	1 3/4"	Wd	B				9				16 Sim.	16 Sim.		
	29		-	6' x 60' TRANSLUCENT WINDOW PANELS							SEE SPECS					16/X6	17/X6	16/X6	2 WINDOWS See Detail 19/X4
	30	HM10		KITCHEN OVERHEAD DOOR									60			9	9		
	31	HM7	-											VII		2	2 Sim.	12 Sim.	
	32	HM1 Sim.	-	3'-0"	6'-0"	1 3/4"	HM	B				12					2 Sim.		

OPENING SCHEDULE NOTES:

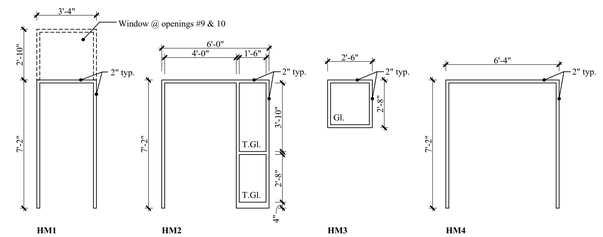
1. This schedule is provided for the convenience of the general contractor.
2. Field Verify all frame openings dimensions prior to fabrication.
3. All hand-activated door opening hardware is to be centered greater than or equal to 34" but less than or equal to 42" above floor.
4. All door hardware shall be lever & /or panic bar activated with a 5lb. max. operating pressure.
5. Install Door stop/holder & door bottom per detail 5 /X3 at M-P Bldg. Openings #1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 & 32.
6. Door openings # 19 & 30 shall close via Fire Alarm System.
7. Door type 'E' with D-H-45 fire label : Provide with maximum size glass tested per CBC Table 716.1(2).

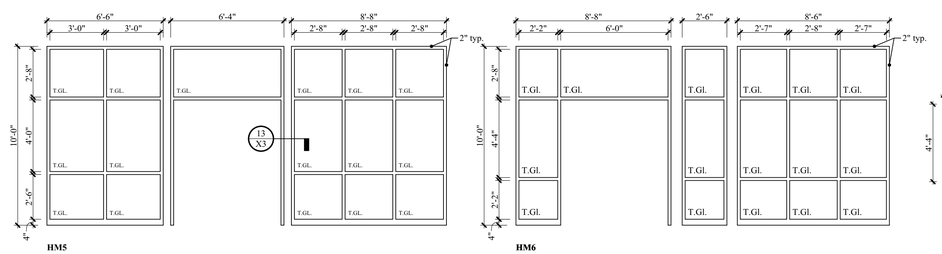
EXTERIOR FINISH SCHEDULE

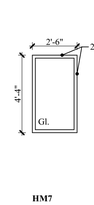
MATERIAL	FINISH	REMARKS
Cement Plaster & All cement plaster metal elements	EP-3	
H.M. Doors, frames, misc. metals & structural steel	EM-2	
Concrete walls & concrete elements	ECB-1	
Mtl. Siding & Mtl. Roofing + related trim, gutter, flashing & shapes	Prefinished	
Metal panels, metal caps, box beams, misc.	EM-2	
Concrete Column	EP-2	

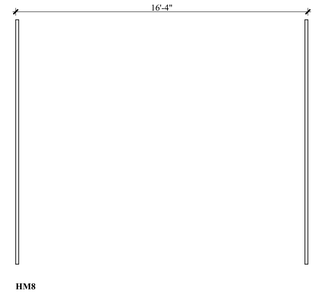
EXTERIOR FINISH SCHEDULE NOTES:

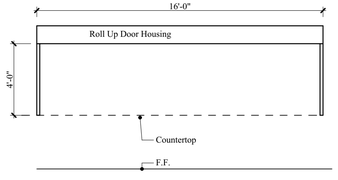
1. The Architect will select a maximum of 2 paint colors for cement plaster and provide a color pattern layout.

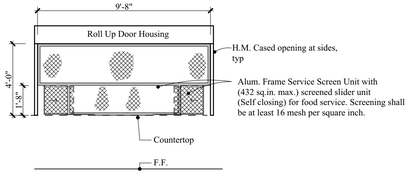


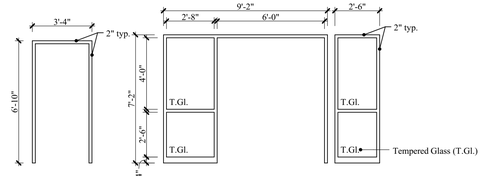










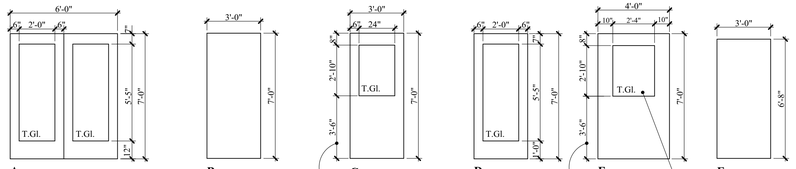


HOLLOW METAL FRAME TYPES

OPENING FRAME TYPES

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

NOTES:
1. **This Schedule is provided for the convenience of the General Contractor. Field verify all dimensions in the field prior to fabrication.**
2. **2" wide face of frame, (typ.) U.O.N.**
3. **Refer to Interior Elevations and details for additional H.M. work.**



DOOR TYPES

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

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE 12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

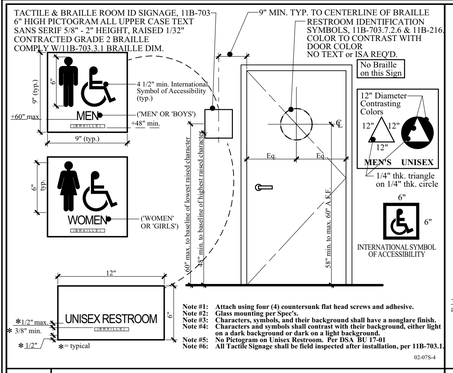
PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
SCHEDULES

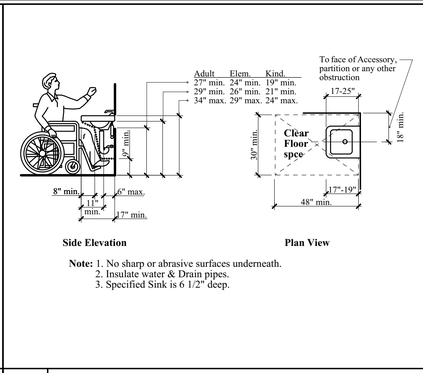
X1

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Mult-Purpose Bldg\2 Working Dwgs Phase\BC_2318_Fairmead Multi-Purpose.pln

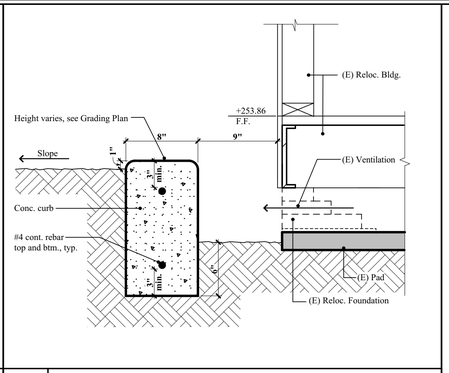


1 TOILET ROOM SIGNAGE N.T.S

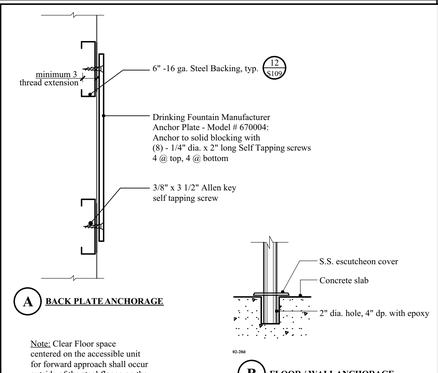
2 FIRE LANE SIGNAGE N.T.S



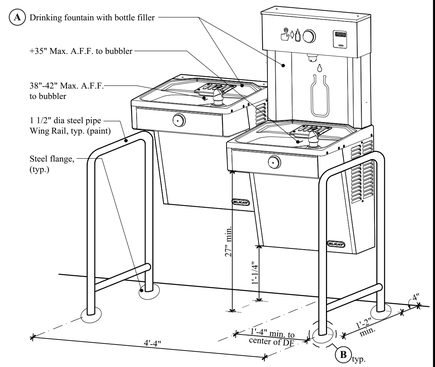
3 LAVATORY & SINKS N.T.S



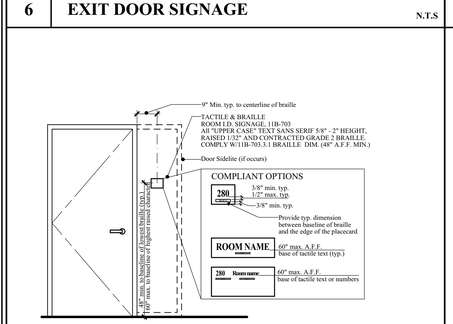
4 CONCRETE CURB N.T.S



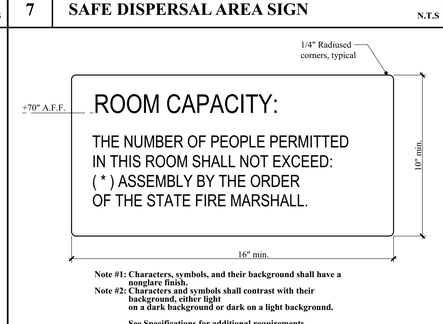
Note: Clear Floor space centered on the accessible unit for forward approach shall occur outside of the steel flange on the floor.



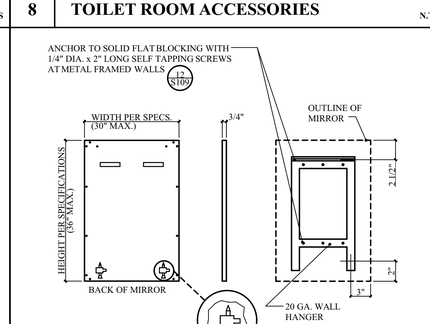
10 HI-LO DRINKING FOUNTAIN N.T.S



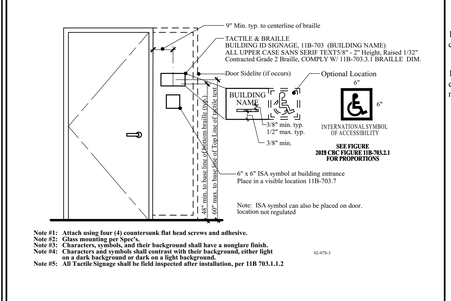
6 EXIT DOOR SIGNAGE N.T.S



7 SAFE DISPERSAL AREA SIGN N.T.S



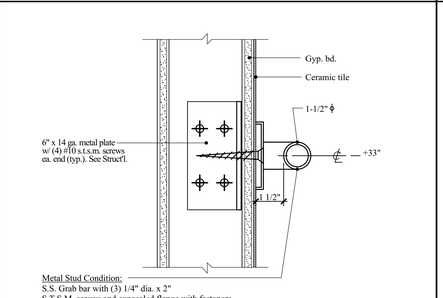
8 TOILET ROOM ACCESSORIES N.T.S



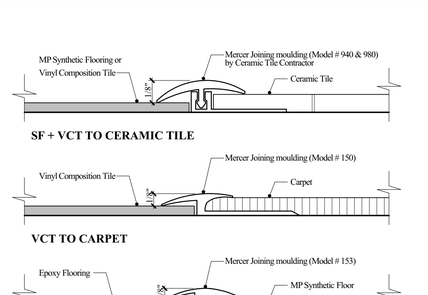
11 ROOM I.D. SIGNAGE N.T.S

12 CAPACITY SIGN N.T.S

13 MIRROR ANCHORAGE N.T.S

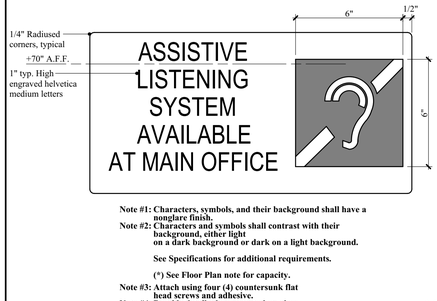


14 GRAB BAR ANCHORAGE N.T.S



15 TRANSITIONAL FLOOR MOULDINGS N.T.S

16 BLDG. ENTRANCE / ISA SIGNAGE N.T.S



17 ASSISTIVE LISTENING SYSTEM SIGNAGE N.T.S

GONZALEZ ARCHITECTS
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TEL: 559-497-1542 ARCHITECTURE PLANNING
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MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
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FILE NO.: 20-10 APPL. NO.: 02-121993

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RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

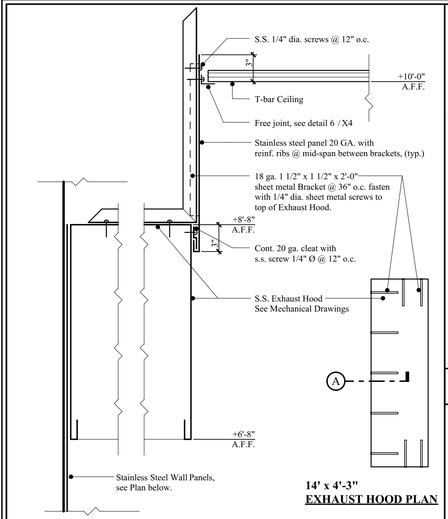
MARK	DATE	DESCRIPTION

PROJECT NO: 2318

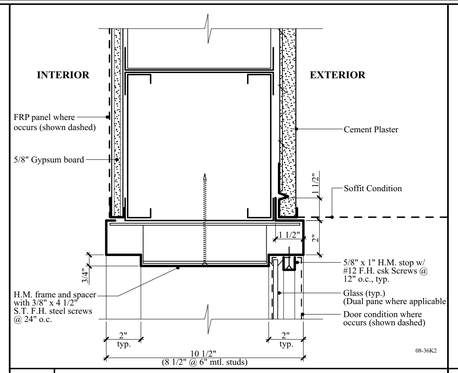
DATE: 4/12/2024

SHEET TITLE:
DETAILS

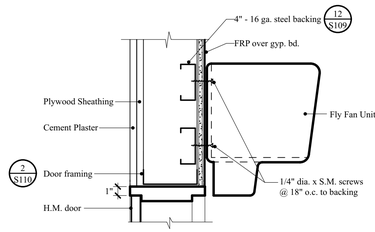
X2



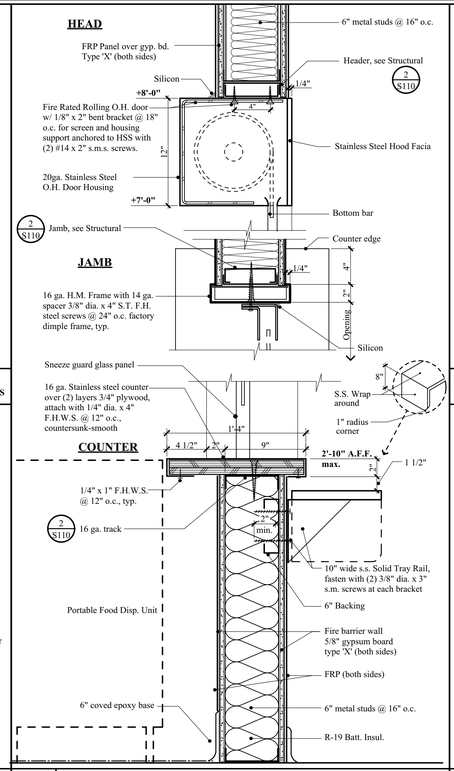
6 SS PANEL ATTACHMENT KITCHEN HOOD N.T.S



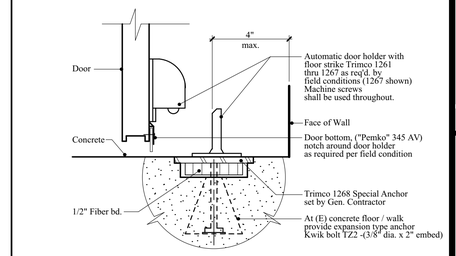
2 HEAD (JAMB SIMILAR) N.T.S



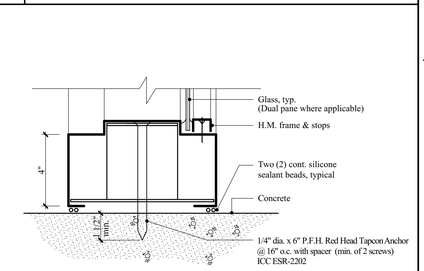
3 FLY FAN SUPPORT N.T.S



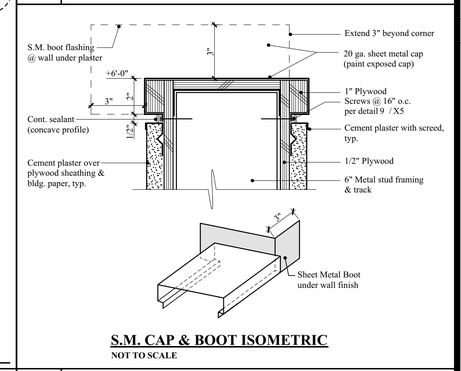
9 O.H. DOOR & COUNTER @ KITCHEN N.T.S



5 DOOR STOP / STRIKE N.T.S

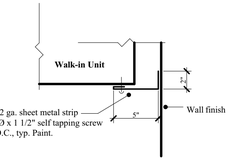


8 SILL @ INTERIOR N.T.S

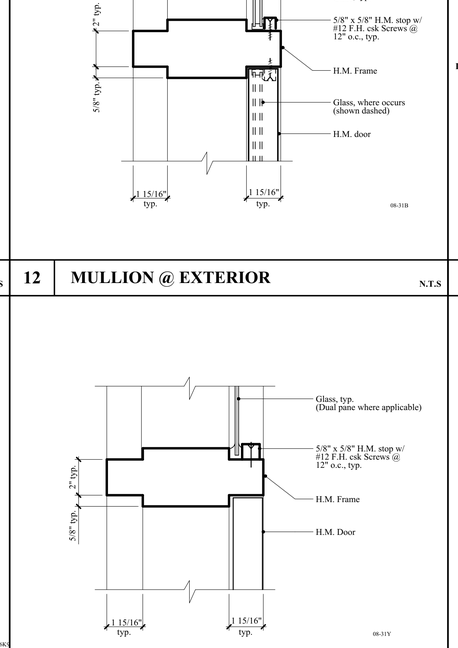


S.M. CAP & BOOT ISOMETRIC
NOT TO SCALE

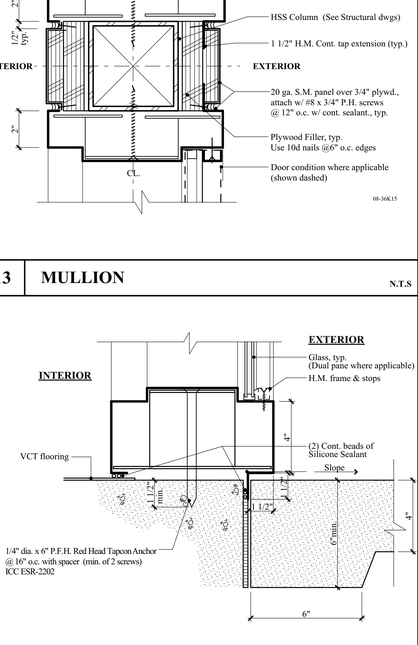
10 S.M. CAP @ LOW WALL N.T.S



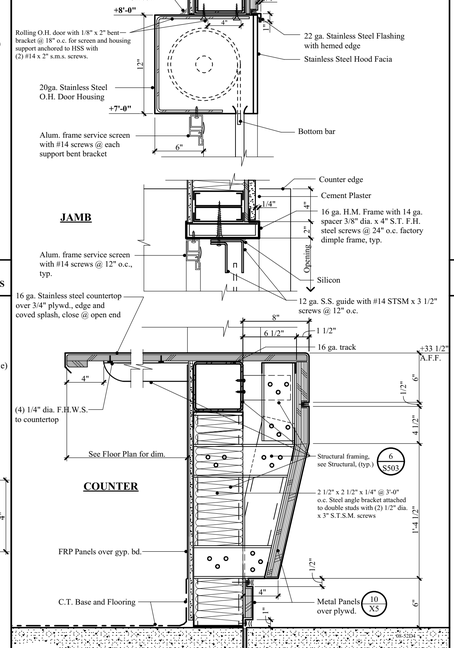
11 WALK-IN S.M. CLOSURE PANEL N.T.S



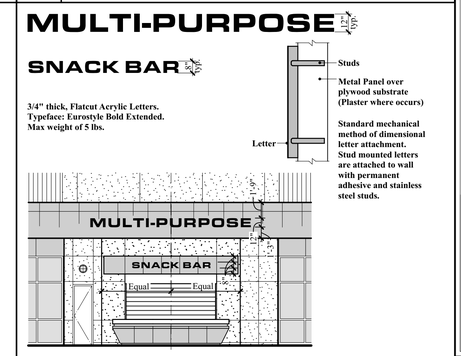
7 HEAD (JAMB SIM.) N.T.S



13 MULLION N.T.S



19 OH DOOR & COUNTER @ SNACK BAR N.T.S

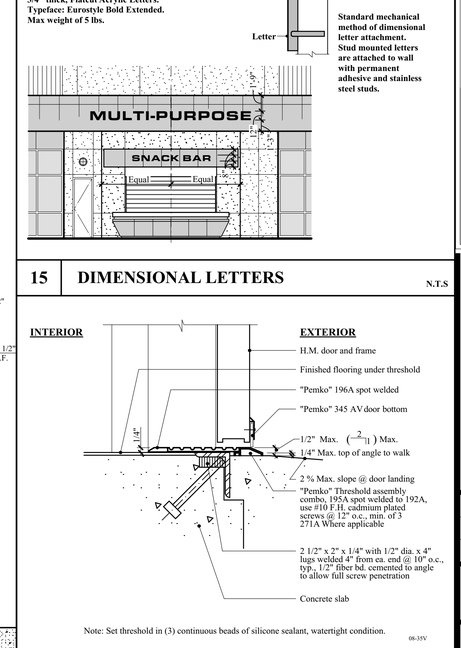


15 DIMENSIONAL LETTERS N.T.S

16 HEAD (JAMB SIM.) N.T.S

17 MULLION @ INTERIOR N.T.S

18 SILL @ EXTERIOR N.T.S



20 THRESHOLD N.T.S

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

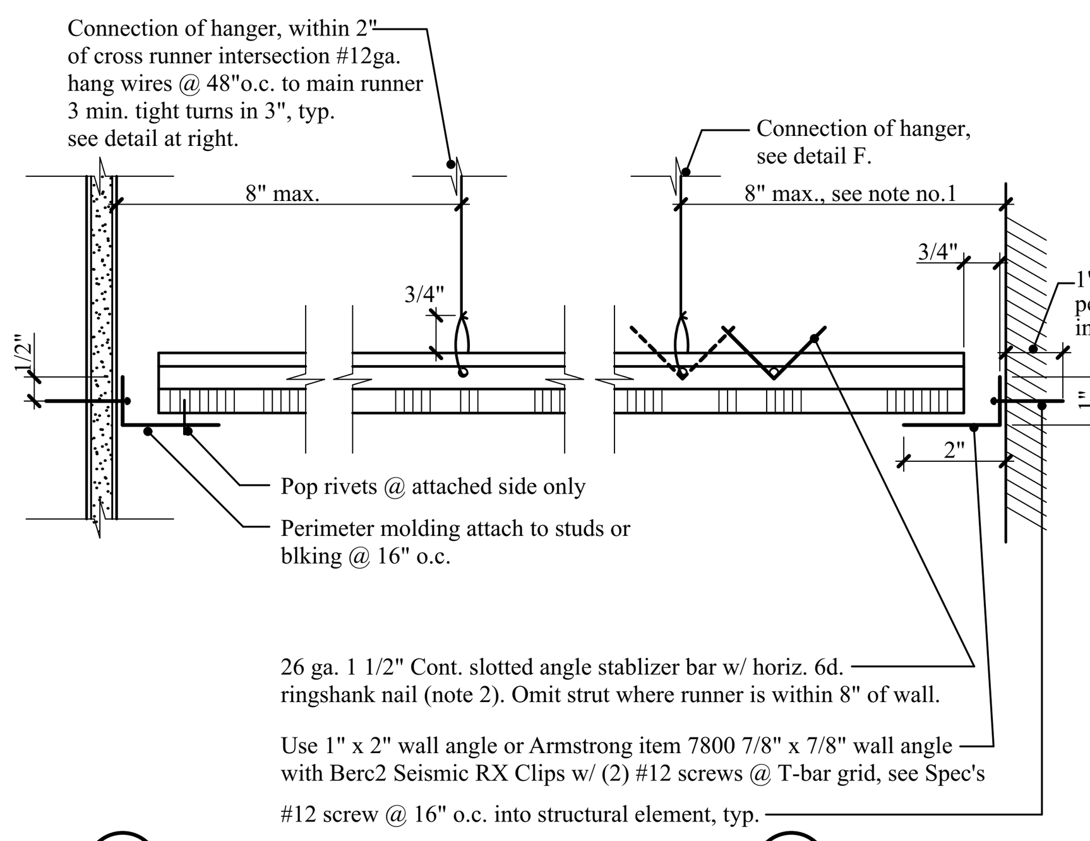
GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
DETAILS

X3

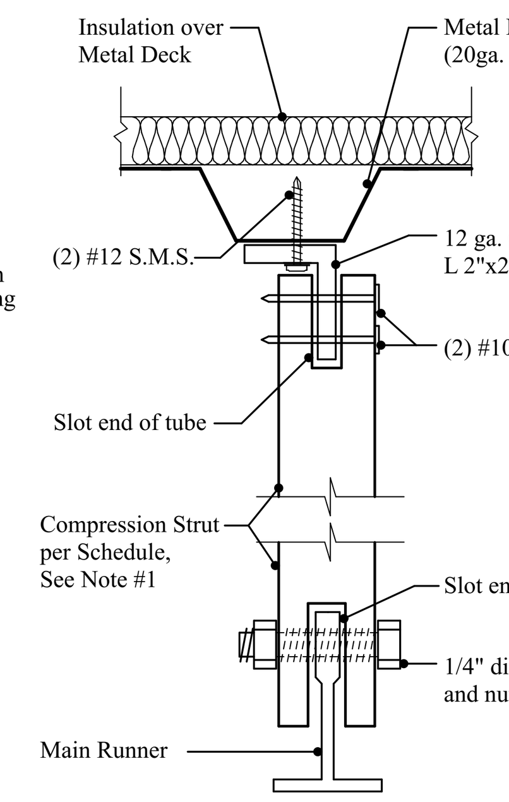


A ATTATCHED JOINT

B FREE JOINT

Note:

1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
2. NAILS AT ENDS OF HORIZONTAL STABILIZERS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTER LINE OF SPAN OF STRUT.



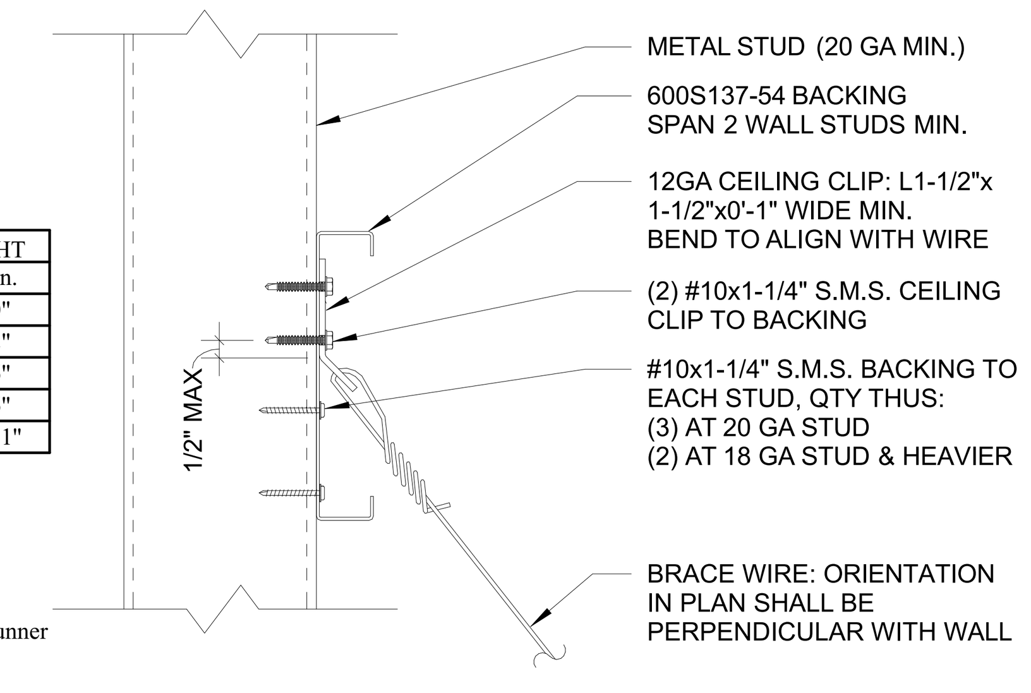
C COMPRESSION STRUT DETAIL

COMPRESSION STRUT SCHEDULE

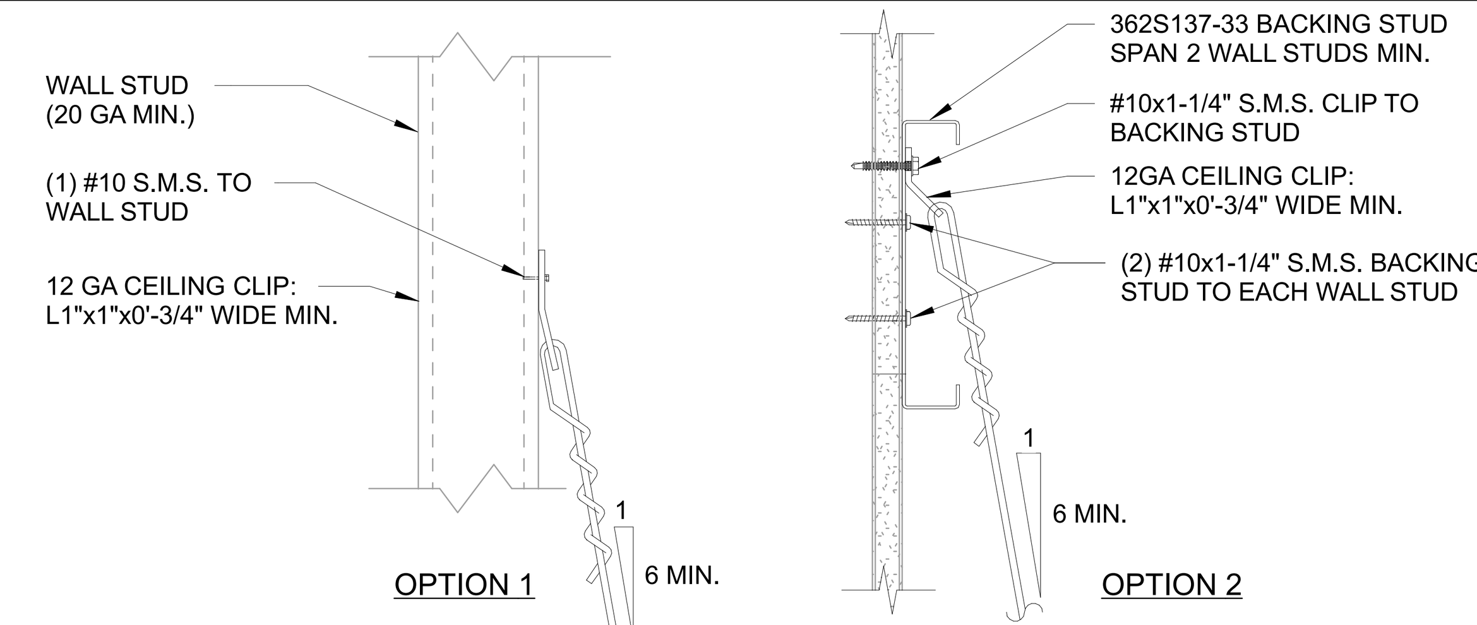
EMT Size	Area sq. in.	R in.	fa psi.	FA <4970	MAX. HEIGHT in.	MAX. HEIGHT ft. - in.
1/2"	0.088	0.238	1966	okay	48	4'-0"
3/4"	0.134	0.309	1291	okay	62	5'-2"
1"	0.198	0.392	874	okay	78	6'-6"
1 1/4"	0.295	0.511	586	okay	102	8'-6"
1 1/2"	0.342	0.593	506	okay	119	9'-11"

Note:

1. Locate not over 12'-0" o.c. ea. way and 4'-0" max. from any permanent wall.
2. One quarter of the length of end runner which ever is less.
3. Compression strut to be centered over intersection of main runner and cross runner.



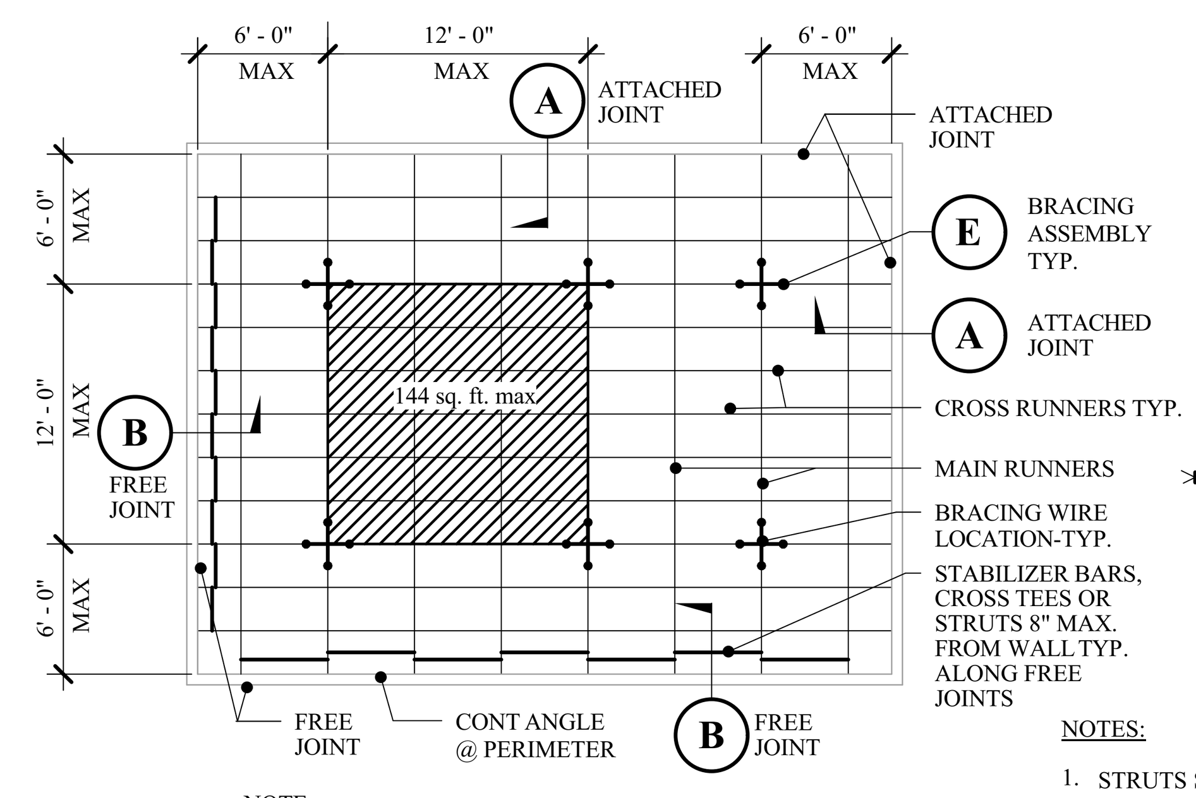
BRACE WIRE CONNECTION TO METAL STUD WALL



NOTES:

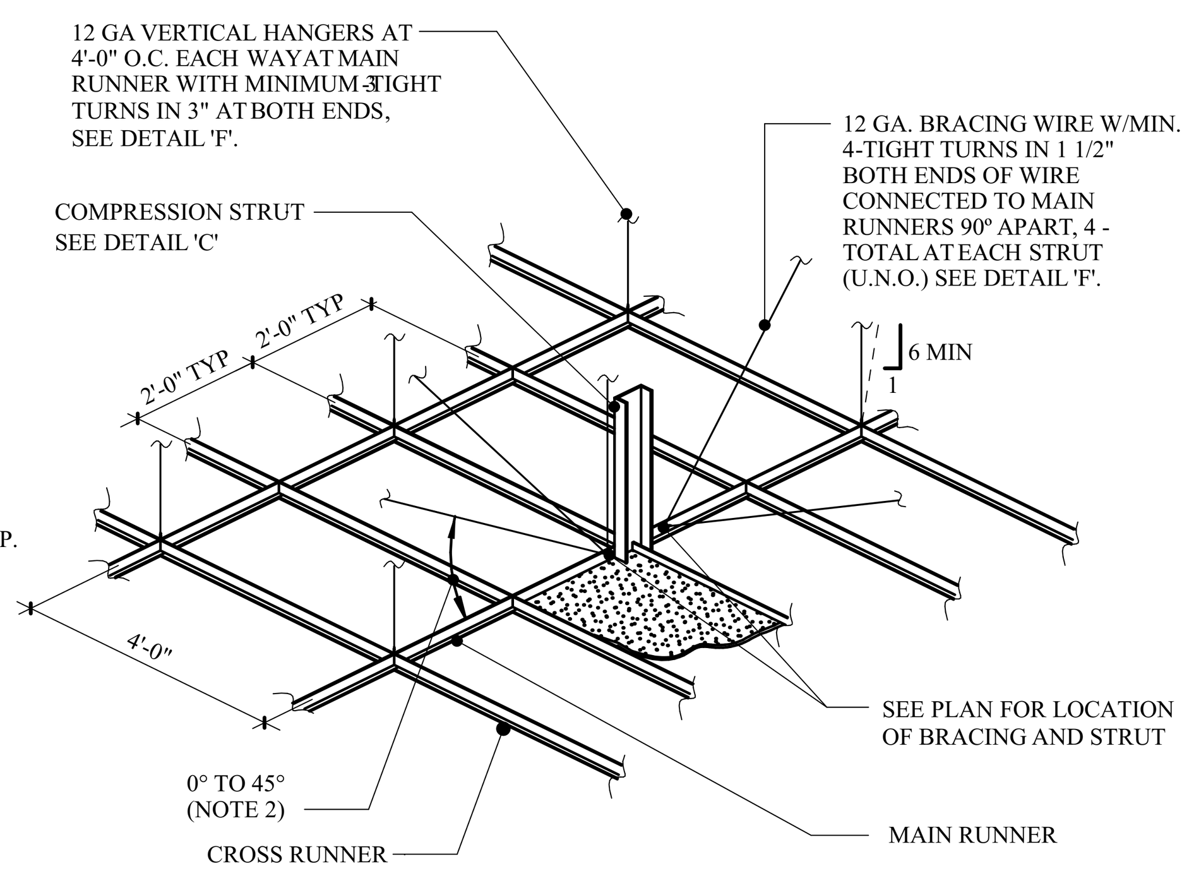
1. THIS DETAIL APPLIES AT PERIMETER WIRE ATTACHEMENT OR WHERE OBSTRUCTION PREVENTS ATTACHMENT TO THE STRUCTURE ABOVE.

HANGER WIRE CONNECTION TO METAL STUD WALL



NOTE:

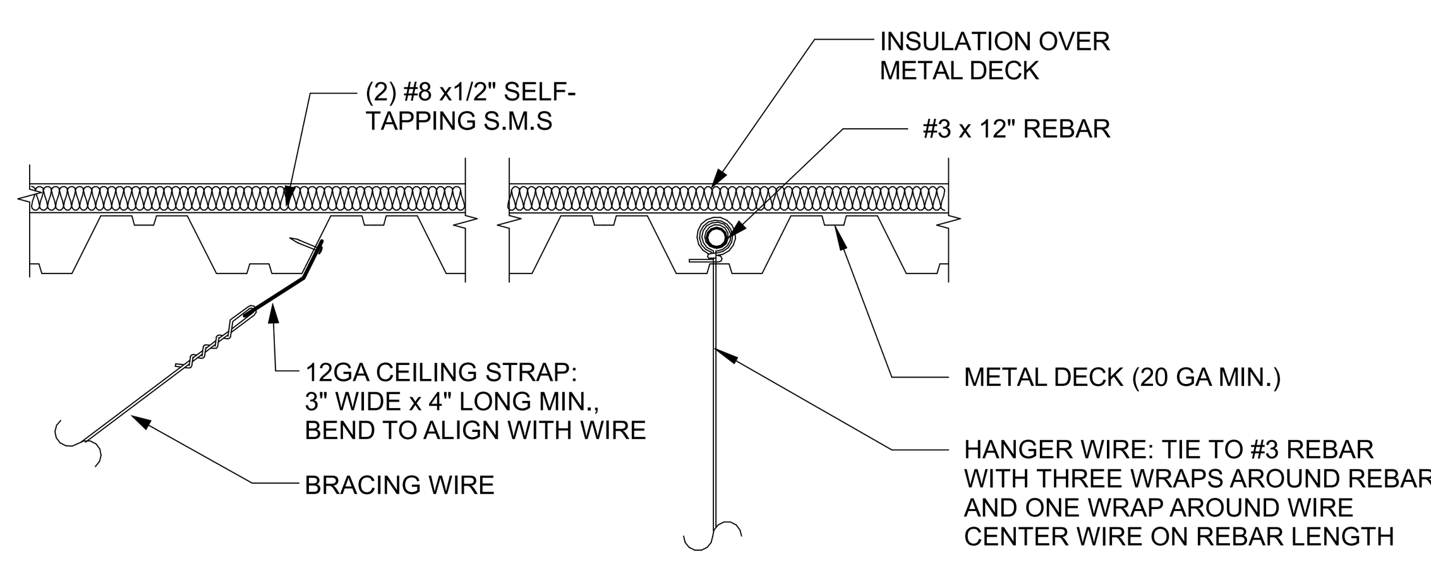
BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 144 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.



NOTES:

1. STRUTS SHALL NOT REPLACE HANGER WIRES.
2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.

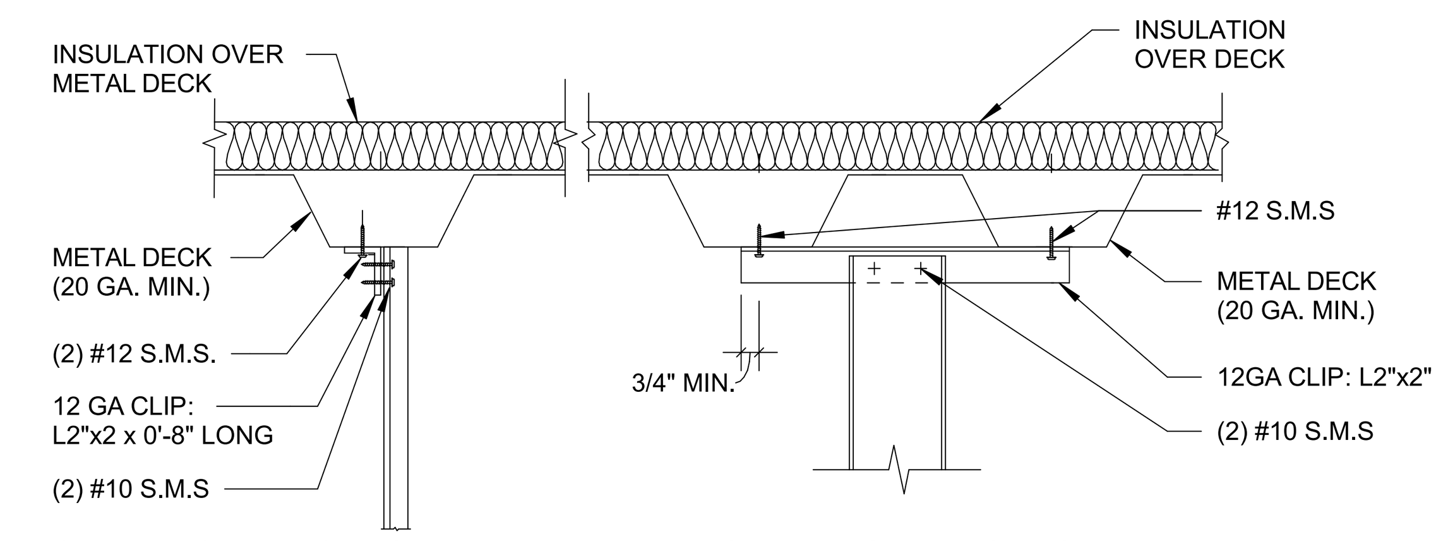
E BRACING ASSEMBLY



BRACE WIRE CONNECTION AT METAL DECK

HANGER WIRE CONNECTION AT METAL DECK

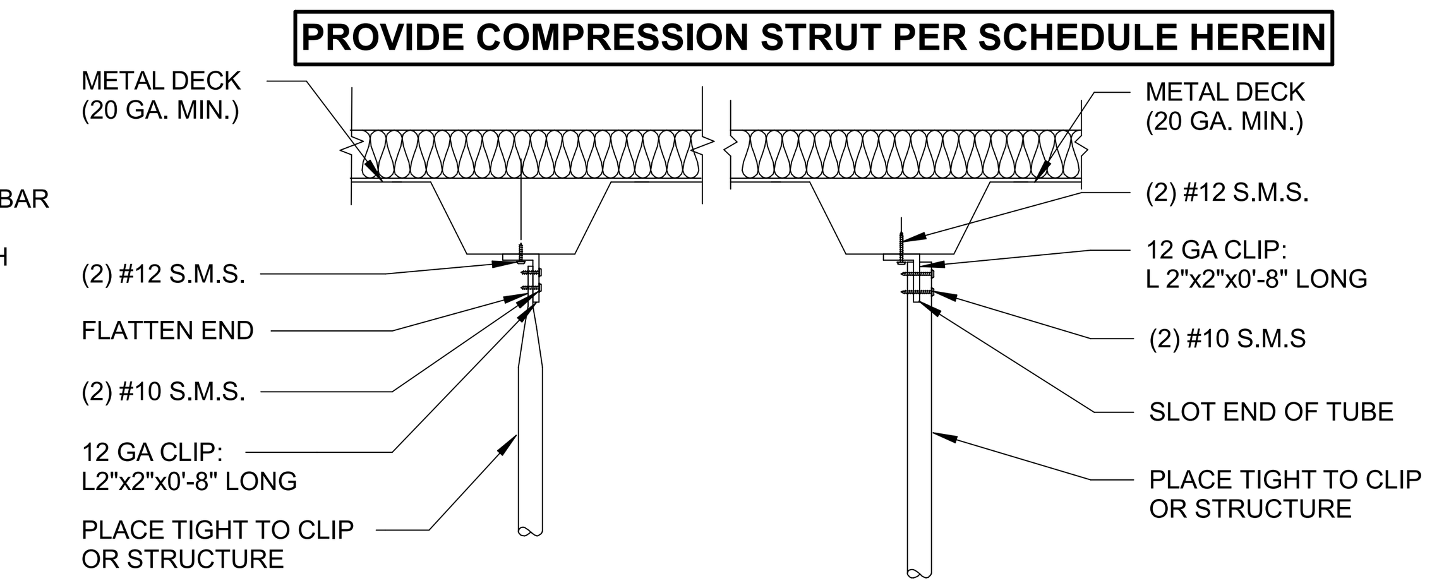
F HANGER CONNECTIONS



CHANNELSTRUT: OPTION 1

CHANNELSTRUT: OPTION 2

PROVIDE COMPRESSION STRUT PER SCHEDULE HEREIN



EMTSTRUT: OPTION 1

EMTSTRUT: OPTION 2

CEILING SYSTEM GENERAL NOTES

1. CEILING SYSTEM GENERAL NOTES:

1.01 Ceiling system components shall comply with ASTM C635-07 and Section 5.1 of ASTM E580-10a.
1.02 The ceiling grid system must be rated heavy duty as defined by ASTM C635-08.
1.03 Ceiling systems. See Specification.

1.04 Seismic Wall Clip: Seismic RX clips BERC 2
Evaluation Report ESR-1308; Manufacturer's Model 1200 System

1.05 Ceiling panels shall not support any light fixtures, air terminals or devices.
1.06 For ceiling installations utilizing acoustical tile panels of mineral or glass fiber, it is not mandatory to provide ¾" clearance between the acoustical tile panels and the wall on the sides of the ceiling which are free to slip. For all other ceiling panel types, provide ¾" clearance between the ceiling panel and the wall on the sides of the ceiling free to slip.

2. MATERIALS:

2.01 Ceiling wire shall be Class 1 zinc coated (galvanized) carbon steel conforming to ASTM A641-09a. Wire shall be #12 gage (0.106" diameter) with soft temper and minimum tensile strength = 70 ksi.
2.02 Galvanized sheet steel (including that used for metal stud and track compression struts/post) shall conform to ASTM A653-11, or other equivalent sheet steel listed in Section A2.1 of the North American Specification for the Design of Cold-Formed Steel Structural Members 2007, including supplement 2 dated 2010 (AISI S100-07/S2-10). Material 43 mil (18 gage) and lighter shall have minimum yield strength of 33 ksi. Material 54 mil (16 gage) and heavier shall have a minimum yield strength of 50 ksi.
2.03 Electrical metallic tube (EMT) shall be ANSI C80.3/UL 797 carbon steel with G90 galvanizing. EMT shall have minimum yield strength (Fy) of 30 ksi and minimum ultimate strength (Fu) of 48 ksi.

3. ATTACHMENT OF HANGER AND BRACING WIRES:

3.01 Separate all ceiling hanger and bracing wires at least six (6) inches from all unbraced ducts, pipes, conduit, etc.
3.02 Hanger and bracing wires shall not attach to or bend around obstructions including but not limited to: piping, ductwork, conduit and equipment.
3.03 Hanger wires that are more than one (horizontal) in six (vertical) out of plumb shall have counter-sloping wires.
3.04 Slack safety wires shall be considered hanger wires for installation and testing requirements.
3.05 Hanger and bracing wire anchorage to the structure shall be installed in such a manner that the direction of the anchorage aligns closely with the direction of the wire. (e.g. bracing wire ceiling clips must be bent as shown in the details and rotated as required to align closely with the direction of the wire, screw eyes in wood must be installed so they align closely with the direction of the wire, etc.)

4. FASTENERS AND WELDING:

4.01 Sheet metal screws shall comply with ASTM C1513-10, ASME B18.6.4-89 (R2005). Penetration of screws through joined material shall not be less than three exposed threads.
4.03 Power-Actuated Fasteners shall be: Refer to 8 / S101
4.04 If not otherwise specified in the evaluation report, power-actuated fasteners installed in steel shall be installed so the entire pointed end of the fastener is driven through the steel member.
4.05 Power-actuated fasteners in concrete are not permitted for bracing wires.

5. TESTING:

All field testing must be performed in the presence of the project inspector.

5.01 Post-installed anchors in concrete used to support hanger wires shall be tested at a frequency of 10 percent. Power actuated fasteners in concrete shall be field tested for 200 lbs. in tension. All other post-installed anchors in concrete shall be tested in accordance with CBC Section 1913A.7.
5.02 Post-installed anchors in concrete used to attach bracing wires shall be tested at a frequency of 50 percent in accordance with CBC Section 1913A.7.

6. LIGHT FIXTURES:

6.01 All light fixtures shall be positively attached to the ceiling suspension systems by
mechanical means to resist a horizontal force equal to the weight of the fixture. A minimum of two screws or approved fasteners are required at each light fixture, per ASTM E580, Section 5.3.1.
6.02 Surface-mounted light fixtures shall be attached to the main runner with at least two positive clamping devices. The clamping device shall completely surround the supporting ceiling runner and be made of steel with a minimum thickness of #14 gage. Rotational spring catches do not comply. A #12 gage slack safety wire shall be connected from each clamping device to the structure above. Provide additional supports when light fixtures are eight (8) feet or longer or exceed 56 lb. Maximum spacing between supports shall not exceed eight (8) feet.
6.03 Light fixtures weighing less than or equal to 10 lb. shall have a minimum of one (1) #12 gage slack safety wire connected from the fixture housing to the structure above.
6.04 Light fixtures weighing less than or equal to 10 lb. shall have a minimum of one (1)12 gage slack safety wire connected from the fixture housing to the structure above.
6.05 Light fixtures weighing greater than 10 lb. but less than or equal to 56 lbs. may be supported directly on the ceiling runners, but they shall have a minimum of two (2) #12 gage slack safety wires connected from the fixture housing at diagonal corners to the structure above. Exception: All light fixtures greater than two by four feet weighing less than 56 lbs. shall have a #12 gage slack safety wire at each corner.
6.06 All Light fixtures weighing greater than 56 lb. shall be independently supported by not less than four (4) taut #12 gage hanger wires (one at each corner) attached from the fixture housing to the structure above or other approved hangers. The four (4) taut #12 gage wires or other approved hangers, including their attachment to the structure above, shall be capable of supporting four (4) times the weight of the fixture.

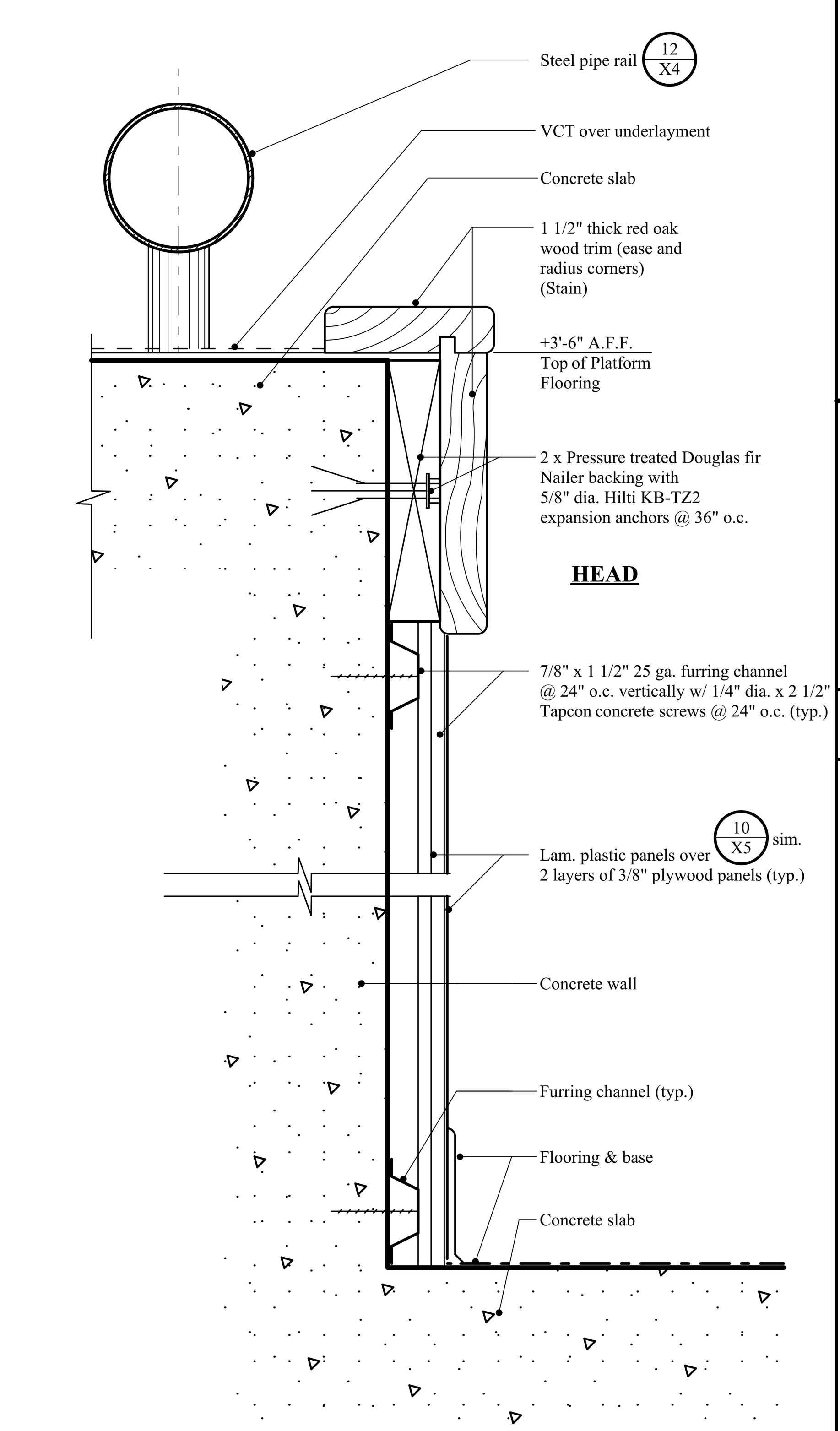
7. SERVICES WITHIN THE CEILING:

7.01 All flexible sprinkler hose fitting mounting brackets, ceiling-mounted air terminals or other services shall be positively attached to the ceiling suspension systems by mechanical means. Screws or approved fasteners are required. A minimum of two attachments are required at each component.
7.02 Ceiling-mounted air terminals or other services weighing less than or equal to 20 lb. shall have one (1) #12 gage slack safety wire attached from the terminal or service to the structure above.
7.03 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 20 lb. but less than or equal to 56 lb. shall have two (2) #12 gage slack safety wires (at diagonal corners) connected from the terminal or service to the structure above.
7.04 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 56 lb. shall be supported directly from the structure above by not less than four (4) taut #12 gage hanger wires attached from the terminal or service to the structure above or other approved hangers.

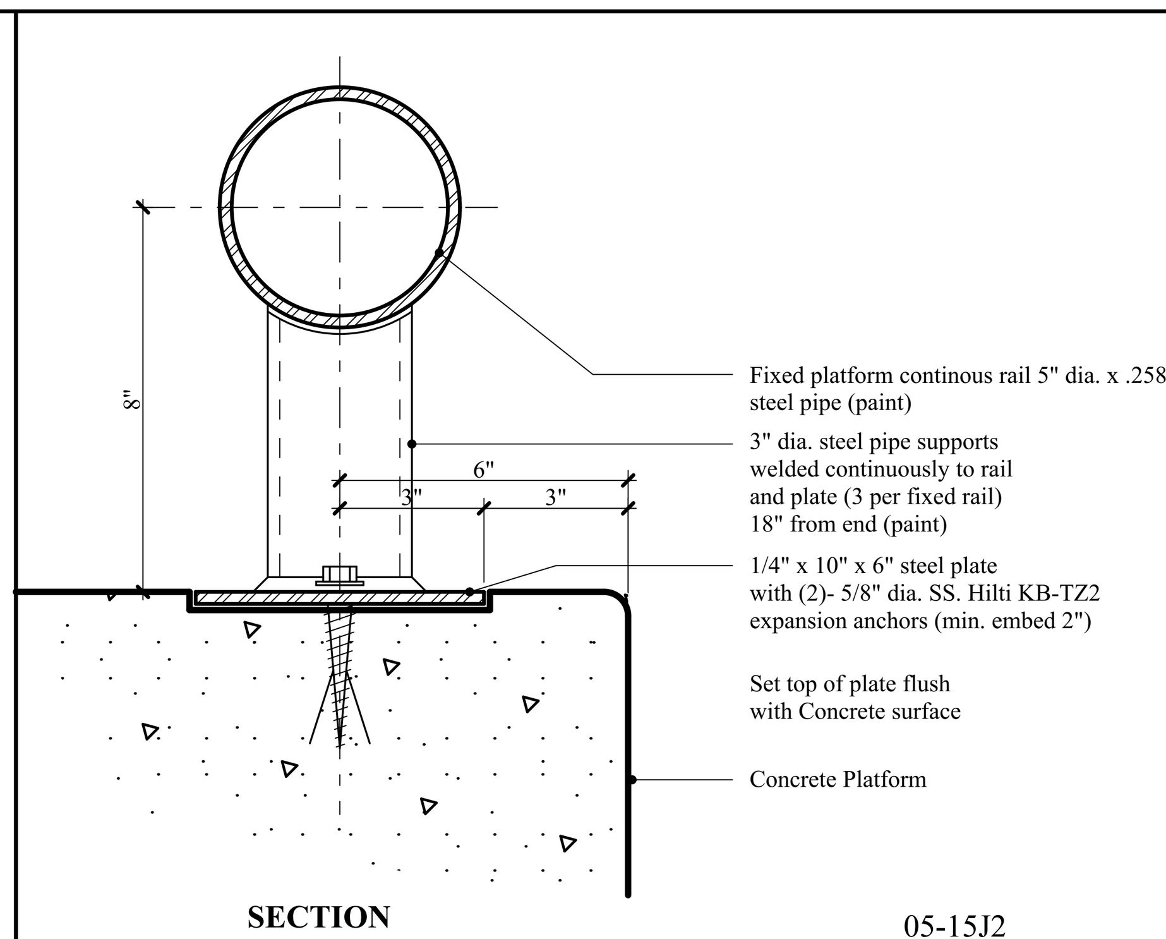
8. OTHER DEVICES WITHIN THE CEILING:

8.01 All lightweight miscellaneous devices, such as strobe lights, occupancy sensors, speakers, exit signs, etc., shall be attached to the ceiling grid. In addition, devices weighing more than 10 lbs. shall have a #12 gage slack safety wire anchored to the structure above. Devices weighing more than 20 lb. shall be supported independently from the structure above.

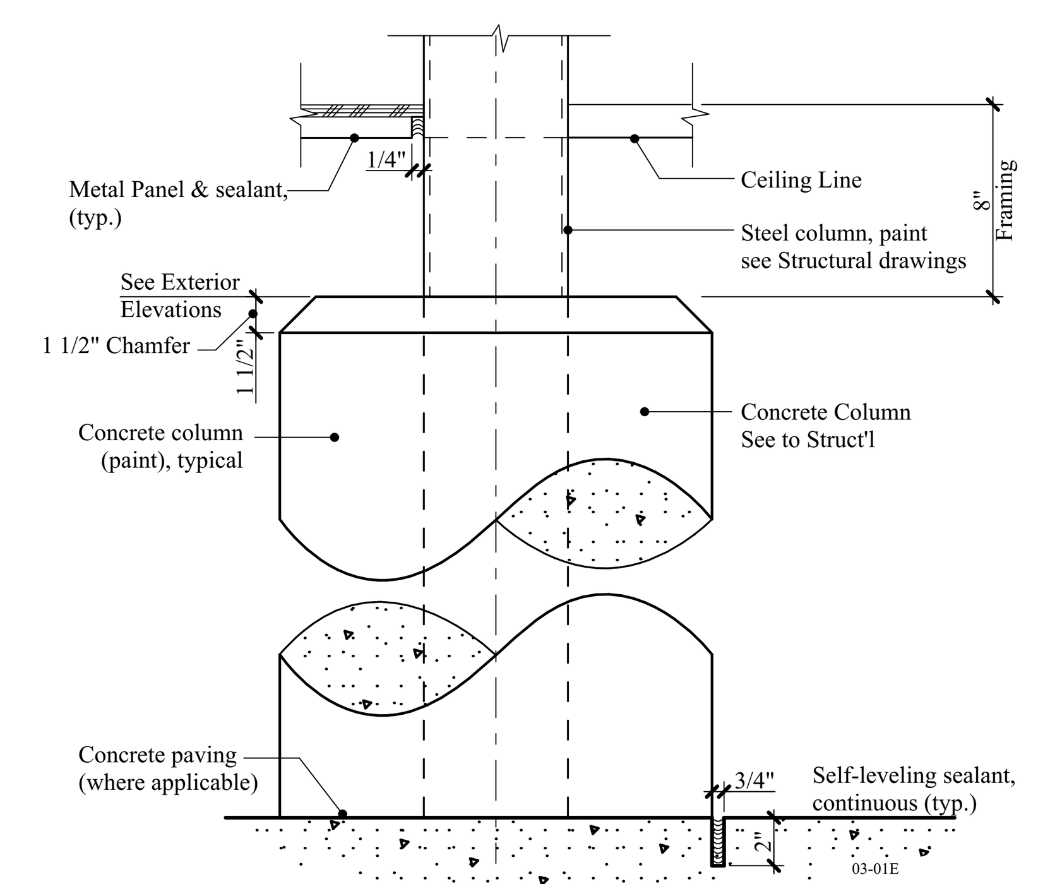
6 SUSPENDED ACOUSTICAL T-BAR CEILING DETAIL N.T.S.



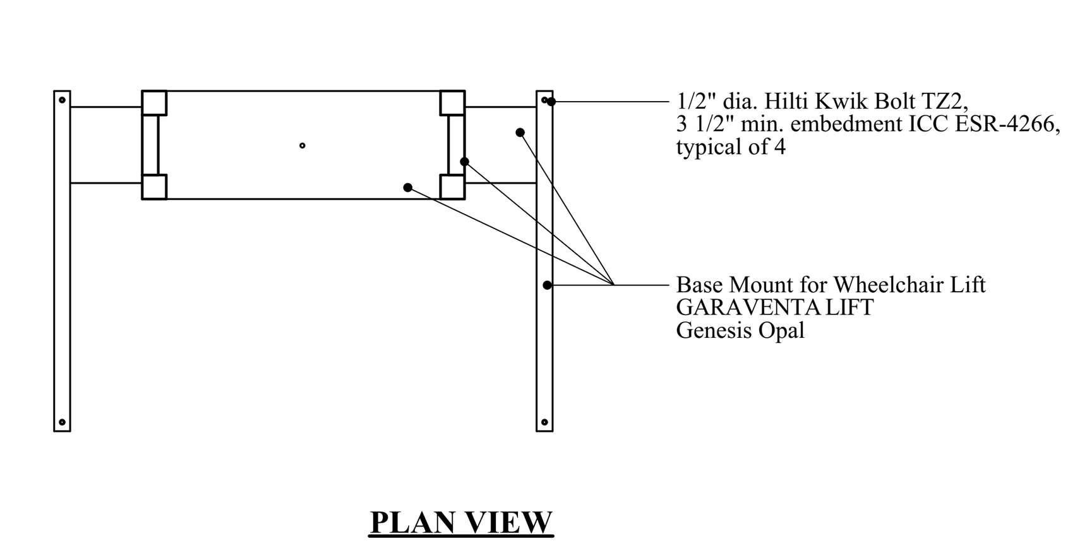
16 PLATFORM RAIL (INTERIOR) N.T.S



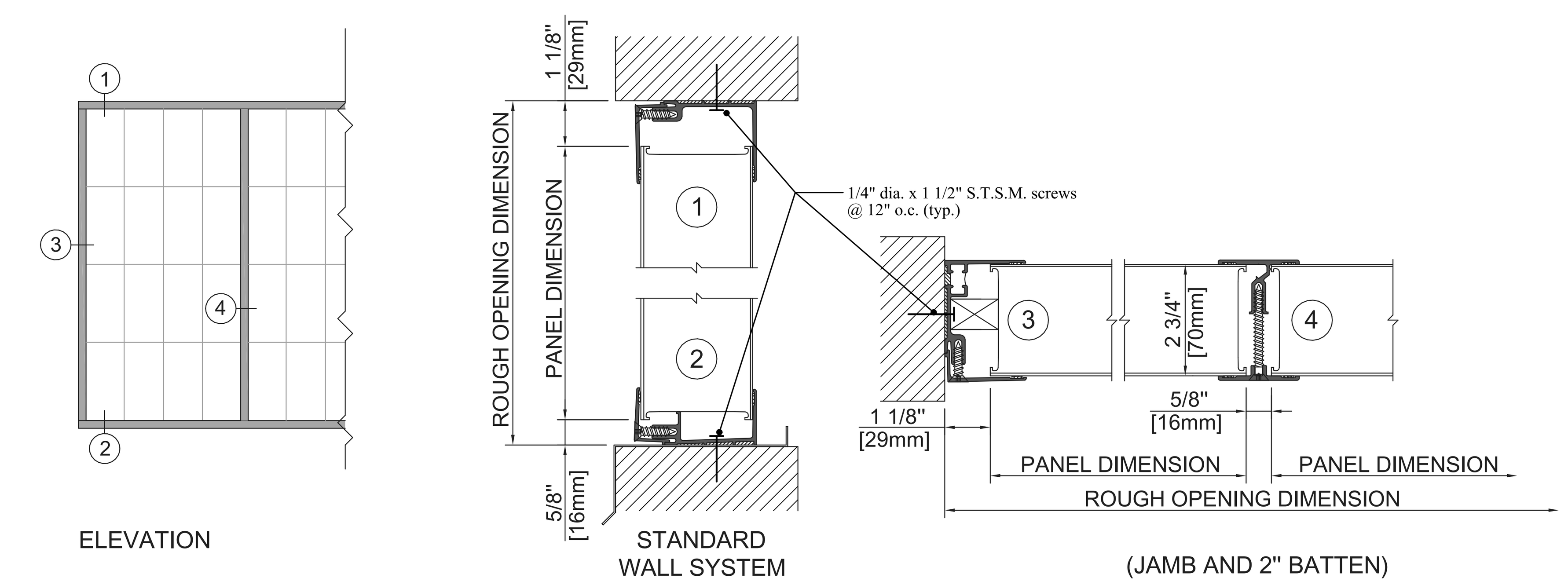
12 PLATFORM RAIL N.T.S



13 CONCRETE COLUMN N.T.S



17 WHEELCHAIR LIFT BASE MTG DETAIL N.T.S



19 STANDARD SYSTEM FOR 2 3/4 PANELS (70mm) WALL PANELS BY KALWALL N.T.S

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
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TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

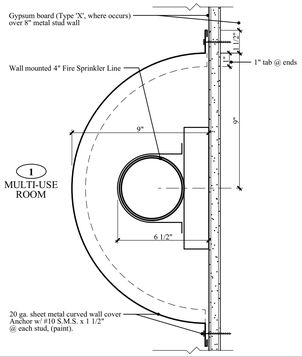
DATE: 4/12/2024

SHEET TITLE:

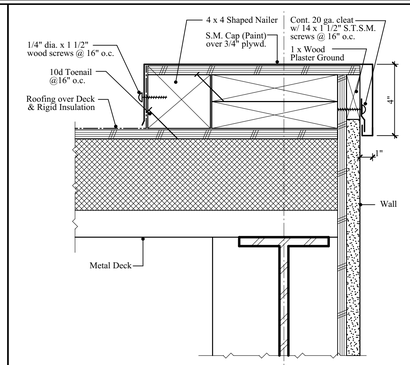
DETAILS

X4

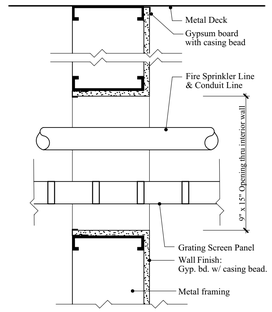
\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2.Working Dwgs Phase\BC_2318_Fairmead Multi-Purpose.pln



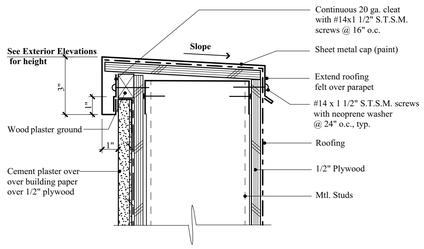
2 FIRE SPRINKLER LINE COVER N.T.S



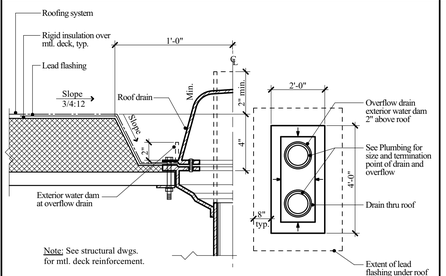
3 RAKE @ WALL CONDITION N.T.S



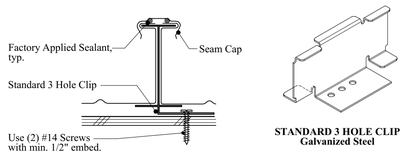
4 STEEL GRATING AT PASS THRU N.T.S



5 PARAPET CAP N.T.S

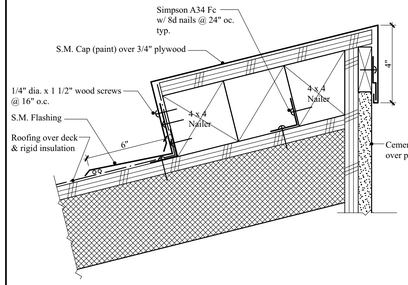


6 ROOF DRAIN N.T.S

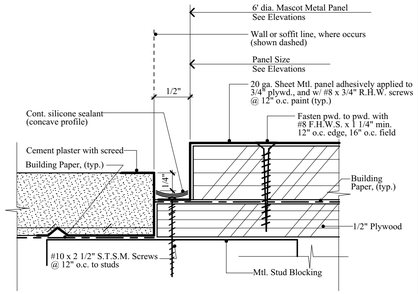


STANDARD 3 HOLE CLIP
Galvanized Steel

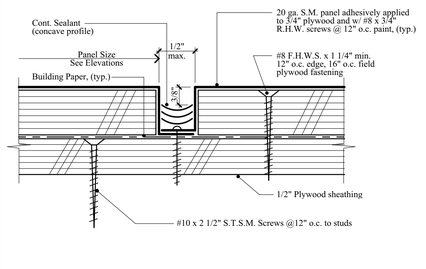
STANDARD 3 HOLE CLIP
Refer to Detail 15/X10 for Schematic Zone Roof Plan & Anchoring Data



8 RIDGE N.T.S

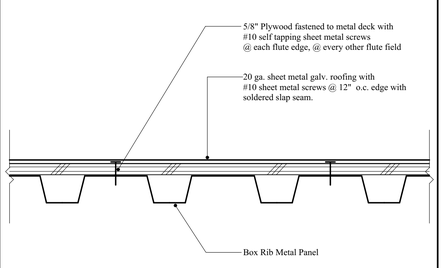


9 METAL PANEL TO C.P. + MASCOT M.P. N.T.S

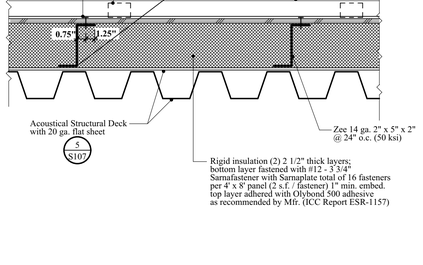


09-33J

10 METAL PANELS N.T.S



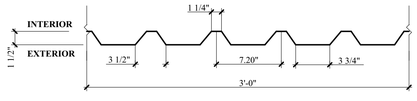
11 SHEET METAL PANELS @ ROOF N.T.S



12 Z PURLIN N.T.S

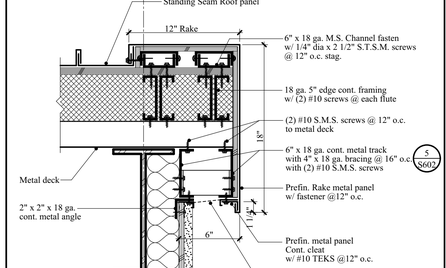
1. The Metal Box Rib Deck Shall 1 1/2" x 20ga. BR5-36 Panel by Centria Manufacturing or equal (T Min. = 0.159 in. S = 0.193 in.)

The Deck shall be formed from Steel Sheets conforming to ASTM A446, Grade A Specification. The Galvanized Coating shall conform to ASTM A525 G60 Specifications.

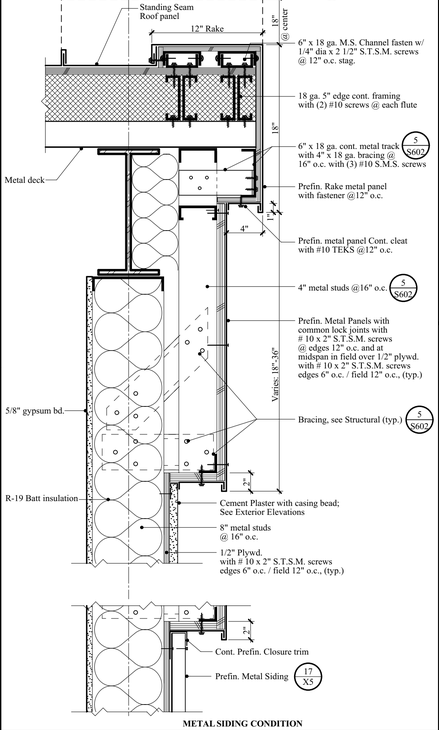


Box Rib Metal Panel

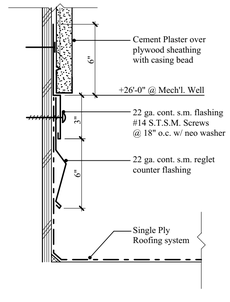
13 CENTRIA BR5-36 PANEL PROFILE N.T.S



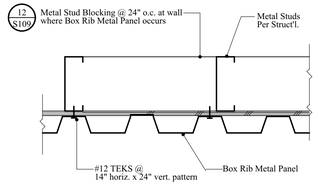
19 RAKE DETAIL N.T.S



20 RAKE DETAIL N.T.S

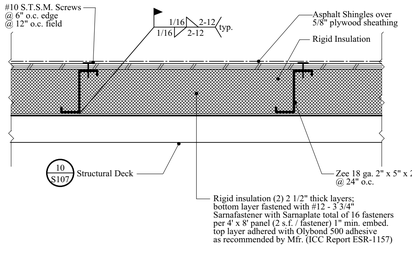


16 REGRET FLASHING @ SPR N.T.S



CENTRIA BR5-36 METAL PANELS

17 WALL PANEL FASTENING N.T.S



18 Z PURLIN @ SHINGLE ROOF N.T.S

GONZALEZ ARCHITECTS
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FRESNO CALIFORNIA 93711 TEL: 559-497-1542
JUAN M. GONZALEZ, A.I.A. FAX: 559-497-1549

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
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PROJECT NO: 2318

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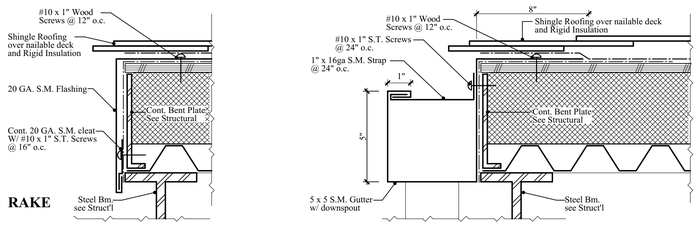
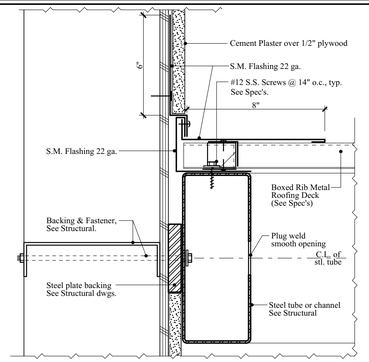
SHEET TITLE:
DETAILS

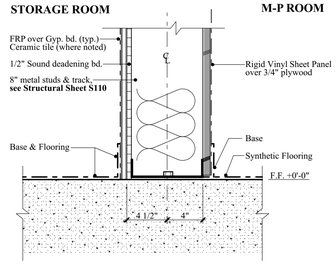
X5



1 O.H. & GUTTER N.T.S



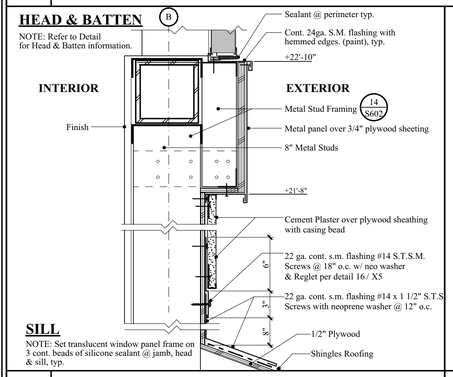
3 S.M. FLASHING @ METAL ROOF N.T.S



4 INTERIOR WALL BASE N.T.S

HEAD & BATTEN

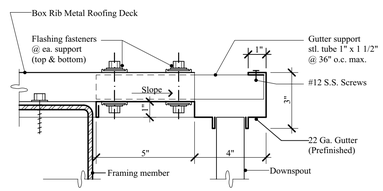
NOTE: Refer to Detail for Head & Batten information.



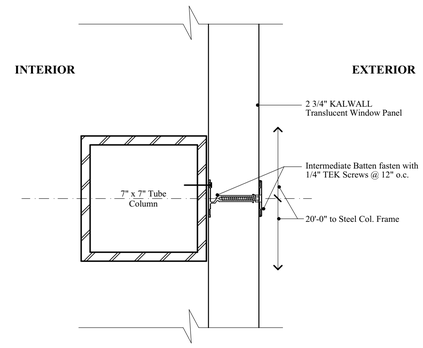
SILL

NOTE: Set translucent window panel frame on 3 cont. beads of silicone sealant @ jamb, head & sill, typ.

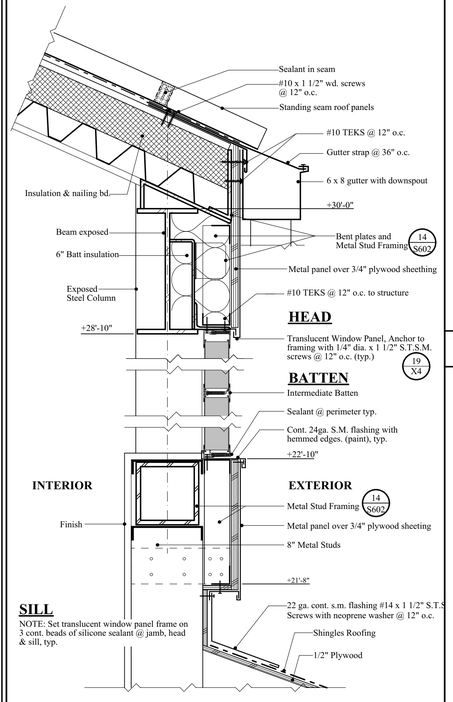
6 TRANSLUCENT PANEL SILL @ GL 'B' N.T.S



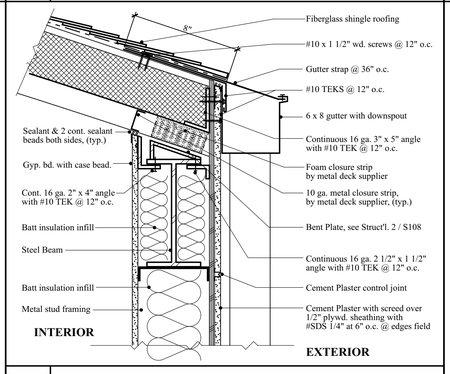
7 GUTTER N.T.S



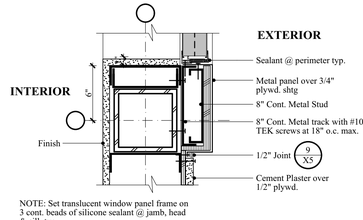
8 PLAN SECTION @ COLUMN N.T.S



16 EAVE & TRANSLUCENT PANEL N.T.S

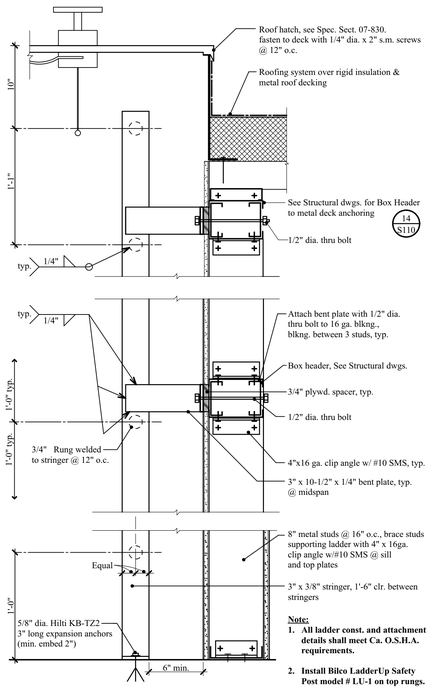


12 EAVE N.T.S

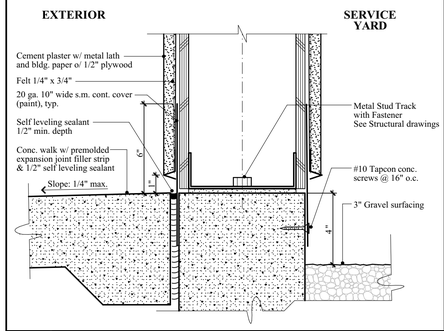


NOTE: Set translucent window panel frame on 3 cont. beads of silicone sealant @ jamb, head & sill, typ.

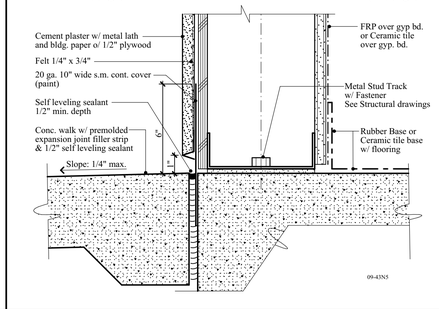
17 TRANSLUCENT PANEL JAMB N.T.S



18 LADDER & ROOF HATCH N.T.S



14 EXTERIOR WALL BASE @ LOW WALL N.T.S



19 EXTERIOR WALL BASE N.T.S

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

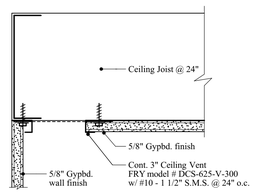
MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

PROJECT NO: 2318

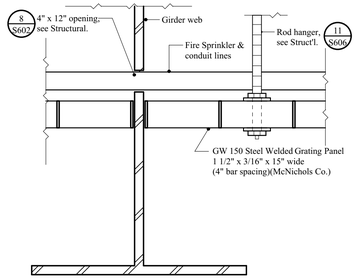
DATE: 4/12/2024

SHEET TITLE:
DETAILS

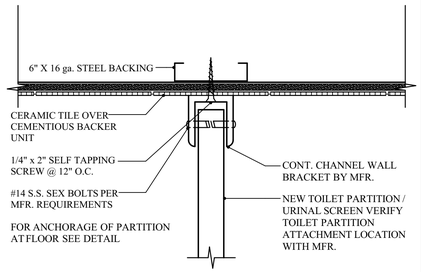
X6



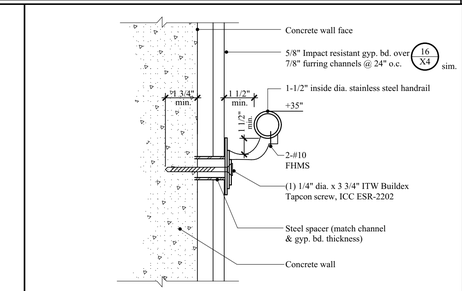
1 CEILING VENT N.T.S



2 GRATING SCREEN N.T.S



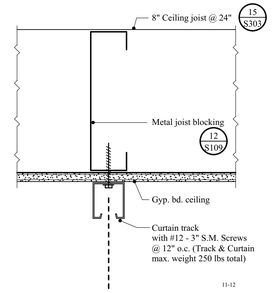
TOILET PARTITION WALL ANCHORAGE



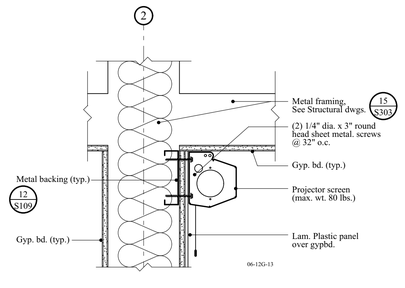
Note:
1. Wall Bracket: Julius Blum S.S. #220 spaced 6' o.c. max.
2. 1-1/2" I.D. stainless steel pipe railing Julios Blum & Co.

05-17F3

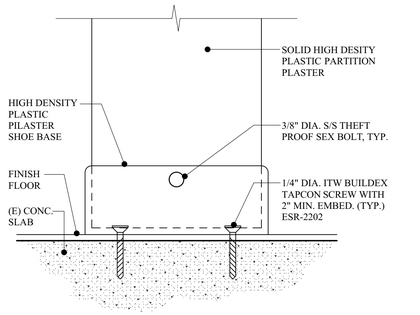
5 HANDRAIL @ CONC. WALL N.T.S



6 CURTAIN TRACK N.T.S

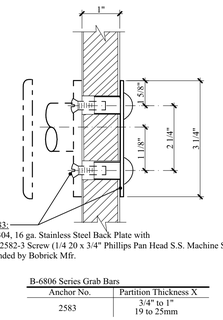


7 PROJECTOR SCREEN N.T.S



TOILET PARTITION FLOOR ANCHORAGE

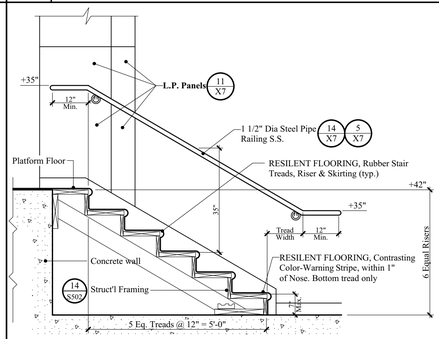
8 PARTITION WALL / FLOOR ANCHORAGE N.T.S



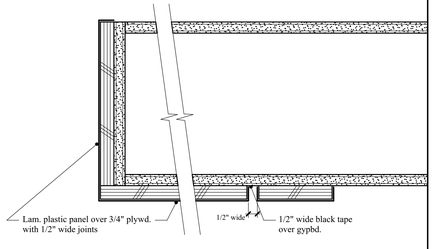
B-6806 Series Grab Bars

Anchor No.	Partition Thickness X
2583	3/4" to 1" 19 to 25mm

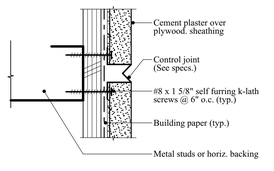
9 GRAB BAR @ PARTITION N.T.S



10 PLATFORM STEPS AND RAILING N.T.S



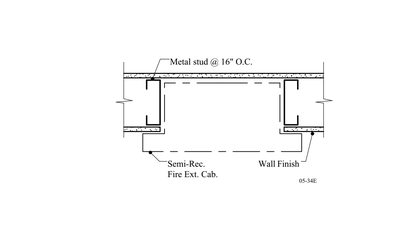
11 L.P. PANEL (JAMB / HEAD, SIM.) N.T.S



CONTROL JOINT
A

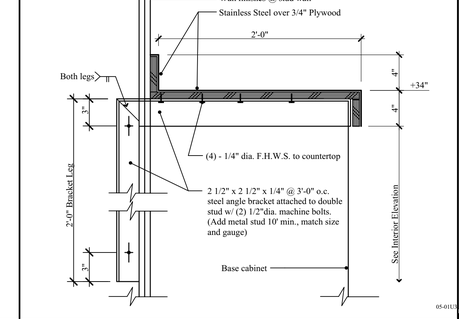
09-29H

12 CEMENT PLASTER N.T.S



05-34E

13 SEMI-RECESSED FIRE EXTINGUISHER N.T.S



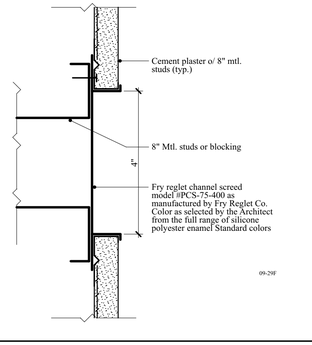
Note:
1. Wall Bracket: Julius Blum S.S. #220 spaced 6' o.c. max.
2. 1-1/2" I.D. stainless steel pipe railing Julios Blum & Co.

05-17F3

14 HANDRAIL (METAL) N.T.S

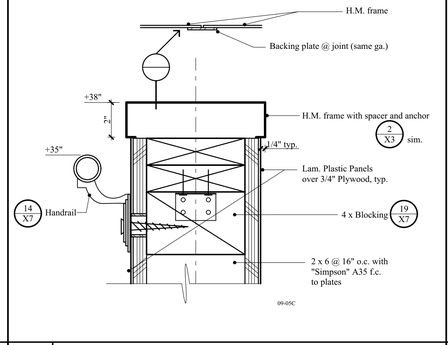
05-01U

15 COUNTERTOP SUPPORT BRACKET N.T.S



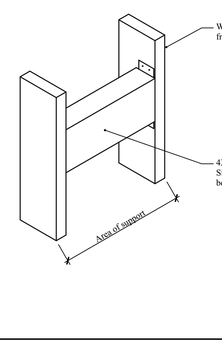
09-29F

17 CEMENT PLASTER REVEAL N.T.S

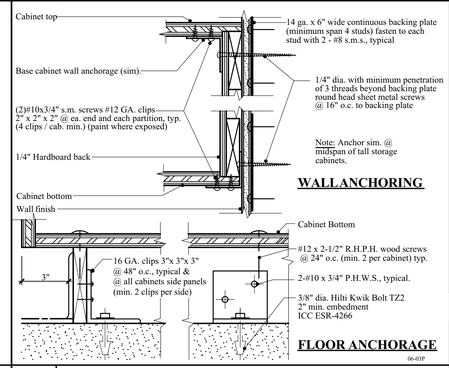


09-05C

18 H.M. WALL CAP N.T.S



19 WOOD BACKING N.T.S



06-03P

20 CASEWORK ANCHORAGE N.T.S

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

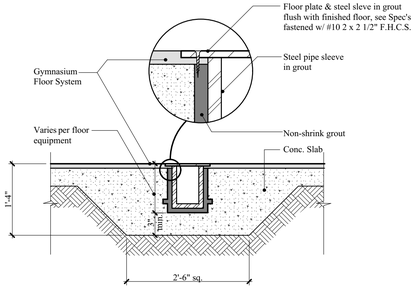
PROJECT NO: 2318

DATE: 4/12/2024

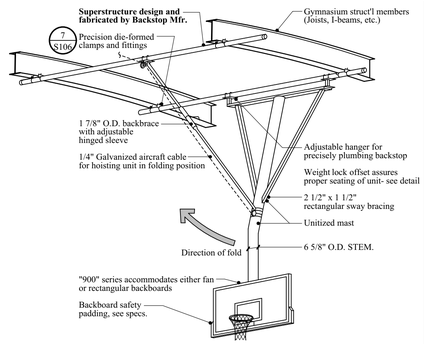
SHEET TITLE:
DETAILS

X7

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Mult-Purpose Bldg\2 Working Dwgs Phase\BC_2318_Fairmead Multi-Purpose.pln

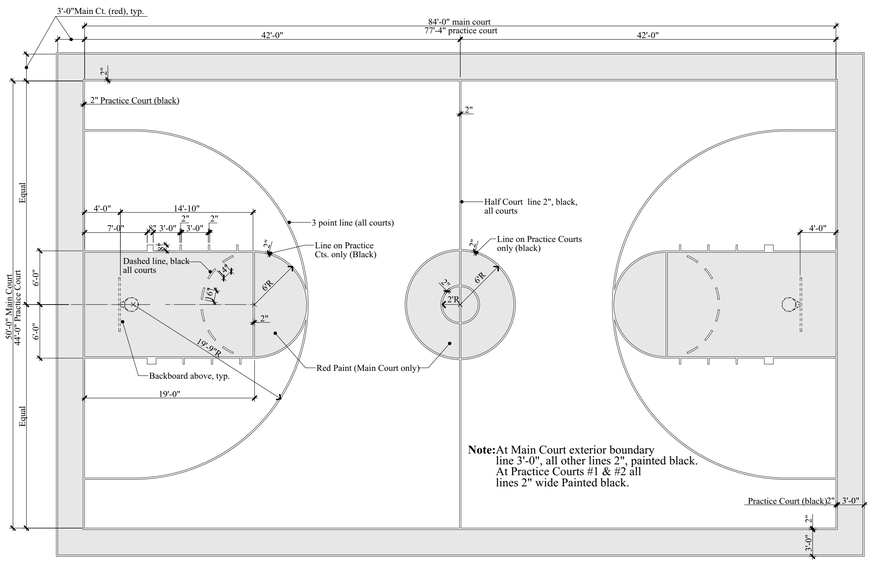


1 **SLEEVE & FLOOR PLATE** N.T.S



NOT PART OF DSA REVIEW FOR BACKSTOP ASSEMBLY

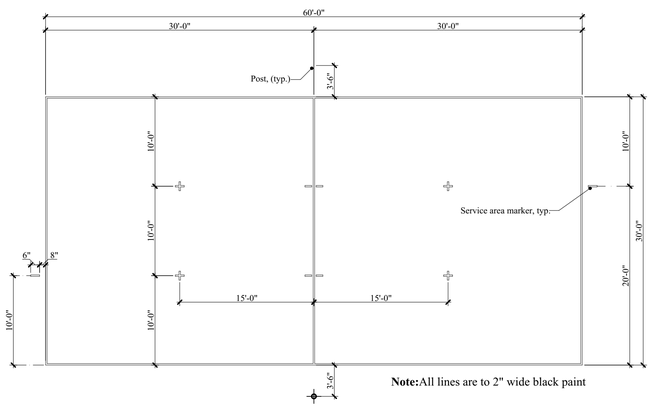
4 **BACKSTOP ASSEMBLY** N.T.S



Note: At Main Court exterior boundary line 3'-0", all other lines 2", painted black. At Practice Courts #1 & #2 all lines 2" wide Painted black.

TYPICAL BASKETBALL COURT

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



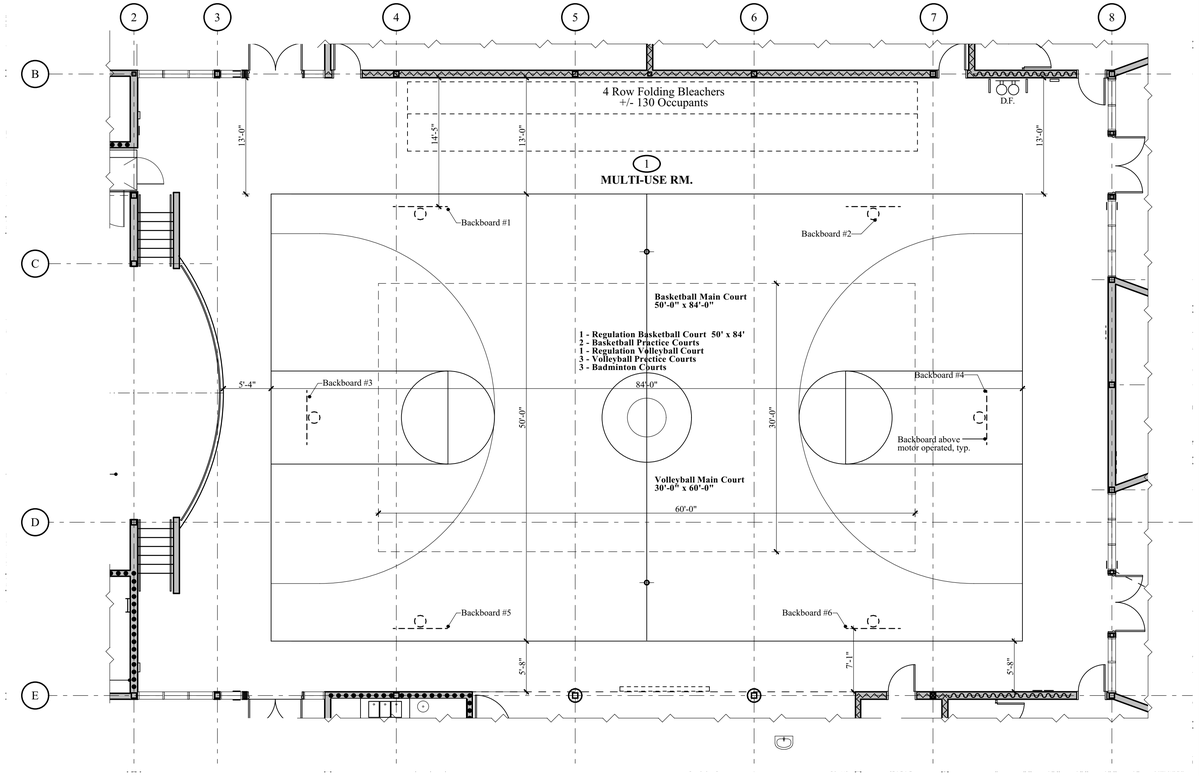
Note: All lines are to 2" wide black paint

TYPICAL VOLLEYBALL COURT

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

PLAYCOURT NOTES:

1. Floor plan show a total 7 game courts:
   3 basketball courts
   4 volleyball courts
   Also shown are the locations for the basketball backboards and floor anchor inserts. Typical Game Court layouts are shown for each court type shown on the floor plan. The layouts provide information and clarify the line work required for each court. It is intended that the Main Basketball Court lines shall dominate all other lines. They will interrupt any other lines which cross or are coincident with them.
   It is intended that the Basketball Court lines shall dominate all the lines of the Volleyball court. They shall interupt these lines when they cross or are coincident with them.
2. Basketball backboards (6 total). see the specifications for complete information. All backboards shall be positioned correctly over the respective courts. Shop Drawings req'd.
3. ⊕ Indicates the location for post (Supplied by the Owner) for which this contractor shall install floor anchor inserts (Supplied by the Owner); See specifications.
4. Colors noted are used as guidelines only; Architect to select final Court layout colors.



NORTH

COURT LAYOUT PLAN

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

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

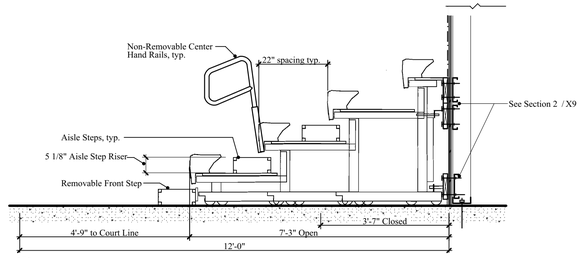
ARCHITECTS
GONZALEZ
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

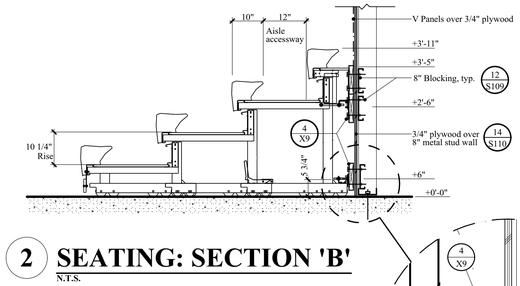
SHEET TITLE:
COURT LAYOUT PLAN

X8



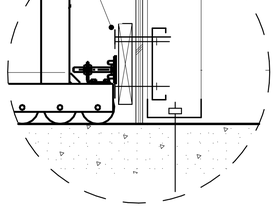
1 SEATING: SECTION 'A'

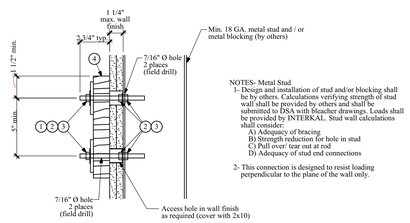
N.T.S.



2 SEATING: SECTION 'B'

N.T.S.





ITEM	DESCRIPTION	PART NO.
1	Ø3/8-16 x 6" threaded rod	163352
2	3/8 Flat washer .438 x 1.00 x .083	602153
3	3/8-16 Keps nut	601629
4	2 x 10 - S. Pine MSR 1800F-1.6E or better (field cut to length)	519849

3

4 WALLANCHORAGE - METAL STUD

CONSTRUCTION SITE SAFETY PLAN

MULTI-PURPOSE BLDG. @ FAIRMEAD E.S.
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
DSA # 02-121993

CONTACTS		
District Safety Director	Michael Alvarez, M & O Director	
Project Number	DSA # 02-121993	
Site/Project Name	Multi-Purpose Bldg. @ Fairmead E.S.	
Site Address/Location	19421 Ave. 22 3/4, Chowchilla, CA.	
Training	Comply with CFC 3303.1.1	
DISTRICT SITE CONTACT		
Name	Michael Alvarez, M & O Director	
Phone	(209) 509-7654	
EMERGENCY CONTACTS		
Contact	**Name**	**Phone Number**
Local Police	Chowchilla Police Department	911
Local Ambulance		911
Local Fire Department	Chowchilla Fire Department	911
Local Hospital	Madera Community Hospital 1250 East Almond Ave. Madera, CA 93637	(559) 675-5555

PROCEDURES EMERGENCY REPORTING

1. Construction personnel shall report all emergencies to Site Safety Director. Site Safety Director shall contact local agencies.

FIRE DEPARTMENT ACCESS

1. Fire access route off Maple Street & Road 19 1/2.
2. Fire apparatus access roads required by Section 3311 are maintained clear of obstructions that reduce the width of the usable roadway to less than 20 feet.

LOCATION OF FIRE PROTECTION EQT & FIRE HYDRANTS

1. Fire protection equipment & fire extinguisher are located within construction office trailer.
2. Fire Hydrants located off Maple Street & Road 19 1/2.

SMOKING & COOKING POLICIES

1. Smoking and cooking on-site is prohibited at all times.

TEMPORARY HEATING EQT. & WIRING

1. Temporary heating equipment is located in Contrator office trailer.
2. Use of temporary heating shall be coordinated with Construction Field Superintendent and District Safety Director.
3. Temporary heating equipment is maintained away from combustible materials in accordance with the equipment manufacturer's instructions.
4. Ascertain temporary wiring does not have exposed conductors.

HOT WORK PERMIT

1. Not Applicable.

COMBUSTIBLE WASTE MATERIAL

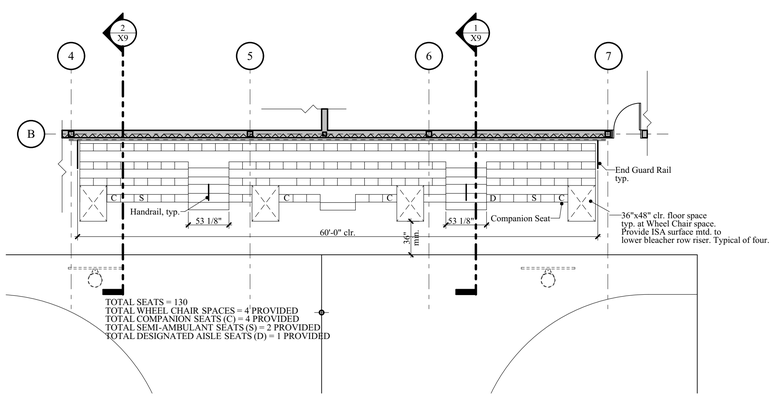
1. All combustible waste material shall be stored daily within enclosed metal waste containers.
2. Combustible debris, rubbish and waste material is removed from the building in areas where work is not being performed.

HAZARDOUS MATERIALS STORAGE

1. Hazardous materials, flammable and combustible liquids shall be stored in State of California approved containers; containers shall be located onsite in an approved safe secured location approved by District Safety Director.

SITE SECURITY

1. Construction area shall be enclosed within a temporary 6' high chain link fennce with utility lockable gates; maintain site locked at all times to prevent intrusion.



NOTE: DSA REVIEW IS NOT REQUIRED PER IR A-22

NORTH

TELESCOPE SEATING PLAN

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

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

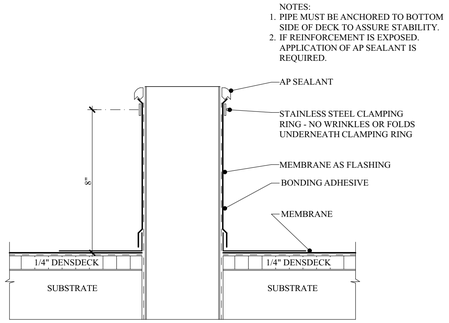
GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

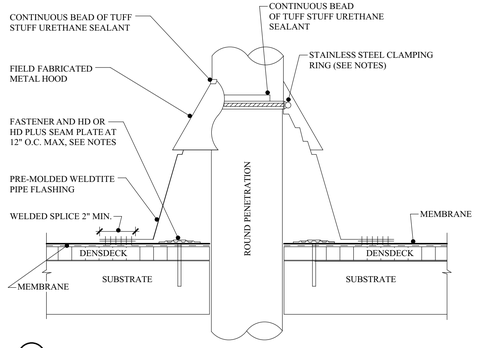
DATE: 4/12/2024

SHEET TITLE:
TELESCOPING SEATING PLAN

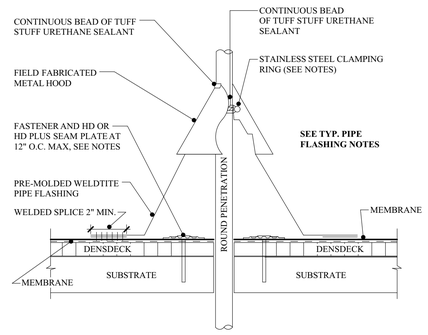
X9



A VENT PIPE FLASHING



B PIPE FLASHING (4" TO 8" Ø PIPE)



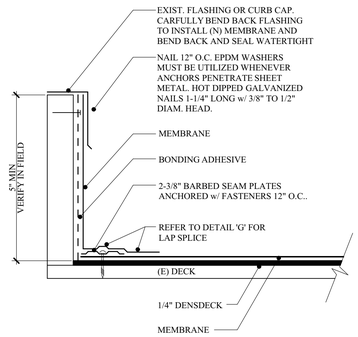
C PIPE FLASHING (1" TO 3 1/2" Ø PIPE)

TYPICAL PIPE FLASHING NOTES:

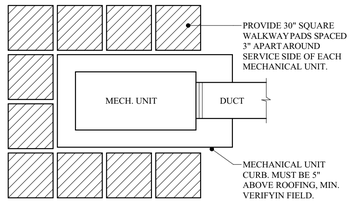
1. PIPE MUST BE ANCHORED TO ENSURE STABILITY.
2. PRE-MOLDED PIPE FLASHING MAY BE CUT TO HEIGHT, BUT NO LOWER THAN REINFORCING RING (NO WRINKLES OR FOLDS UNDER CLAMPING RING)
3. APPLY TUFF STUFF BEWEEN PENETRATION AND PRE-MOLDED PIPE FLASHING PRIOR TO INSTALLATION OF CLAMPING RING.
4. SMALL PRE-MOLDED PIPE FLASHING FITS 1"-3 1/2" PENETRATION SIZES.
5. LARGE PRE-MOLDED PIPE FLASHING FITS 4"-8" PENETRATION SIZES.
6. DO NOT USE WHEN SERVICE LINE TEMP. EXCEEDS 180°F. REFER TO UT-P-6 & 7.

ROOF DRIPS EDGE NOTES:

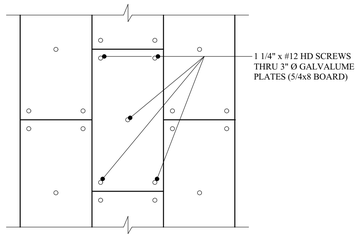
1. INSTALL MEMBRANE OVER THE EDGE OF THE ROOFING 2"
2. INSTALL METAL WORK TO MANUFACTURER'S REQUIREMENTS OR SMACNA RECOMMENDATIONS. IF SHOP FABRICATED METAL EDGE IS USED IT MUST MEET ANSI/SPRI ES-1 OR AN FM STANDARD.
3. STRIP OFF THE CLAD METAL EDGE WITH A 6" WIDE MEMBRANE.
4. FLANGE OF METAL MUST BE FULLY SUPORTED BY WOOD AND TERMINATED AT LEAST 1/2" FROM EDGE OF WOOD.



D CURB / WALL FLASHING

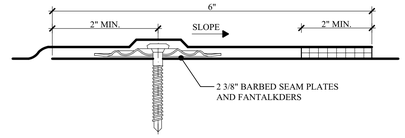


E TYPICAL ROOF WALKWAYPADS / MECH. UNIT



NOTE: SEE SINGLE PLY ROOFING SPEC. SECTION 07-531, PRODUCTS PART 2.4

F DENSDECK ATTACHMENT



G LAP SPLICE

SINGLE PLY ROOFING (S.P.R.)

N.T.S.

9 N.T.S.

10 N.T.S.

11 N.T.S.

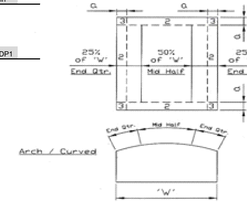
THE GARLAND COMPANY, INC.
HIGH-PERFORMANCE BUILDING ENVELOPE SOLUTIONS
3800 EAST 91ST. STREET · CLEVELAND, OHIO 44105-2197
P. (216) 641-7500 · F. (216) 641-0633 · 800-321-9336 · www.garlandco.com

Preliminary Pressure Calculations

Date 4/11/2024 JADAHP
Sales Rep Richard Jones
City Chowchilla
State CA

Project Name: Multi-Purpose Building at Fairmead Elementary School
Roof Sections: Multi Purpose Building

Design Code	ASCE 7-16 ASD		Base Velocity Pressure	14.3 psf	Gcpi = 0.55
Exposure Category	C		Roof Type	Arch	
Risk Cat. , Importance Factor	III , 1		Edge Zones		
Wind Speed	100 mph		Zone 2 width =	3'-11"	
Rise to Span Ratio:	0.114285714		Zone 3 width =	3'-11"	
Arch Height:	39 ft		Zone 3 length =	3'-11"	
Roof Pitch (X, Y)	2.75 : 12		=		
Roof Angle	12.91 deg		=		
Parapet ≥ 36" Entire Roof	No		=		
Deck Type	Wood		Zone Image a =	3'-11"	
Deck Thickness	0.625 in				
Panel Type	R-Mer Span				
Width	18 in				
Material	24/24 GA Steel				
Fastener	Wood: Concealor #14-13 DP1				
# per clip	2				
Safety Factor	2.5 **				
Clip Pry Coefficient	1.25				
Ultimate Pullout	475 psf				
Allowable Clip Load	304 psf				
Panel Safety Factor	1.25 **				



SCHEMATIC ZONE PLAN

Zone Pressures (psf)

	Zone 2	Zone 3	MID 1/2	END 1/4
	36.6	50.9	21.9	23.4

** **Clip Spacing ft / in**

	Zone 2	Zone 3	MID 1/2	END 1/4
	4'-0"	2'-6"	5'-0"	5'-0"

**Clip spacing calculated as per LRFD

Notes:

Clips to be attached to min. 5/8" plywood sheathing at max. spacing above. Per IAPMO Report #662, Calculations are subject to DSA review and approval.

Evaluation Report # : IAPMO UES ER-662

12 13 14 15 STANDING SEAM ROOF DATA & SCHEM. ZONE

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

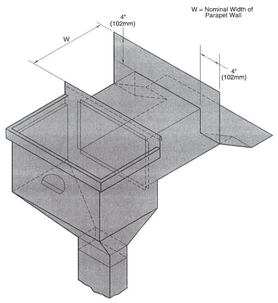
GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

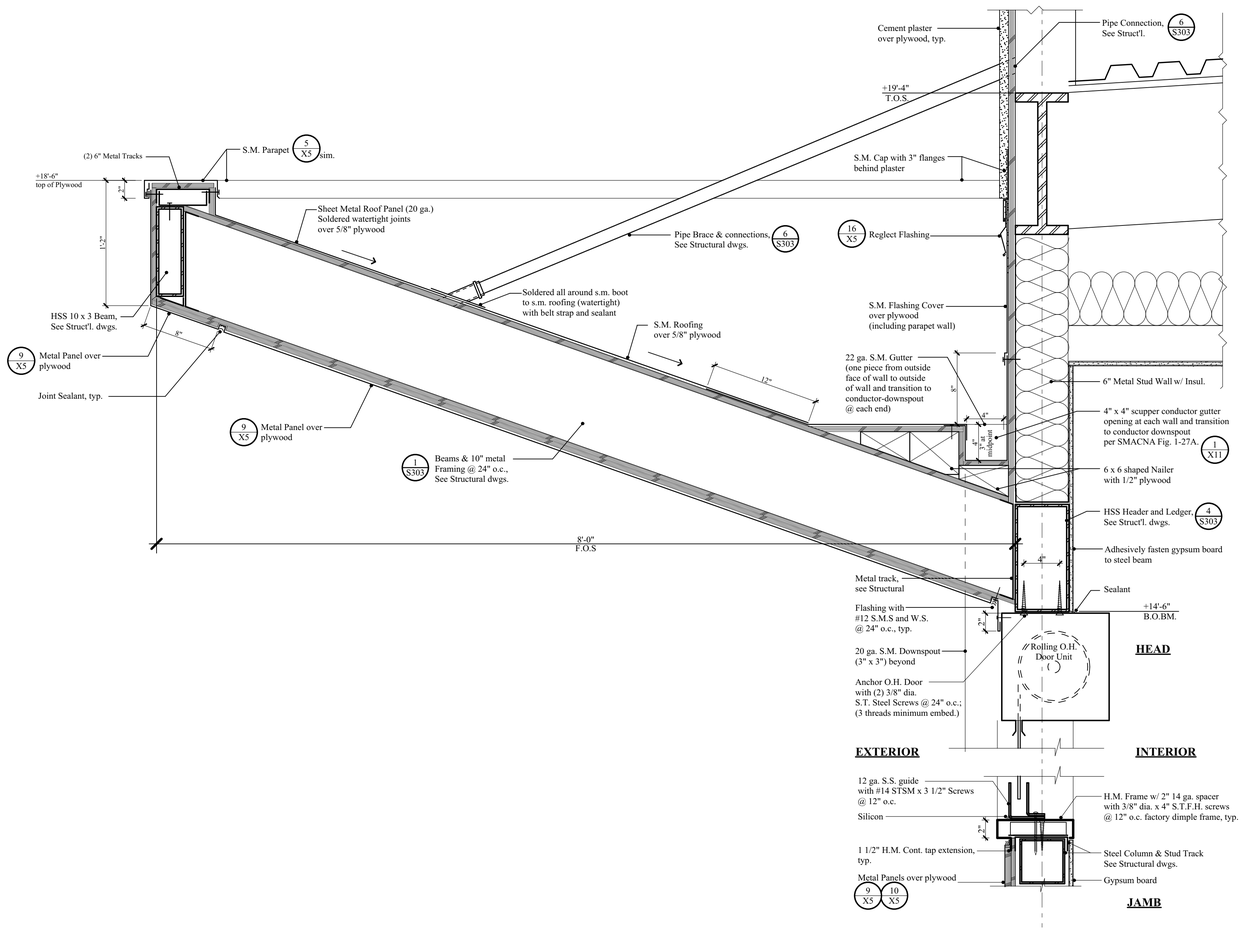
SHEET TITLE:
DETAILS

X10



SMACNA FIGURE 1-27A

1 SCUPPER-CONDUCTOR N.T.S



13 OVERHANG AT EXTERIOR PLATFORM N.T.S

FILE NO.: 20-10 APPL. NO.: 02-121993

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JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
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CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

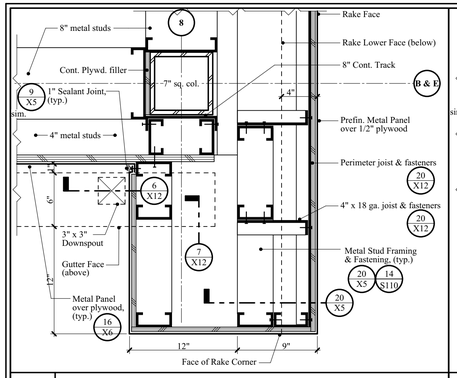
ARCHITECTS
GONZALEZ
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

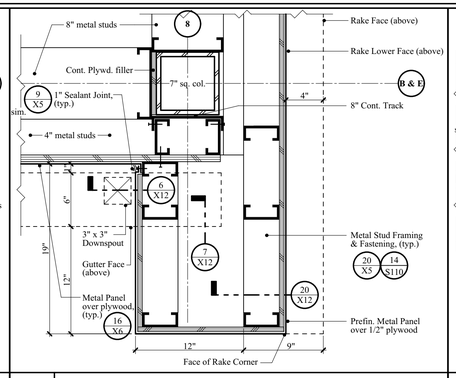
DATE: 4/12/2024

SHEET TITLE:
DETAILS

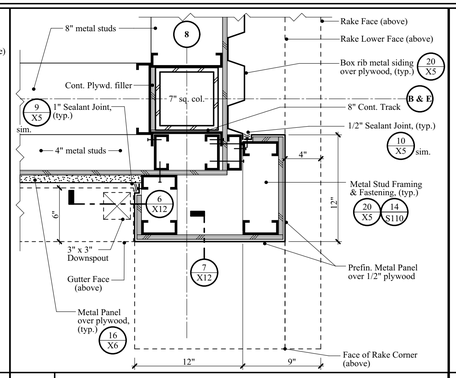
X11



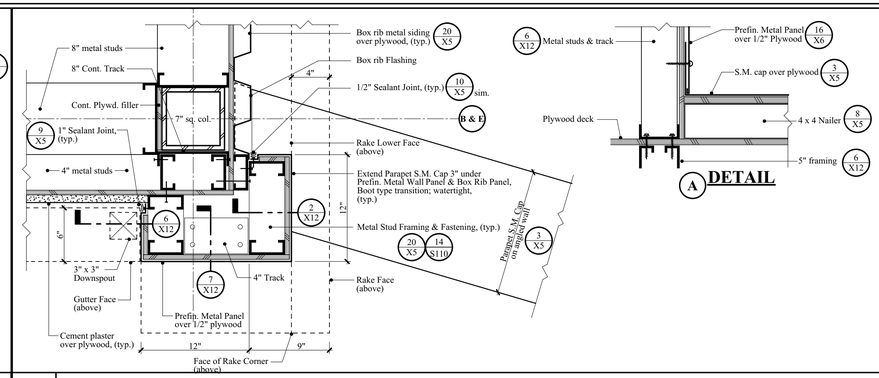
1 **METAL PANEL CORNER DETAIL** N.T.S



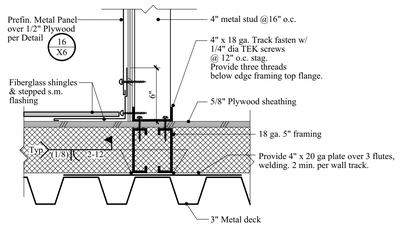
2 **METAL PANEL CORNER DETAIL** N.T.S



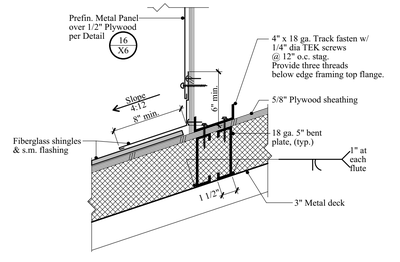
3 **METAL PANEL CORNER DETAIL** N.T.S



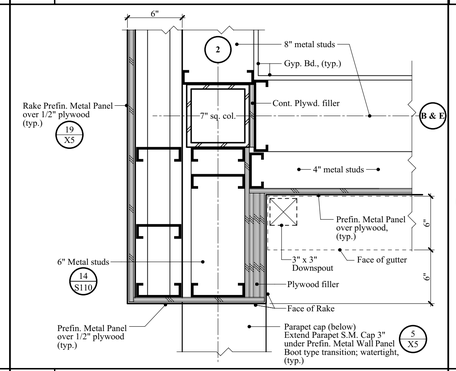
4 **METAL PANEL COVER @ CORNER DETAIL** N.T.S



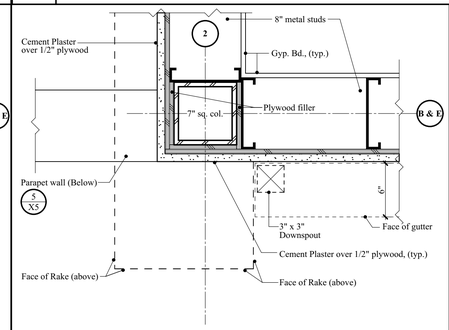
6 **WALL @ LOWER ROOF DETAIL** N.T.S



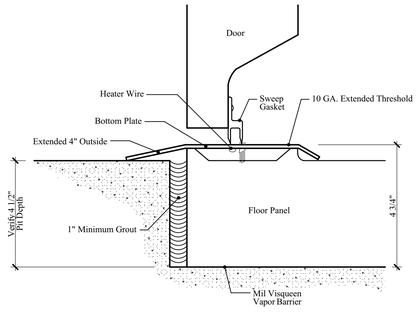
7 **WALL @ LOWER ROOF DETAIL** N.T.S



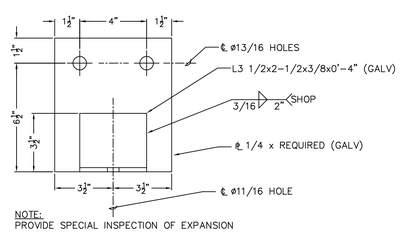
8 **METAL PANEL CORNER DETAIL @ GL 2** N.T.S



9 **WALL CORNER DETAIL @ GL 2** N.T.S

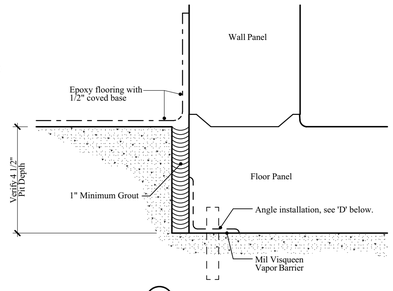


A **WALK-IN THRESHOLD**

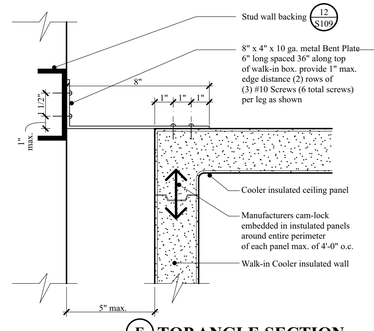


FLOOR TYPE STYLE TIE DOWN

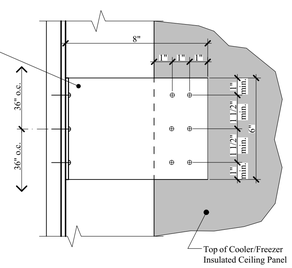
B **ANGLE TIE DOWN ELEVATION**



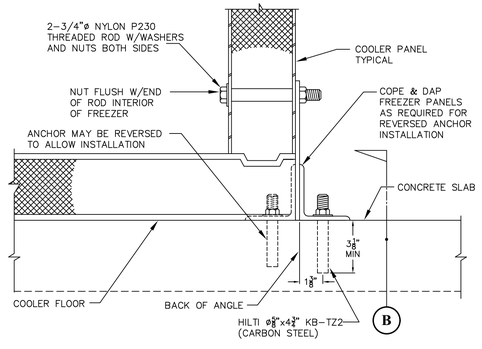
C **WALK-IN SECTION**



E **TOP ANGLE SECTION**



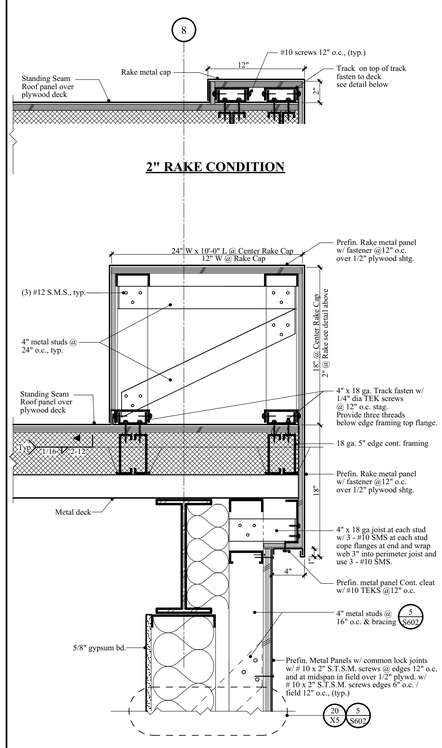
PLAN



NOTE: (2) ANGLE TIE DOWNS PER WALL PANEL

D **ANGLE TIE DOWN SECTION**

17 **WALK-IN UNIT ANCHORAGE** N.T.S



20 **RAKE & CORNER TRIM** N.T.S

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

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MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
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GONZALEZ ARCHITECTS
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FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

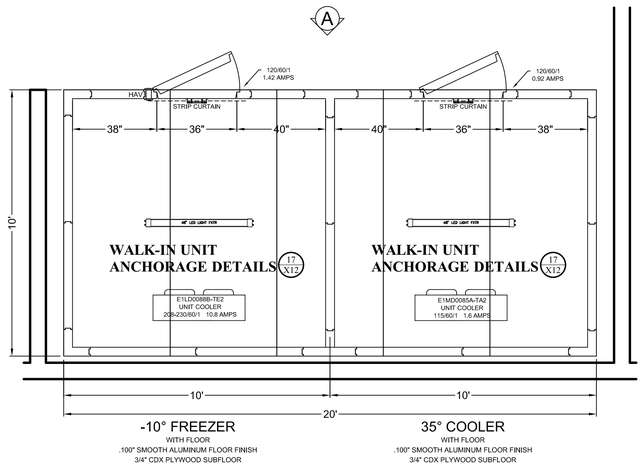
PROJECT NO: 2318

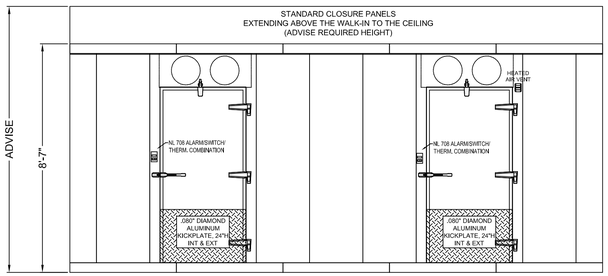
DATE: 4/12/2024

SHEET TITLE:
DETAILS

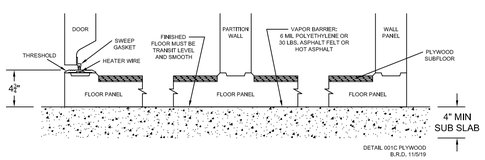
X12

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Mult-Purpose Bldg\2 Working Dwgs Phase\BC_2318_Fairmead Multi-Purpose.pln

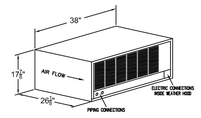




VIEW -A-

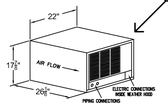


WITH FLOOR PLYWOOD SUBFLOOR DETAIL

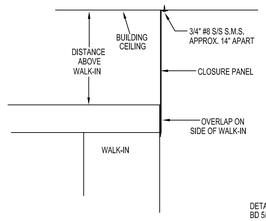


(1) MSLD020AB REMOTE REFRIGERATION SYSTEM
R-449A, AIR COOLED, LOW TEMPERATURE
208-230/60/1 CONDENSING UNIT MCA 25.0, MAX FUSE 30, 240 LBS

CONDENSERS SET ON HOUSEKEEPING PAD IN SERVICE YARD, SEE FLOOR PLAN ON SHEET A1

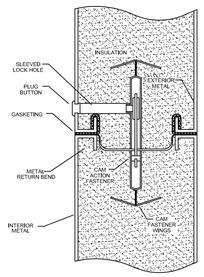


(1) MHMD010AB REMOTE REFRIGERATION SYSTEM
R-449A, AIR COOLED, MEDIUM TEMPERATURE
208-230/60/1 CONDENSING UNIT MCA 19.0, MAX FUSE 20, 180 LBS

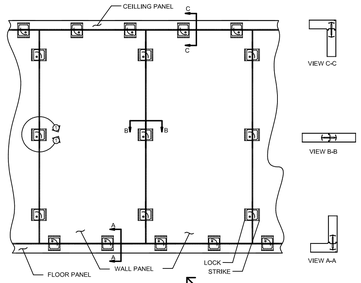


DETAIL 029A
BD 5/20/94

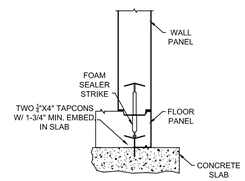
STANDARD CLOSURE PANEL DETAIL



B-B SECTION



ELEVATION



A-A SECTION

SEE DETAILS 17 / X12

SPECIFICATIONS D2355886-A (QUOTE NUMBER NL235588629-A)

Refrigerated Solutions Group
(1) Master-Bilt INDOOR Walk-In Cooler/Freezer Combination (2 compartments)
20' 0" long, 10' 0" wide, 8' 7" high.

Finishes:
26 Gauge Corroslon Resilstant Stucco Embossed Coated Steel - Interlor wall, Exterlor wall, Interlor ceilling
26 Gauge Smooth Galvanlzed - Ceilling topslde, Floor bottomslde
.100 Smooth Aluminum - Interlor floor

Freezer (0.0°F) Details:

(1) 36" X 78" Walk-In Door right-hand swing
Includes door closer, cam lift hinges (one spring loaded on 36" wide and smaller doors), deadbolt key/padlock handle with inside release, magnetic gasket, heater wire, double sweep gasket, LED vapor proof light, Heated Air Vent (standard on all freezer compartments) and combination digital thermometer and switch w/pilot light.
(1) Standard Strip Curtain
(1) Additional Standard Hinge
(1) 24" Door Plug-Exterior & Interior Kickplates (.080" Diamond Aluminum)
(1) NL708 High/Low Digital Alarm and Light Management System (Flush Mount). ALARM MUST BE SHELTERED FROM WEATHER

Sq. Ft. Of 3/4" Marine Plywood Subfloor for Freezer (0.0°F)

(1) MSLD020AB*
2HP Cond Unit 208-230/60/1 R-448A/R-449A, Outdoor Unit Scroll Compressor , Low Temp 0F., 7550 BTUH System Capacity. With Mounted Timer. Sized for 110 F. Temperature at Condenser, 38° (L) 27" (W) 18" (H) Base: M2 @ 240#, MCA: 25, MOP: 30, RLA: 14, LRA: 75. Connections - Liquid: 0.375", Suction: 0.875".
(1) E1LD0088B-TE2*
Evap 208-230/60/1 R-448A/R-449A, Elec Defrost Mtd TXV/Temp Ctrl/Sol, Low Temp 0F., 9130 BTUH Evaporator Capacity, 44" (L) 16" (W) 17" (H) @ 55#. Fan Amps: 1.0, Defrost Amps: 9.8.

Calculated load for Freezer (0.0°F) is 5972 BTU's/hour calculated from 90 °F ambient temperature, 0' elevation, 70 °F floor temperature, 18.12 minutes open door time per 24 hrs for(1) 36.00" X 78.00" walk-indoor opening into 90.00 °F ambient, 1.5 Watts per square foot lighting operating 10 hours per day, 0.05 occupants working 10 hours per day. All calculations are based on data supplied by ASHRAE publications.

(1) 4 Year Extended Compressor Warranty, 1.5-3HPS
(1) 18 Month Labor/Service Warranty
Refrigeration is "sized" for holding product only; that is; our calculation is based on product entering at the same temperature as the desired temperature of this walk-in. If you feel that this is insufficient, please advise.

If Remote refrigeration condensing will be installed in ambient conditlions colder than -10°F, RSG recommends an outdoor heater kit added to the refrigeration system to run sufficiently in these outdoor ambient conditions. To add this system accessory your upcharge will be $600 per system. *Standard outdoor Capsule Paks are rated to -20°F Ambient conditions. This accessory is not required.

Cooler (35.0°F) Details:

(1) 36" X 78" Walk-In Door right-hand swing
Includes door closer, cam lift hinges (one spring loaded on 36" wide and smaller doors), deadbolt key/padlock handle with inside release, magnetic gasket, heater wire, double sweep gasket, LED vapor proof light, Heated Air Vent (standard on all freezer compartments) and combination digital thermometer and switch w/pilot light.
(1) Standard Strip Curtain
(1) Additional Standard Hinge
(1) 24" Door Plug-Exterior & Interior Kickplates (.080" Diamond Aluminum)
(1) NL708 High/Low Digital Alarm and Light Management System (Flush Mount). ALARM MUST BE SHELTERED FROM WEATHER

Sq. Ft. Of 3/4" Marine Plywood Subfloor for Cooler (35.0°F)

(1) MHMD010AB*
1HP Cond Unit 208-230/60/1 R-448A/R-449A, Outdoor Unit , Medium Temp 35F., 7273 BTUH System Capacity. With Mounted Timer. With Hermetic Compressor. Sized for 110 F. Temperature at Condenser, 22° (L) 27" (W) 18" (H) Base: M1 @ 180#, MCA: 19, MOP: 20, RLA: 7, LRA: 46, Connections - Liquid: 0.375", Suction: 0.875".
(1) E1MD0085A-TA2*
Evap 115/60/1 R-448A/R-449A, Air Defrost Mtd TXV/Temp Ctrl/Sol, Medium Temp 35F., 8500 BTUH Evaporator Capacity, 44" (L) 16" (W) 17" (H) @ 52#. Fan Amps: 1.6.

Calculated load for Cooler (35.0°F) is 6043 BTU's/hour calculated from 90 °F ambient temperature, 0' elevation, 70 °F floor temperature, 33.64 minutes open door time per 24 hrs for(1) 36.00" X 78.00" walk-indoor opening into 90.00 °F ambient, 1.5 Watts per square foot lighting operating 8 hours per day, 0.05 occupants working 8 hours per day. All calculations are based on data supplied by ASHRAE publications.

(1) 4 Year Extended Compressor Warranty, .5-1HP
(1) 18 Month Labor/Service Warranty
Refrigeration is "sized" for holding product only; that is; our calculation is based on product entering at the same temperature as the desired temperature of this walk-in. If you feel that this is insufficient, please advise.

If Remote refrigeration condensing will be installed in ambient conditlions colder than -10°F, RSG recommends an outdoor heater kit added to the refrigeration system to run sufficiently in these outdoor ambient conditions. To add this system accessory your upcharge will be $600 per system. *Standard outdoor Capsule Paks are rated to -20°F Ambient conditions. This accessory is not required.

Other Walk-In Accessories:

(2) 48" LED Vapor-proof All Temperature Integrated Light Fixture (Shipped Loose)
(2) 3" x 3" x 8'-7" Angle Trim Strip GA #071075
(2) Tapcon Concrete Floor Attachment Kit. Includes 20 Tapcons for w/Floor or Less Floor 4-3/8" Foam Screed Walk-ins ONLY
(16) Non -Skid Floor Strips (Shipped Loose)
(1) Set of Standard Closure Panels 20' 4" high x 2' 1" long 26 Gauge Corroslon Resilstant Stucco Embossed Coated Steel
(1) BUDGET

Construction Approvals: NSF Approved, cULus and CSA Electrical, UL Flame Spread-25 and ULC Flame Spread-50 In accordance with ASTME-84. To comply with the US Energy Independence & Security Act of 2007, all walk-in doors opening into the ambient (indoors or outdoors) are required to have a method for minimizing infiltration when the doors are open. All Master-Bilt walk-in doors will include a spring hinge to comply with this standard by 1-1-09, however to further minimize infiltration, Master-Bilt recommends the use of a strip curtain or strip door for all exterior doors. NOTE: Indoor walk-in(s) must be in an environmentally controlled space. Relative Humidity should be kept between 30%-60%, maintaining a Dew Point of 50° F or less.

Quotation is subject to change upon receipt of detailed specifications and/or refrigeration load information. Refrigeration sizing is based on maximum line runs of 100 feet per system. NOTE: Walk-Ins sold into the state of California may require structural engineered drawings for seismic review. If required, Master-Bilt can provide the required drawings and structural support. Please contact Master-Bilt for lead time and pricing to meet this requirement. Local Codes: Walk-Ins may need engineered drawings or special construction to meet local code approvals for rain, wind, seismic, and snow load approvals. If required, please contact Master-Bilt for lead time and pricing to meet these requirements.

A:

L.A.R.R.: RR 25197
EXPIRES: September 1, 2024
WEIGHT OF WALK IN BOX: 4,487 LBS

SHEET: X13

RSG Refrigerated Solutions Group
REFRIGERATED SOLUTIONS GROUP
891 COUNTY RD U, HUDSON, WI, 54016
(715) 386-2323 or (866)

N.S.F. FOAMED-IN-PLACE MASTER-BILT INDOOR WALK-IN COOLER/FREEZER COMBINATION

20'0"x10'0"x8'7"

CUSTOMER:
FISCHER GROUP
FOR QUOTATION PURPOSES ONLY
1636 QUOTATION PUPOSES ONLY
1636 N BRIAN ST
ORANGE, CA 92867

PROJECT:
CHOWCHILLA EUSD
FAIRMEAD ES

A MINIMUM OF 2" CLEARANCE MUST BE ALLOWED AT ANY POINT WHERE THE WALK-IN IS ERECTED NEXT TO AN EXISTING BUILDING WALL.

ALL PANELS ARE FOAMED-IN-PLACE WITH HFC 245fa, CFC FREE POLYURETHANE INSULATION, ZERO OZONE-DEPLETION.

NOTE: INDOOR WALK-IN(S) MUST BE IN AN ENVIRONMENTALLY CONTROLLED SPACE. RELATIVE HUMIDITY SHOULD BE KEPT BETWEEN 30% - 60%, MAINTAINING A DEW POINT OF 50°F OR LESS.

PLEASE RETURN THE APPROVED DRAWINGS AS SOON AS POSSIBLE TO PREVENT ANY DELAY IN FABRICATION.

☐ **APPROVED**
☐ **APPROVED AS NOTED**
☐ **NOT APPROVED-RESUBMIT**

SIGNED _____

DATE _____

* * *

IMPORTANT:
CHANGES MADE AFTER THE PRINT APPROVAL MAY INVOLVE ADDITIONAL CHARGES AND THE POSSIBILITY OF A REVISED SHIPPING DATE

NO.	DATE	BY

DATE: 12/11/23

SCALE: 3/8" = 1'

DRN. BY: LCS

PURCHASER:

PRINTED NAME:

SIGNATURE:

#
D2355886-A

1. THESE NOTES GOVERN ALL CONDITIONS CALLED OUT ON THE PLANS AS "SHOT PINS" UNLESS SPECIFICALLY NOTED OTHERWISE.

2. ALL SHOT PINS SHALL BE AS MANUFACTURED BY HILTI, INCORP. REFERENCE SHALL BE MADE TO THE LATEST EDITION OF THE HILTI 'PRODUCT TECHNICAL GUIDE' AND THE ICC-ES ESR-2269 REPORT FOR ADDITIONAL INFORMATION.

3. SHOT PINS DRIVEN INTO STEEL BASE MATERIAL SHALL BE X-U TYPE WITH P8 WASHERS. LENGTH OF PIN SHALL BE AS REQUIRED TO PENETRATE THROUGH THE STEEL BASE MATERIAL. MINIMUM EDGE DISTANCE TO ANY CONNECTED PART SHALL BE 1/2" AND MINIMUM FASTENER SPACING SHALL BE 2". ENTIRE POINTED END OF PIN MUST PENETRATE THROUGH STEEL LESS THAN 1/2" THICK OR PENETRATE A MINIMUM OF 1/2" INTO STEEL 1/2" THICK OR GREATER. PINS IN STEEL SUBJECT TO WITHDRAW LOADS ARE REQUIRED TO HAVE KNURLED SHANK.

4. SHOT PINS DRIVEN INTO CONCRETE BASE MATERIAL SHALL BE X-U TYPE WITH P8 WASHERS. LENGTH OF PIN SHALL BE AS REQUIRED TO PENETRATE 1 1/2" INTO THE CONCRETE BASE MATERIAL. MINIMUM EDGE DISTANCE TO ANY CONCRETE MATERIAL SHALL BE 3" AND MINIMUM FASTENER SPACING SHALL BE 4".

5. SHOT PINS DRIVEN INTO CONCRETE BASE MATERIAL THROUGH METAL DECK SHALL BE X-U TYPE WITH P8 WASHERS. LENGTH OF PIN SHALL BE AS REQUIRED TO PENETRATE 1" INTO THE CONCRETE THROUGH THE LOW FLUTE. PIN SHALL BE CENTERED IN THE LOW FLUTE AND MINIMUM FASTENER SPACING SHALL BE 4".

6. WHERE STEEL WASHERS ARE INDICATED ON THE DRAWINGS, PINS SHALL BE X-U WITH PREMOUNTED STEEL WASHERS WITH A MINIMUM DIAMETER OF 36mm (1 7/16").

10 "SHOT PIN" NOTES FOR HILTI X-U
S101 NOT TO SCALE

1. EPOXY SHALL BE HILTI HIT-HY 200 V3 ADHESIVE AS MANUFACTURED BY HILTI, INC., 7250 DALLAS PARKWAY, SUITE 1000, PLANO, TEXAS 75024. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND I.C.C. REPORT NO. ESR-4868.

2. TEST VALUES AND INSTALLATION REQUIREMENTS SHALL BE AS FOLLOWS:

BAR SIZE	BOLT SIZE	MIN. EMBEDMENT	TEST LOAD (POUNDS)
#4	1/2"	4"	1190
#5	5/8"	5"	1540
#6	3/4"	7"	2190

3. PLACEMENT GUIDELINES FOR ABOVE VALUES IN ITEM 2 REQUIRE THE FOLLOWING CONDITIONS.
- TABLE VALUES ARE BASED ON f'c = 3000 PSI
- 6" MIN. EDGE DISTANCE & 12" MIN. BOLT/BAR SPACING
- HOLES DRILLED WITH A HAMMER DRILL AND CARBIDE BIT
- BIT DIAMETER EQUALS (BAR DIAMETER) + 1/8"
- HOLES SHALL BE DRY OR WATER-SATURATED, BUT NOT WATER FILLED
- MAX. LONG TERM TEMPS OF 110° F OR LESS & MAX. SHORT TERM OF 162° F OR LESS
- ANY SEISMIC DESIGN CATEGORY PER 2022 C.B.C.
- A.S.T.M. A615 GRADE 60 REBAR
- A.S.T.M. A193 GRADE B7 THREADED RODS
- A.C.I. "CRACKED" CONCRETE CONDITION IS SUFFICIENT
- DEPTH/THICKNESS OF CONCRETE BEING ATTACHED TO MUST BE AT LEAST 1 1/2" GREATER THAN THE EMBEDMENT DEPTH.

4. WHEN INSTALLING EPOXIED REBAR/BOLTS IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE-INCH BETWEEN THE EXISTING REINFORCEMENT AND THE EPOXIED REBAR/BOLT.

5. ANY REBAR/BOLTS SHOWN ON THE APPROVED PLANS AS BEING EPOXIED, REQUIRES SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 4.4 IN THE I.C.C. REPORT. SPECIAL INSPECTION SHALL BE BY AN APPROVED TESTING AND INSPECTION AGENCY. ANY ITEMS THAT REQUIRE EPOXY BUT ARE NOT SPECIFICALLY SHOWN AS BEING EPOXIED ON THE APPROVED PLANS MUST BE APPROVED BY THE STRUCTURAL ENGINEER AND D.S.A./H.C.A.I. PRIOR TO INSTALLATION.

11 HILTI HIT-HY 200 EPOXY NOTES
S101 NOT TO SCALE

1. ANY SUBSTITUTIONS FOR STRUCTURAL ITEMS ON APPROVED PLANS SHALL BE REVIEWED BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO USE. REVIEW WILL BE BILLED ON A TIME AND MATERIALS BASIS TO CONTRACTOR WITH NO GUARANTEE THE SUBSTITUTION WILL BE ALLOWED.

2. DETAILS AND NOTES ON TYPICAL SHEETS SHALL APPLY U.N.O. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITIONS. U.N.O.

3. DO NOT SCALE STRUCTURAL DRAWINGS. IF DIMENSIONS IN DRAWINGS ARE NOT CLEAR, OR DISCREPANCIES EXIST ON THE DRAWINGS OR SPECIFICATIONS, CONTACT THE ENGINEER.

4. SEE MECHANICAL, ELECTRICAL, AND/OR ARCHITECTURAL DRAWINGS FOR LOCATION AND SIZE OF PIPES, CONDUITS, FLOOR DRAINS, VENTS, DUCTS, DRAIN LEADERS AND OTHER SIMILAR OPENINGS NOT INDICATED ON THE STRUCTURAL DRAWINGS.

5. SEE MECHANICAL, ELECTRICAL AND/OR ARCHITECTURAL DRAWINGS FOR EMBEDMENT OF BOLTS, ANCHORS AND OTHER MISCELLANEOUS EMBEDDED ITEMS NOT SHOWN ON STRUCTURAL DRAWINGS.

6. THE DESIGN, FABRICATION AND CONSTRUCTION SHALL COMPLY WITH ACCEPTED LOCAL GOVERNING CODES OF THE PARTICULAR AREA.

7. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL SOLELY AND COMPLETELY BE RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

8. THE DUTY OF THE ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.

9. CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ENGINEER WHETHER PERFORMED PRIOR TO, DURING, OR AFTER COMPLETION OF CONSTRUCTION ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS, BUT THEY DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.

10. ALL WORK SHALL CONFORM TO THE LATEST APPLICABLE CONSTRUCTION SAFETY REQUIREMENTS OF O.S.H.A. AND ANY OTHER GOVERNMENTAL ENTITY HAVING JURISDICTION.

11. SHOP DRAWINGS:
   - SHOP DRAWINGS SHALL BE SUBMITTED PER PROJECT SPECIFICATIONS.
   - PRIOR TO SUBMISSION, THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS FOR CONFORMANCE WITH THE APPROVED DOCUMENTS AND SHALL STAMP SUBMITTALS AS BEING "REVIEWED FOR CONFORMANCE" TO APPROVED CONTRACT DOCUMENTS.
   - THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE DESIGN TEAM THAT HE AND THE SUBCONTRACTOR UNDERSTAND THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL HE INTENDS TO FURNISH AND INSTALL, AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS HE INTENDS TO USE.
   - DESIGN DOCUMENTS ARE NOT SHOP DRAWINGS AND SHALL NOT BE SUBMITTED AS SUCH.

12. ALL NOTES SPECIFIED ON PLANS AND IN DETAILS WITH THE WORD "TYPICAL" FOLLOWED BY **BOLD AND UNDERLINED** TEXT REFER TO THE TYPICAL PROJECT DETAILS ON S1 SERIES SHEETS. TYPICAL DETAILS ARE NOT SPECIFICALLY REFERENCED ON PLANS AND SPECIFIC DETAIL U.N.O.

8 GENERAL PROJECT NOTES
S101 NOT TO SCALE

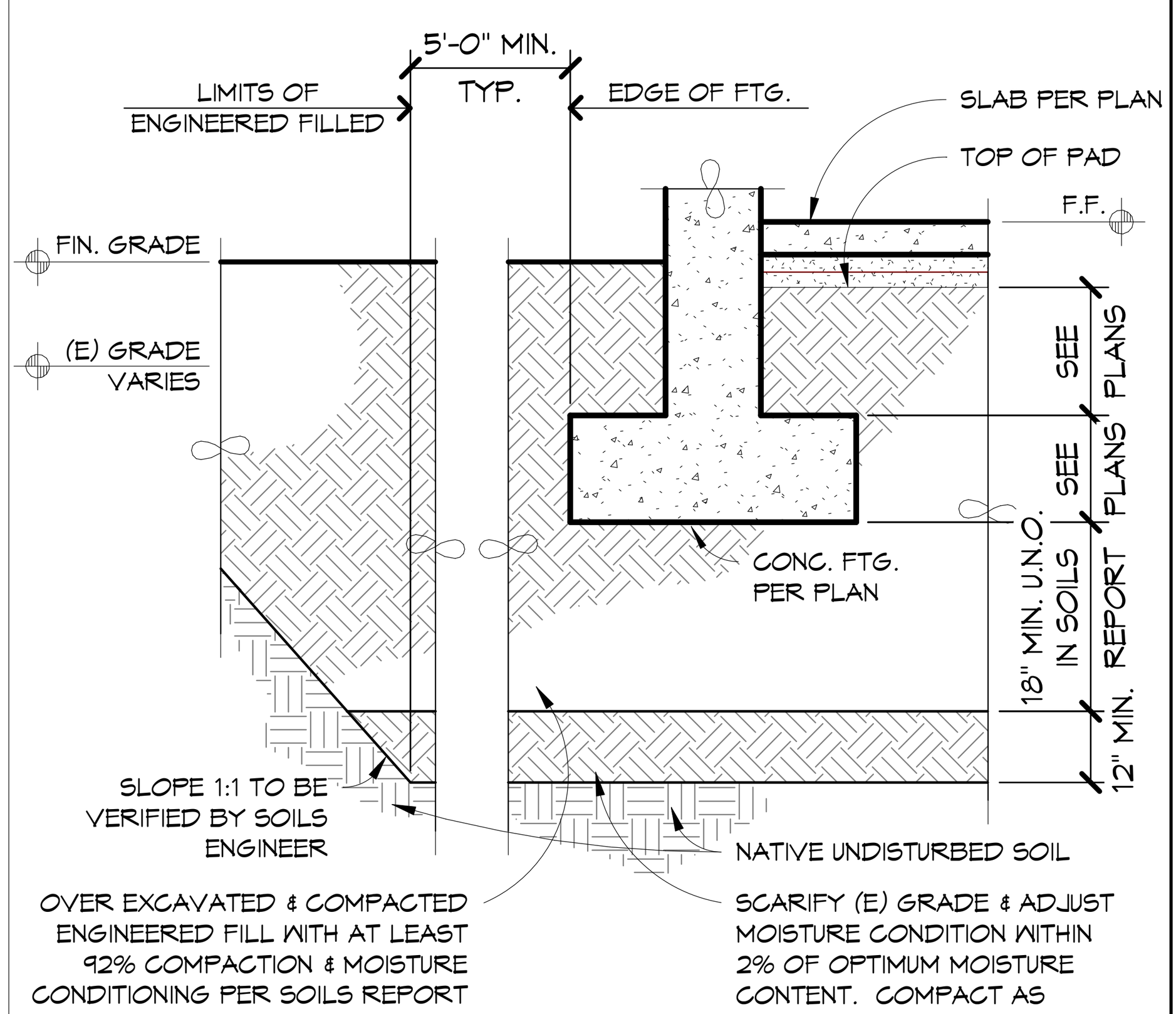
A.B.	ANCHOR BOLT
ABV.	ABOVE
A.C.I.	AMERICAN CONCRETE INSTITUTE
ADDL.	ADDITIONAL
A.E.S.A.	ARCHITECTURAL EXPOSED STEEL
A.F.P.A.	AMERICAN FOREST AND PAPER ASSOCIATION
A.I.S.C.	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
A.I.T.C.	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ALT.	ALTERNATE
A.P.A.	AMERICAN PLYWOOD ASSOCIATION
ARCH.	ARCHITECT(URAL)
A.E.S.S.	ARCHITECTURAL EXPOSED STRUCTURAL STEEL
A.S.C.E.	AMERICAN SOCIETY OF CIVIL ENGINEERS
A.S.T.M.	AMERICAN SOCIETY FOR TESTING & MATERIALS
A.W.S.	AMERICAN WELDING SOCIETY
BLDG.	BUILDING
BLK., BLKG.,	BLOCK, BLOCKING
BM.	BEAM
B.O.	BOTTOM OF
BOT.	BOTTOM
C	CHANNEL
C.B.C.	CALIFORNIA BUILDING CODE
CDX	C-D EXPOSURE 1
C.J.	CONSTRUCTION JOINT
CL	CENTERLINE
CLG.	CEILING
CLR.	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
CTSK.	COUNTERSINK
d	PENNY NAILS
DBL.	DOUBLE
DEMO.	DEMOLISH
DET., DTL.	DETAIL
DF	DOUGLAS FIR
DIA., Φ	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DL	DEAD LOAD
DO	DITTO / DO OVER
DP	DEEP
D.S.A.	DEPARTMENT OF STATE ARCHITECT
DWG	DRAWING
(E)	EXISTING
EA.	EACH
ELEV.	ELEVATION
E.N.	EDGE NAILING
ENGR.	ENGINEER
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXP.	EXPANSION
E.W.	EACH WAY
FDN.	FOUNDATION
F.E.M.A.	FEDERAL EMERGENCY MANAGEMENT AGENCY
F.F.	FINISH FLOOR
FIN.	FINISH
FLR.	FLOOR
F.N.	FIELD NAILING
FRMG.	FRAMING
FT., FTG.	FOOT, FOOTING
F.V.	FIELD VERIFY
GA.	GAUGE
GALV.	GALVANIZED
GLB	GLUE LAMINATED BEAM
H.C.A.I.	HEALTH CARE ACCESS AND INFORMATION
H.D.	HOLDOWN
HDR.	HEADER
HGR.	HANGER
HORIZ.	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HT.	HEIGHT
I.B.C.	INTERNATIONAL BUILDING CODE
I.C.C.	INTERNATIONAL CODE COUNCIL
IN	INCH
I.D.	INSIDE DIAMETER
INT.	INTERIOR
I.R.	INTERPRETATION OF REGULATIONS
JST.	JOIST
K	KIPS
KSI	KIPS PER SQUARE INCH
L	ANGLE
LBS, #	POUNDS (XXX LBS, XXX#)
LL	LIVE LOAD
LLV(LLH)	LONG LEG VERTICAL (HORIZ.)
LOC.	LOCATION
LSL	LAMINATED STRAND LUMBER
LT. WT.	LIGHT WEIGHT
LVL	LAMINATED VENEER LUMBER
MAS.	MASONRY
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MFR	MANUFACTURER
MIN.	MINIMUM
M.S.R.	MACHINE STRESS RATED
MTL.	METAL
(N)	NEW
NO., #	NUMBER, (NO. XX, #XX)
N.T.S.	NOT TO SCALE
O/, o/	OVER
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.H.	OPPOSITE HAND
OPNG.	OPENING
OP.	OPPOSITE
OSB	ORIENTED STRAND BOARD
PL.	PLATE
P.T.	PRESSURE TREATED
PLYWD.	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REINF.	REINFORCING
REQD.	REQUIRED
RM.	ROOM
SCHED.	SCHEDULE
SHTG.	SHEATHING
SHT.	SHEET
SIM.	SIMILAR
SMS	SHEET METAL SCREWS
SPEC.	SPECIFICATION
SQ.	SQUARE
STGR.	STAGGER
STD.	STANDARD
STIFF.	STIFFENER
STL.	STEEL
STRUCT.	STRUCTURAL
SYM.	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
THK.	THICK
TL	TOTAL LOAD
T.O.	TOP OF
TYP.	TYPICAL
U.N.O., U.O.N.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/, W/O	WITH, WITH OUT
WD	WOOD
W.F.	WIDE FLANGE
W.C.L.I.B.	WEST COAST LUMBER INSPECTION BUREAU
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC
W.W.A.	WELDED WIRE MESH
W.W.P.A.	WESTERN WOOD PRODUCTS ASSOCIATION

5 ABBREVIATIONS
S101 NOT TO SCALE

CODE
2022 CALIFORNIA BUILDING CODE

RISK CATEGORY	TYPE III
HIGH ROOF LOAD	
DEAD LOADS	27 PSF
LIVE LOAD	20 PSF
LOW ROOF LOADS	
DEAD LOADS	21 PSF
LIVE LOADS	20 PSF
WALL LOADS	
EXTERIOR WALL DEAD LOADS	19 PSF
INTERIOR WALL DEAD LOADS	11 PSF
SEISMIC LOADING CRITERIA	
ANALYSIS PROCEDURE USED	ELF
SEISMIC IMPORTANCE FACTOR	1.25
MAPPED SPECTRAL ACCELERATION, MCE:	
a. Ss	0.571
b. S1	0.230
SPECTRAL RESPONSE COEFFICIENT:	
a. Fa	1.343
b. Fv	2.140
MAXIMUM CONSIDERED EARTHQUAKE RESPONSE ACCELERATIONS:	
a. Sms	0.767
b. Sm1	0.492
DESIGN SPECTRAL RESPONSE ACCELERATIONS:	
a. Sds	0.511
b. Sd1	0.328
SEISMIC DESIGN CATEGORY	D
RESPONSE MODIFICATION COEFFICIENT, R (ORDINARY CONCENTRICALLY BRACED FRAMES)	3.25
VERTICAL STRUCTURAL IRREGULARITY: (IN-PLANE DISCONTINUITY IN VERTICAL LATERAL FORCE-RESISTING ELEMENT IRREGULARITY)	
SEISMIC RESPONSE COEFFICIENT/BASE SHEAR	0.197 *W
SEISMIC SYSTEM OVERSTRENGTH FACTOR	2
SEISMIC DEFLECTION AMPLIFICATION FACTOR	3.25
SEISMIC FORCE REDUNDANCY FACTOR	1.3
WIND LOADING CRITERIA:	
BASIC WIND SPEED	100 MPH
SURFACE ROUGHNESS CATEGORY	C
EXPOSURE CATEGORY	C
VELOCITY PRESSURE EXPOSURE COEFFICIENT, Kz	0.98
TOPOGRAPHIC FACTOR, Kzt	1.0
ENCLOSURE CLASSIFICATION	ENCLOSED
DESIGN WALL WIND LOADS, Pnet	23.6 PSF
DESIGN PARAPET WIND LOADS, Pnet	53.3 PSF
DESIGN UPLIFT WIND LOADS, Pnet	16 PSF
SOILS CRITERIA:	
ALLOWABLE BEARING PRESSURE (DL+LL) *FOOTING WIDTH TO BE A MINIMUM OF 1'-6" WIDE	2,000 PSF*
PASSIVE EARTH PRESSURE	340 PSF
COEFFICIENT OF FRICTION	0.42
SITE CLASSIFICATION	D
TESTING LAB	TECHNICON ENGINEERING SERVICES, INC.
SOILS REPORT NUMBER	230556.001
SOILS REPORT DATE	11/03/2023

2 DESIGN CRITERIA
S101 NOT TO SCALE



15 OVER EXCAVATION
S101 NOT TO SCALE

1. EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT TZ2 AS MANUFACTURED BY HILTI, INC., 7250 DALLAS PARKWAY, SUITE 1000, PLANO, TEXAS 75024. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND I.C.C. REPORT NO. ESR-4266.

2. TEST VALUES AND INSTALLATION REQUIREMENTS SHALL BE AS FOLLOWS:

BOLT SIZE	MIN. EMBED	CONT. THKS.	INSTALLATION TORQUE (S.S.)	INSTALLATION TORQUE (C.S.)
3/8"	2"	4"	30 #-FT	30 #-FT
1/2"	3 1/2"	6"	40 #-FT	50 #-FT
5/8"	4"	6"	60 #-FT	40 #-FT
3/4"	4 3/4"	8"	125 #-FT	110 #-FT

3. PLACEMENT GUIDELINES FOR ABOVE VALUES IN ITEM 2 REQUIRE THE FOLLOWING CONDITIONS:
- TABLE VALUES ARE BASED ON f'c = 3000 PSI
- HOLES DRILLED WITH A HAMMER DRILL AND CARBIDE BIT COMPLYING W/ ANSI B212.15-1994
- BIT DIAMETER EQUALS THE SIZE OF THE ANCHOR BEING INSTALLED
- HOLE DEPTH MUST EXCEED MIN. EMBED. BY ONE BOLT DIAMETER
- ANY SEISMIC DESIGN CATEGORY PER 2022 C.B.C.
- TENSION LOAD VALUES SHALL BE MULTIPLIED BY 0.6 FOR LIGHTWEIGHT CONCRETE
- A.C.I. "CRACKED" CONCRETE CONDITION IS SUFFICIENT
- FOR CARBON OR STAINLESS STEEL BOLTS

4. WHEN INSTALLING EXPANSION ANCHORS IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE-INCH BETWEEN THE EXISTING REINFORCEMENT AND THE EXPANSION ANCHOR.

5. ANY BOLTS SHOWN ON THE APPROVED PLANS AS EXPANSION ANCHORS, REQUIRES SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 4.4 IN THE I.C.C. REPORT. SPECIAL INSPECTION SHALL BE BY AN APPROVED TESTING AND INSPECTION AGENCY. ANY ITEMS THAT REQUIRE EXPANSION ANCHORS BUT ARE NOT SPECIFICALLY SHOWN ON THE APPROVED PLANS MUST BE APPROVED BY THE STRUCTURAL ENGINEER AND D.S.A./H.C.A.I. PRIOR TO INSTALLATION.

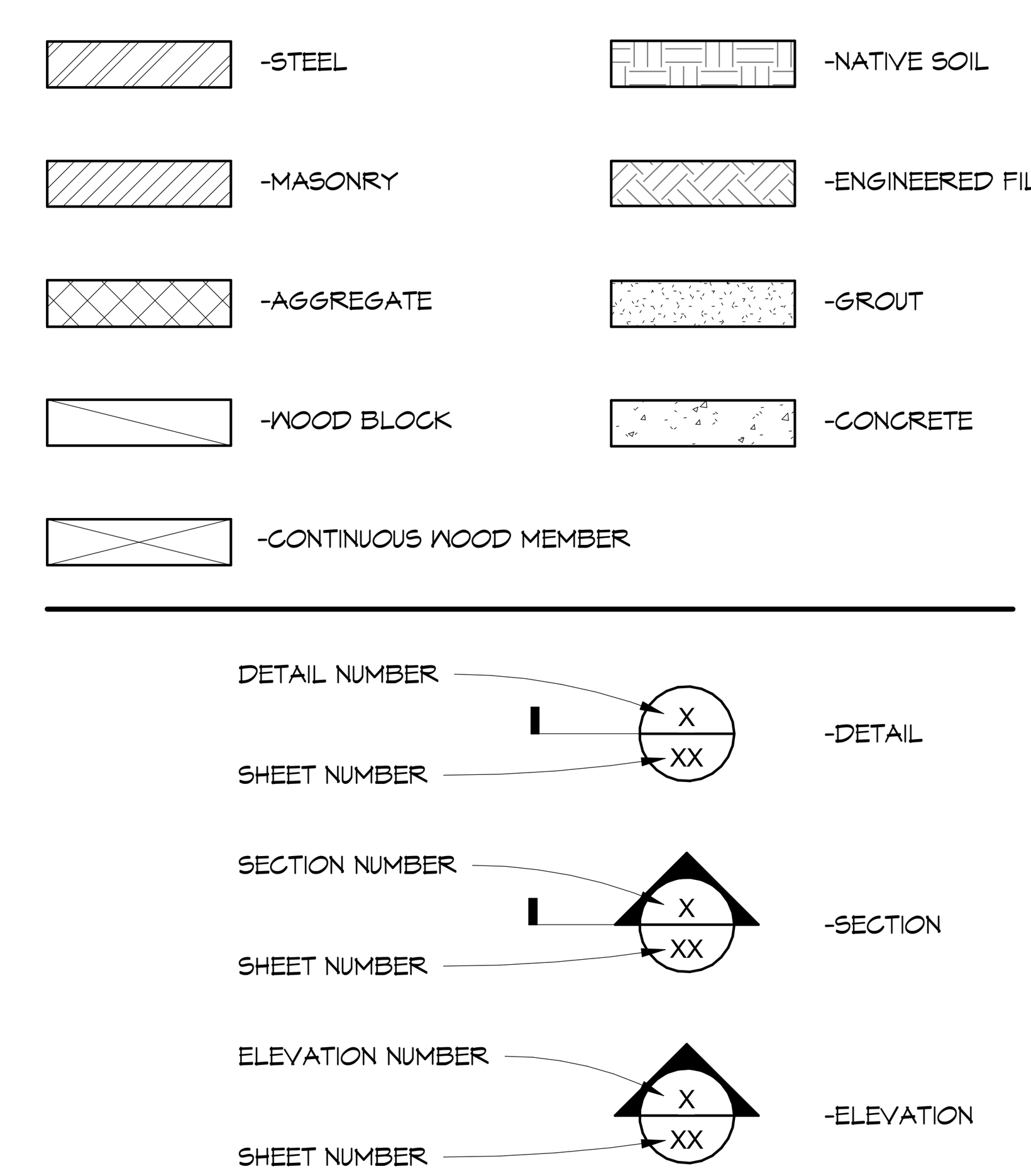
12 HILTI KWIK BOLT TZ2 IN CONC.
S101 NOT TO SCALE

A SPECIAL INSPECTOR EMPLOYED BY THE OWNER IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 24 AND SECTION 1704A.2 OF THE 2022 C.B.C. SHALL BE REQUIRED TO INSPECT THE PORTIONS OF THE PROJECT LISTED BELOW. THE SPECIAL INSPECTOR'S DUTIES ARE SPECIFICALLY DEFINED BY TITLE 24. THE SPECIAL INSPECTOR SHALL KEEP RECORDS OF INSPECTIONS AS REQUIRED IN SECTION 1704A.2.4 OF THE 2022 C.B.C. AND SUBMIT THEIR REPORTS DIRECTLY TO D.S.A./H.C.A.I.

REQUIRED AREAS OF INSPECTION	2022 C.B.C. REFERENCES
STEEL	SECTIONS 1705A.2.1 & 1705A.13.1 & TABLE 1705A.2.3
CONCRETE	SECTION 1705A.3 & TABLE 1705A.3
WOOD	SECTIONS 1705A.5 & 1705A.11.1/1705A12.2
SOILS	SECTION 1705A.6 & TABLE 1705A.6
PILE FOUNDATIONS	SECTION 1705A.7 & TABLE 1705A.7
PIER FOUNDATIONS	SECTIONS 1705A.8 & TABLE 1705A.8
POST-INSTALLED ANCHORS	SECTION 1910A.5 & I.C.C. E.S.R. REPORTS
EPOXY ADHESIVES	SECTION 1910A.5 & I.C.C. E.S.R. REPORTS

NOTE: FOR SPECIFIC REQUIREMENTS REGARDING SPECIAL INSPECTION FOR D.S.A. PROJECTS, SEE THE TESTING AND INSPECTION FORM FOR THIS PROJECT.

9 SPECIAL INSPECTION NOTES
S101 NOT TO SCALE



6 LEGENDS AND SYMBOLS
S101 NOT TO SCALE

BrooksRansom ASSOCIATES 23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-1286 RENEWAL DATE 12/31/2013 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER GAYLORD R. RANSOM No. S2386 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)

SHEET TITLE: TYPICAL PROJECT NOTES AND DETAILS

S101

4/11/2024 5:00:47 PM
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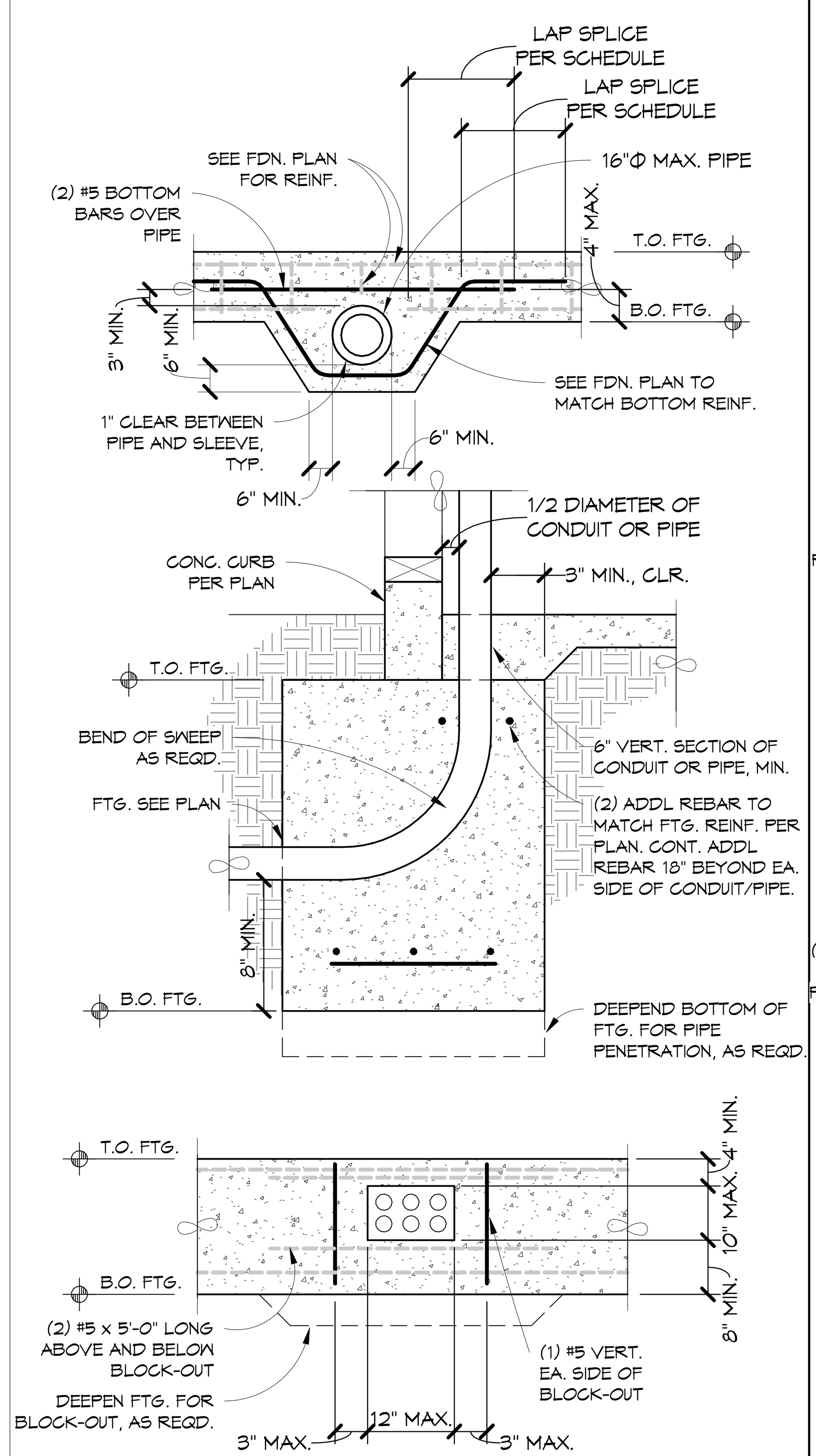
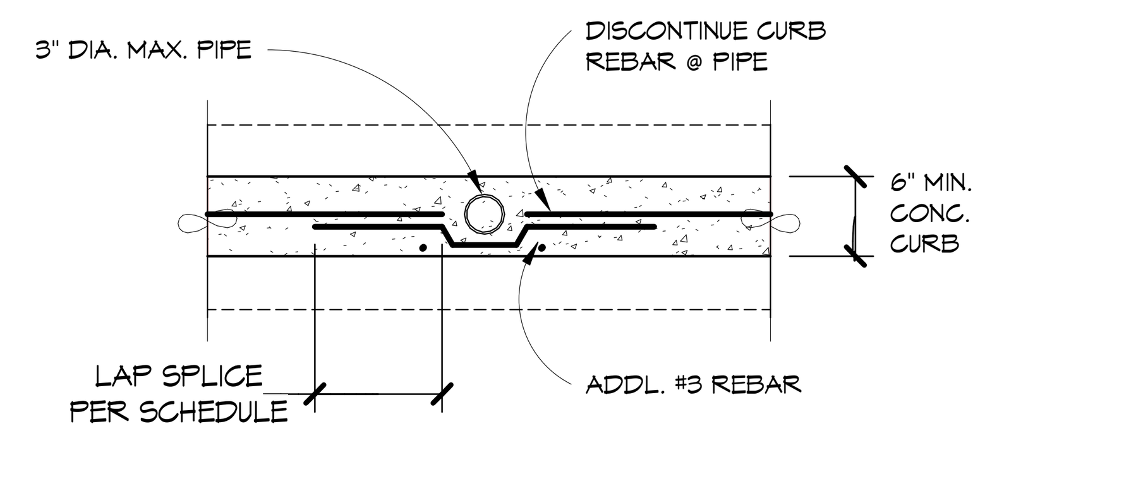
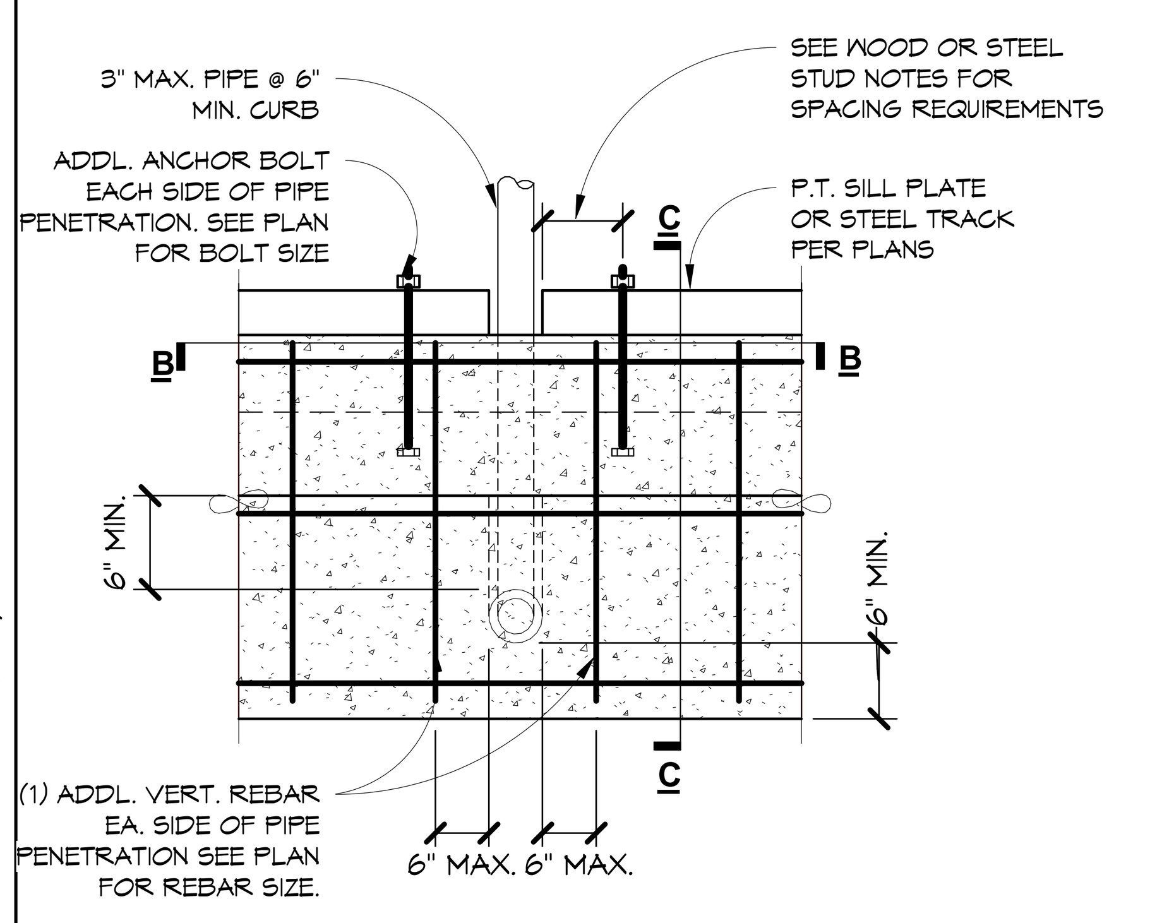


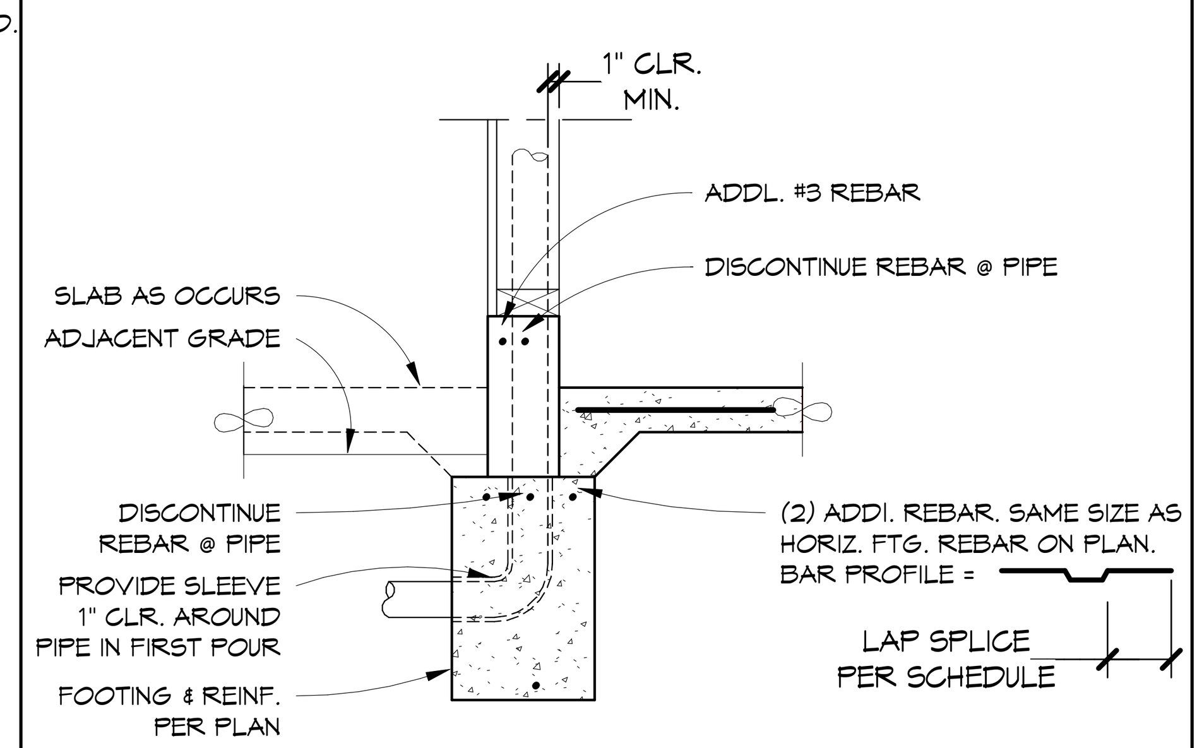
NOTE:
BLOCK-OUTS TO BE 4'-0" APART, MIN., FROM CENTERLINES.

14	PIPES THROUGH FOOTINGS
S102	NOT TO SCALE



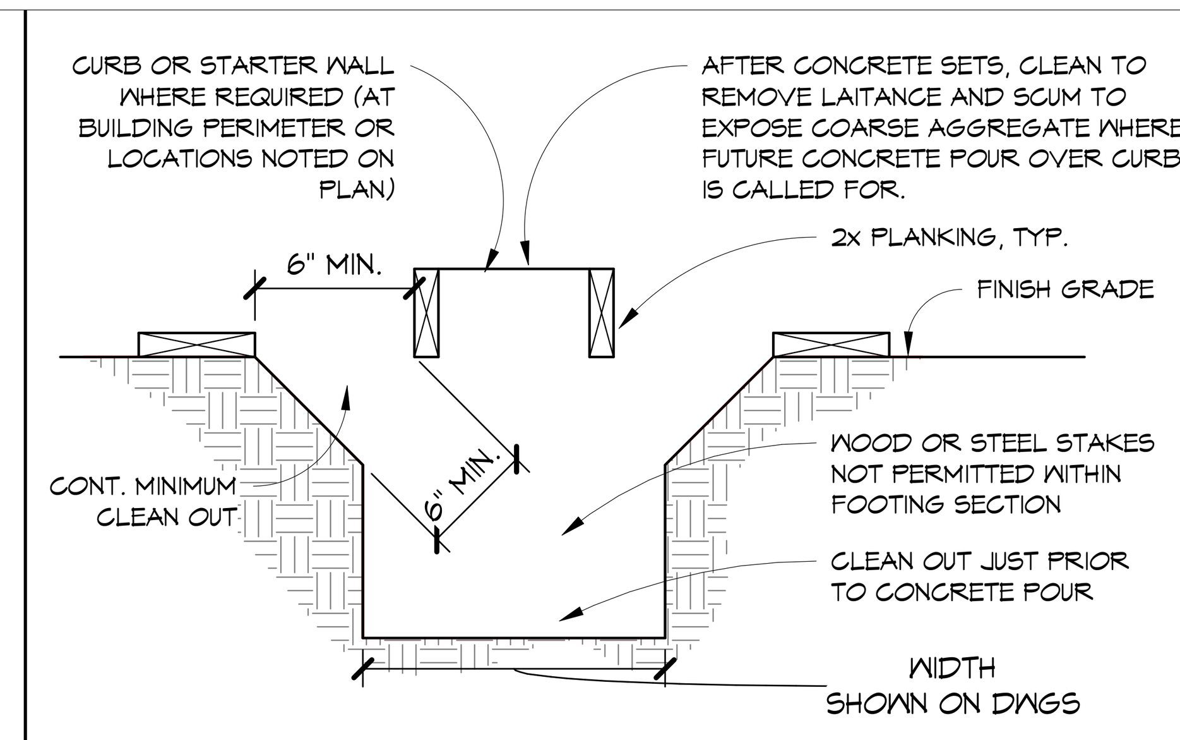
VIEW B-B





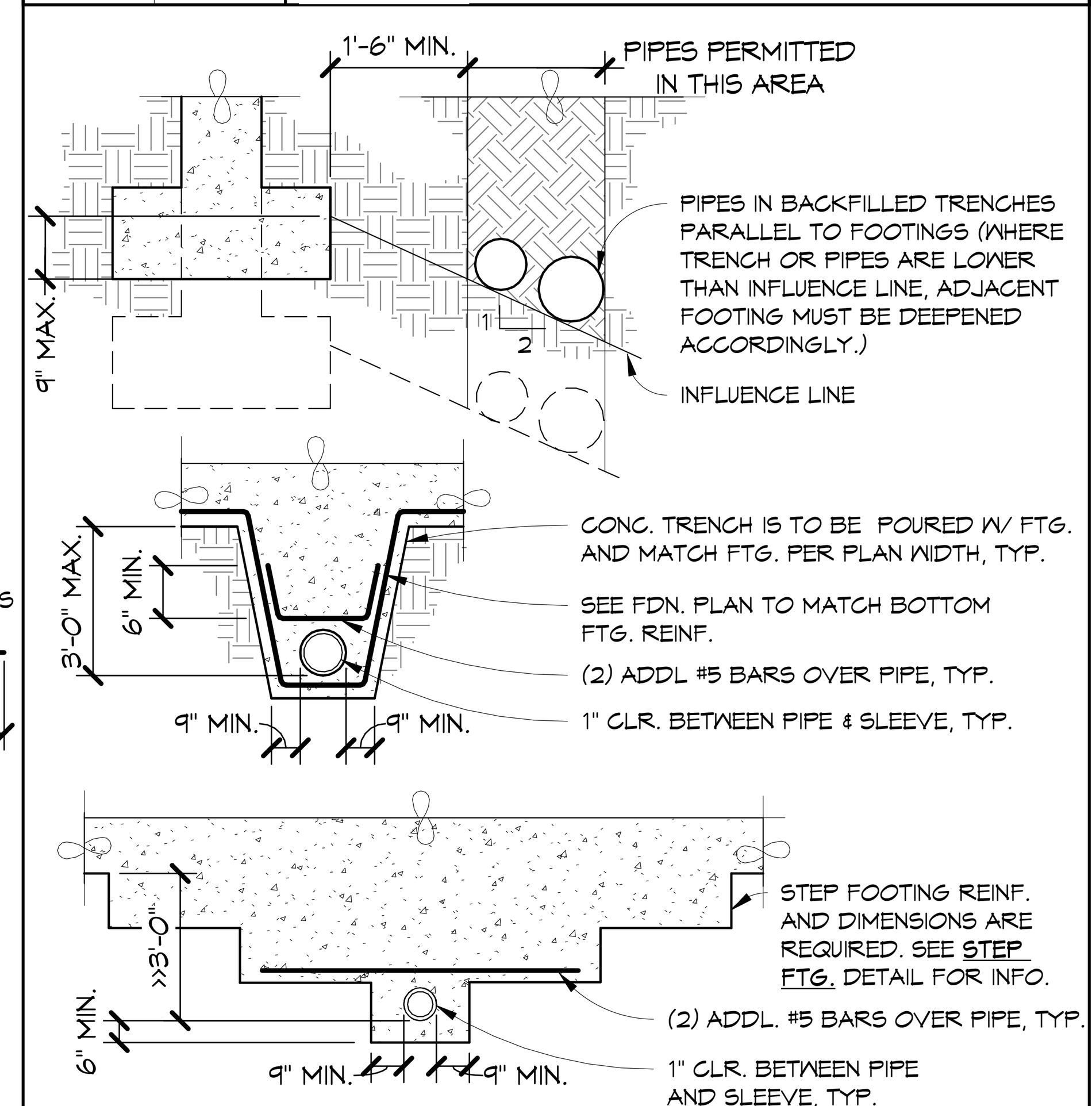
VIEW C-C

11	PIPE THRU CONC. CURB AND FTG.
S102	NOT TO SCALE



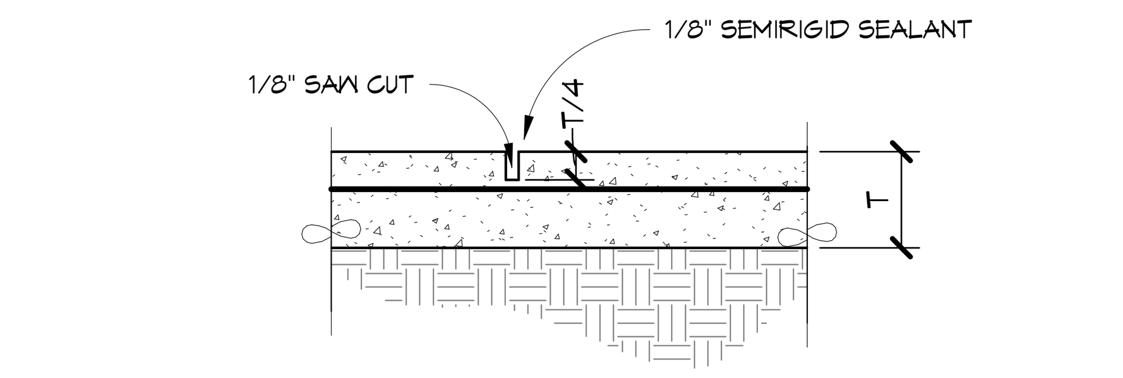
NOTES:
1. FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED THAT FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE ARCHITECT, OR STRUCTURAL ENGINEER, SUBJECT TO THE APPROVAL OF THE D.S.A./H.C.A.I. IN SUCH CASE, THE MINIMUM FORM WORK SHOWN ABOVE IS MANDATORY TO INSURE CLEAN EXCAVATIONS IMMEDIATELY PRIOR TO, AND DURING, THE PLACING OF CONCRETE.
2. FORMWORK NOT PERMITTED BELOW GRADE UNLESS FULLY FORMED.

7	REQUIRED CONT. FTG. FORM WRK
S102	NOT TO SCALE

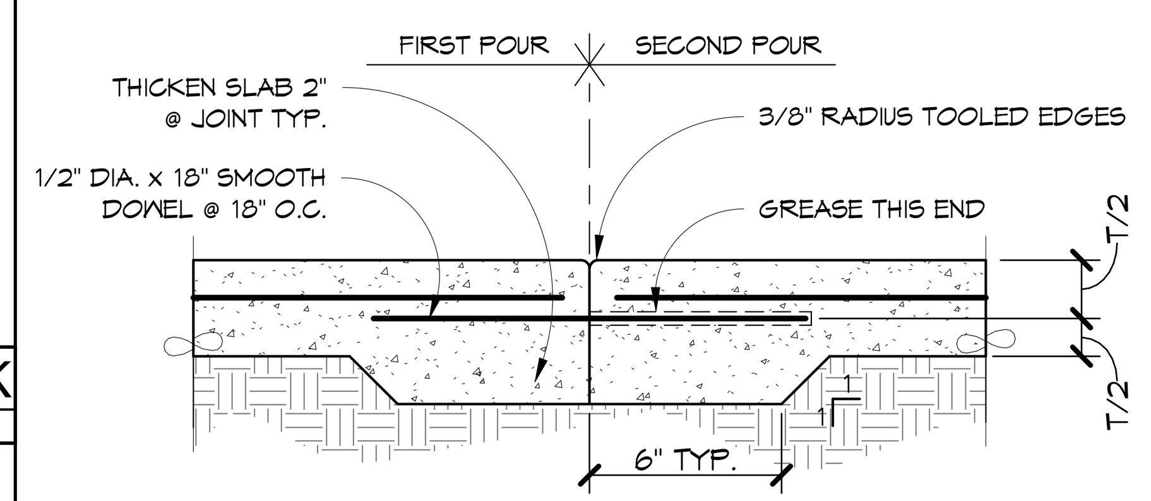


8	PIPES BELOW/ADJACENT TO FTG.
S102	NOT TO SCALE

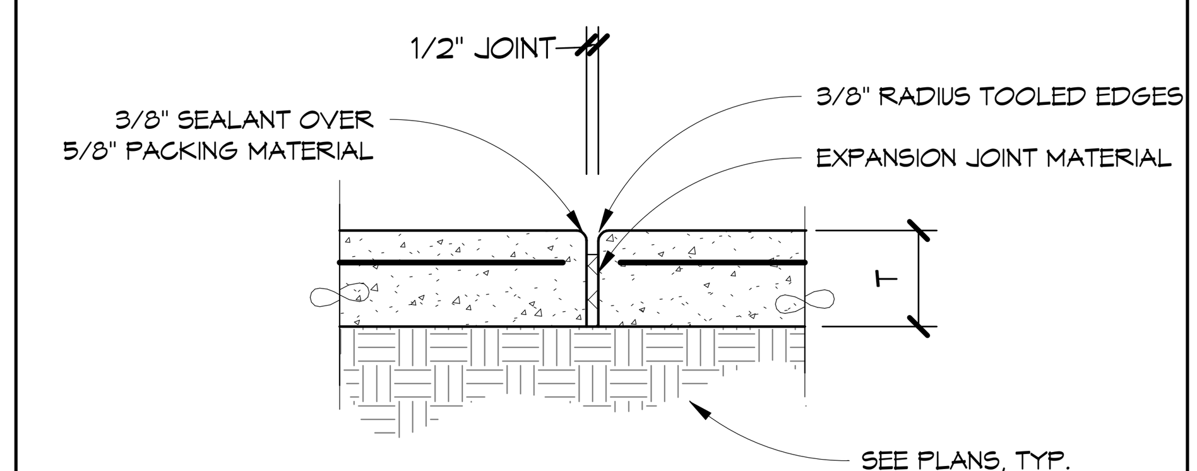
NOTES:
1. JOINT SPACING SHALL NOT EXCEED 10 FEET O.C. IN ANY DIRECTION.
2. JOINTS SHALL DIVIDE SLABS INTO AREAS NOT EXCEEDING 100 SQUARE FEET. THESE AREAS SHALL NOT CONTAIN REENTRY CORNERS AND MUST HAVE LENGTH TO WIDTH RATIOS NOT EXCEEDING 1.5 TO 1.0.
3. THE CONTRACTOR SHALL SUBMIT A CONTROL JOINT PLAN FOR APPROVAL PRIOR TO POURING THE CONCRETE SLAB.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE SLAB JOINTS WITH THE LOCATIONS OF TILE CRACK CONTROL JOINTS. VERIFY TILE CRACK CONTROL JOINTS WITH THE ARCHITECT, IF APPLICABLE.
5. CONCRETE SLAB WORK SHALL BE IN ACCORDANCE WITH A.C.I. 302.1R.



CONTROL JOINT



CONSTRUCTION JOINT



EXPANSION JOINT
FOR FLATWORK ONLY.
(SEE ARCH. AND/OR CIVIL DRAWINGS)

5	CONCRETE SLAB JOINTS
S102	NOT TO SCALE

1. FOUNDATIONS SHALL BEAR ON ENGINEERED FILL OR NATIVE SOIL A MINIMUM OF 18" BELOW ADJACENT GRADE OR FINISHED GRADE U.N.O. IN A SOILS REPORT.

2. MAXIMUM SIZE AGGREGATE SHALL BE AS FOLLOWS:
- SLAB ON GRADE: 1"
- FOOTINGS: 1 1/2"
- COLUMNS & WALLS: 1 1/2"

3. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS:
- 4000 PSI NORMAL WEIGHT SLAB ON GRADE
- 3000 PSI NORMAL WEIGHT FOOTINGS
- 4000 PSI NORMAL WEIGHT CONCRETE COLUMNS & WALLS.

4. MAXIMUM WATER CEMENT RATIOS SHALL BE AS FOLLOWS:
- 0.45 SLAB ON GRADE
- 0.50 COLUMNS & WALLS
- 0.58 FOOTINGS

8. THE FOLLOWING ARE MINIMUM CONCRETE COVER DIMENSIONS PER A.C.I. 318-19 SECTION 20.6.1. THEY ARE FROM FACE OF REINFORCING STEEL TO FACE OF CONCRETE. ALL REINFORCING STEEL SHALL MAINTAIN THE FOLLOWING CLEAR DISTANCES, U.N.O.
- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
- CONCRETE EXPOSED TO EARTH OR WEATHER: (NO. 6 THROUGH NO. 18) 2"; (NO. 5 AND SMALLER) 1 1/2"
- CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
  - SLABS, WALLS AND JOISTS: (NO. 14 AND NO. 18) 1 1/2"; (NO. 11 AND SMALLER) 3/4"
  - BEAMS AND COLUMNS: (ALL SIZES) 1 1/2"
  - SHELLS AND FOLDED PLATE MEMBERS: (NO. 6 AND LARGER) 3/4"; (NO. 5 AND SMALLER) 1/2"
- PLACE REINF. AT MID-THICKNESS FOR SLABS ON GRADE.

9. CONSTRUCTION LOADS SHALL NOT BE PLACED ON NEW CONCRETE CONSTRUCTION, INCLUDING CONCRETE TOPPING ON METAL DECK, FOR AT LEAST 7 DAYS AFTER CONCRETE PLACEMENT OR WITH APPROVAL BY ENGINEER.

10. ALL SPLICES IN CONTINUOUS REINFORCEMENT USED IN WALLS, FOOTINGS, ETC. SHALL HAVE A MINIMUM LAP AS DESCRIBED IN THE TYPICAL LAP SPLICE DETAIL. SPLICES IN ADJACENT BARS SHALL NOT BE LESS THAN 4'-0" APART. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. OR WHERE SPECIFICALLY DETAILED TO BE SEPARATED.

11. ALL REINFORCEMENT CROSSING CONSTRUCTION JOINTS SHALL BE CONTINUOUS, OR SHALL BE MADE EFFECTIVELY CONTINUOUS BY USE OF FULLY DEVELOPED LAP SPLICES, DOWELS (WITH LAPPED SPLICES) OR APPROVED COUPLERS.

12. HORIZONTAL CONSTRUCTION JOINTS SHALL HAVE ENTIRE SURFACE REMOVED TO EXPOSE\CLEAN AGGREGATE SOLIDLY EMBEDDED.

13. CONCRETE SHALL NOT BE DROPPED THROUGH REINF. STEEL (AS IN WALL) SO AS TO CAUSE SEGREGATION OF AGGREGATES. IN SUCH CASES, HOPPERS AND VERTICAL CHUTES OR TRUNKS SHALL BE USED. CHUTES OR TRUNKS SHALL BE OF VARIABLE LENGTHS SO THAT FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED FIVE (5) FEET AND A SUFFICIENT NUMBER OF CHUTES AND TRUNKS SHALL BE USED TO ENSURE THE CONCRETE REMAINS LEVEL AT ALL TIMES.

14. ALL STEEL COLUMN BASE PLATES AND STEEL BEAMS BEARING ON CONCRETE SHALL BEAR UPON 1 1/2" OF NON-SHRINK, 3,000 PSI MIN, GROUT PADS AND LEVELING NUTS, U.N.O.

15. WHERE STEEL MEMBERS BEAR IN CONCRETE OR MASONRY WALLS, OPENINGS SHALL BE DRY-PACKED AFTER STEEL IS IN PLACE.

16. CONTRACTOR SHALL SUBMIT PROPOSED POUR SCHEDULE FOR ENGINEER'S APPROVAL PRIOR TO THE FORMING OR POURING OF ANY CONCRETE WORK.

17. PROVIDE 3/4" CHAMFER AT EXPOSED EDGES OF CONCRETE BEAMS, COLUMNS AND WALLS UNLESS NOTED OTHERWISE.

18. THE CONTRACTOR SHALL FURNISH AND INSTALL 1/2" PRE-MOLDED EXPANSION JOINTS IN ALL EXTERIOR WALKS AND SLABS AS INDICATED ON DRAWINGS, BUT IN NO CASE MORE THAN 24'-0" O.C.

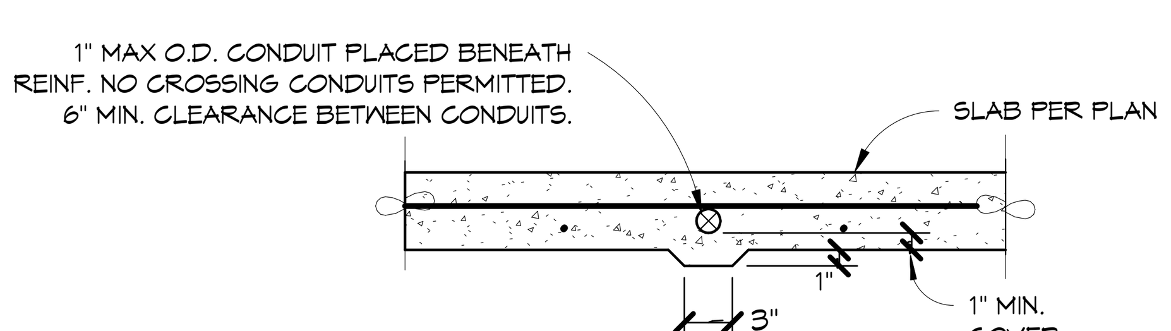
19. ALL REINFORCING SHALL CONFORM TO A.S.T.M. A615 AND SHALL BE GRADE 40 FOR #3, GRADE 60 FOR #4 AND LARGER.

20. COLUMN SPIRALS SHALL CONFORM TO "STANDARD SPECIFICATION FOR COLD-DRAWING STEEL FOR CONCRETE REINFORCEMENT" ASTM A82 WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. FABRICATION SHALL CONFORM TO ACI MANUAL OF STANDARD PRACTICE.

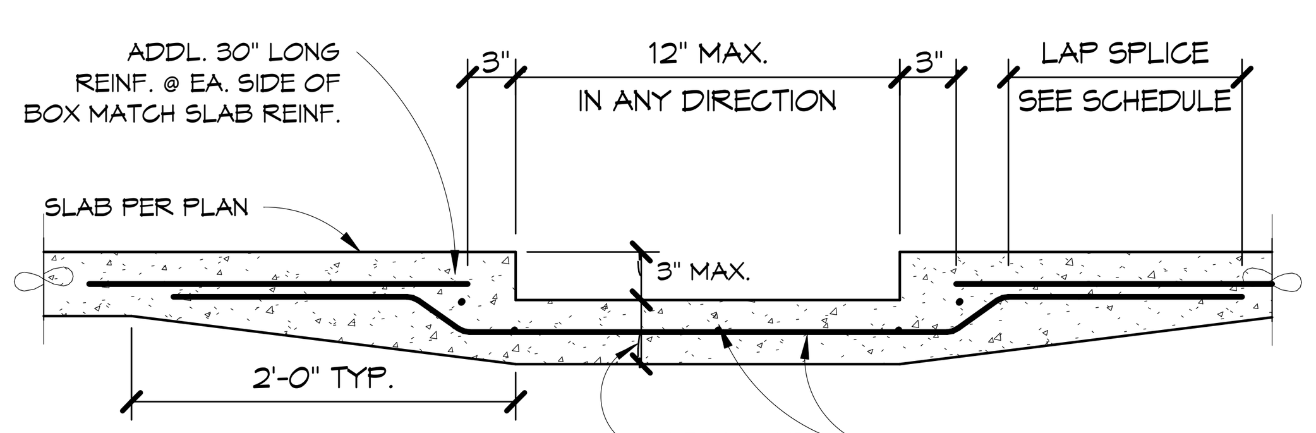
21. WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A185.

22. ALL WELDING OF REINFORCING STEEL SHALL BE WITH LOW HYDROGEN ELECTRODES U.N.O. WELDING OF REINFORCING SHALL BE ALLOWED ONLY WHERE DETAILED ON DRAWINGS. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AMERICAN WELDING SOCIETY SPECIFICATIONS A.W.S. D1.4. WELDING SHALL NOT BE DONE WITHIN TWO BAR DIAMETERS OF ANY BENT PORTION OF A BAR WHICH HAS BEEN BENT COLD. WELDING OF CROSSING BARS SHALL NOT BE PERMITTED FOR ASSEMBLY OF REINFORCEMENT UNLESS AUTHORIZED BY THE STRUCTURAL ENGINEER OF RECORD. A.S.T.M. A706 REINFORCING SHALL BE USED FOR ALL REINFORCING THAT IS BEING WELDED.

23. WHERE DRILLED PIERS ARE USED, CONTRACTOR IS RESPONSIBLE TO PROVIDE MEASURES TO DRILL HOLE PER PLANS BY USE OF CASING IF UNFORESEEN SOIL CONDITIONS ARE ENCOUNTERED.



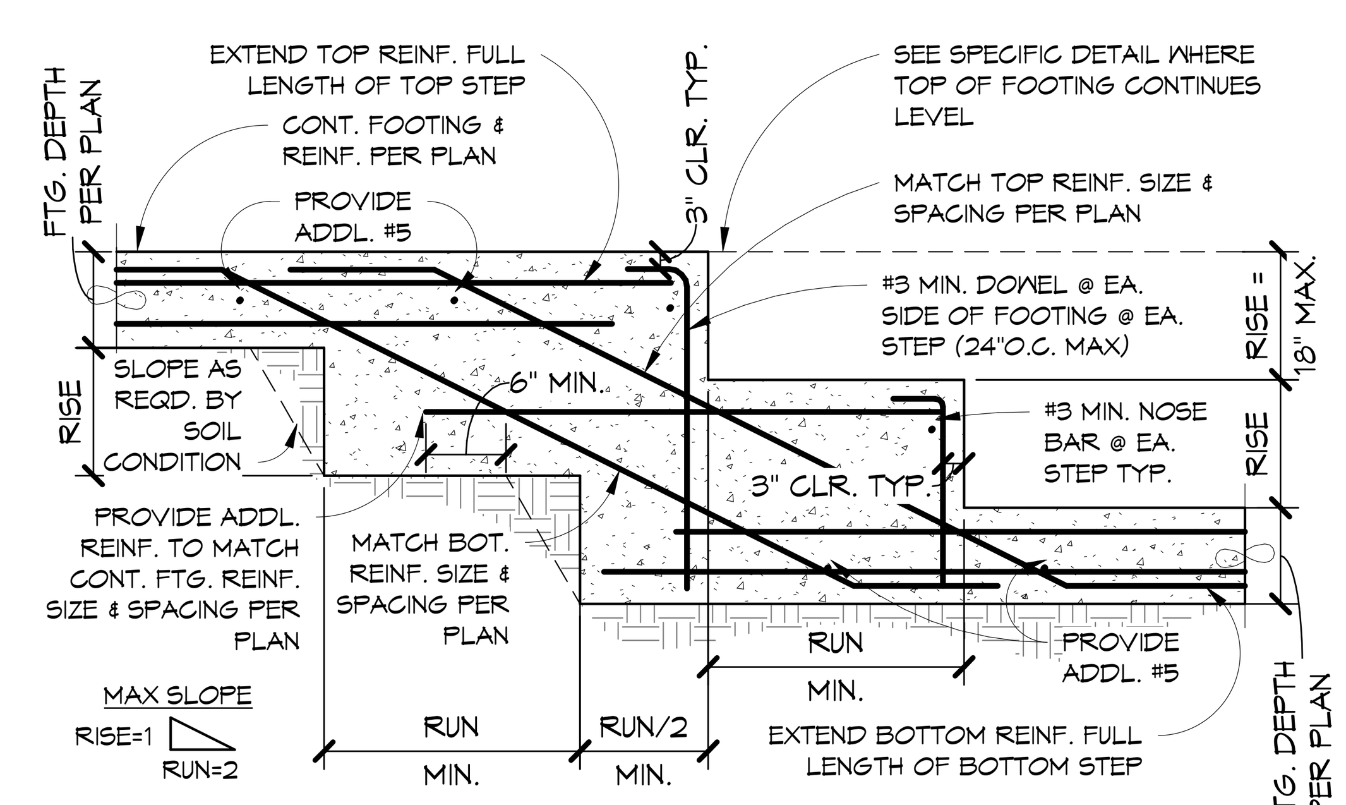
CONDUIT



RECESSED BOX

NOTE:
SEAL ALL PENETRATIONS THROUGH VAPOR BARRIER, AND PATCH ALL PUNCTURES AND CUTS, PRIOR TO PLACING CONCRETE.

15	CONDUITS AND BOXES IN SLAB
S102	NOT TO SCALE



NOTES:
1. THE MAX. ALLOWABLE FTG. RISE = 18" & SLOPE = 1:2 U.N.O. IN THE SOILS REPORT.
2. FOR FOOTINGS WITHOUT EITHER BOTTOM OR TOP REINFORCEMENT, PROVIDE #5 @ 12" O.C. (2 MIN), TOP & BOTTOM IN AREA OF STEPPED FOOTING.
3. PROVIDE A MIN. LAP SPLICE FOR ALL DIAGONAL REINF. INTO CONT. FOOTING BEYOND STEPPED FOOTING AREA. SEE TYP. LAP SPLICE DTL. FOR ADDL. INFO.
4. PROVIDE STIRRUPS IN SLOPED FOOTING SECTION IF STIRRUPS ARE REQUIRED IN TYPICAL CONT. FOOTING SECTION. SEE PLAN FOR ADDL. INFORMATION.

9	STEPPED FOOTING
S102	NOT TO SCALE

3	FOUNDATION AND CONC. NOTES
S102	NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
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4/11/2024 5:00:49 PM
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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

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ARCHITECTURE PLANNING
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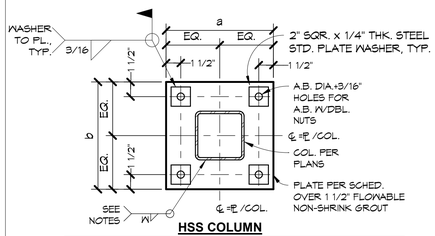
SHEET TITLE:
TYPICAL CONCRETE NOTES AND DETAILS

S102

BASE PLATE SCHEDULE

COLUMN SIZE	BASE PLATE SIZE		
	't'	'a'	'b'
C4	3/4"	10"	10"
C5	3/4"	10"	10"
C7	3/4"	15"	15"
C8	3/4"	15"	15"
C8Z	3/4"	8"	15"

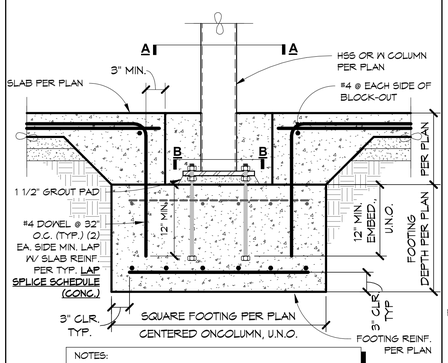
NOTE: 't' = THICKNESS



HSS COLUMN

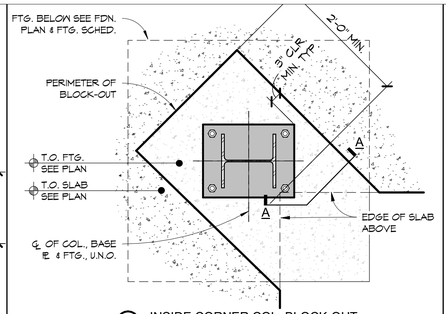
NOTES:
1. FILLET WELD 'W' SHALL BE 1/4" AT BASE PLATES 3/4" AND LESS, AND 5/16" AT BASE PLATES GREATER THAN 3/4".
2. ANCHOR BOLTS TO BE 3/4" DIA. WITH 12" MIN. EMBEDMENT INTO FOOTING, U.N.O.

13 | COLUMN BASE PLATE SCHEDULE | S103 | NOT TO SCALE

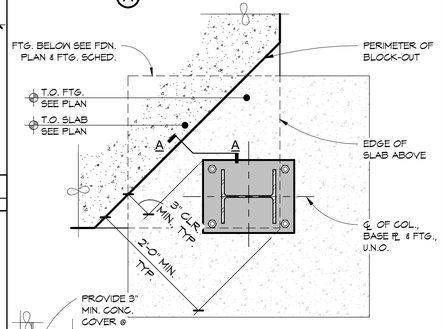


NOTES:
VIEW A-A SEE TYPICAL CONCRETE BLOCK-OUT DETAIL FOR ADDITIONAL INFORMATION.
VIEW B-B SEE TYPICAL COLUMN BASE PLATE SCHEDULE DETAIL FOR ADDITIONAL INFORMATION.

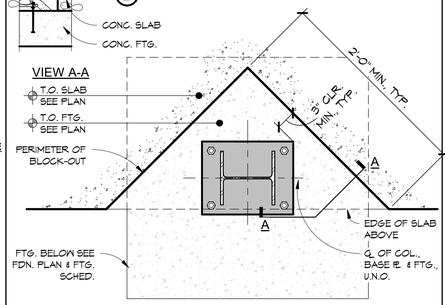
10 | SQUARE FOOTING AT STEEL COL. | S103 | NOT TO SCALE



A INSIDE CORNER COL. BLOCK-OUT

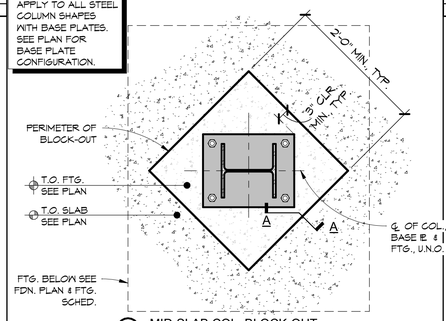


B OUTSIDE CORNER COL. BLOCK-OUT



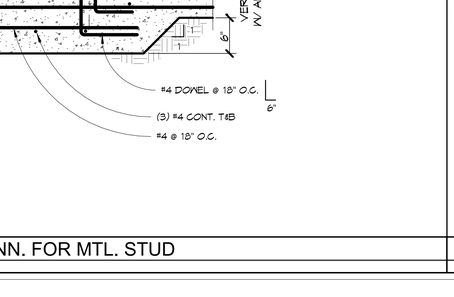
C SLAB EDGE COL. BLOCK-OUT

NOTE:
CONC. BLOCK-OUTS APPLY TO ALL STEEL COLUMN SHAPES WITH BASE PLATES. SEE PLAN FOR BASE PLATE CONFIGURATION.



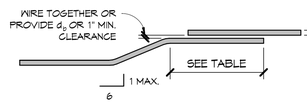
D MID-SLAB COL. BLOCK-OUT

11 | STEEL COLUMN AT CONC. CURB | S103 | NOT TO SCALE



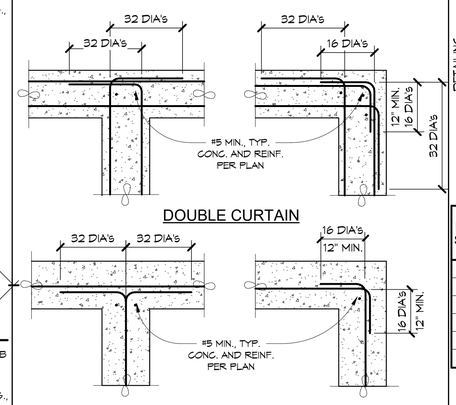
LAP LENGTH (MINIMUM 3,000 PSI CONCRETE)

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
BOTTOM BAR	16"	29"	36"	43"	62"	72"	81"	91"	101"
TOP BAR	21"	38"	47"	56"	81"	94"	105"	118"	131"

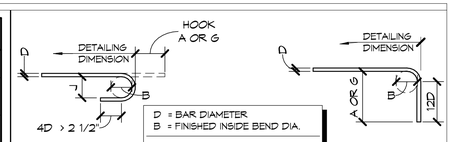


NOTES:
1. SPLICES ARE SHOWN IN INCHES AND SHALL CONFORM TO CLASS "B" SPLICES AS PER A.C.I.318-19, FOR 3,000 PSI CONCRETE.
2. SPLICE LENGTHS ASSUME THE MODIFICATION FACTORS OF A.C.I.318-19 SECTIONS 25.1.1 ARE 1.0. FOR OTHER CONDITIONS PROVIDE SPLICE LENGTHS IN ACCORDANCE WITH A.C.I.318-19.
3. USE THE SPLICE LENGTH GIVEN FOR TOP BARS WHEN MORE THAN 12" OF CONCRETE IS CAST BELOW HORIZONTAL BARS IN THE MEMBER. USE THE SPLICE LENGTH GIVEN FOR BOTTOM BARS FOR ALL OTHER CONDITIONS.

4 | LAP SPLICE SCHEDULE (CONC.) | S103 | NOT TO SCALE

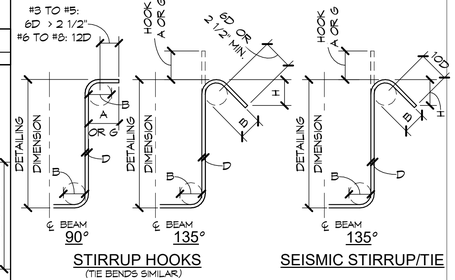


5 | REBAR AT INTERSECTIONS | S103 | NOT TO SCALE



D = BAR DIAMETER
B = FINISHED INSIDE BEND DIA.
B = 6D FOR #3 THROUGH #8
B = 8D FOR #9, #10 AND #11
B = 10D FOR #14 AND #18

BAR SIZE	DIMENSION OF STD. 180° HOOKS, ALL GRADES			DIMENSION OF STD. 90° HOOKS, ALL GRADES	
	A OR G	J	B	A OR G	B
#3	5"	3"	2 1/4"	6"	2 1/4"
#4	6"	4"	3"	8"	3"
#5	7"	5"	3 3/4"	10"	3 3/4"
#6	8"	6"	4 1/2"	1'-0"	4 1/2"
#7	10"	7"	5 1/4"	1'-2"	5 1/4"
#8	11"	8"	6"	1'-4"	6"
#9	1'-3"	1'-1 3/4"	9 1/2"	1'-7"	9 1/2"
#10	1'-5"	1'-1 1/4"	10 3/4"	1'-10"	10 3/4"
#11	1'-7"	1'-2 3/4"	12"	2'-0"	12"
#14	2'-3"	1'-9 3/4"	18 1/4"	2'-7"	18 1/4"
#18	3'-0"	2'-4 1/2"	24"	3'-5"	24"

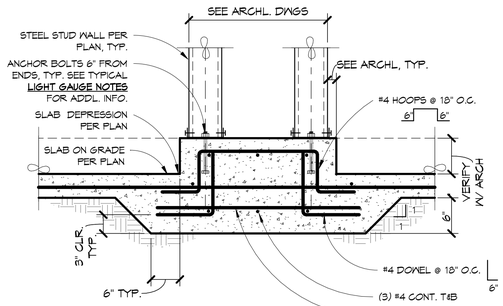


STIRRUP HOOKS (TIE BENDS SIMILAR)

SEISMIC STIRRUP/TIE

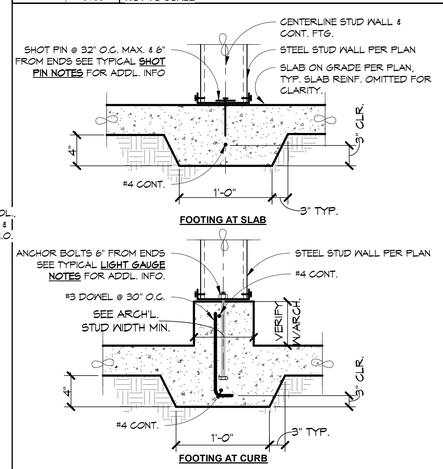
BAR SIZE	B	90°	135°		135° SEISMIC HOOK			
		A OR G	A OR G	APPROX H.	SIZE	B	A OR G	APPROX H.
#3	1 1/2"	4"	4"	2 1/2"	#3	1 1/2"	4 1/4"	3"
#4	2"	4 1/2"	4 1/2"	3"	#4	2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"	#5	2 1/2"	5 1/2"	3 3/4"
#6	4 1/2"	1'-0"	8"	4 1/2"	#6	4 1/2"	8"	4 1/2"
#7	5 1/4"	1'-2"	9"	5 1/4"	#7	5 1/4"	9"	5 1/4"
#8	6"	1'-4"	10 1/2"	6"	#8	6"	10 1/2"	6"

2 | STANDARD REBAR HOOKS | S103 | NOT TO SCALE



15 | NON-BEARING DOUBLE WALL CONN. FOR MTL. STUD | S103 | NOT TO SCALE

9 | CONC. BLOCK-OUTS FOR STL COL. | S103 | NOT TO SCALE



6 | NON-BEARING WALL CONN. | S103 | NOT TO SCALE

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
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CHOWCHILLA, CALIFORNIA

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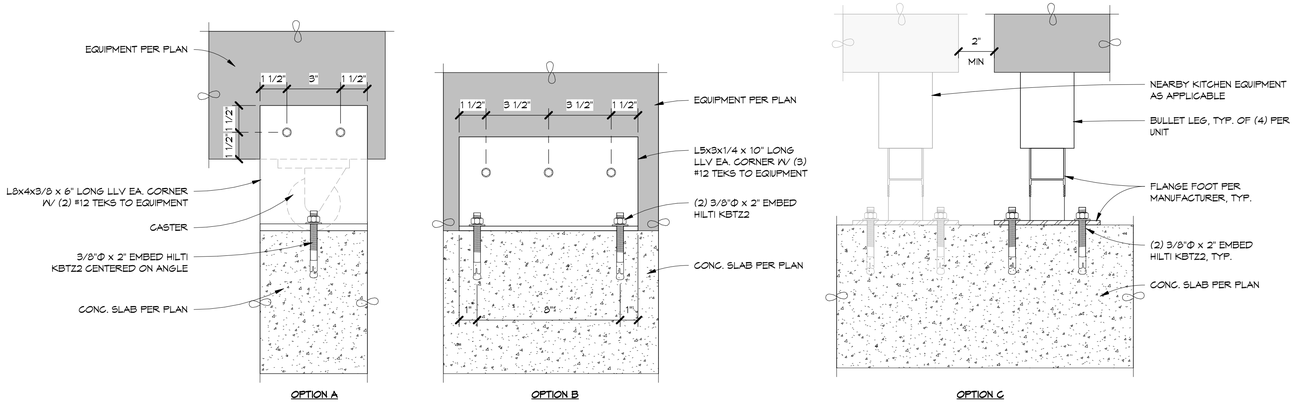
23422

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)

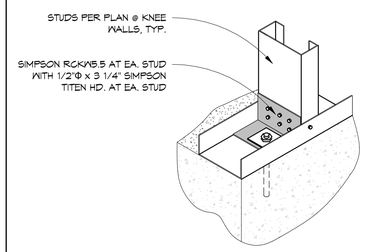
SHEET TITLE:
TYPICAL CONCRETE DETAILS

S103

4/11/2024 5:00:52 PM
C:\Users\Brandon\Documents\23422 Fairmead MPR (R23)_brandonyTU5ZN.rvt

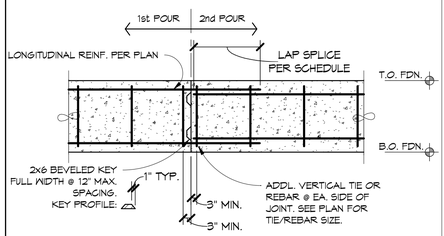


13	MECHANICAL ANCHORAGE DETAILS
S104	NOT TO SCALE

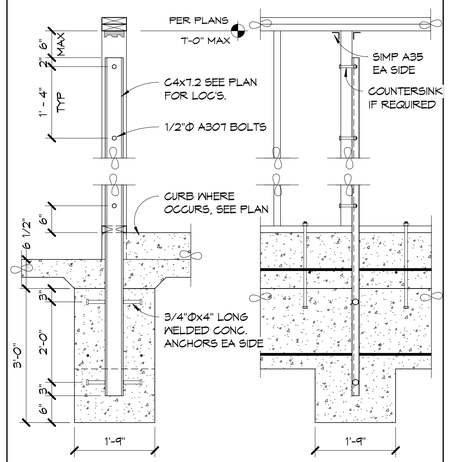


KNEE WALL LIMITATIONS:
1. 42" MAX. HEIGHT.
2. 16" O.C. MAX STUD SPACING.
3. 12 PSF UNIFORM VERT. LOAD ON WALL, 10PSF O.O.P. LOAD ON WALL
4. 16 GA. STUDS.

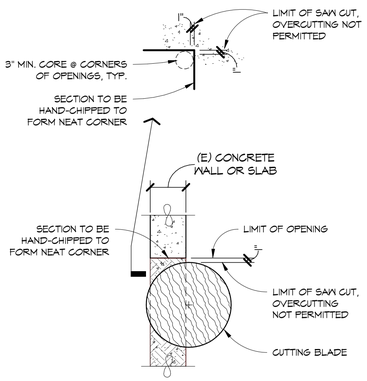
4	KNEE WALL ATTACHMENT
S104	NOT TO SCALE



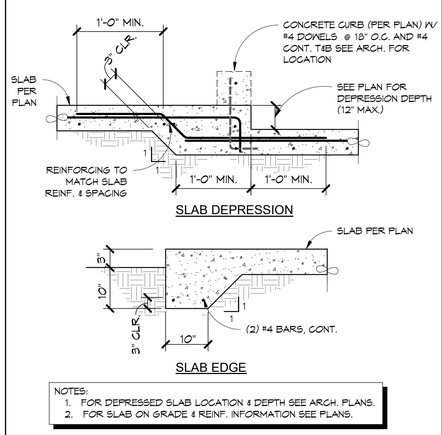
1	CONCRETE FOOTING JOINT
S104	NOT TO SCALE



8	EXTERIOR KNEE WALL
S104	NOT TO SCALE

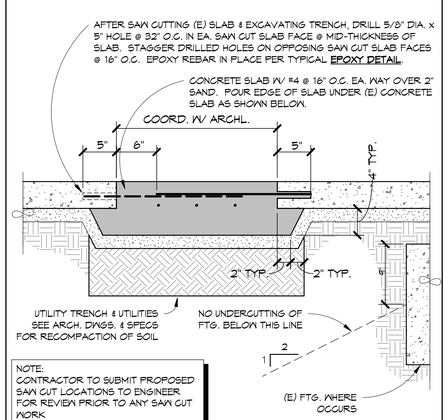


5	SAW CUTTING IN CONCRETE
S104	NOT TO SCALE



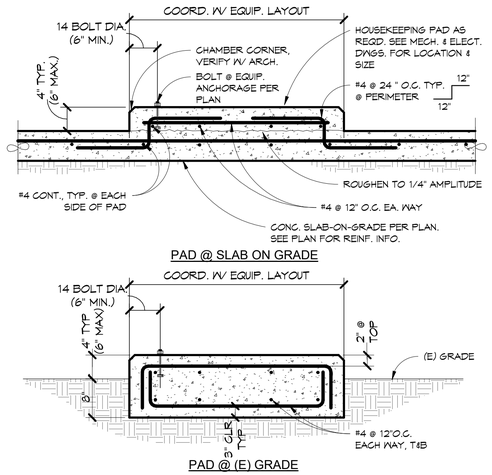
NOTES:
1. FOR DEPRESSED SLAB LOCATION & DEPTH SEE ARCH. PLANS.
2. FOR SLAB ON GRADE & REINF. INFORMATION SEE PLANS.

2	SLAB DEPRESSION AND EDGE
S104	NOT TO SCALE



NOTE:
CONTRACTOR TO SUBMIT PROPOSED SAW CUT LOCATIONS TO ENGINEER FOR REVIEW PRIOR TO ANY SAW CUT WORK.

9	UTILITY TRENCH SLAB RETROFIT
S104	NOT TO SCALE



6	HOUSEKEEPING PAD
S104	NOT TO SCALE

BrooksRansom ASSOCIATES
7485 N PALM AVE, STE 100 | FRESNO, CA 93711
(559) 449-9444 OFFICE | (559) 449-9404 FAX
23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

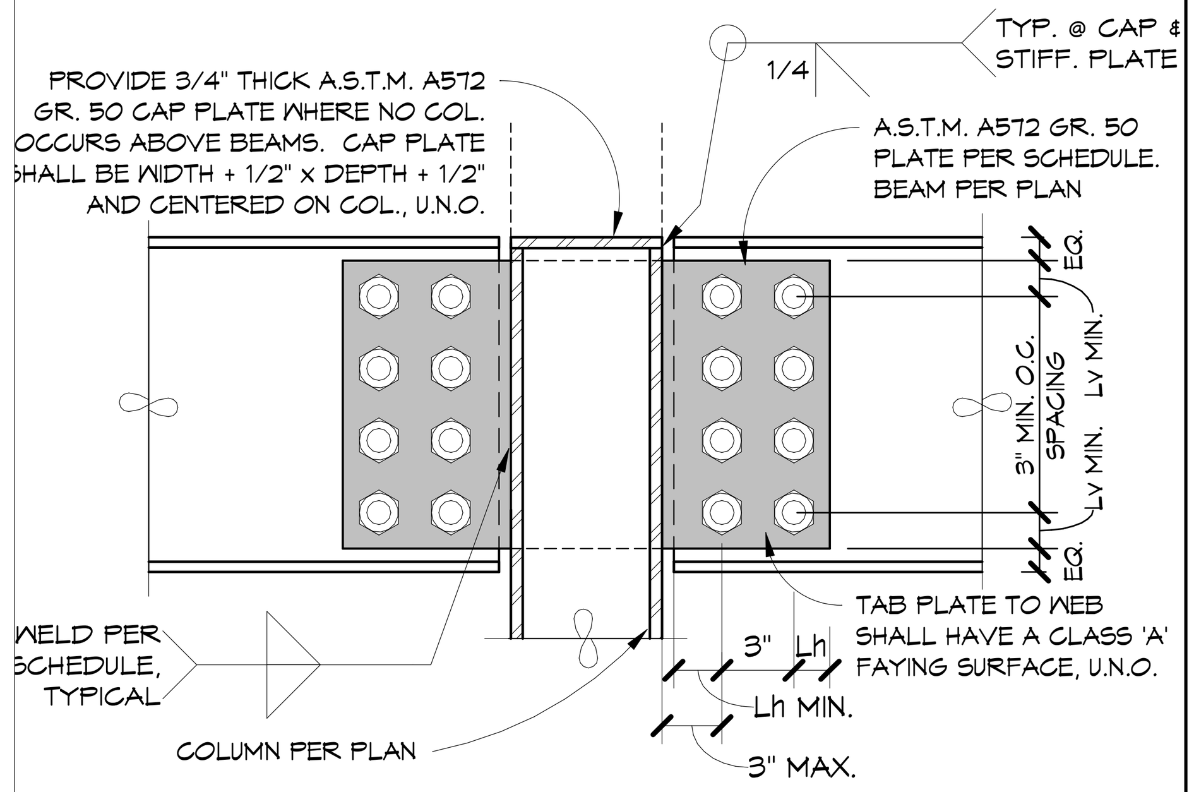
MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)

SHEET TITLE:
TYPICAL CONCRETE DETAILS

S104



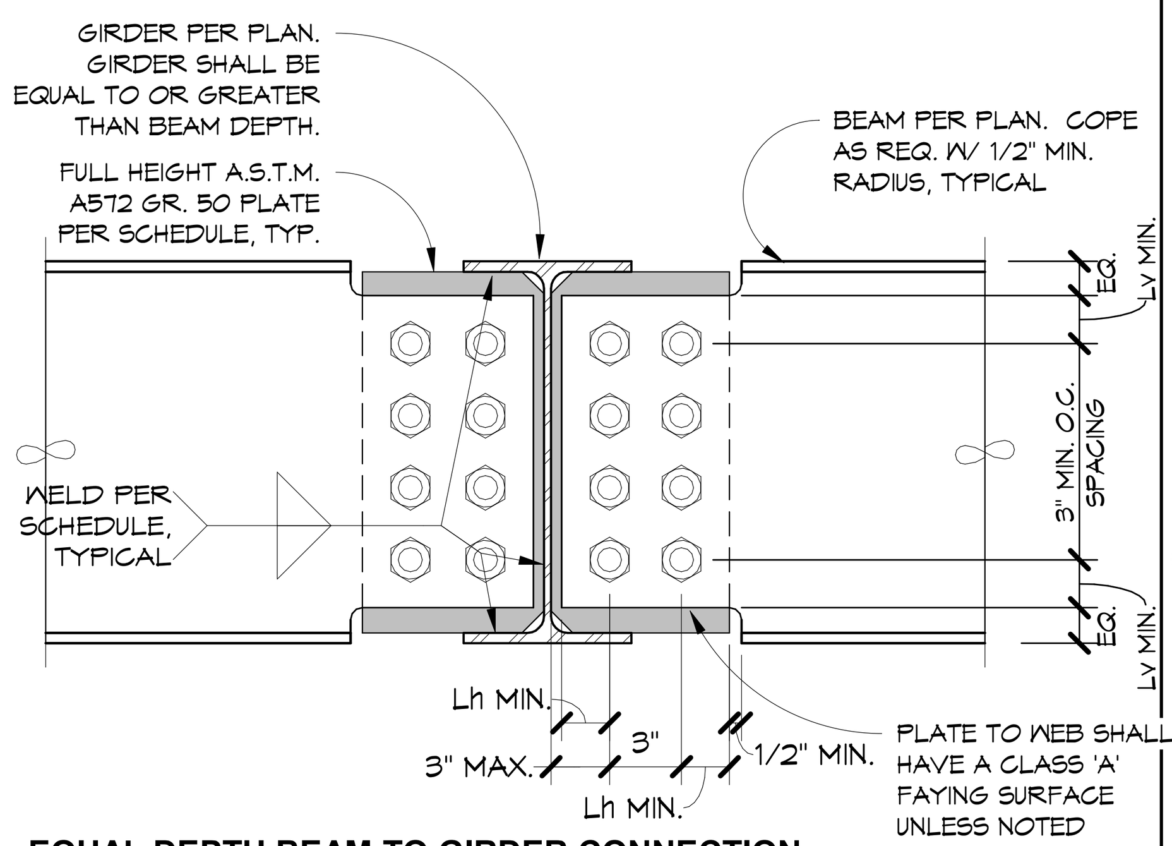
BEAM TO HSS COLUMN KNIFE PLATE CONNECTION

(SEE KNIFE PLATE CONNECTION SCHEDULE FOR ADD'L INFO.)

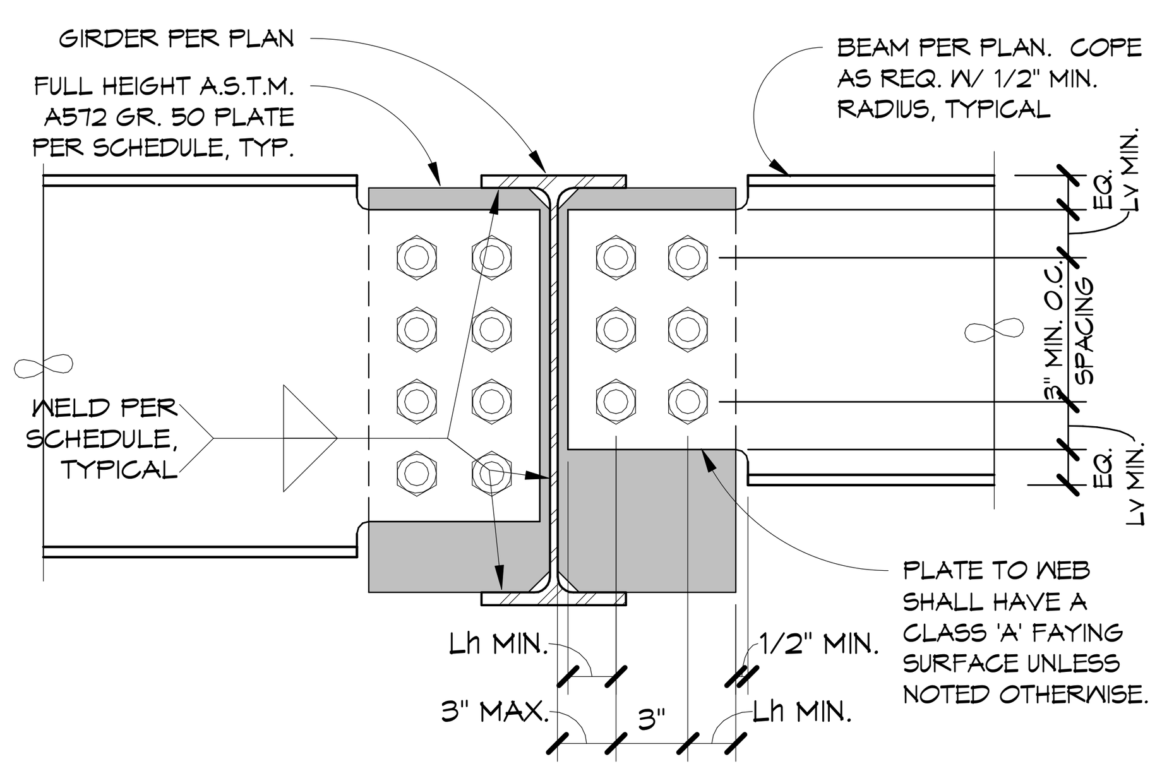
NOTE:
THIS DETAIL DOES NOT APPLY TO ANY CONDITION THAT IS NOT SPECIFICALLY ILLUSTRATED ABOVE. INCLUDING MOMENT CONNECTIONS. SEE SPECIFIC DETAILS FOR ADDITIONAL INFORMATION.

CONNECTION SCHEDULE							
BEAM SIZE	PLATE A572 GR. 50	FILLET WELD SIZE	BOLTS			DIMENSIONS	
			NO.	SIZE	TYPE	Lh	Lv
W8x	3/8"	1/4	(4)	3/4"Φ	A325 SC	1 1/2"	1 1/2"
W10x	3/8"	1/4	(4)	3/4"Φ	A325 SC	1 1/2"	1 1/2"
W12x	3/8"	1/4	(6)	3/4"Φ	A325 SC	2"	2"
W14x	3/8"	1/4	(6)	3/4"Φ	A325 SC	2"	2"
W16x	3/8"	1/4	(8)	3/4"Φ	A325 SC	2"	2"
W18x	5/8"	5/16	(8)	1"Φ	A325 SC	2"	2"
W21x	5/8"	5/16	(10)	1"Φ	A325 SC	2"	2"
W24x	5/8"	5/16	(12)	1"Φ	A325 SC	2"	2"
W27x	5/8"	5/16	(14)	1"Φ	A325 SC	2"	2"

14 COLLECTOR BM. TO COL. CONN. SCH.
S105 NOT TO SCALE



EQUAL DEPTH BEAM TO GIRDER CONNECTION



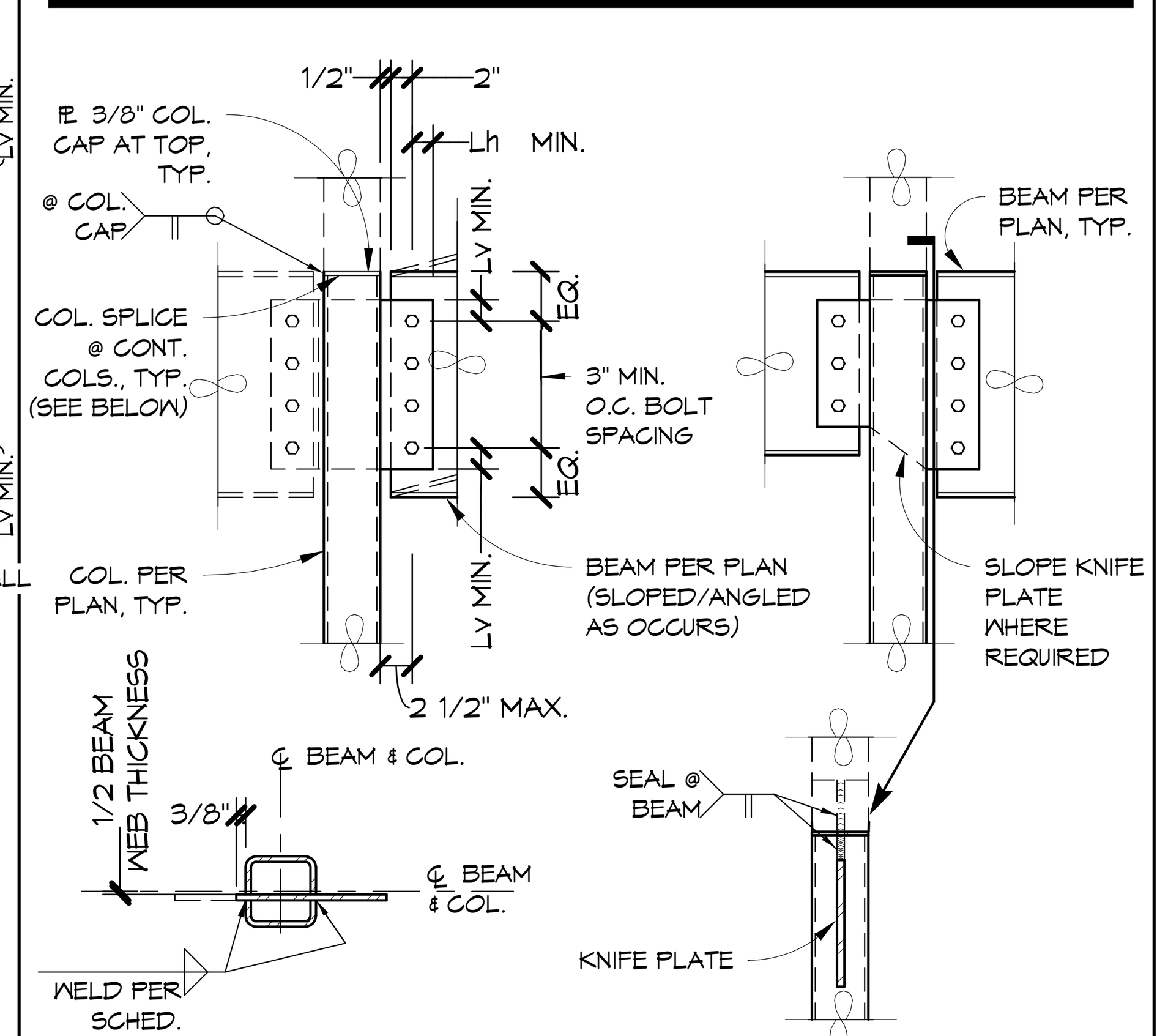
UN EQUAL DEPTH BEAM TO GIRDER CONNECTION

NOTE:
THIS DETAIL DOES NOT APPLY TO ANY CONDITION THAT IS NOT SPECIFICALLY ILLUSTRATED ABOVE. THEREFORE, FOR ANY OF THE FOLLOWING CONDITIONS SEE THE SPECIFIC DETAILS FOR MORE INFORMATION:
- BEAMS WITH THEIR UPPER FLANGE HIGHER THAN THE GIRDER UPPER FLANGE
- BEAMS WITH THEIR BOTTOM FLANGE LOWER THAN THE GIRDER BOTTOM FLANGE
- BEAMS DEEPER THAN THE GIRDER
- BEAM CONNECTIONS THAT ARE OFFSET IN PLAN.

CONNECTION SCHEDULE							
BEAM SIZE	PLATE A572 GR. 50	FILLET WELD SIZE	BOLTS			DIMENSIONS	
			NO.	SIZE	TYPE	Lh	Lv
W8x	3/8"	1/4	(4)	3/4"Φ	A325 SC	1 1/2"	1 1/2"
W10x	3/8"	1/4	(4)	3/4"Φ	A325 SC	1 1/2"	1 1/2"
W12x	3/8"	1/4	(6)	3/4"Φ	A325 SC	2"	2"
W14x	3/8"	1/4	(6)	3/4"Φ	A325 SC	2"	2"
W16x	3/8"	1/4	(8)	3/4"Φ	A325 SC	2"	2"
W18x	5/8"	5/16	(8)	1"Φ	A325 SC	2"	2"
W21x	5/8"	5/16	(10)	1"Φ	A325 SC	2"	2"
W24x	5/8"	7/16	(12)	1"Φ	A325 SC	2"	2"
W27x	5/8"	7/16	(14)	1"Φ	A325 SC	2"	2"

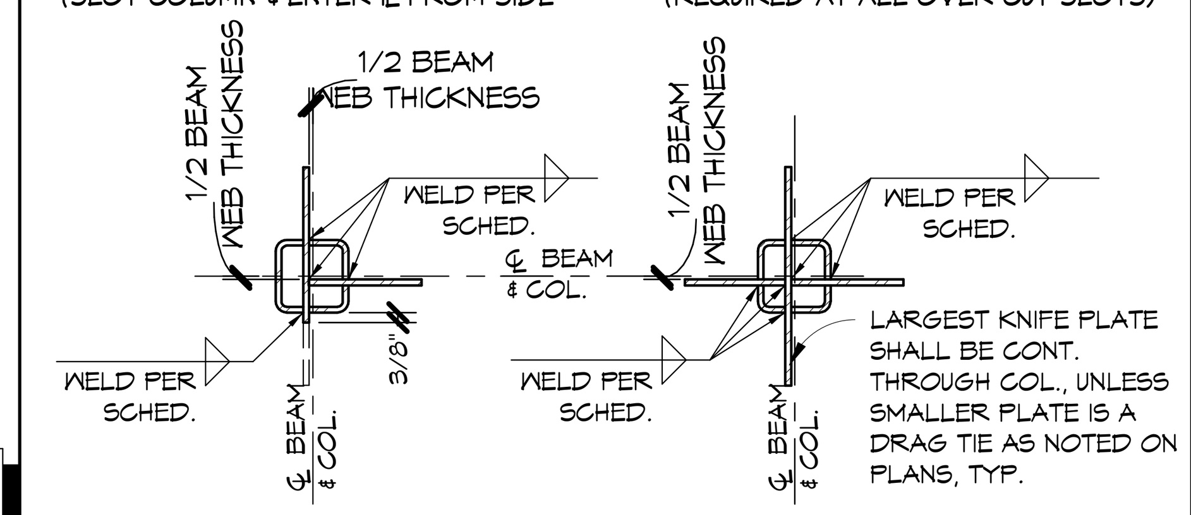
11 COLLECTOR BM. TO GIRD. CONN. SCH.
S105 NOT TO SCALE

NOTES:
1. CLIP BEAM FLANGE(S) WHERE REQUIRED TO CLEAR ADJACENT BEAM FLANGES AT MULTI-BEAM CONNECTIONS.
2. KNIFE PLATE SLOT WIDTH = KNIFE PLATE THICKNESS + 1/8"
3. PJP WELDS ARE REQUIRED ALL AROUND COLUMN AT SPLICE LOCATIONS. LEAVE 1/16" OF COLUMN WALL THICKNESS AT INTERIOR FACE FOR PJP WELD.



SINGLE / DOUBLE CONNECTION
(SLOT COLUMN & ENTER ℄ FROM SIDE)

TYP. AT SLOTS
(REQUIRED AT ALL OVER CUT SLOTS)

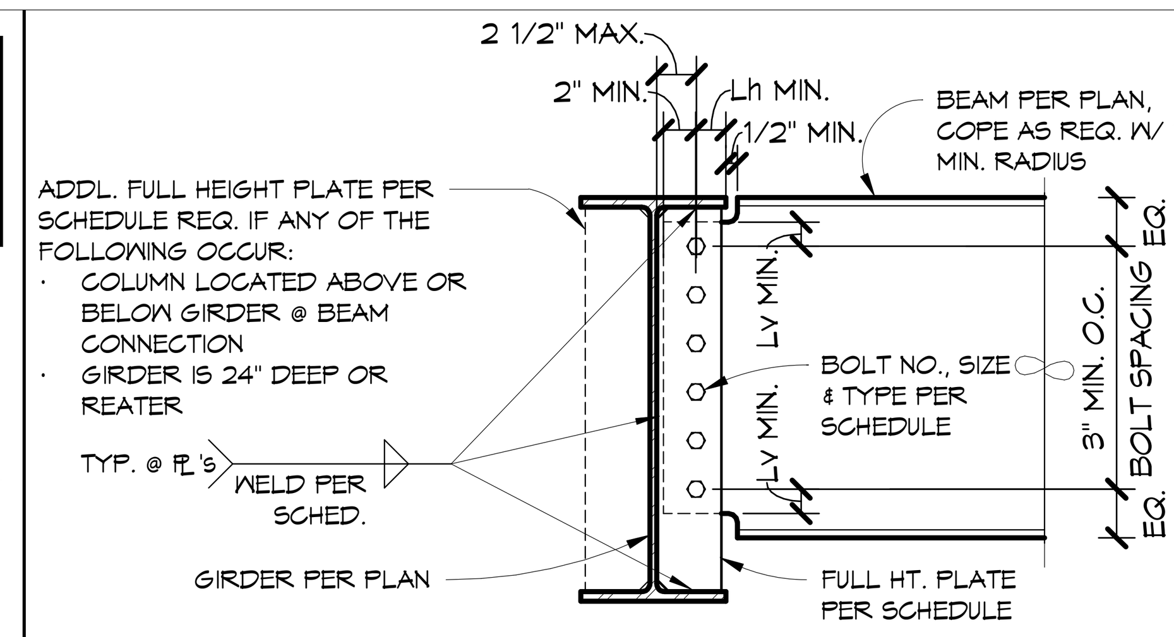


DOUBLE / TRIPLE CONNECTION
(CUT COLUMN & ENTER ℄ FROM ABOVE)

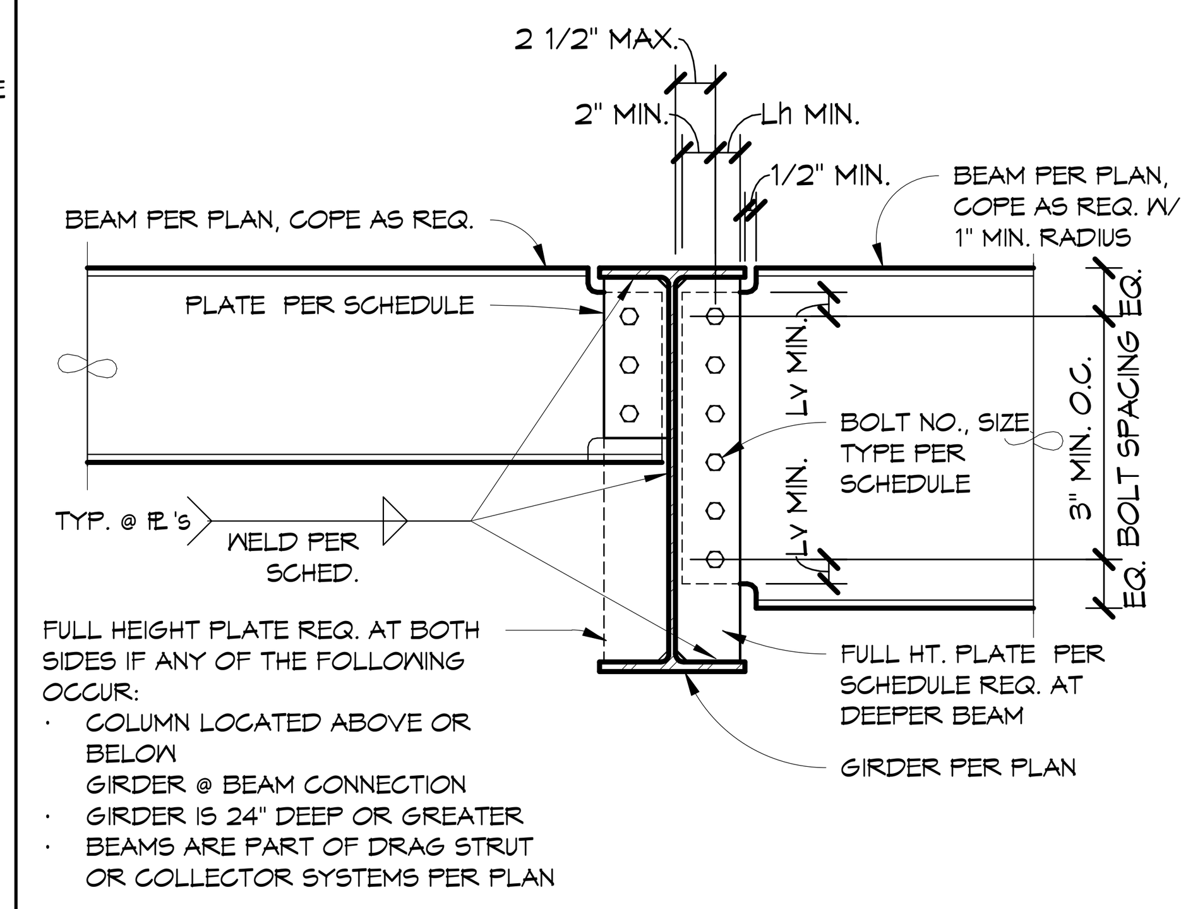
QUAD CONNECTION
(CUT COLUMN & ENTER ℄ FROM ABOVE)

CONNECTION SCHEDULE							
BEAM SIZE	PLATE	FILLET WELD SIZE	BOLTS			DIMENSIONS	
			NO.	SIZE	TYPE	Lh	Lv
W8x / C8x	3/8	1/4	(2)	3/4"Φ	A325N	1 1/2"	1 1/2"
W10x / C10x	3/8	1/4	(2)	3/4"Φ	A325N	1 1/2"	1 1/2"
W12x / C12x	3/8	1/4	(3)	3/4"Φ	A325N	1 1/2"	1 1/2"
W14x / C15x	3/8	1/4	(3)	3/4"Φ	A325N	1 1/2"	1 1/2"
W16x	3/8	1/4	(4)	3/4"Φ	A325N	1 1/2"	1 1/2"
W18x	3/8	1/4	(4)	1"Φ	A325N	2"	2"
W21x	1/2	5/16	(5)	1"Φ	A325N	2"	2"
W24x	1/2	5/16	(6)	1"Φ	A325N	2"	2"
W27x	1/2	5/16	(7)	1"Φ	A325N	2"	2"

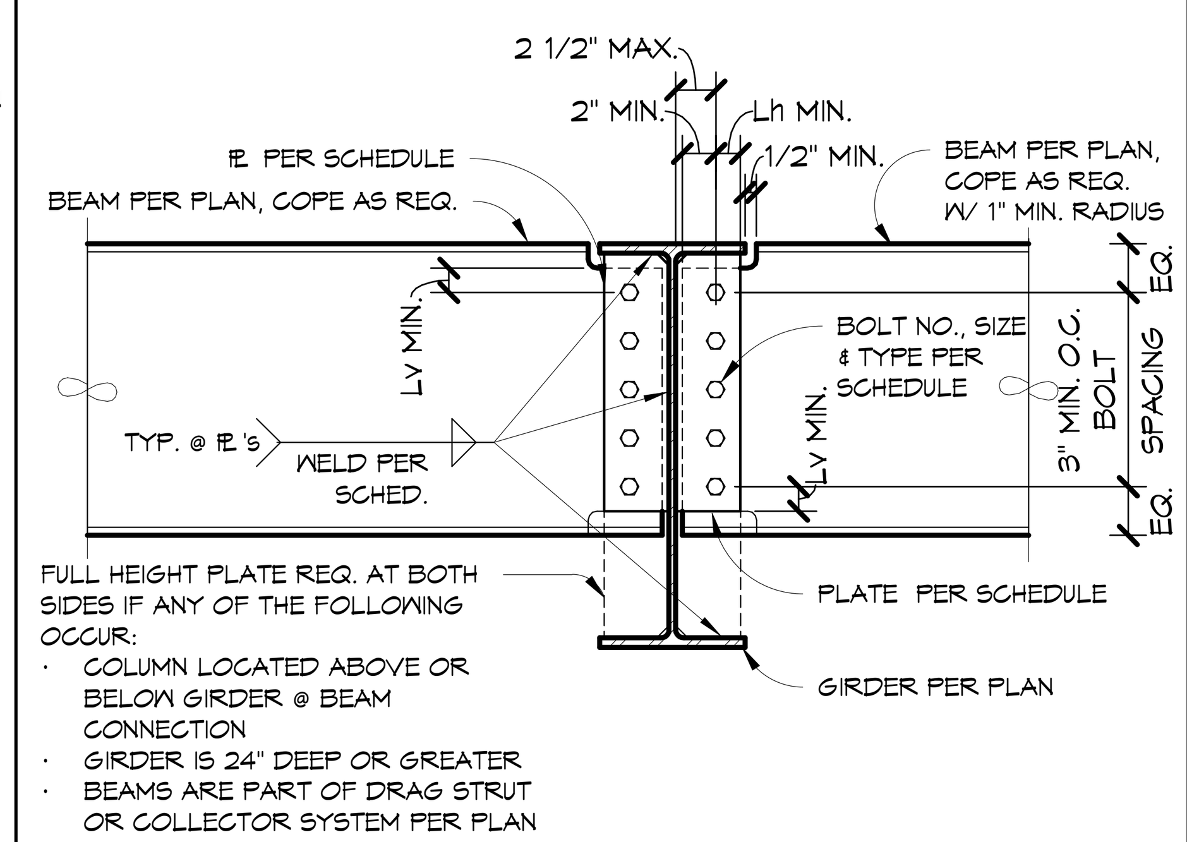
8 KNIFE PLATE CONNECT. SCHED.
S105 NOT TO SCALE



ONE SIDED BEAM TO GIRDER CONNECTION



TWO SIDED BEAM TO GIRDER CONNECTION
(UNEQUAL DEPTH CONNECTING BEAMS WITH NOT MORE THAN A 1'-0" IN PLAN OFFSET)



TWO SIDED BEAM TO GIRDER CONNECTION
(EQUAL DEPTH CONNECTING BEAMS WITH NOT MORE THAN A 1'-0" IN PLAN OFFSET)

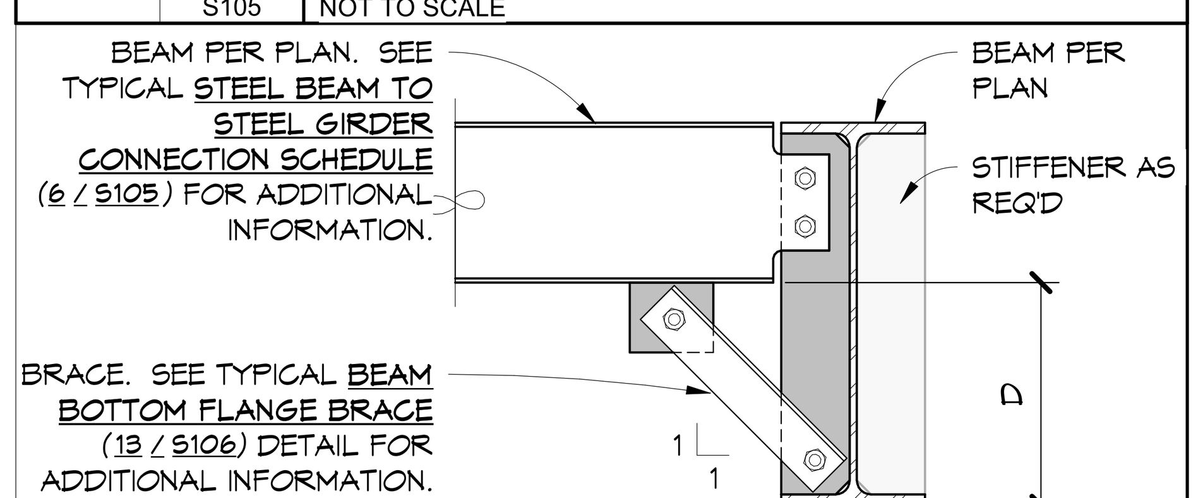
NOTE:
THIS DETAIL DOES NOT APPLY TO ANY CONDITION THAT IS NOT SPECIFICALLY ILLUSTRATED ABOVE. THEREFORE, FOR ANY OF THE FOLLOWING CONDITIONS SEE THE SPECIFIC DETAILS FOR MORE INFORMATION:
- BEAMS WITH THEIR UPPER FLANGE HIGHER THAN THE GIRDER UPPER FLANGE
- BEAMS WITH THEIR BOTTOM FLANGE LOWER THAN THE GIRDER BOTTOM FLANGE
- BEAMS DEEPER THAN THE GIRDER

CONNECTION SCHEDULE							
BEAM SIZE	PLATE	FILLET WELD SIZE	BOLTS			DIMENSIONS	
			NO.	SIZE	TYPE	Lh	Lv
W8x / C8x	3/8	1/4	(2)	3/4"Φ	A325N	1 1/2"	1 1/2"
W10x / C10x	3/8	1/4	(2)	3/4"Φ	A325N	1 1/2"	1 1/2"
W12x / C12x	3/8	1/4	(3)	3/4"Φ	A325N	1 1/2"	1 1/2"
W14x / C15x	3/8	1/4	(3)	3/4"Φ	A325N	1 1/2"	1 1/2"
W16x	3/8	1/4	(4)	3/4"Φ	A325N	1 1/2"	1 1/2"
W18x	3/8	1/4	(4)	1"Φ	A325N	2"	2"
W21x	1/2	5/16	(5)	1"Φ	A325N	2"	2"
W24x	1/2	5/16	(6)	1"Φ	A325N	2"	2"
W27x	1/2	5/16	(7)	1"Φ	A325N	2"	2"

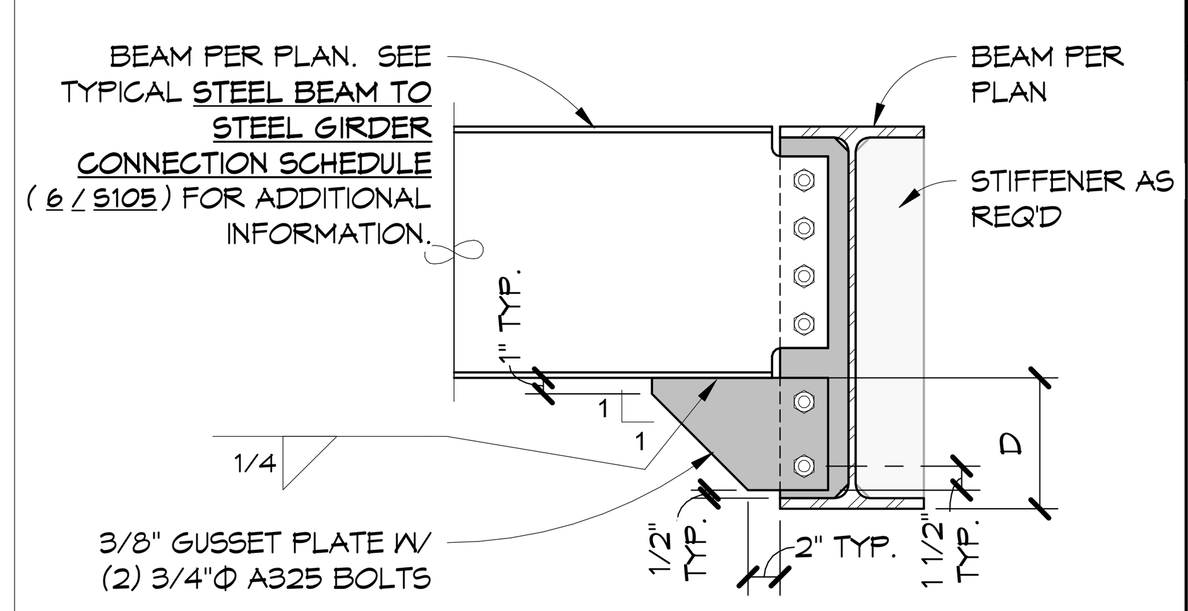
6 BEAM TO GIRDER CONN. SCHED.
S105 NOT TO SCALE

1. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDING" PUBLISHED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
2. ALL BUTT WELDS SHALL BE COMPLETE JOINT PENETRATION WELDS.
3. ALL WELDING OF STRUCTURAL STEEL MEMBERS SHALL BE DONE BY CURRENTLY CERTIFIED WELDERS AND DONE IN CONFORMANCE WITH THE A.I.S.C. AND A.W.S. SPECIFICATIONS. WELDING IS NOT PERMITTED ON MEMBERS SUPPORTING LOADS.
4. WHERE THE CONTRACTOR REQUESTS WELDING TO BE USED IN LIEU OF BOLTED CONNECTIONS, SUCH WELDING SHALL BE DONE ONLY WITH THE ENGINEERS PRIOR APPROVAL. WHERE EMBEDDED PLATES OCCUR WITH SHEAR TABS, CONTRACTOR HAS OPTION TO FIELD WELD STEEL BEAM TO SHEAR TAB TO FACILITATE ERECTION WITH APPROVAL FROM ENGINEER. EMBEDDED PLATE MAY BE OVERSIZED BY 1" IN EACH DIRECTION TO FACILITATE FIELD WELDING. ANY TESTING AND/OR INSPECTION THE ENGINEER MAY DEEM NECESSARY TO BE ASSURED OF THE QUALITY OF SUCH WELDING, SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.
5. A.S.T.M. A325 BOLTS SHALL BE USED UNLESS NOTED OTHERWISE. TWIST-OFF TYPE TENSION-CONTROL A.S.T.M. F1852 BOLT ASSEMBLIES MAY BE SUBSTITUTED FOR A.S.T.M. A325 BOLTS AT ANYTIME. WHERE A.S.T.M. A490 BOLTS ARE SPECIFIED ON THE PLANS TWIST-OFF TYPE TENSION-CONTROL A.S.T.M. F2280 BOLT ASSEMBLIES MAY BE SUBSTITUTED AT ANYTIME.
6. A.S.T.M. F1554 GRADE 36 ANCHOR BOLTS SHALL BE USED UNLESS NOTED OTHERWISE. A.S.T.M. F1554 GRADE 36 BOLTS MAY BE WELDED, WHILE GRADE 55 MAY BE WELDED ONLY IF IT IS ORDERED WITH SUPPLEMENT S1 AND THE CARBON EQUIVALENT FORMULA SPECIFIED IN SECTION S.1.5.2.1 OF THE A.S.T.M. GRADE 105 BOLTS MAY NOT BE WELDED.
7. A.S.T.M. A563 HEAVY-HEX NUTS SHALL BE USED UNLESS NOTED OTHERWISE. SEE A.S.T.M. A563 FOR THE APPROPRIATE GRADE AND FINISH OF THE NUTS WHICH VARY ACCORDING TO APPLICATION.
8. A.S.T.M. F436 WASHERS SHALL BE USED UNLESS NOTED OTHERWISE. AT SLIP CRITICAL CONNECTIONS A.S.T.M. F959 COMPRESSIBLE-WASHER-TYPE DIRECT TENSION INDICATORS SHALL BE USED UNLESS TWIST-OFF-TYPE TENSION-CONTROL BOLT ASSEMBLIES WITH A.S.T.M. F436 WASHERS ARE USED.
9. A.S.T.M. A108 SHEAR STUD CONNECTORS SHALL BE USED UNLESS NOTED OTHERWISE. THE MECHANICAL REQUIREMENTS MUST MEET A.W.S. D1.1 TABLE 7.1 FOR TYPE B SHEAR STUDS CONNECTORS. (Fy=50 ksi, Fu=65 ksi)
10. HOLES PUNCHED OR DRILLED IN BEAMS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWING: HOLES FOR BOLTS SHALL BE 1/16" LARGER THAN THE NOMINAL DIAMETER OF THE BOLT WHERE CONNECTION IS OF SHEAR TYPE, AND 3/16" LARGER WHERE CONNECTION IS OF BEARING TYPE ON CONCRETE OR MASONRY.
11. ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL SHALL RECEIVE ONE SHOP COAT OF RED OXIDE, ZINC CHROMATE OR APPROVED EQUAL BASE.
12. ALL STEEL MEMBERS AND THEIR CONNECTIONS, EXPOSED TO EARTH OR WEATHER SHALL BE HOT DIPPED GALVANIZED, UNLESS NOTED OTHERWISE. CAP ALL VENT HOLES AT ENCLOSED HSS STEEL SECTIONS AND SEAL HOLES TO A WATER TIGHT CONDITION.
13. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE FOLLOWING A.I.S.C. STANDARDS:
   - W (WIDE FLANGE) AND WT SHAPES SHALL BE A.S.T.M. A992 (Fy=50 ksi, Fu=65 ksi)
   - M, MT, S AND ST SHAPES SHALL BE A.S.T.M. A36 (Fy=36 ksi, Fu=58 ksi)
   - CHANNELS, ANGLES, PLATES 1/2" THICK OR LESS AND MISCELLNEUOS STEEL, SHALL BE A.S.T.M. A36. (Fy=36 ksi, Fu=58 ksi)
   - PLATES GREATER THAN 1/2" THICK SHALL BE A.S.T.M. A572 GR. 50. (Fy=50 ksi, Fu=65 ksi)
   - HP SHAPES SHALL BE A.S.T.M. A572 (Fy=50 ksi, Fu=65 ksi)
   - RECTANGULAR AND SQUARE HSS SHALL BE A.S.T.M. A500 GRADE C (Fy=46 ksi, Fu=58 ksi)
   - ROUND HSS SHALL BE A.S.T.M. A500 GRADE B (Fy=42 ksi, Fu=58 ksi)
   - PIPE SHALL CONFORM TO A.S.T.M. A53 GRADE B (Fy=35 ksi, Fu=60 ksi)
14. ALL ENDS OF EXPOSED STRUCTURAL SHAPES & HOLLOW STRUCTURAL SHAPED STEEL MEMBERS SHALL HAVE 1/4" CAP PLATE WITH PARTIAL PENETRATION WELDS, U.N.O., GRIND SMOOTH, A.E.S.S.
15. ALL STEEL BEAMS SHALL HAVE INSTALLED STANDARD MILL TOLERANCE UP, TYP., U.N.O.
16. FILLER METAL AND WELDING FLUX: E70XX IN ACCORDANCE WITH A.W.S. D1.1-2015.
17. WHERE LATERAL FORCE RESISTING COLUMNS OCCUR, A DOUBLE NUT SHALL BE PROVIDED ABOVE THE BASE PLATE AT ALL THREADED ROD/BOLT LOCATIONS.
18. CONTRACTOR SHALL PROVIDE AN ALLOWANCE EQUAL TO 2% OF THE BID FOR STRUCTURAL STEEL, MISCELLANEOUS IRON, AND REINFORCING STEEL TO BE USED AT THE DISCRETION OF THE STRUCTURAL ENGINEER. UNUSED PORTION TO REVERT TO THE OWNER UPON COMPLETION OF THE PROJECT.

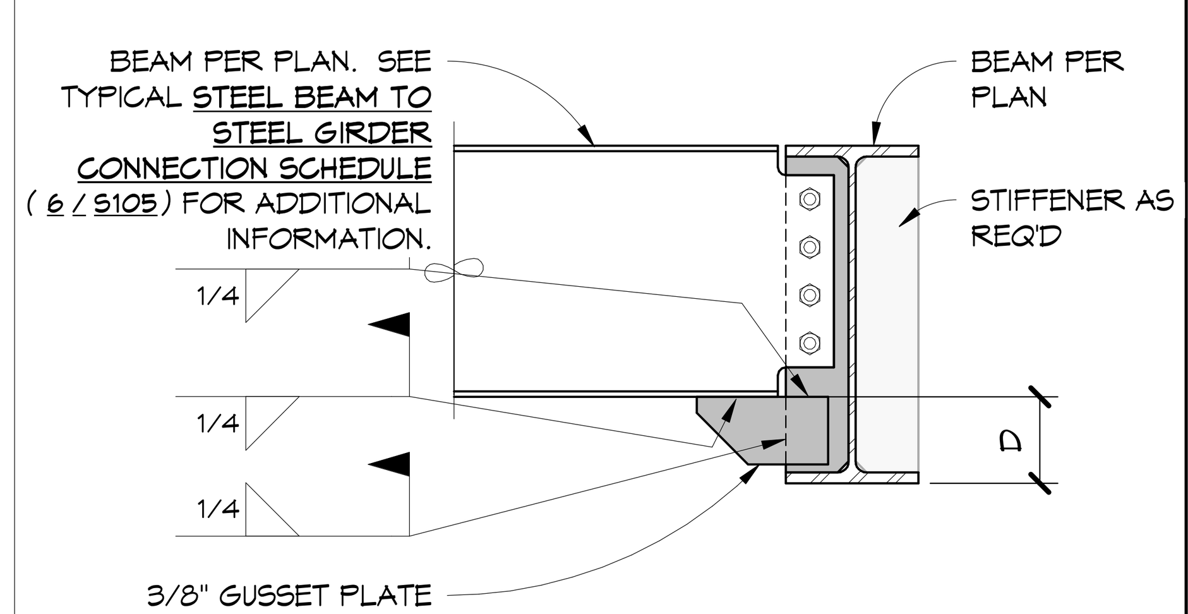
2 STEEL NOTES
S105 NOT TO SCALE



'D' > 12"

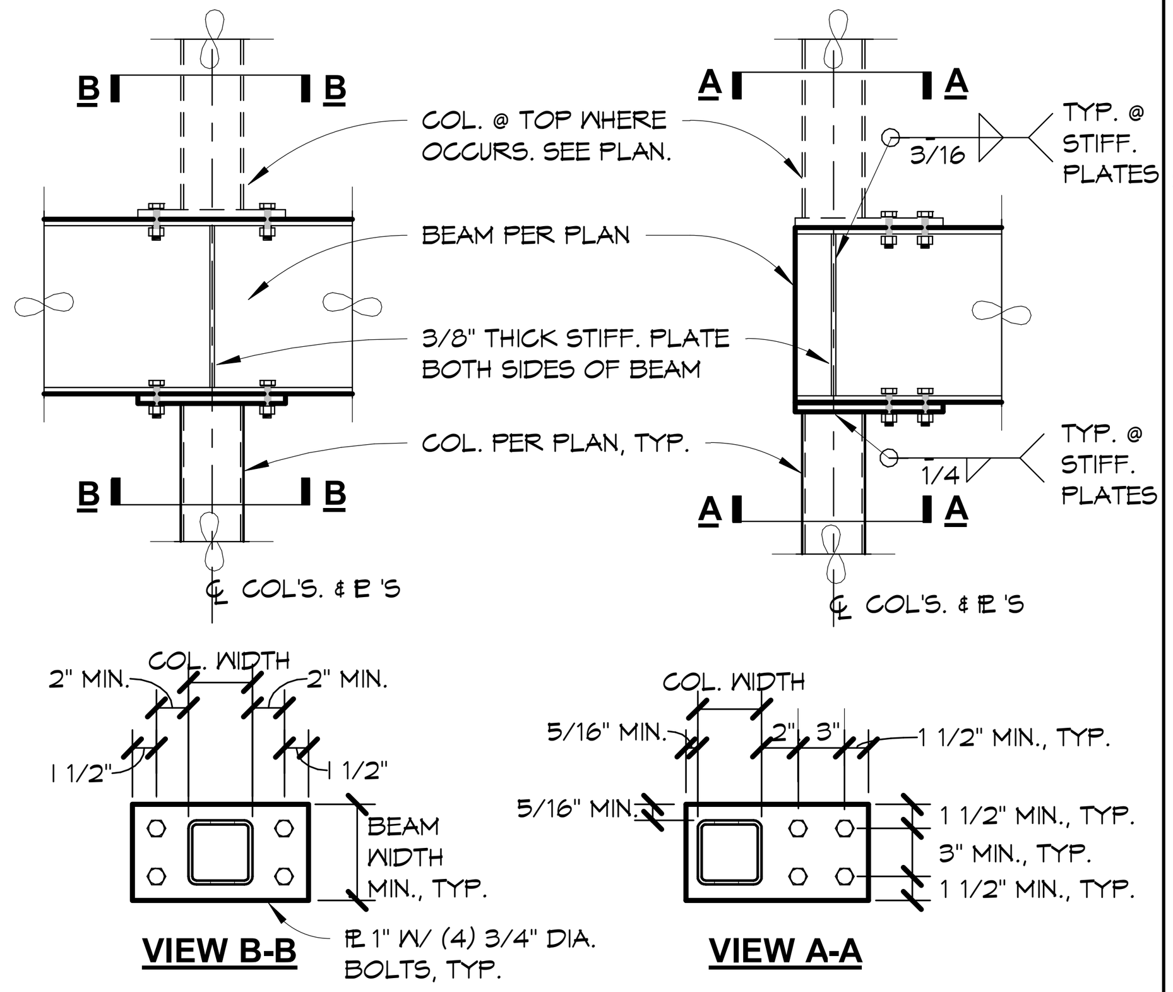


6" < 'D' < 12"



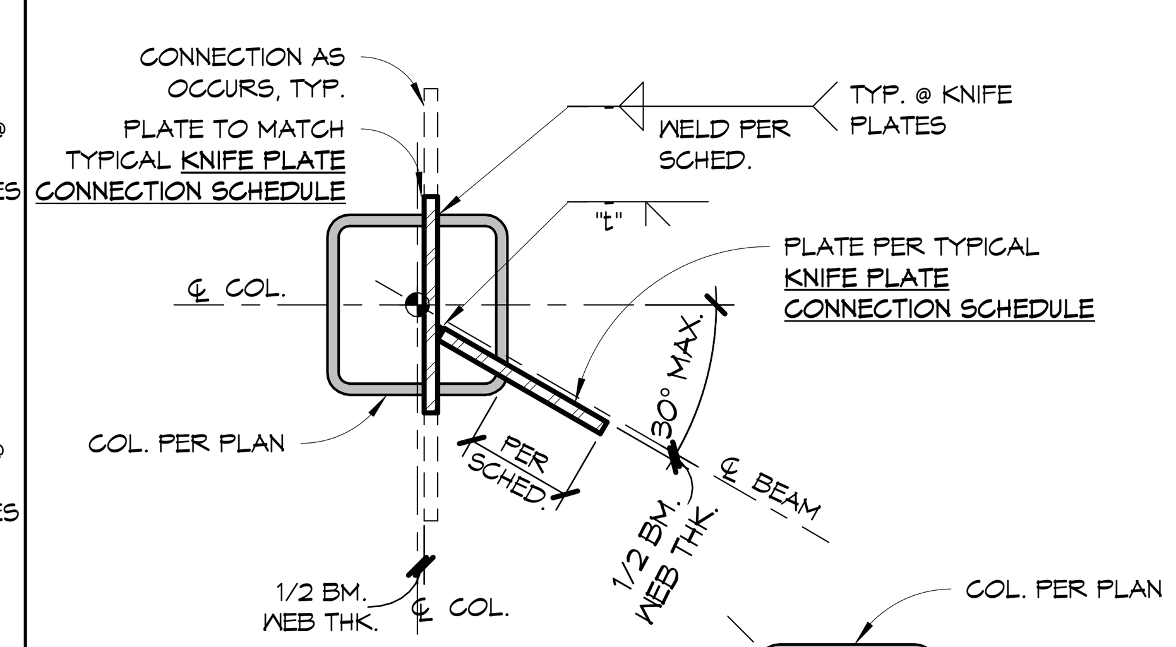
3" < 'D' < 6"

15 BM CONN. AT BRACING BEAMS
S105 NOT TO SCALE



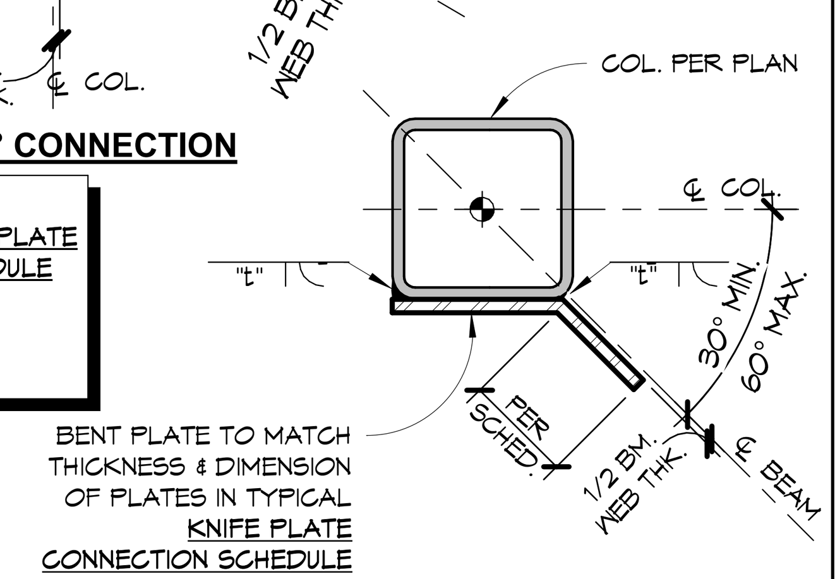
NOTE:
CONNECTION APPLIES TO ALL STEEL COLUMN SHAPES. SEE PLAN FOR COLUMN INFO.

12 FLAT PLATE COLUMN CONNECTION
S105 NOT TO SCALE



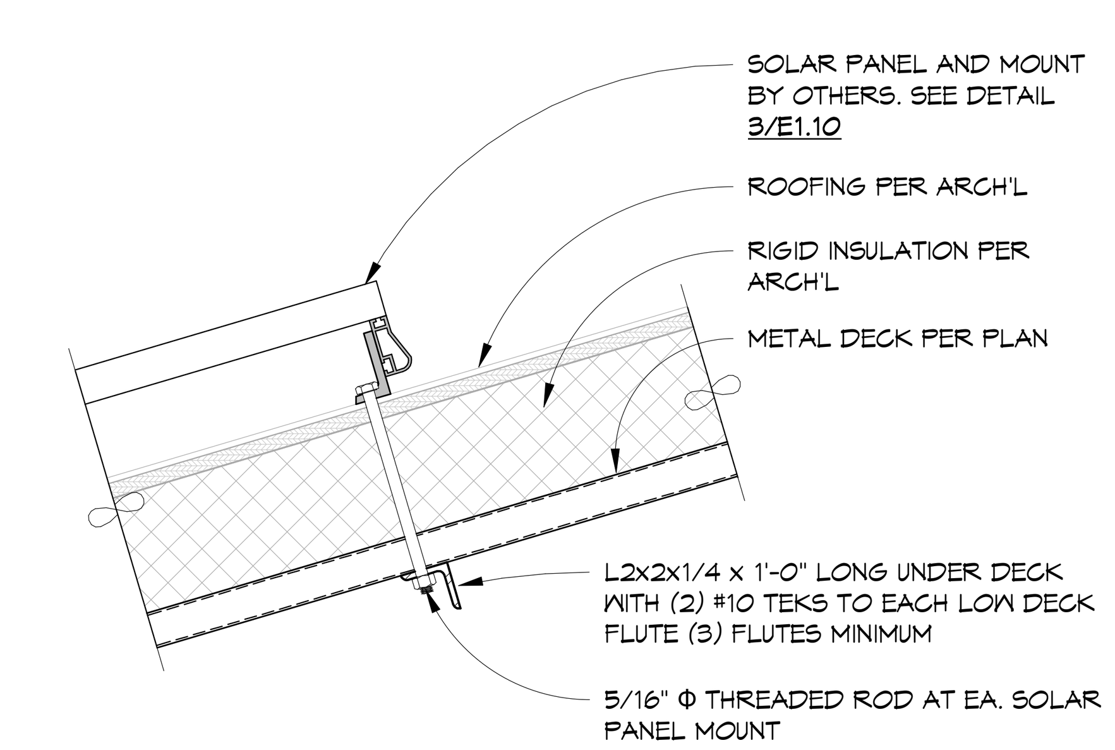
0° - 30° CONNECTION

NOTES:
1. SEE TYPICAL KNIFE PLATE CONNECTION SCHEDULE FOR ADDL. INFO.
2. "t" = THICKNESS OF CONNECTION PLATE



30° - 60° CONNECTION

9 SKEWED KNIFE PLATE
S105 NOT TO SCALE



3 SOLAR ATTACHMENT TO MTL. DCK
S105 NOT TO SCALE

BrooksRansom ASSOCIATES 23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-1286 RENEWAL DATE 12/31/2013 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

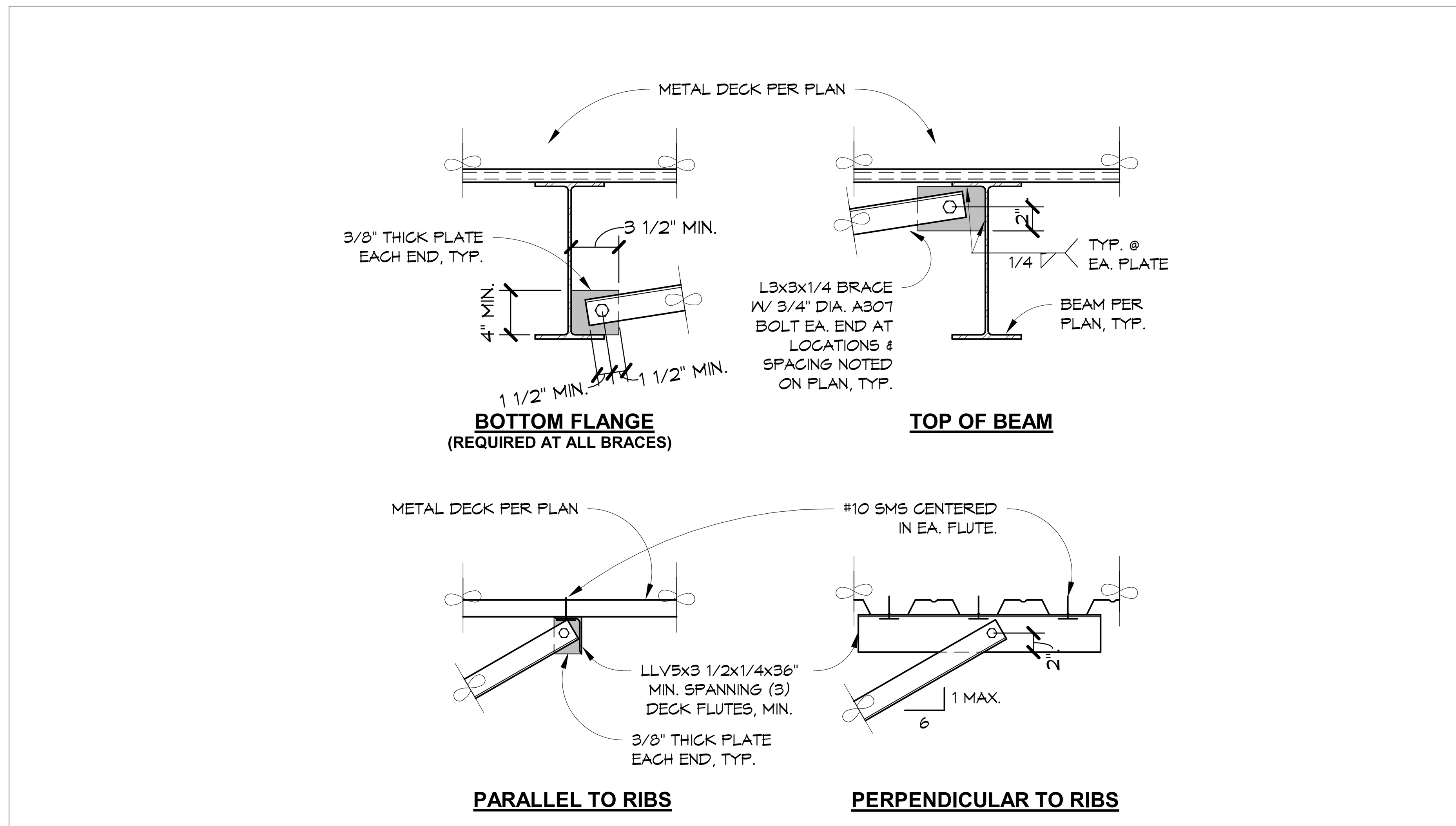
MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

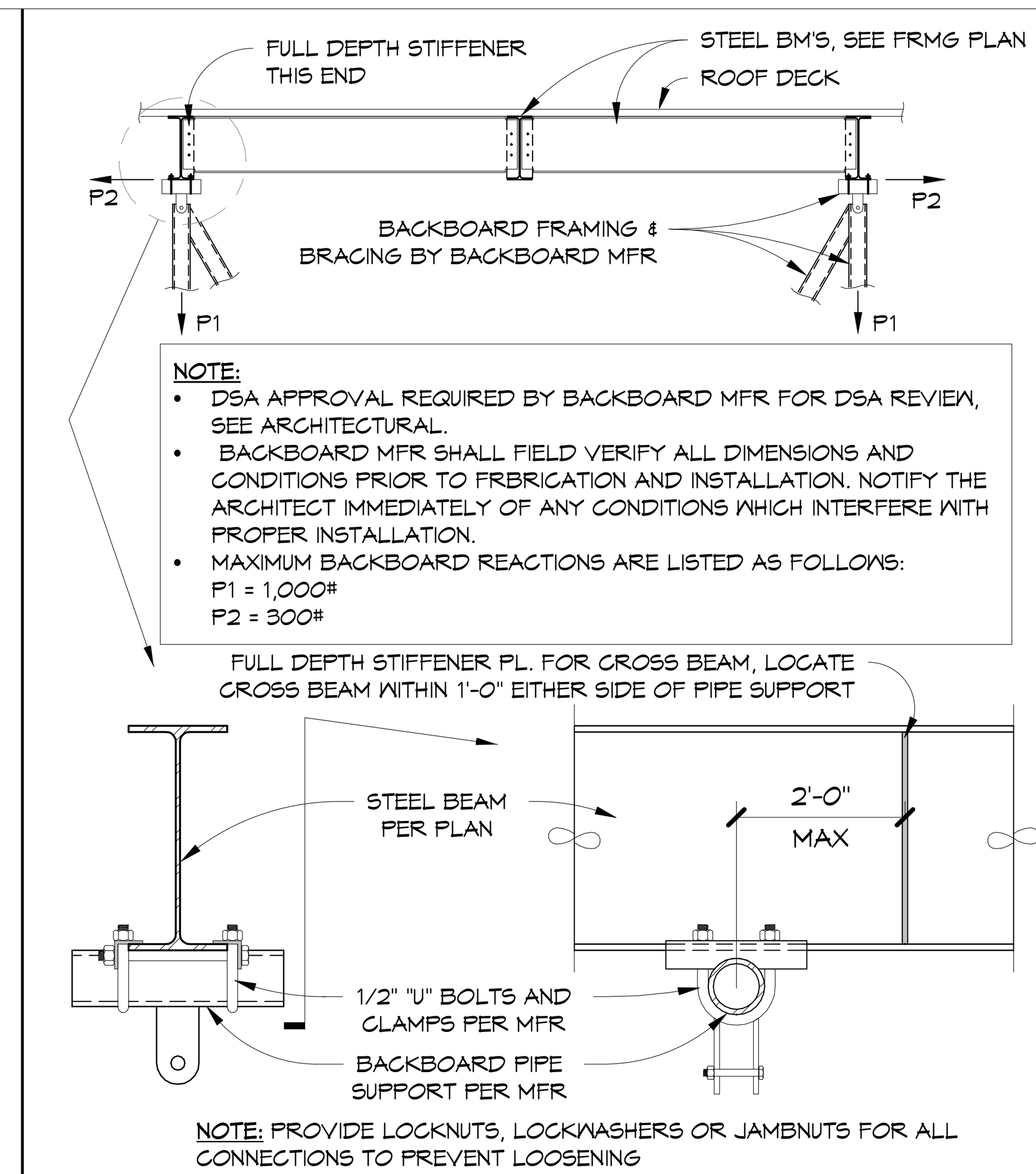
PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE: TYPICAL STEEL NOTES AND DETAILS

S105

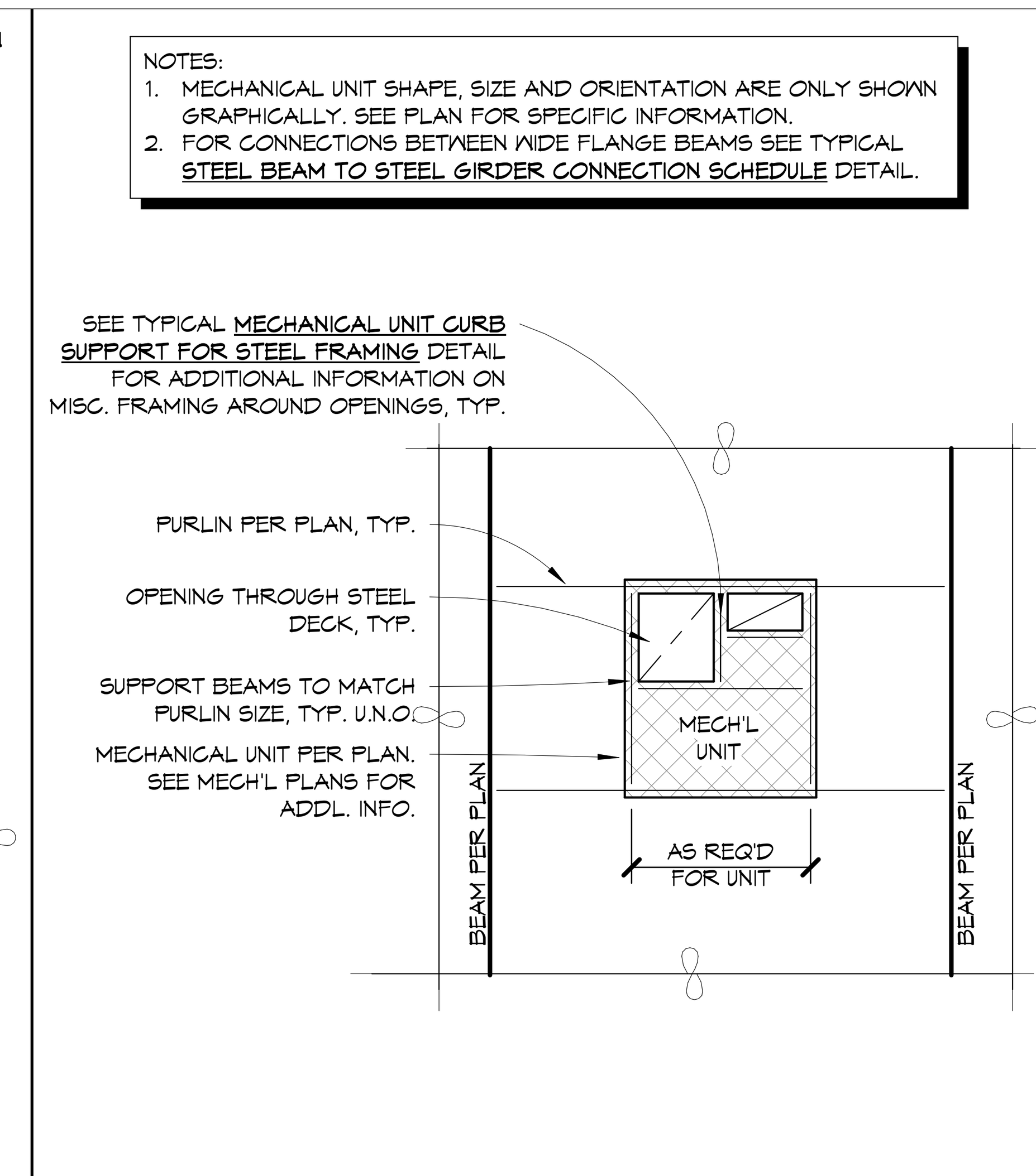
4/11/2024 5:00:56 PM
C:\Users\BrandonY\Documents\23422 Fairmead MPR (R23)_brandonyTU5ZN.rvt



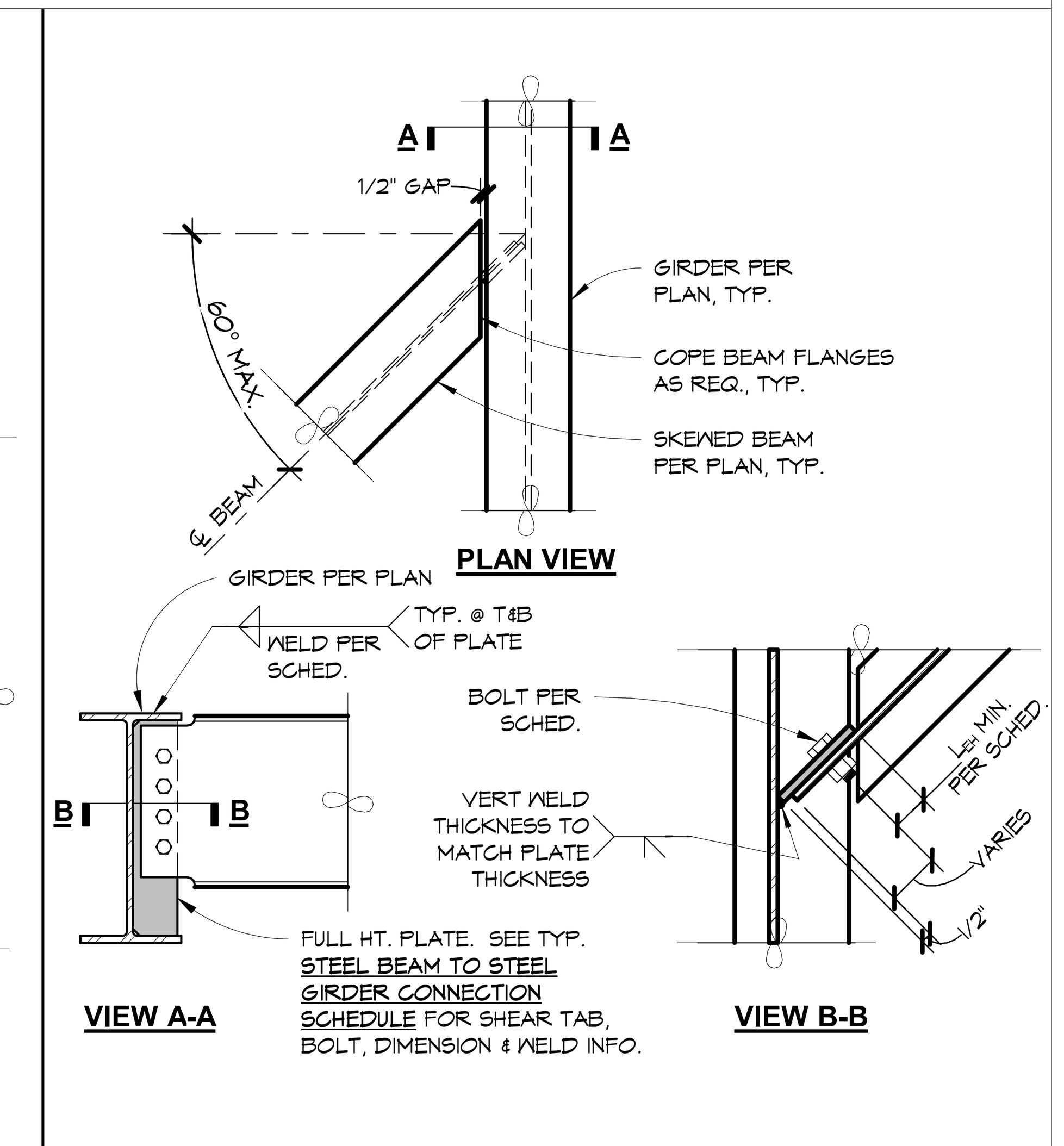
13	BEAM BOTTOM FLANGE BRACING
S106	NOT TO SCALE



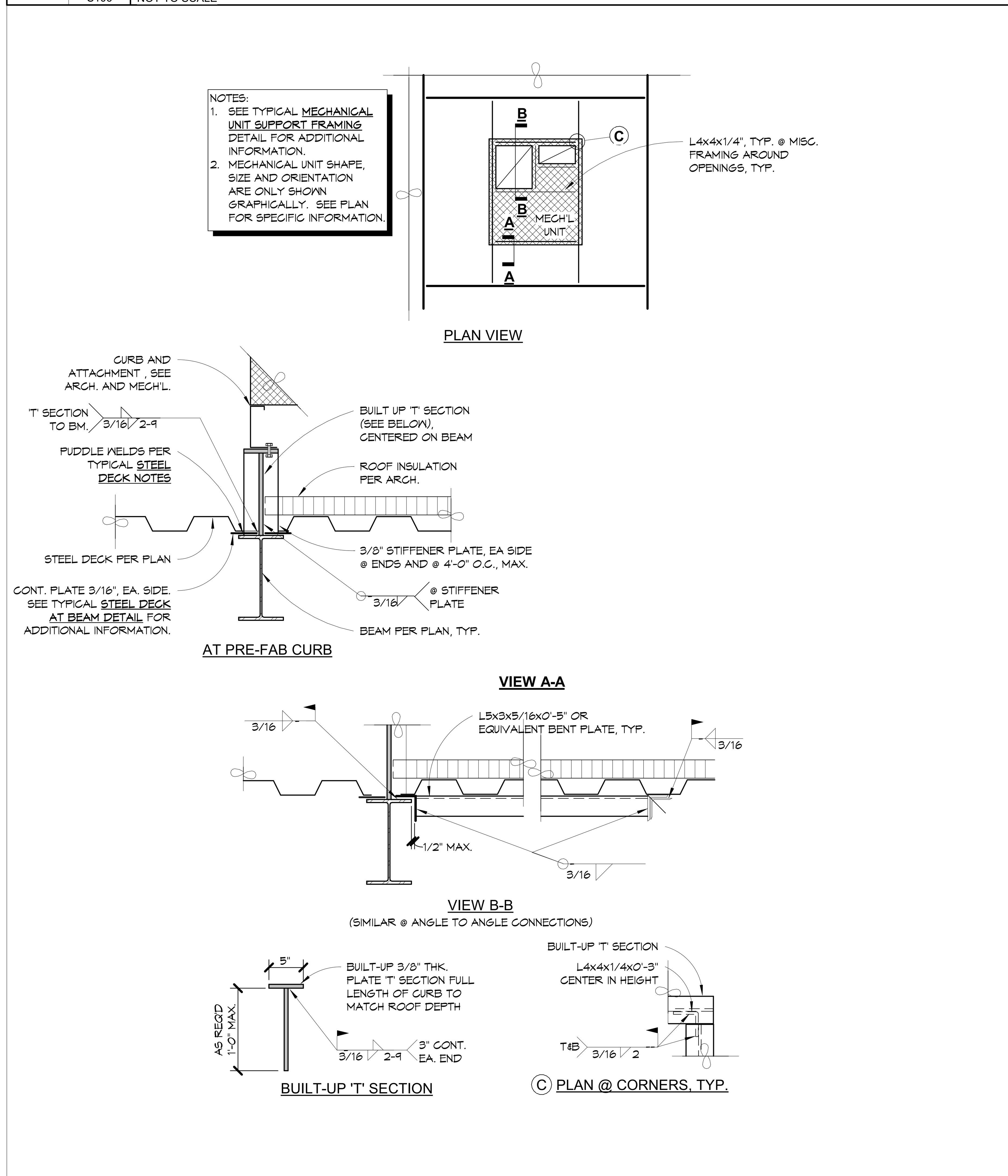
7	BACKBOARD SUPPORT
S106	NOT TO SCALE



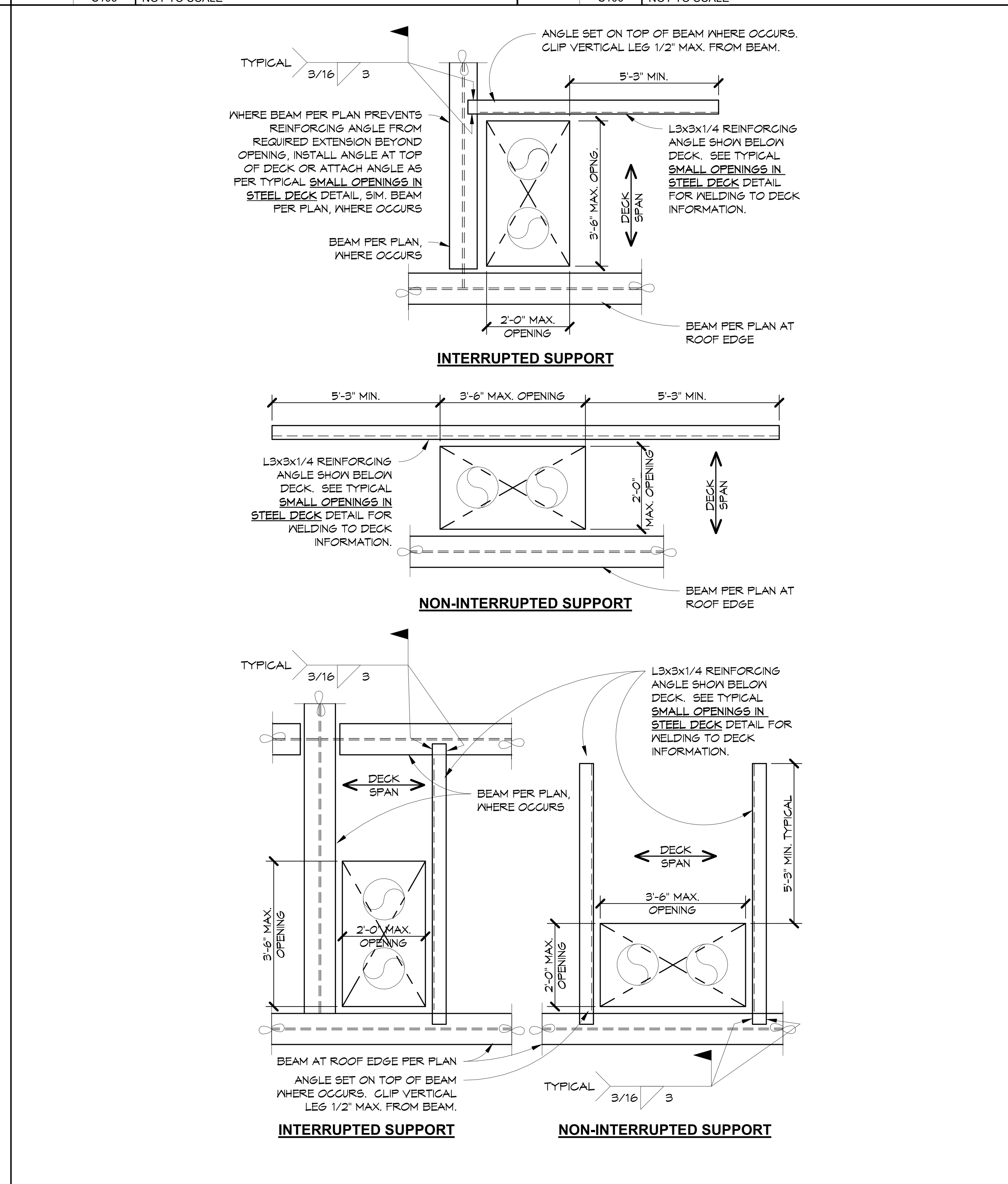
4	MECH'L UNIT SUPPORT FRMG
S106	NOT TO SCALE



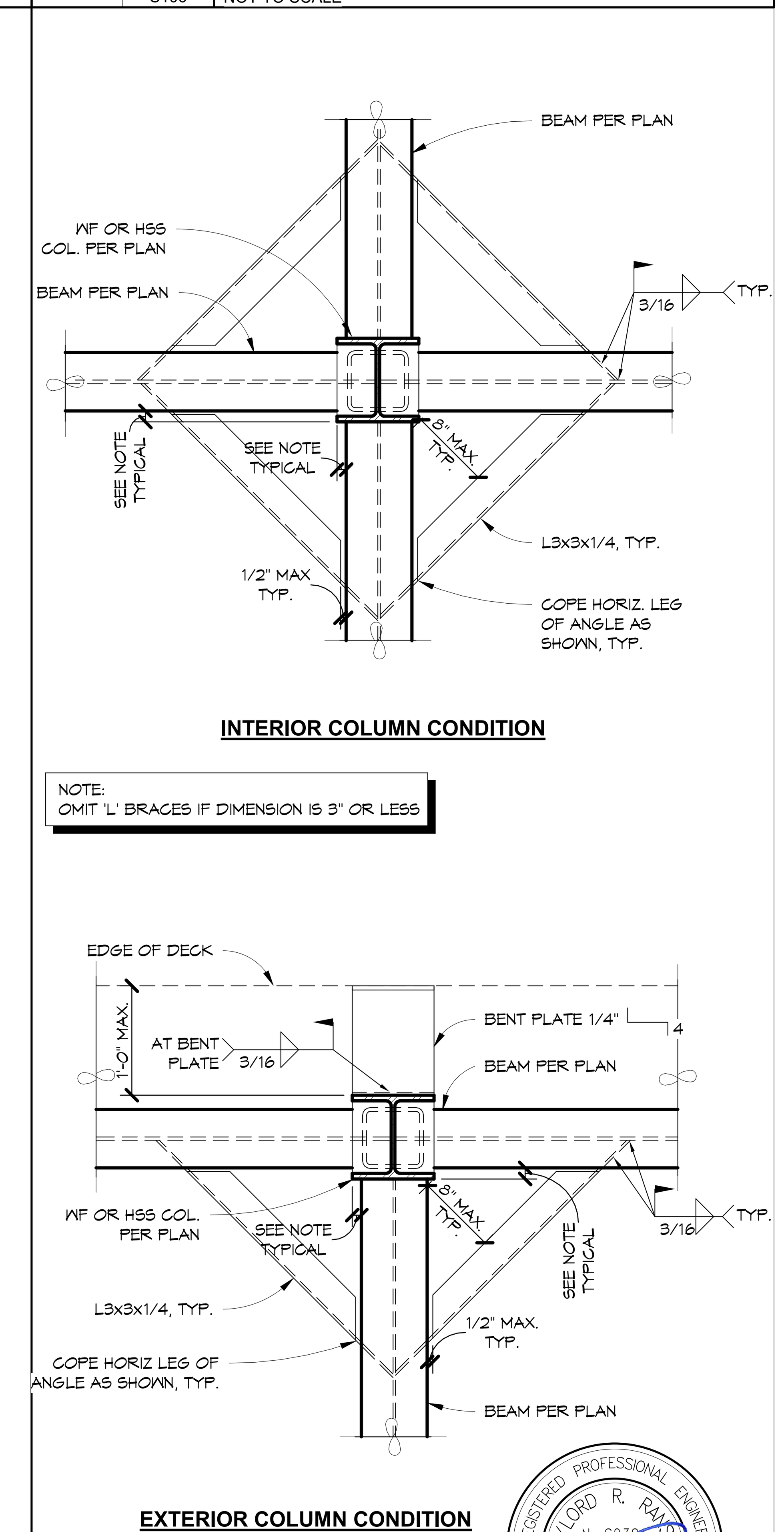
1	SKEWED BEAM TO GIRDER CONN
S106	NOT TO SCALE



15	MECH'L UNIT CURB SUPPORT FOR STL. FRAMING
S106	NOT TO SCALE



9	REINF. AT ROOF DRAINS AT METAL DECK
S106	NOT TO SCALE



REGISTERED PROFESSIONAL ENGINEER — GAYLORD R. RAINSON — No. S2586 — STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
7405 N. PALM AVE. STE 100 | FRESNO, CA 93711
(559) 449-8444 OFFICE | (559) 449-8404 FAX
23422

3	STEEL DECK SUPPORT AT COLS.
S106	NOT TO SCALE

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C:\Users\BrandonY\Documents\23422 Fairmead MPR (R23)_brandonyTU5ZN.rvt

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-1286 — RENEWAL DATE 12/31/2013 — STATE OF CALIFORNIA

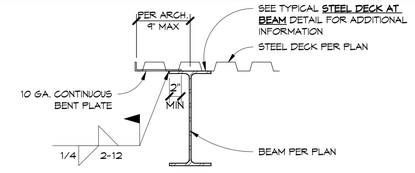
MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

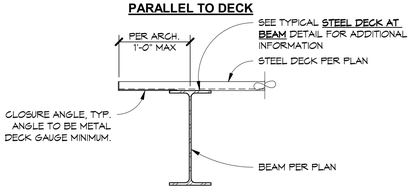
GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
TYPICAL STEEL DETAILS

S106



PARALLEL TO DECK

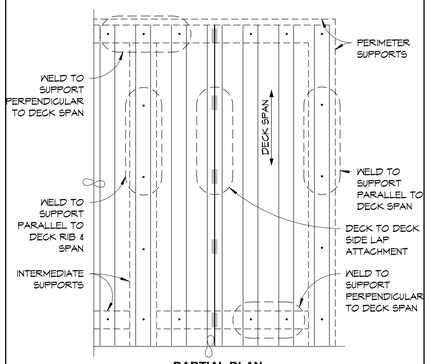


PERPENDICULAR TO DECK

NOTES:
1. CLOSURE STRIPS, OR ANGLES EQUAL OR EXCEEDING THE PHYSICAL PROPERTIES LISTED ABOVE, ARE REQUIRED AT ALL STEEL DECK OPENINGS, PERIMETERS AND EDGES.
2. CLOSURE STRIPS, OR ANGLES, SHALL BE FURNISHED AND INSTALLED BY THE METAL DECK CONTRACTOR.
3. SUPERIMPOSED LOAD AT OVERHANG MUST BE 100 PSF OR LESS.
4. FOR OVERHANG GREATER THAN THOSE SHOWN, ADDITIONAL SUPPORT OR BENT PLATES ARE REQUIRED. SEE SPECIFIC DETAILS FOR INFORMATION.

13	CLOSURE STRIPS FOR STL DECK
S107	NOT TO SCALE

NOTES:
1. MINIMUM LENGTH OF DECK SHEETS SHALL BE THREE-SPANS.
2. ENDS OF DECK SHEETS MUST BE LAPPED A MINIMUM OF 2", AND LAPS MUST OCCUR OVER SUPPORTS.
3. DECK SHEET MUST HAVE A MINIMUM BEARING OF 2" ON SUPPORTS.



PARTIAL PLAN

10	DECK ATTACHMENT LAYOUT
S107	NOT TO SCALE

NOTE:
Da = (D - T)
De = (0.7D - 1.5T)

SINGLE THICKNESS OF SHEET

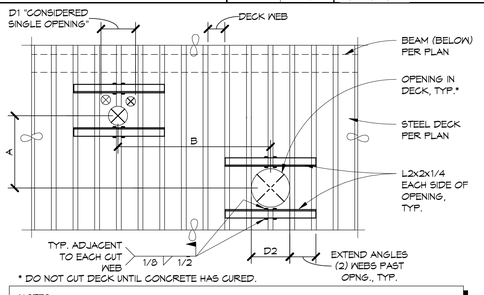
NOTE:
Da = (D - 2T)
De = (0.7D - 1.5T)

DOUBLE THICKNESS OF SHEET

GAGE	VISIBLE WELD SIZE
(0.0283") 22	3/4" DIA. (0.774)
(0.0346") 20	3/4" DIA. (0.788)
(0.0451") 18	7/8" DIA. (0.811)
(0.0566") 16	7/8" DIA. (0.836)

NOTE:
BASED ON 1/2" EFFECTIVE WELD
ARC SPOT WELDS PER A.W.S. D1.3/ D1.3M
D = (De + 1.5T)/0.7, VISIBLE DIAMETER
Da = RESULTING AVERAGE DIAMETER
De = EFFECTIVE DIAMETER

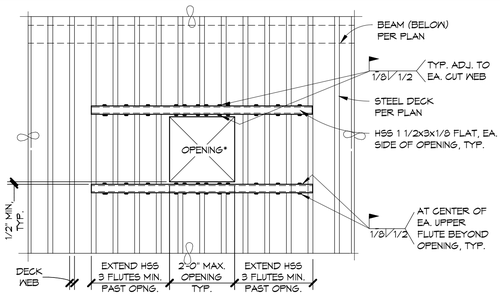
7	ARC SPOT WELDS
S107	NOT TO SCALE



* DO NOT CUT DECK UNTIL CONCRETE HAS CURED.

NOTES:
1. OPENINGS D1 AND D2 CANNOT CUT MORE THAN TWO ADJACENT DECK WEBS.
2. HOLES LESS THAN 6" DIA. AND CUTTING NO MORE THAN ONE WEB NEED NO REINFORCING.
3. REINFORCING ANGLES MUST BE PLACED ON TOP OF STEEL DECK. WHERE ANGLES ARE PLACED BELOW DECK, PROVIDE 1/2" LONG WELD AT EACH LOW FLUTE EDGE FULL LENGTH OF ANGLE.
4. IF DIMENSION "A" IS GREATER THAN 4D1, 4D2, OR 32" WHICHEVER IS LARGER, THERE IS NO RESTRICTION ON DIMENSION "B".
5. IF DIMENSION "B" IS GREATER THAN 4D1, 4D2, OR 32" WHICHEVER IS LARGER, THERE IS NO RESTRICTION ON DIMENSION "A".
6. IF EITHER DIMENSIONS "A" OR "B" ARE LESS THAN 4D1, 4D2, OR 32" WHICHEVER IS LARGER, THE OPENING GROUP WILL BE CONSIDERED AS A SINGLE HOLE, AND MUST BE REINFORCED AS REQUIRED BY THE TYP. **LARGE OPENING IN STEEL DECK** DETAIL.
7. OPENINGS NOT SHOWN ON PLANS SHALL BE REINFORCED BY SUBCONTRACTOR REQUIRING THE OPENINGS.

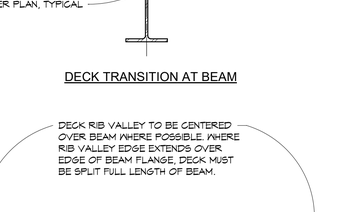
14	SMALL OPNGS. IN STL. DECK FOR FLOOR OR ROOF DECK
S107	NOT TO SCALE



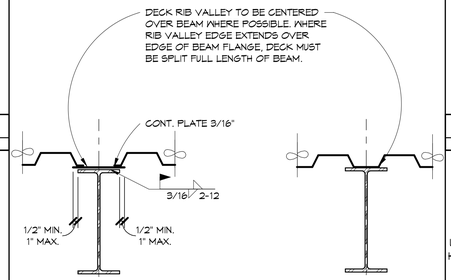
* DO NOT CUT DECK UNTIL CONCRETE HAS CURED.

NOTES:
1. REINFORCING MEMBERS MUST BE PLACED ON TOP OF STEEL DECK. WHERE ANGLES ARE PLACED BELOW DECK, PROVIDE 1/2" LONG WELD AT EACH LOW FLUTE EDGE FULL LENGTH OF ANGLE.
2. WHEN THE MAXIMUM DIMENSION OF AN OPENING OR OPENING GROUP EXCEEDS 24", THE SITUATION MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR SUPPLEMENTAL SUPPORT STEEL REQUIREMENTS PRIOR TO PROCEEDING.
3. OPENINGS NOT SHOWN ON PLANS SHALL BE REINFORCED BY SUBCONTRACTOR REQUIRING THE OPENINGS.

15	LARGE OPNGS. IN STL. DECK FOR FLR. AND ROOF DECK
S107	NOT TO SCALE

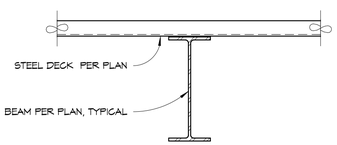


DECK TRANSITION AT BEAM



DECK PARALLEL TO BEAM
(SPLIT DECK OVER BEAM)

DECK PARALLEL TO BEAM
(RIB OVER BEAM)



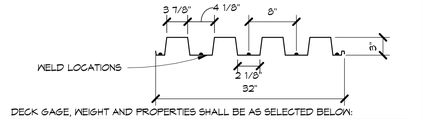
DECK PERPENDICULAR TO BEAM

NOTE:
ALL DECK ATTACHMENTS PER TYPICAL **STEEL DECK NOTES**

9	STEEL DECK AT BEAM
S107	NOT TO SCALE

STEEL DECKING SHALL BE TYPE N-32 AS MANUFACTURED BY ASC STEEL DECK MANUFACTURING COMPANY, 2110 ENTERPRISE BOULEVARD, WEST SACRAMENTO, CA 95691. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND IAPMO UES ER-161. AN EQUIVALENT DECKING CAN BE SUBSTITUTED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. THE EQUIVALENT DECKING MUST MEET OR EXCEED ALL OF THE CRITERIA STATED BELOW.

- DECKING SHALL BE FORMED FROM COLD ROLLED ZINC COATED STEEL (A.S.T.M. A 653) SHEETS WITH COATING DESIGNATION G60 (Z180) AND HAVE A MINIMUM YIELD STRENGTH OF 33,000 PSI. DECKING AT EXPOSED EXTERIOR APPLICATIONS SHALL HAVE ZINC COATING DESIGNATION G90 (Z275).
- THE DECK PROFILE AND DIMENSION SHALL BE AS FOLLOWS:



- DECK GAGE, WEIGHT AND PROPERTIES SHALL BE AS SELECTED BELOW:

GAGE	WEIGHT (PSF)	I (in⁴)	+S (in³)	-S (in³)	SELECTED DECK
22	1.96	0.814	0.349	0.402	
20	2.35	0.968	0.446	0.505	
18	3.1	1.275	0.661	0.715	
16	3.82	1.575	0.879	0.927	✓

- DECK ATTACHMENT TO SUPPORTS PERPENDICULAR TO RIBS SHALL BE WITH 1/2" DIA. EFFECTIVE ARC SPOT (PUDDLE) WELDS WITH A PATTERN AS SELECTED BELOW:

PATTERN DESIGNATION	PATTERN DIAGRAM	SELECTED PATTERN
32/3		✓

- TYPE AND SPACING OF DECK ATTACHMENT TO SUPPORTS PARALLEL WITH DECK RIBS SHALL BE AS SELECTED BELOW:

ATTACHMENT TYPE	ATTACHMENT SPACING	SELECTED ATTACHMENT
1/2" DIA. EFF. ARC SPOT WELD	24" O.C.	
1/2" DIA. EFF. ARC SPOT WELD	18" O.C.	✓
1/2" DIA. EFF. ARC SPOT WELD	12" O.C.	

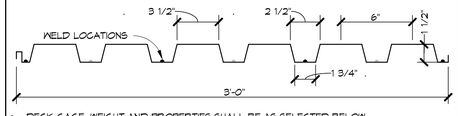
- TYPE AND SPACING OF DECK ATTACHMENT AT SIDE LAPS SHALL BE AS SELECTED BELOW:

ATTACHMENT TYPE	ATTACHMENT SPACING	SELECTED ATTACHMENT
BUTTON PUNCH (BP)	24" O.C.	
BUTTON PUNCH (BP)	12" O.C.	
1 1/2" TOP SEAM WELD	18" O.C.	✓
1 1/2" TOP SEAM WELD	12" O.C.	

- SEE **DECK ATTACHMENT LAYOUT DETAIL** FOR ADDITIONAL INFORMATION.
- ALL OPENINGS IN DECK SHALL BE REINFORCED AS SHOWN IN THE **SMALL/LARGE OPENINGS IN STEEL DECK** DETAIL.
- NO MECHANICAL EQUIPMENT, DUCTS OR PIPING SHALL BE SUPPORTED DIRECTLY FROM DECK. ALL PIPING AND EQUIPMENT SHALL BE SUPPORTED FROM STRUCTURAL FRAMING MEMBERS.
- DECK SHALL BE SUPPORTED BY A MINIMUM OF (4) MEMBERS, (3-SPAN MINIMUM)

5	STEEL ROOF DECK NOTES (N-32)
S107	NOT TO SCALE

- STEEL DECKING SHALL BE TYPE HSB-36 AS MANUFACTURED BY VERCO MANUFACTURING COMPANY, 4340 NORTH 42ND AVENUE, PHOENIX, ARIZONA 85019. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND IAPMO UES ER-2018. AN EQUIVALENT DECKING CAN BE SUBSTITUTED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. THE EQUIVALENT DECKING MUST MEET OR EXCEED ALL OF THE CRITERIA STATED BELOW.
- DECKING SHALL BE FORMED FROM COLD ROLLED ZINC COATED STEEL (A.S.T.M. A 653) SHEETS WITH COATING DESIGNATION G60 (Z180) AND HAVE A MINIMUM YIELD STRENGTH OF 33,000 PSI. DECKING AT EXPOSED EXTERIOR APPLICATIONS SHALL HAVE ZINC COATING DESIGNATION G90 (Z275).
- THE DECK PROFILE AND DIMENSION SHALL BE AS FOLLOWS:



- DECK GAGE, WEIGHT AND PROPERTIES SHALL BE AS SELECTED BELOW:

GAGE	WEIGHT (PSF)	I (in⁴)	+S (in³)	-S (in³)	SELECTED DECK
22	1.9	0.175	0.187	0.198	
20	2.3	0.216	0.235	0.248	
18	2.8	0.302	0.322	0.335	✓
16	3.5	0.371	0.411	0.417	

- DECK ATTACHMENT TO SUPPORTS PERPENDICULAR TO RIBS SHALL BE WITH 1/2" DIA. EFFECTIVE ARC SPOT (PUDDLE) WELDS WITH A PATTERN AS SELECTED BELOW:

PATTERN DESIGNATION	PATTERN DIAGRAM	SELECTED PATTERN
36/4		
36/5		✓
36/6		
36/7		

- TYPE AND SPACING OF DECK ATTACHMENT TO SUPPORTS PARALLEL WITH DECK RIBS SHALL BE AS SELECTED BELOW:

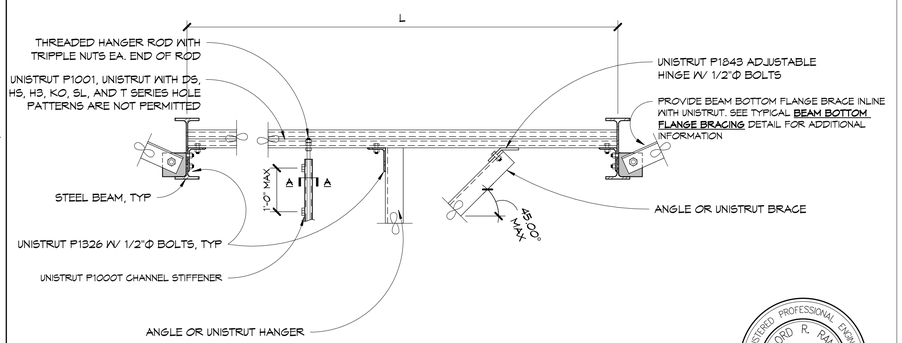
ATTACHMENT TYPE	ATTACHMENT SPACING	SELECTED ATTACHMENT
1/2" DIA. EFF. ARC SPOT WELD	24" O.C.	
1/2" DIA. EFF. ARC SPOT WELD	18" O.C.	
1/2" DIA. EFF. ARC SPOT WELD	12" O.C.	✓
1/2" DIA. EFF. ARC SPOT WELD	6" O.C.	

- TYPE AND SPACING OF DECK ATTACHMENT AT SIDE LAPS SHALL BE AS SELECTED BELOW:

ATTACHMENT TYPE	ATTACHMENT SPACING	SELECTED ATTACHMENT
BUTTON PUNCH (BP)	24" O.C.	
BUTTON PUNCH (BP)	12" O.C.	✓
1 1/2" TOP SEAM WELD (TSW)	24" O.C.	
1 1/2" TOP SEAM WELD (TSW)	18" O.C.	
1 1/2" TOP SEAM WELD (TSW)	12" O.C.	
1 1/2" TOP SEAM WELD (TSW)	6" O.C.	

- SEE **DECK ATTACHMENT LAYOUT DETAIL** FOR ADDITIONAL INFORMATION.
- ALL OPENINGS IN DECK SHALL BE REINFORCED AS SHOWN IN THE **SMALL/LARGE OPENINGS IN STEEL DECK** DETAIL.
- NO MECHANICAL EQUIPMENT, DUCTS OR PIPING SHALL BE SUPPORTED DIRECTLY FROM DECK. ALL PIPING AND EQUIPMENT SHALL BE SUPPORTED FROM STRUCTURAL FRAMING MEMBERS.
- DECK SHALL BE SUPPORTED BY A MINIMUM OF (4) MEMBERS, (3-SPAN MINIMUM)

2	STEEL ROOF DECK NOTES (HSB-36)
S107	NOT TO SCALE



L	MAX LOAD FOR SUPPORT
L ≤ 8'-0"	490 LBS
8'-0" < L ≤ 8'-6"	450 LBS
8'-6" < L ≤ 10'-0"	350 LBS

6	MEP CONNECTION ATTACH.
S107	NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
TAYLORD R. RANSOM
No. S2318
EXPIRES 12/31/25
STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
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23422

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL.: 559-497-1542
FAX: 559-497-1549

FILE NO.: 20-10 APPL. NO.: 02-121993

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)

SHEET TITLE:
TYPICAL METAL DECK NOTES AND DETAILS

S107

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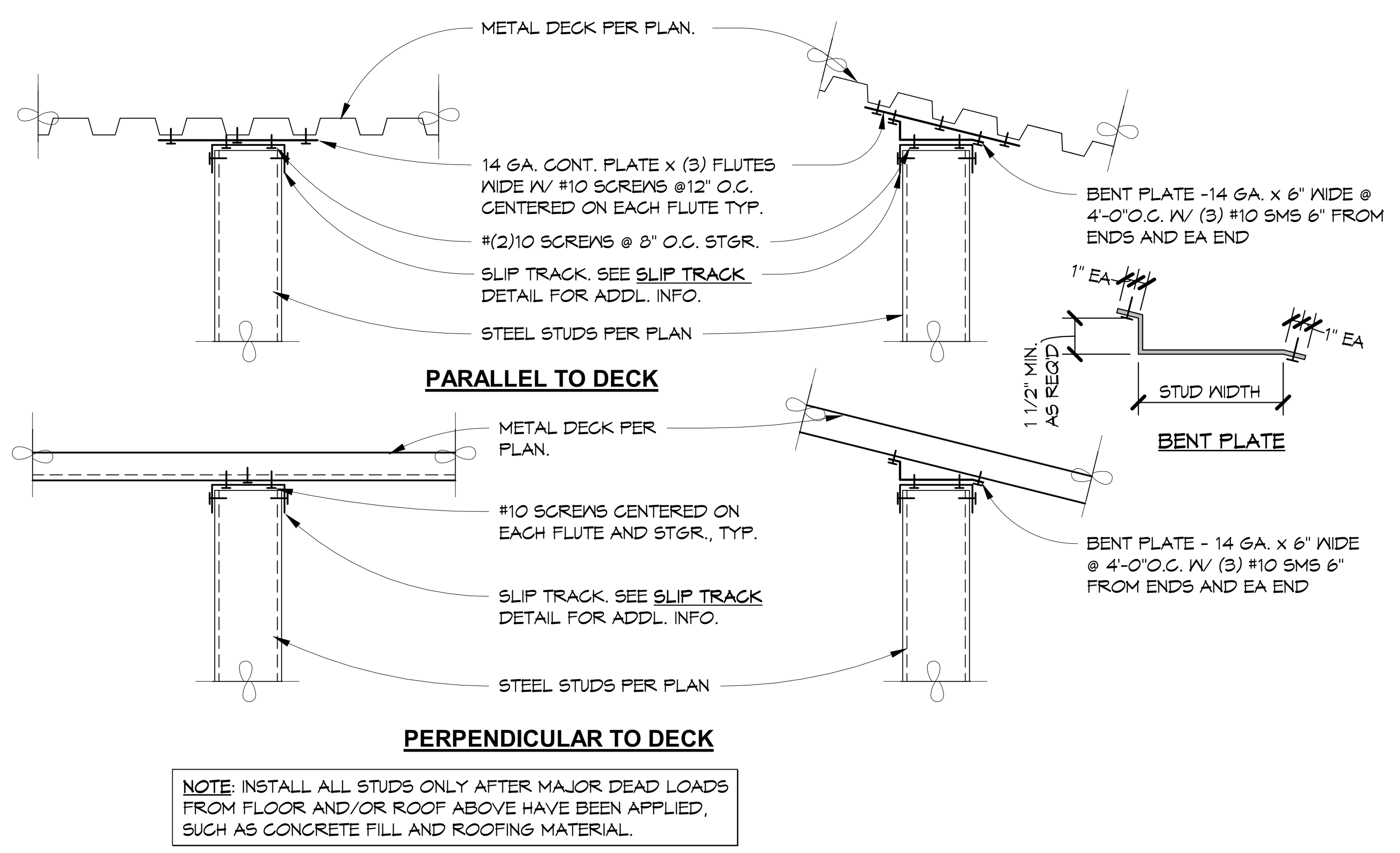
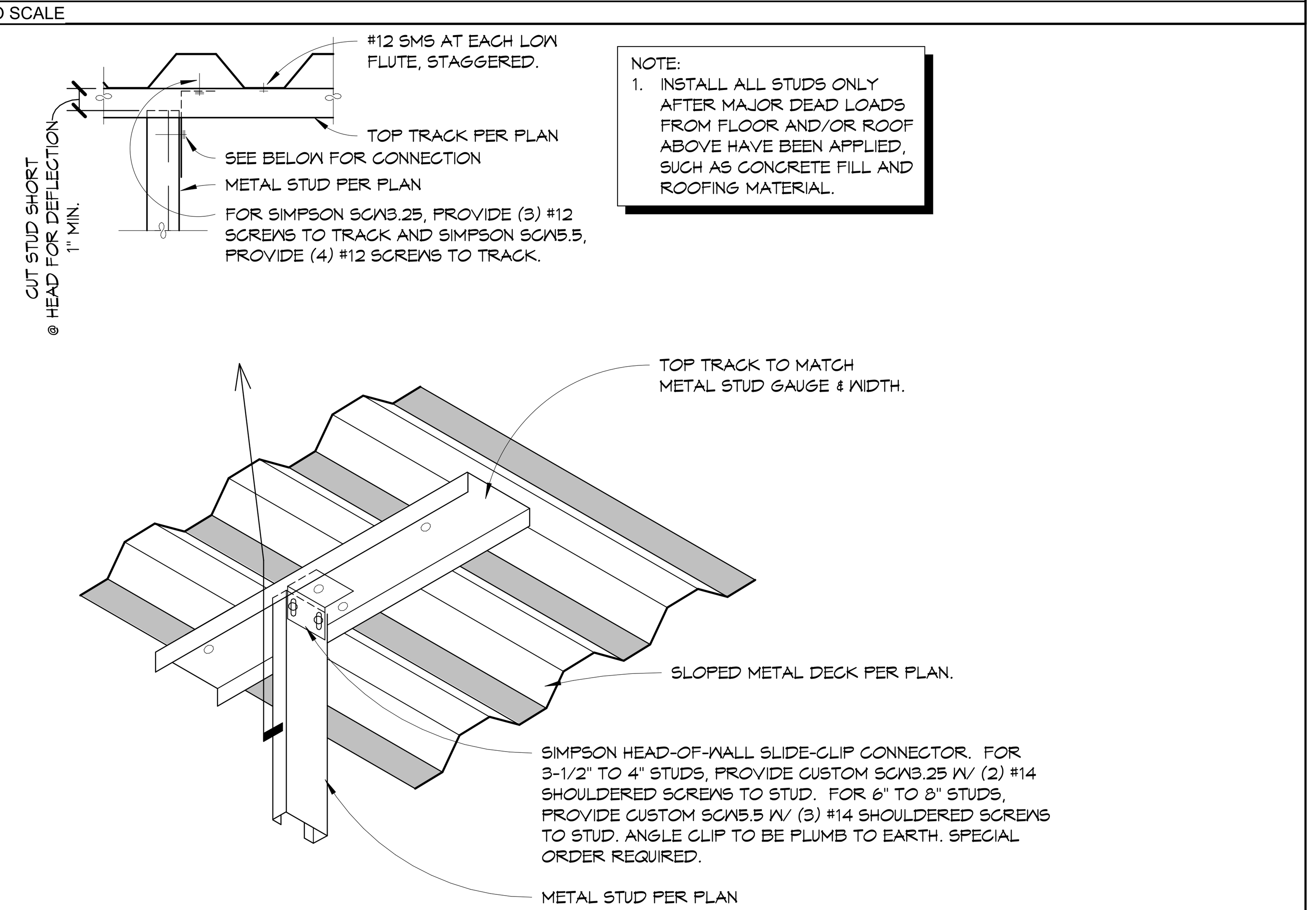
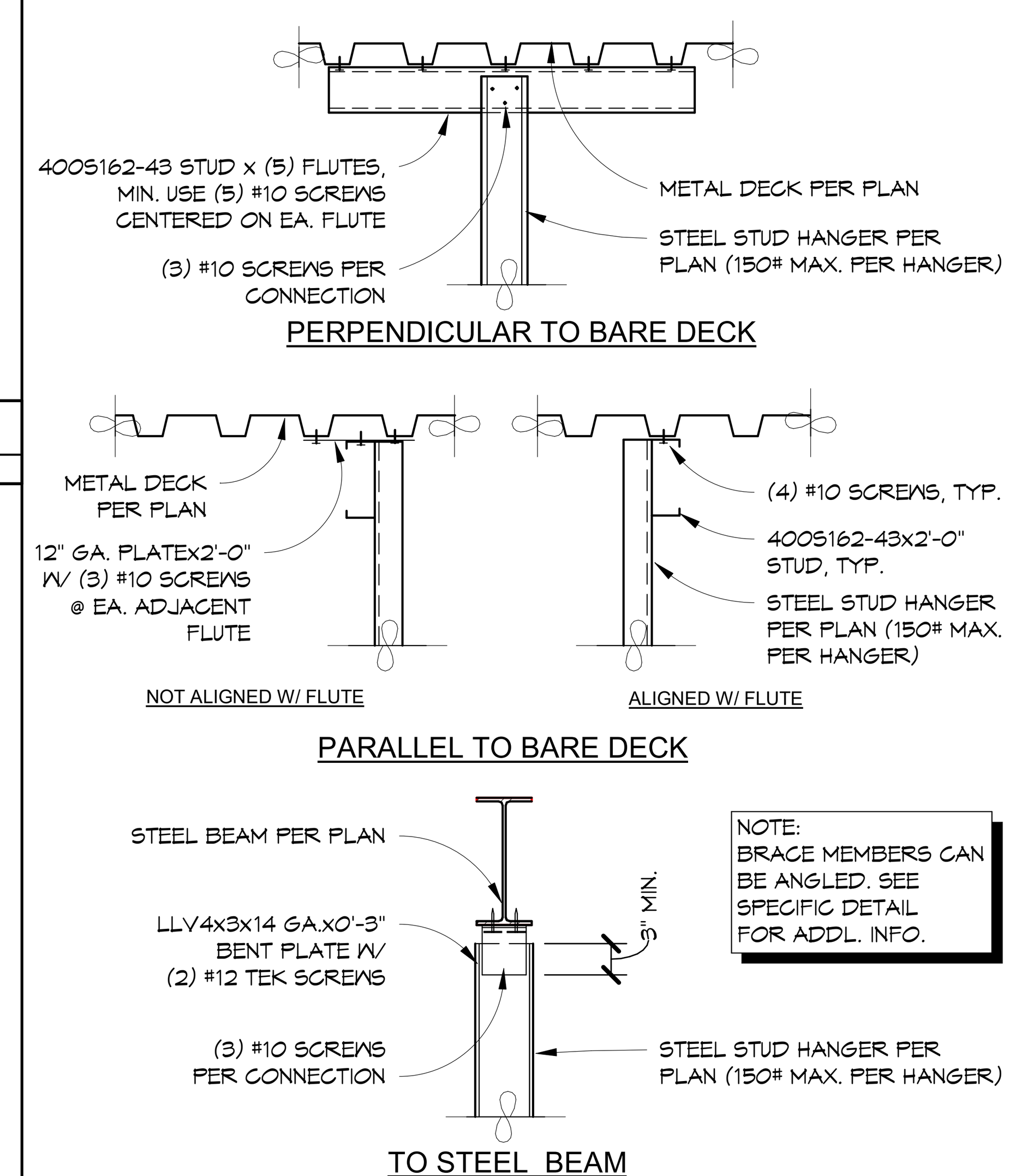


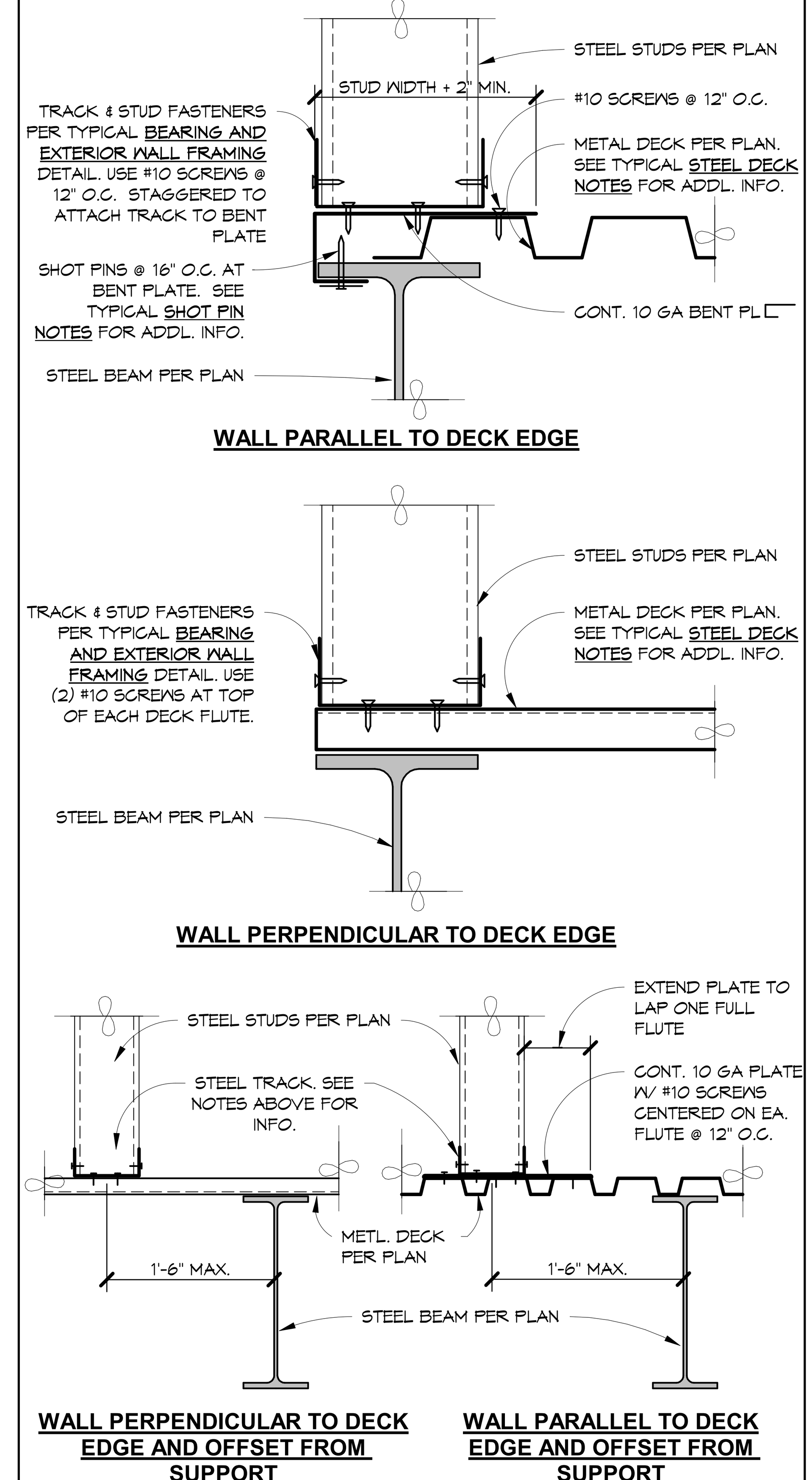
13	NON-BEARING METAL STUD WALL AT MTL. DECK
S108	NOT TO SCALE



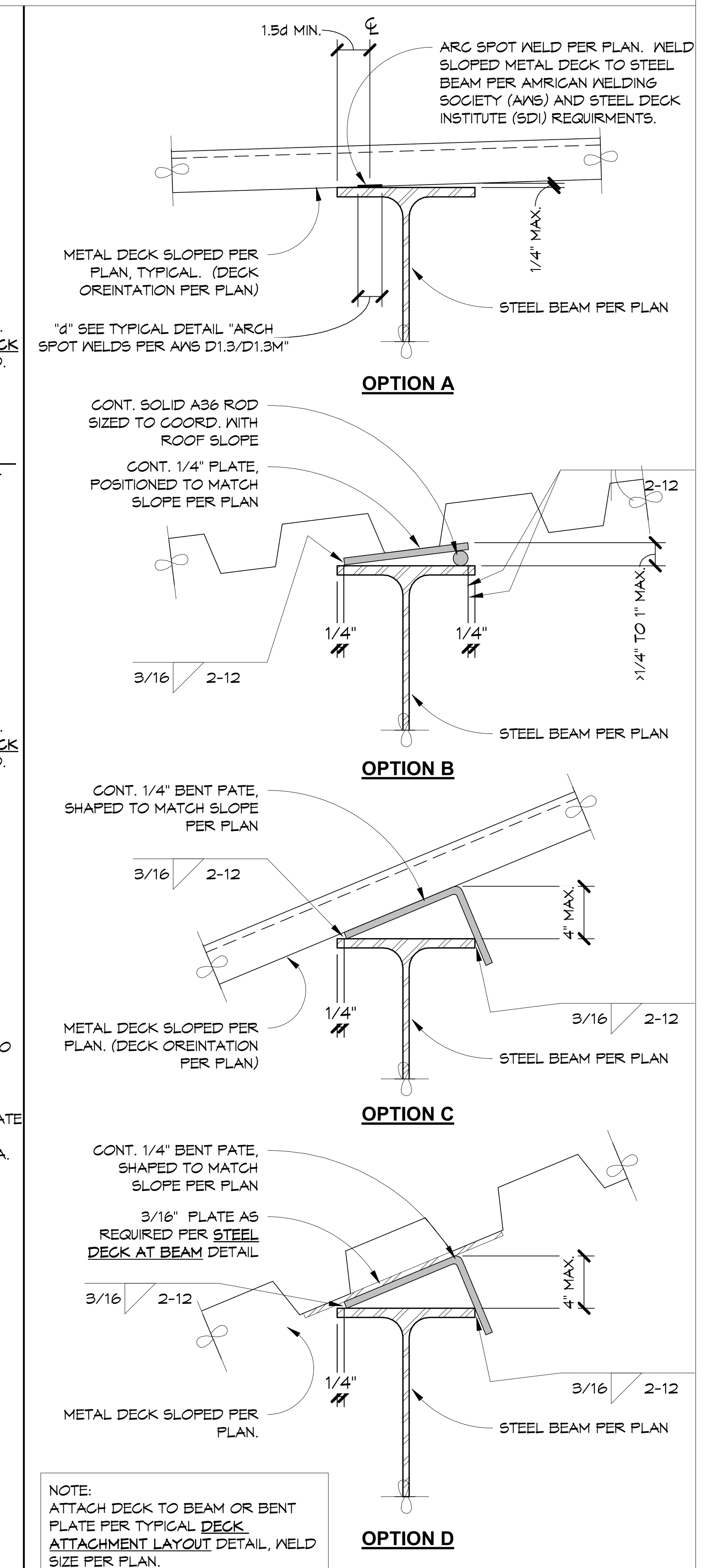
14	NON-BEARING WALL AT SLOPED DECK
S108	NOT TO SCALE



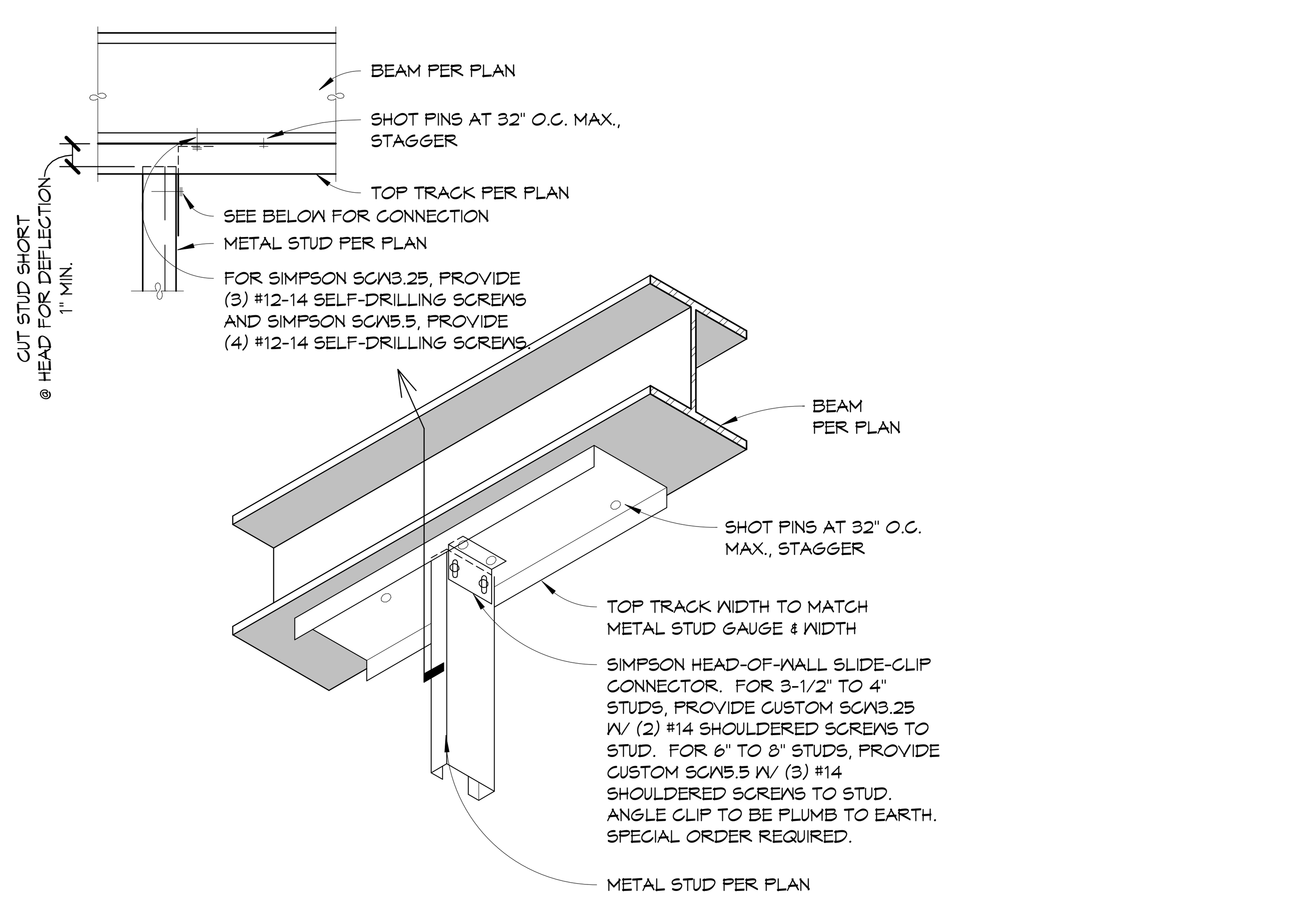
8	HANGER/BRACE ATTACHMENTS
S108	NOT TO SCALE



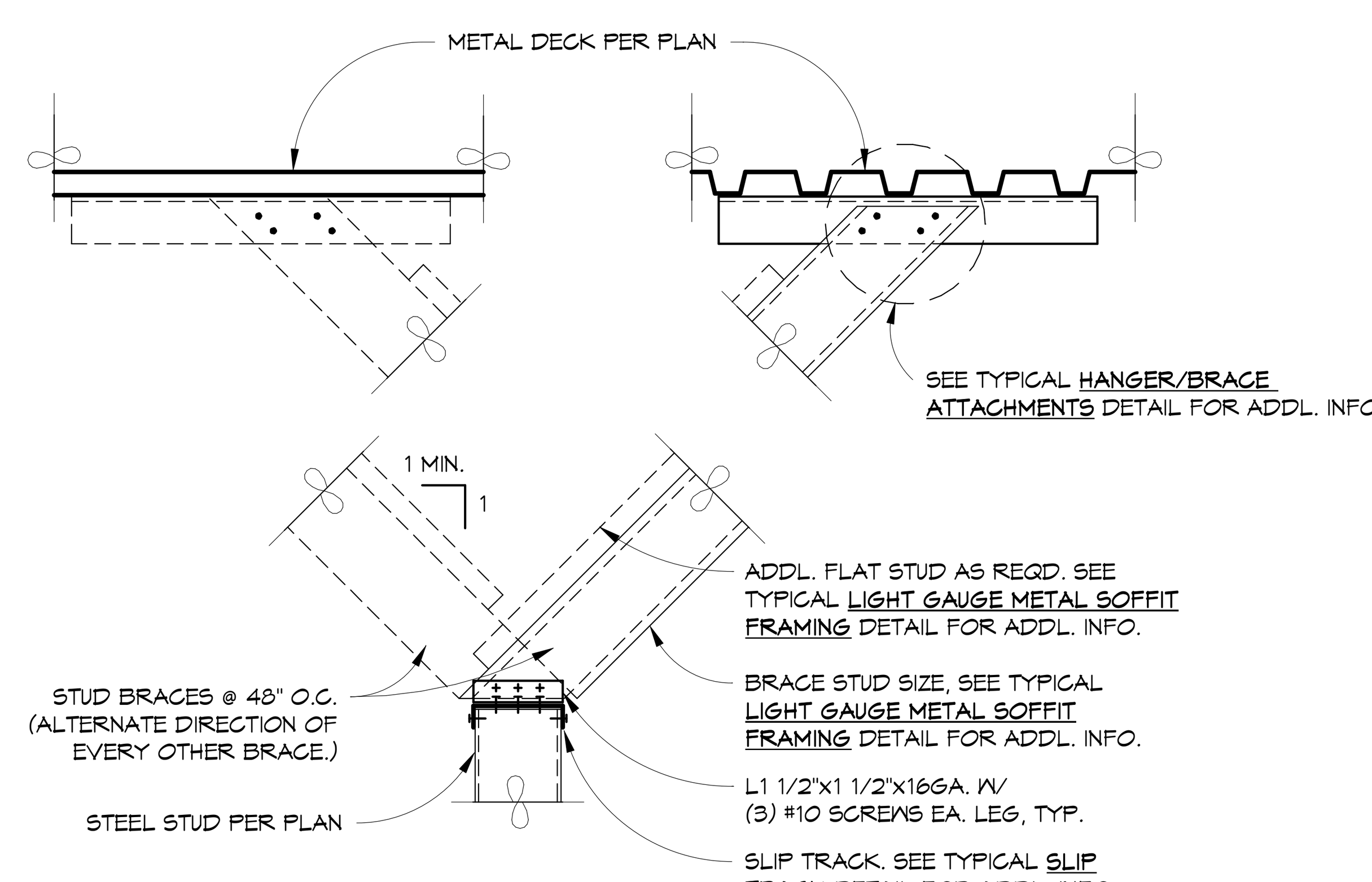
5	NON-BEARING WALL ON MTL. DECK
S108	NOT TO SCALE



2	SLOPED STL. DECK. AT STL. BEAM
S108	NOT TO SCALE



15	NON-BEARING WALL AT SLOPED BEAM
S108	NOT TO SCALE



6	NON-BEARING WALL BRACING FOR LT. GAUGE STL.
S108	NOT TO SCALE

BrooksRansom ASSOCIATES
7455 N. PALM AVE. STE 100 | FRESNO, CA 93711
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23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE: TYPICAL METAL DECK DETAILS

S108

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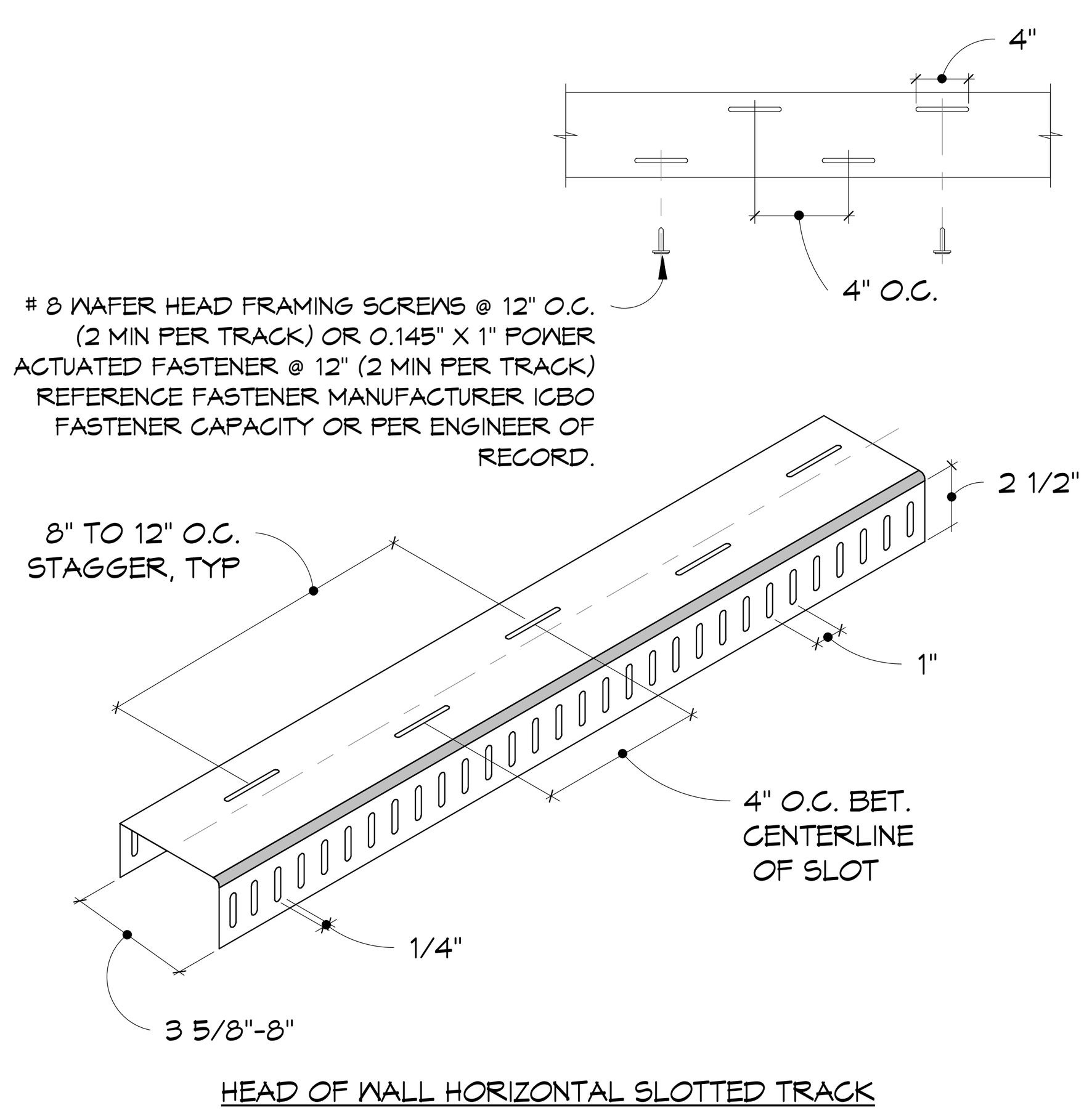


NOTE:
SEE TYPICAL SLIP TRACK FOR NON-BRNG WALL DETAIL FOR ADDITIONAL INFORMATION

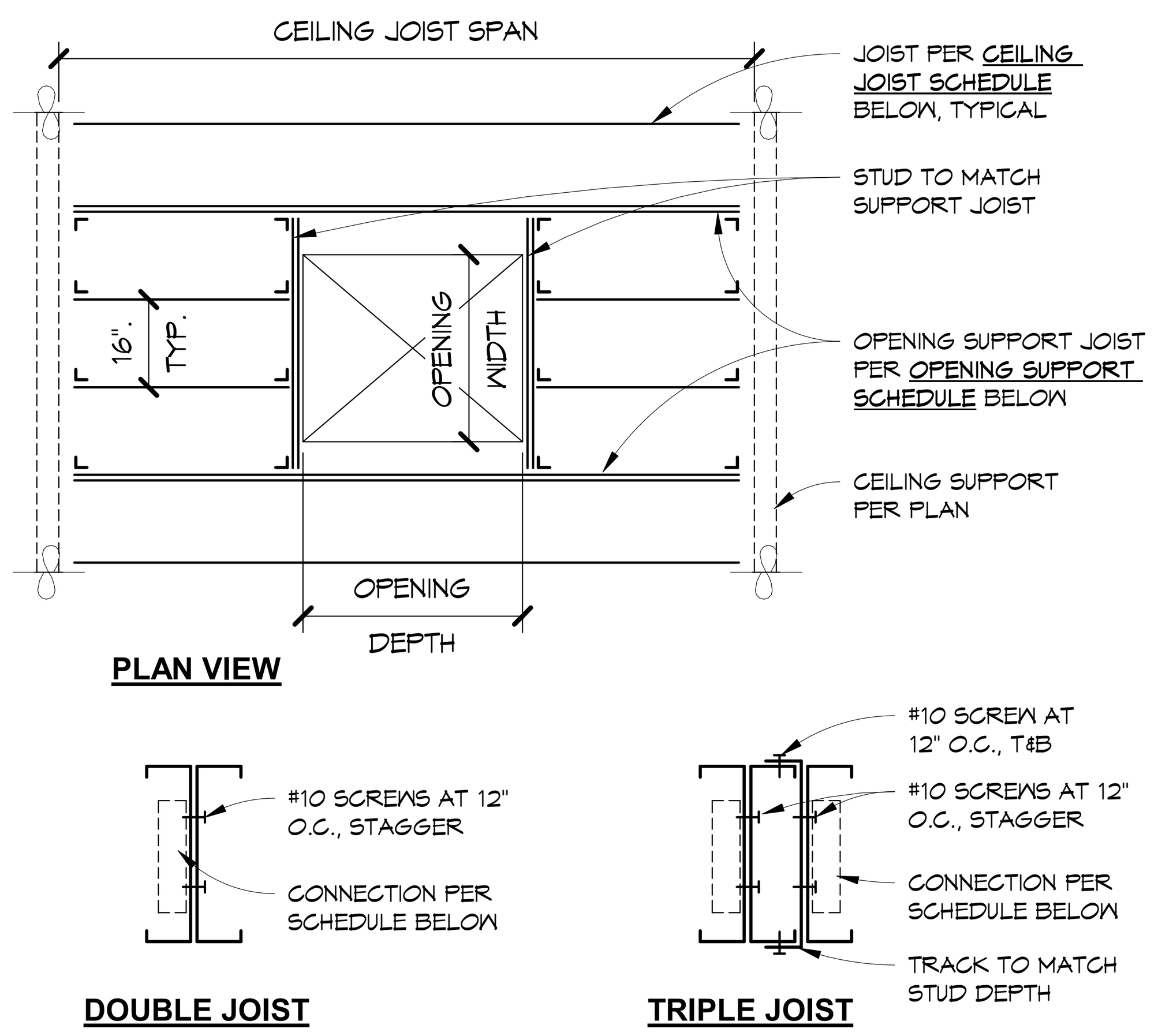
13 HORIZONTAL SLOTTED TRACK
S109 NOT TO SCALE

STANDARD TRACK (T) SECTIONAL PROPERTIES			
SECTION	STUD SIZE	EFFECTIVE Sxx ($IN.^3$)	EFFECTIVE Ixx ($IN.^4$)
362T125-27	3 5/8" x 22 GA	0.135	0.301
362T125-30	3 5/8" x 20 GA	0.152	0.339
362T125-43	3 5/8" x 18 GA	0.245	0.531
362T250-43 *	3 5/8" x 18 GA	0.196	0.763
362T125-54	3 5/8" x 16 GA	0.312	0.678
362T250-54 *	3 5/8" x 16 GA	0.244	0.983
400T125-27	4" x 22 GAUGE	0.156	0.380
400T125-33	4" x 20 GAUGE	0.201	0.484
400T125-43	4" x 18 GAUGE	0.282	0.666
400T250-43 *	4" x 18 GAUGE	0.227	0.946
400T125-54	4" x 16 GAUGE	0.359	0.849
400T250-54 *	4" x 16 GAUGE	0.284	1.216
600T125-27	6" x 22 GAUGE	0.225	1.041
600T125-30	6" x 20 GAUGE	0.272	1.159
600T125-33	6" x 20 GAUGE	0.335	1.297
600T125-43	6" x 18 GAUGE	0.515	1.750
600T250-43 *	6" x 18 GAUGE	0.434	2.353
600T125-54	6" x 16 GAUGE	0.653	2.221
600T250-54 *	6" x 16 GAUGE	0.543	3.003
600T125-68	6" x 14 GAUGE	0.874	2.930
600T125-97	6" x 12 GAUGE	1.347	4.281
800T125-43	8" x 18 GAUGE	0.739	3.600
800T250-43 *	8" x 18 GAUGE	0.618	4.692
800T125-54	8" x 16 GAUGE	0.961	4.548
800T250-54 *	8" x 16 GAUGE	0.792	5.949
800T125-97	8" x 12 GAUGE	2.062	8.613

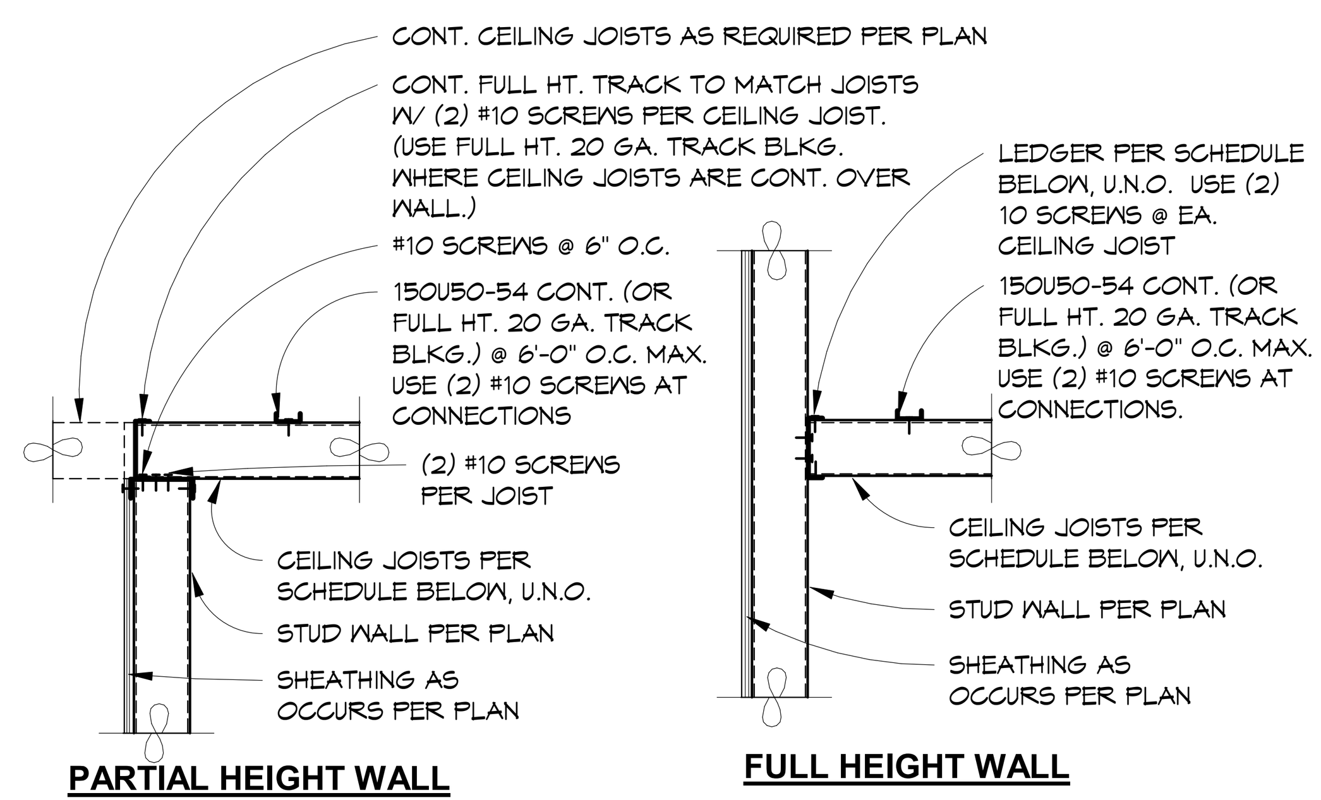
STANDARD TRACK(S) SECTIONAL PROPERTIES			
SECTION	STUD SIZE	EFFECTIVE Sxx ($IN.^3$)	EFFECTIVE Ixx ($IN.^4$)
162S125-30	1 5/8" x 20 GA	0.059	0.060
162S125-33	1 5/8" x 20 GA	0.130	0.110
250S162-33	2 1/2" x 20 GA	0.180	0.235
250S162-43	2 1/2" x 18 GA	0.240	0.302
250S162-54	2 1/2" x 16 GA	0.288	0.370
250S162-68	2 1/2" x 14 GA	0.357	0.450
350S162-33	3 1/2" x 20 GA	0.279	0.508
350S162-43	3 1/2" x 18 GA	0.372	0.654
350S162-54	3 1/2" x 16 GA	0.447	0.804
350S162-68	3 1/2" x 14 GA	0.563	0.985
362S125-27	3 5/8" x 22 GA	0.154	0.338
362S125-30	3 5/8" x 20 GA	0.1750	0.375
362S162-33	3 5/8" x 20 GA	0.292	0.551
362S162-43	3 5/8" x 18 GA	0.389	0.710
362S162-54	3 5/8" x 16 GA	0.468	0.873
362S162-68	3 5/8" x 14 GA	0.584	1.069
400S125-27	4" x 22 GAUGE	0.127	0.426
400S125-30	4" x 20 GAUGE	0.202	0.473
400S162-33	4" x 20 GAUGE	0.332	0.692
400S162-43	4" x 18 GAUGE	0.443	0.892
400S162-54	4" x 16 GAUGE	0.533	1.098
400S162-68	4" x 14 GAUGE	0.666	1.346
550S162-33	5 1/2" x 20 GA	0.512	1.458
550S162-43	5 1/2" x 18 GA	0.681	1.888
550S162-54	5 1/2" x 16 GA	0.821	2.324
550S162-68	5 1/2" x 14 GA	1.031	2.861
600S125-27	8" x 22 GAUGE	0.274	1.145
600S125-30	8" x 20 GAUGE	0.331	1.259
600S125-43	8" x 18 GAUGE	0.584	1.802
600S162-33	6" x 20 GAUGE	0.577	1.793
600S162-43	6" x 18 GAUGE	0.767	2.316
600S162-54	6" x 16 GAUGE	0.927	2.860
600S162-68	6" x 14 GAUGE	1.164	3.525
600S162-97	6" x 12 GAUGE	1.599	4.797
800S125-43	8" x 18 GAUGE	0.894	3.696
800S162-33	8" x 20 GAUGE	0.757	3.582
800S162-43	8" x 18 GAUGE	1.1158	4.633
800S162-54	8" x 16 GAUGE	1.397	5.736
800S162-68	8" x 14 GAUGE	1.757	7.089
800S162-97	8" x 12 GAUGE	2.748	9.713
1000S162-54	10" x 16 GAUGE	1.712	9.950
1000S162-97	10" x 12 GAUGE	3.393	16.967
1200S250-97	12" x 12 GAUGE	5.446	34.016

* SLOTTED MTL. TRACK. SEE TYP. SLIP TRACK DETAIL FOR ADDL. INFO.

11 SECTION PROPERTIES SCHEDULE
S109 NOT TO SCALE



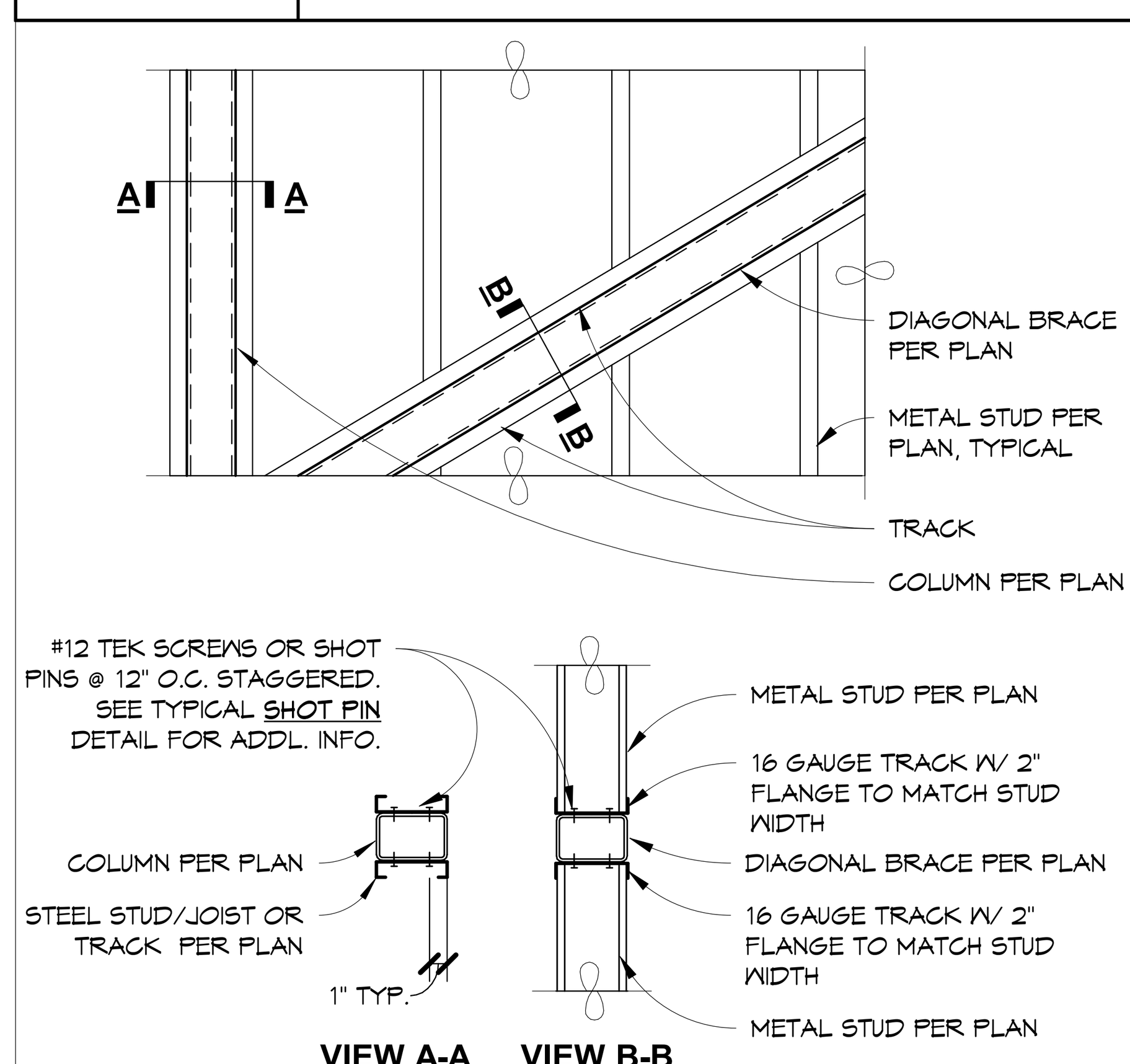
OPENING SUPPORT SCHEDULE		
OPENING WIDTH	JOIST TYPE	CONNECTION TYPE
16" MAX.	SINGLE JOIST	(1) SIMPSON L50
32" MAX.	DOUBLE JOIST	(1) SIMPSON L50
48" MAX.	TRIPLE JOIST	(2) SIMPSON L50



CEILING JOIST SCHEDULE		
MAX SPAN	SIZE/SPACING	LEDGER SIZE / ATTACHMENT
UP TO 10'-0"	400S162-33 @ 16" O.C.	400T125-43 W/(2) #10 SCREWS PER STUD
10'-1" TO 12'-0"	600S162-33 @ 16" O.C.	600T125-54 W/(3) #10 SCREWS PER STUD
12'-1" TO 16'-0"	600S162-43 @ 16" O.C.	600T125-54 W/(3) #10 SCREWS PER STUD
16'-1" TO 18'-0"	800S162-97 @ 16" O.C.	800T125-97 W/(4) #10 SCREWS PER STUD

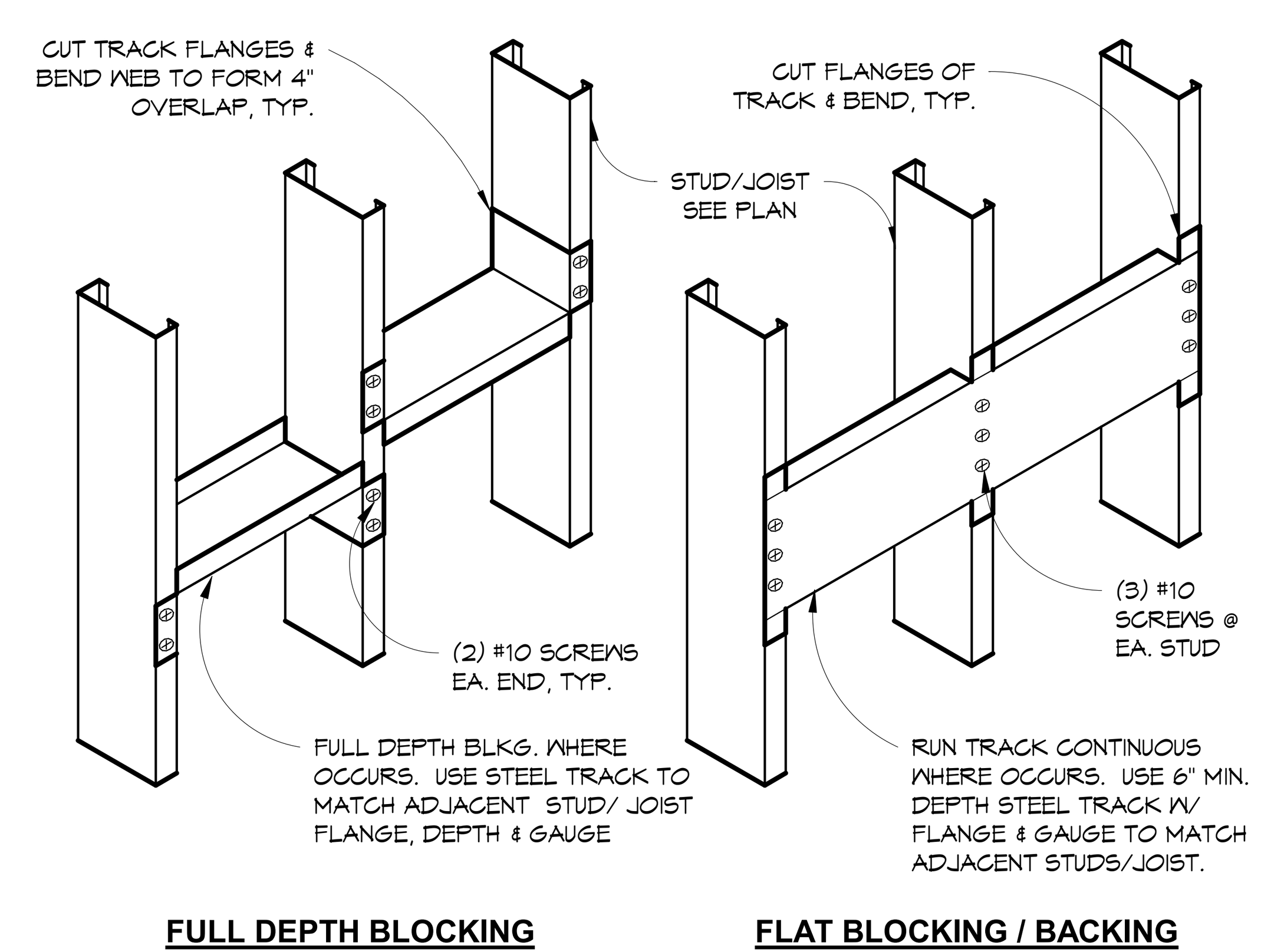
NOTES:
1. DEFLECTION LIMIT IS L/360 WITH 13 PSF D.L. AND 10 PSF L.L.
2. JOISTS SPAN AND SPACING PER ICC-ES ESR 3064P TABLES.

8 CEILING JOIST SCHEDULE FOR LIGHT GAUGE STEEL
S109 NOT TO SCALE

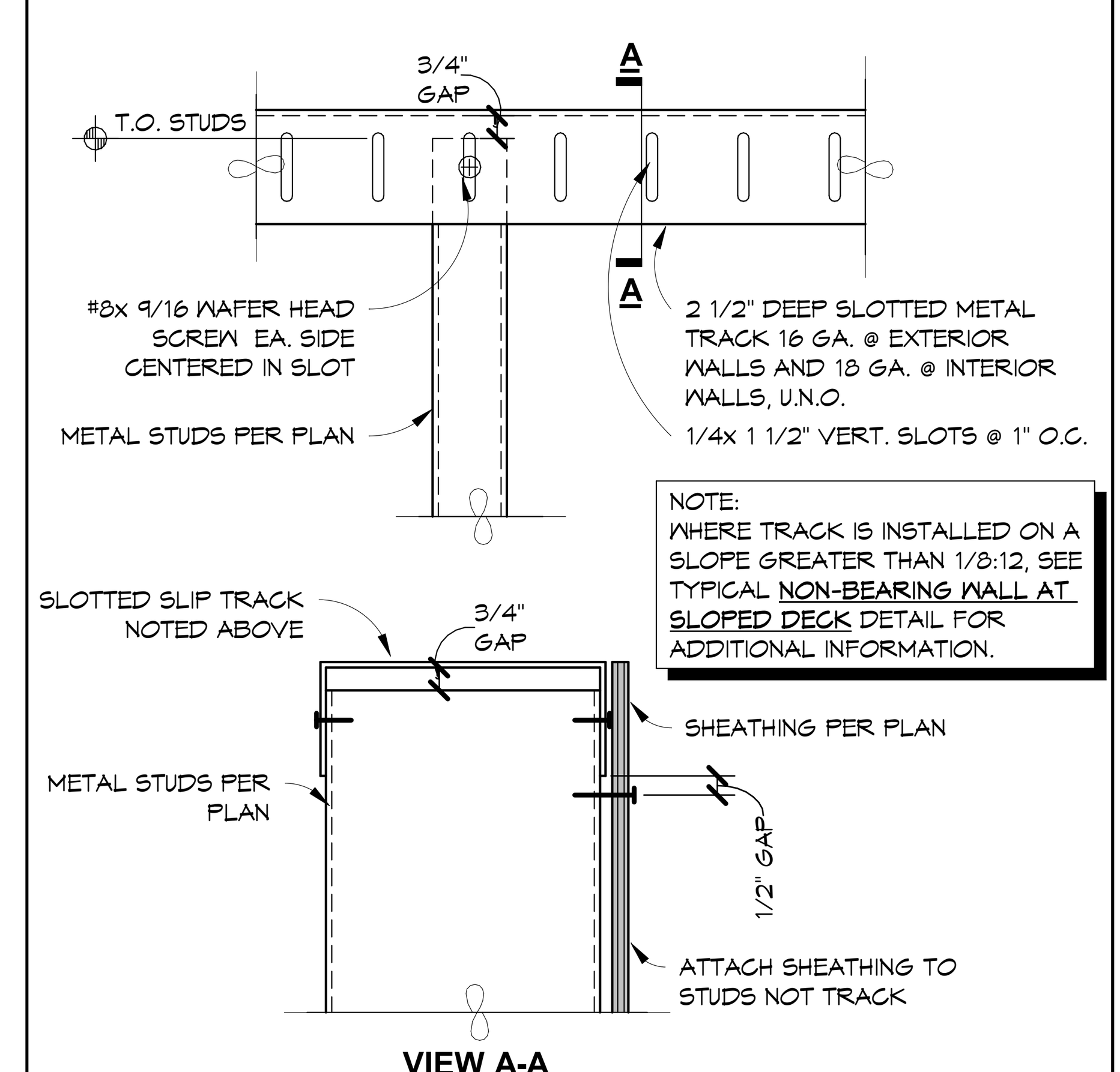


NOTE:
SIMILAR DETAILING OTHER STEEL SHAPES.

15 LT GA TO STRUCTURAL FRMG
S109 NOT TO SCALE



12 STUD/JOIST BLOCKING FOR LIGHT GAGE STL.
S109 NOT TO SCALE



NOTE:
WHERE TRACK IS INSTALLED ON A SLOPE GREATER THAN 1/8:12, SEE TYPICAL NON-BEARING WALL AT SLOPED DECK DETAIL FOR ADDITIONAL INFORMATION.

6 SLIP TRACK FOR NON-BRNG WALL
S109 NOT TO SCALE

1. ALL MEMBERS SHALL BE MANUFACTURED BY A CURRENT MEMBER OF THE STEEL STUD MANUFACTURER'S ASSOCIATION, IN ACCORDANCE WITH THE LATEST AMERICAN IRON AND STEEL INSTITUTE - NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS INCLUDING THE LATEST SUPPLEMENTS (A.I.S.I.-N.A.S.).
2. ALL GALVANIZED STUDS, TRACKS AND JOISTS SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF THE LATEST A.I.S.I.-N.A.S. STANDARD.
3. ALL STEEL MEMBERS SHALL HAVE PHYSICAL MARKING AND IDENTIFICATION NUMBERS AS REQUIRED BY A.S.T.M. C645 AND A.S.T.M. C955. THESE MARKINGS MUST INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING INFORMATION: DEPTH, FLANGE WIDTH, MINIMUM STEEL THICKNESS, MANUFACTURER DESIGNATION, STEEL YIELD STRENGTH AND PROTECTIVE COATING WEIGHT.
4. STRUCTURAL STEEL FRAMING MEMBERS MUST MEET THE PHYSICAL REQUIREMENTS OF A.S.T.M. C955, THE INSTALLATION REQUIREMENTS OF A.S.T.M. C1007 AND THE MINIMUM COATING REQUIREMENTS OF A.S.T.M. A653 COATING DESIGNATION G-60.
5. NON-STRUCTURAL STEEL FRAMING MEMBERS MUST MEET THE PHYSICAL REQUIREMENTS OF A.S.T.M. C645, THE INSTALLATION REQUIREMENTS OF A.S.T.M. C754 AND THE MINIMUM COATING REQUIREMENTS OF A.S.T.M. A653 COATING DESIGNATION G-40.
6. STEEL SHALL BE A.S.T.M. A1003, GRADE 50 FOR 12, 14, AND 16 GAUGE SECTIONS, AND A.S.T.M. A1003, GRADE 33 FOR 18 AND HIGHER GAUGE SECTIONS.
7. PROVIDE STEEL MEMBERS WITH SECTION PROPERTIES EQUAL TO OR GREATER THAN THOSE SPECIFIED BY THE "STEEL STUD MANUFACTURER'S ASSOCIATION" (S.S.M.A.) CATALOG, ICC ESR-3064P, FOR THE MEMBER SIZES DESIGNATED ON THE PLANS.
8. THE CONTRACTOR MUST PROVIDE A MATERIAL SUBMITTAL INDICATING THE SIZE, GAUGE, SECTIONAL PROPERTIES AND MATERIALS TO BE USED TO THE ARCHITECT AND ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AGENCY APPROVAL FOR ANY SUBSTITUTIONS.
9. BENT, KINKED, DISTORTED, CORRODED OR DAMAGED SECTIONS SHALL NOT BE USED.
10. STUDS MAY HAVE CUTOUTS (OR KNOCKOUTS). CUTOUTS MAY BE A MAXIMUM DIMENSION OF 1 1/2" WIDE x 4" LONG AND HAVE A MINIMUM SPACING OF 24" O.C. EXCEPT CUTOUTS FOR 1 5/8" AND 2 1/2" MUST NOT EXCEED A WIDTH OF 3/4". CUTOUTS SHALL NOT BE CLOSER THAN 12" FROM MEMBER ENDS.
11. ALL WELDING TO BE PERFORMED BY LIGHT GAUGE WELDERS CERTIFIED FOR ALL APPROPRIATE DIRECTIONS COMPLYING WITH A.W.S. D1.3. WELDING RODS SHALL CONFORM TO THE FOLLOWING:
    - 18 GA. AND LIGHTER: E60XX
    - 16 GA. AND HEAVIER: E70XX OR E6013
    - LIGHT GAUGE TO STRUCTURAL STEEL: E70XX LOW HYDROGEN
12. ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH A ZINC-RICH PAINT. ALL WELDS OF CARBON SHEET STEEL SHALL BE TOUCHED UP WITH PAINT.
13. WIRE TYING OF COMPONENTS SHALL NOT BE PERMITTED.
14. LATERAL BRIDGING FOR STEEL STUD IS REQUIRED WHEN WALL BOARD, INSTALLED IN ACCORDANCE WITH A.I.S.I.-N.A.S. REQUIREMENTS, DOES NOT CONTINUE FULL HEIGHT ON BOTH SIDES. BRIDGING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND TYPICAL BRIDGING DETAILS. ALL EXTERIOR WALLS SHALL HAVE BRIDGING PER TYPICAL BRIDGING DETAILS.
15. SCREWS SHALL BE SELF-DRILLING/SELF-TAPPING STEEL SCREWS INSTALLED IN ACCORDANCE WITH THE A.I.S.I.-N.A.S. SCREWS SHALL HAVE SUFFICIENT LENGTH TO ENSURE A MINIMUM OF 3 FULL THREADS SHOWING AFTER PENETRATION OF JOINED LIGHT GAUGE MATERIALS. SCREWS SHALL HAVE A MINIMUM OF 1" EDGE/SPACING DISTANCE. THE MINIMUM SCREW HEAD DIAMETER SHALL BE 5/16", AND SCREW SIZES SHALL CONFORM TO THE FOLLOWING, U.N.O. :

METAL TO METAL FASTENER SIZE	
METAL THICKNESS 'T'	SCREW TYPE
T < 12 GA.	#10 W/ #3 POINT
12 GA. < T < 3/16"	#12 W/ #3 POINT
3/16" < T < 5/16"	1/4" DIA. W/ #4 POINT

16. LIGHT GAUGE STEEL CONTRACTOR SHALL PROVIDE ALL ACCESSORIES INCLUDING, BUT NOT LIMITED TO, TRACKS, CLIPS, WEB STIFFENERS, ANCHORS, FASTENING DEVICES, RESILIENT CLIPS AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE STEEL MEMBERS BEING USED.
17. STEEL TRACKS THAT OCCUR UNDER ALL EXTERIOR CURTAIN WALLS, BEARING WALLS AND SHEAR WALLS SHALL BE BOLTED TO MASONRY OR CONCRETE WITH 5/8"Φ x 12" BOLTS SPACED NOT MORE THAN 5'-0" ON CENTER, WITH A MIN. OF 2 BOLTS FOR EACH PIECE OF TRACK, U.N.O. USE STANDARD STEEL PLATE WASHERS AT EACH BOLT LOCATION.
18. ALL ANCHOR BOLTS IN STEEL TRACKS SHALL BE 4 INCH MINIMUM AND 12 INCH MAXIMUM FROM THE END OF THE TRACK, AND HAVE 7 INCH MINIMUM EMBEDMENT INTO CONCRETE OR MASONRY. ANY LOCATION WHERE A HOLE OR NOTCH OCCURS THROUGH A TRACK FLANGE, TRACK SHALL HAVE AN ADDITIONAL ANCHOR BOLT PLACED 4 INCHES TO 12 INCHES ON EACH SIDE OF THE HOLE OR NOTCH.
19. ALL ANCHOR BOLTS SHALL BE MACHINE MADE TYPE F1554 GRADE 36 U.N.O. BOLTS WITH UPSET THREADS ARE NOT PERMITTED.
20. ALL STEEL FRAMING MEMBERS SHALL BE DESIGNATED ON PLANS WITH THE S.S.M.A. STUD AND TRACK SECTION NOMENCLATURE AS DESCRIBED BELOW:

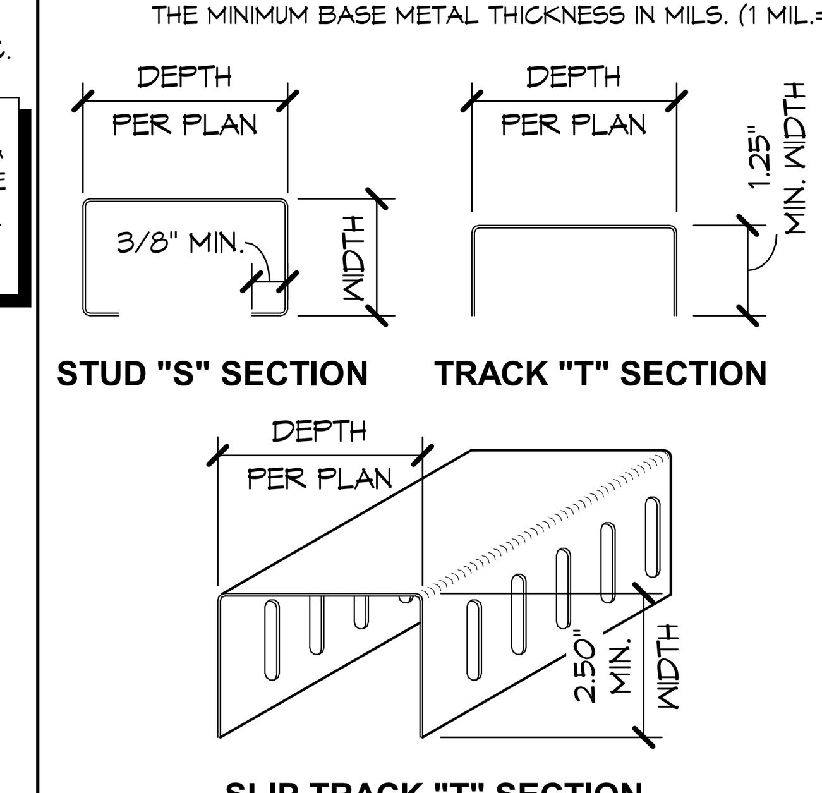
600 S 162 - 54

MEMBER DEPTH: (EXAMPLE: 6" = 600 X 1/100 INCHES) FOR ALL "T" SECTIONS MEMBER DEPTH IS THE INSIDE TO INSIDE DIMENSION.

STYLE: (EXAMPLE: STUD OR JOIST SECTION = S)

FLANGE WIDTH: (EXAMPLE: 1 5/8" = 1.625" = 162) ALL FLANGE WIDTHS ARE TAKEN IN 1/100 INCHES.

MATERIAL THICKNESS: (EXAMPLE: 18 GA = 0.054 IN. = 54 MILS) THE MINIMUM BASE METAL THICKNESS IN MILS. (1 MIL.=1/1000 IN.)



3 LIGHT GAUGE STEEL NOTES
S109 NOT TO SCALE

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.

7545 N. DEL MAR AVENUE, SUITE 203
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REGISTERED PROFESSIONAL ENGINEER
GAYLORD R. RANSOM
No. S2386
STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
7405 N. PALM AVE. STE 100 | FRESNO, CA 93711
23422

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)

SHEET TITLE:
TYPICAL LIGHT GAUGE NOTES AND DETAILS

S109

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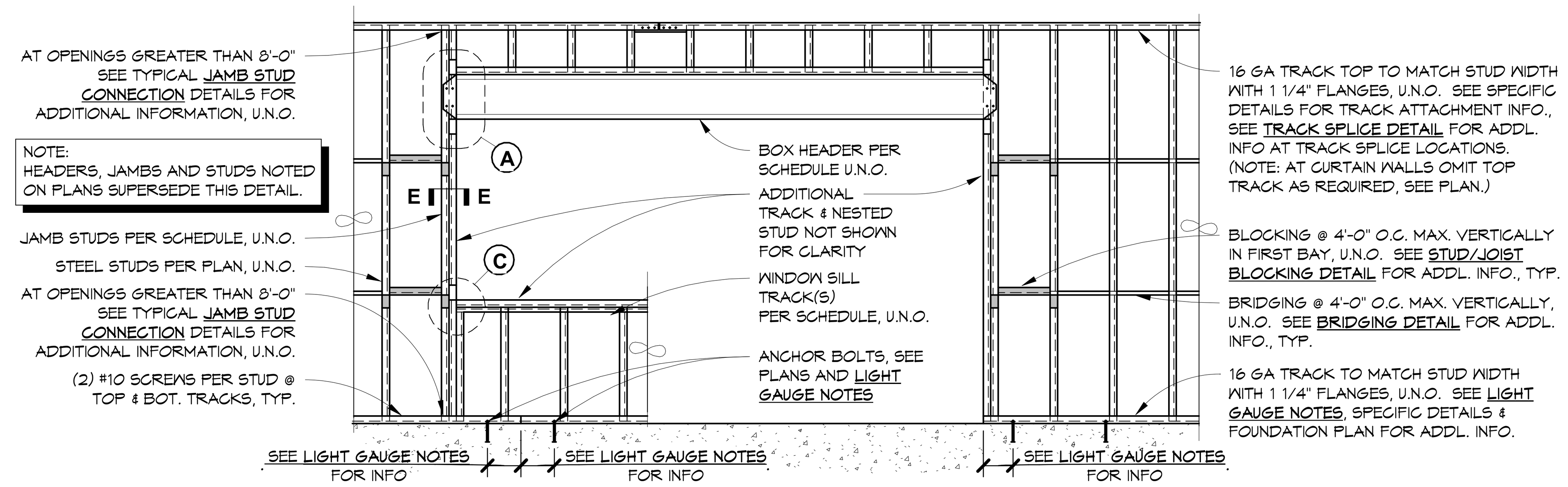
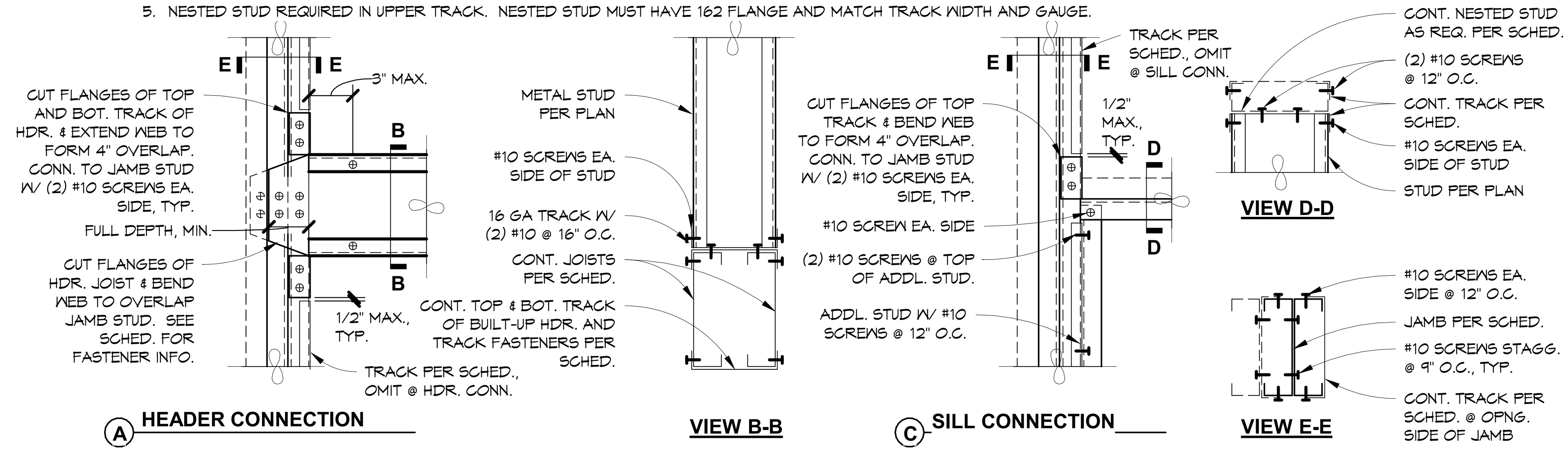
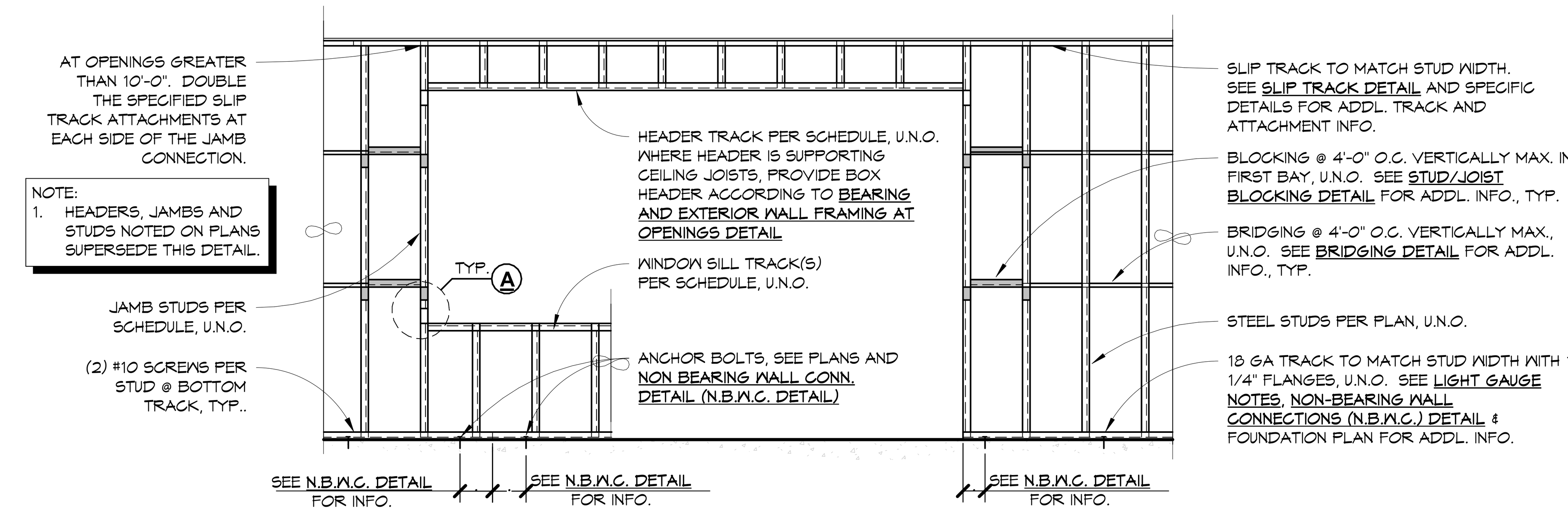
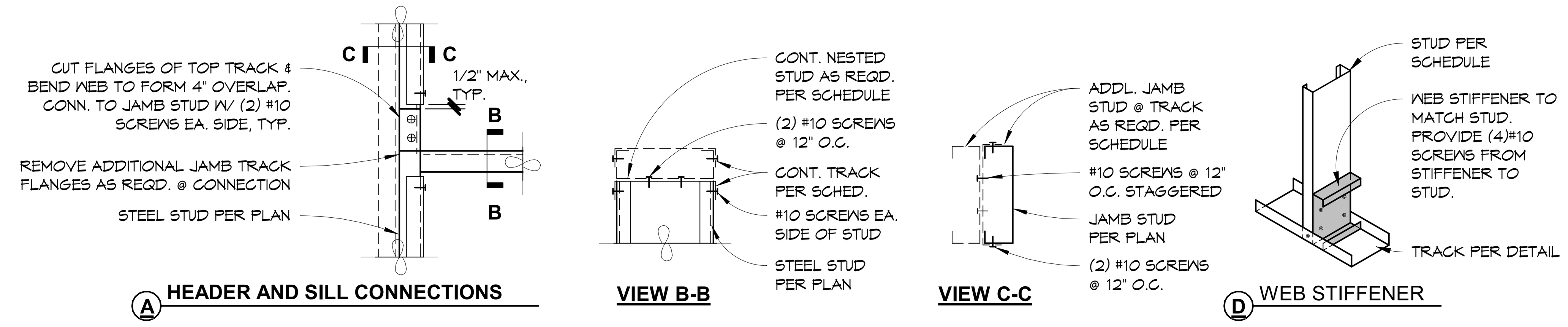


LIGHT GAUGE FRAMING SCHEDULE							
WALL TYPE	SPAN LENGTH	BOX HEADER		JAMB STUDS	WINDOW SILL TRACK(S)	NO. OF #10 SCREWS @ HDR. JST. TO JAMB	SPACING OF #10 SCREWS @ EA. HDR. TRK. TO EA. HDR. JST.
		DBL. JOISTS	T&B TRACKS				
3 5/8" STUDS	0'-0" TO 8'-0"	600S162-54	362T125-54	(3)362S162-68 [3]	362T125-54	3	12" O.C.
	8'-1" TO 10'-0"	800S162-54	362T125-54	(3)362S162-68 [3]	(2)362T125-54 [5]	4	10" O.C.
6" STUDS	0'-0" TO 8'-0"	600S162-54	600T125-54	(2)600S162-54 [4]	600T125-43	3	12" O.C.
	8'-1" TO 10'-0"	800S162-54	600T125-54	(2)600S162-54 [4]	600T125-54	4	10" O.C.
	10'-1" TO 12'-0"	1000S162-54	600T125-54	(2)600S162-54 [4]	600T125-54	5	8" O.C.
	12'-1" TO 14'-0"	1000S162-97	600T125-97	(2)600S162-68 [4]	(2)600T125-54 [5]	5	6" O.C.
	14'-1" TO 18'-0"	1200S250-97	600T125-97	(2)600S162-68 [4]	(2)600T125-68 [5]	6	6" O.C.
8" STUDS	0'-0" TO 8'-0"	600S162-54	800T125-54	(2)800S162-54 [4]	800T125-43	3	12" O.C.
	8'-1" TO 10'-0"	800S162-54	800T125-54	(2)800S162-54 [4]	800T125-43	4	10" O.C.
	10'-1" TO 12'-0"	1000S162-54	800T125-54	(2)800S162-54 [4]	800T125-54	5	8" O.C.
	12'-1" TO 14'-0"	1000S162-97	800T125-97	(2)800S162-54 [4]	800T125-54	5	6" O.C.
	14'-1" TO 18'-0"	1200S250-97	800T125-97	(2)800S162-54 [4]	(2)800T125-54 [5]	6	6" O.C.

1. LIMITATIONS: 1) 450 PLF MAX. VERTICAL LOAD (ASD) TO HDR. 2) 20 PSF MAX. OUT-OF-PLANE LOAD (ASD) TO HDR, JAMB AND SILL. 3) 14'-0" MAX WALL HT.
2. DEFLECTION LIMITATIONS: 1) L/360 VERTICAL. 2) L/240 OUT-OF-PLANE.
3. TWO TRACKS REQUIRED. TRACKS MUST HAVE 125 FLANGE AND MATCH STUD WIDTH AND GAUGE. SEE DETAILS FOR PLACEMENT.
4. ONE TRACK REQUIRED. TRACK MUST HAVE 125 FLANGE AND MATCH STUD WIDTH AND GAUGE. SEE DETAILS FOR PLACEMENT.
5. NESTED STUD REQUIRED IN UPPER TRACK. NESTED STUD MUST HAVE 162 FLANGE AND MATCH TRACK WIDTH AND GAUGE.







ALLOWABLE STUD HEIGHTS[1]						
STUD MEMBER	INTERIOR (5 PSF LAT) NON-LOAD BEARING BRITTLE FINISHES[2]			INTERIOR (5 PSF LAT) NON-LOAD BEARING FLEXIBLE FINISHES[3]		
	12" O.C.	16" O.C.	24" O.C.	12" O.C.	16" O.C.	24" O.C.
362S125-27	16'-6"	15'-0"	13'-1"	18'-10"	16'-4"	13'-4"
362S125-30	17'-0"	15'-6"	13'-6"	20'-3"	17'-7"	14'-4"
400S125-27	17'-10"	16'-2"	14'-1"	19'-11"	17'-3"	14'-1"
400S125-30	18'-5"	16'-8"	14'-7"	21'-5"	18'-6"	15'-2"
600S125-27	24'-4"e	21'-6"e	17'-7"e	24'-10"e	21'-6"e	17'-7"e
600S125-30	25'-2"	22'-11"	18'-11"	26'-10"	23'-3"	18'-11"
800S125-43	36'-1"	32'-9"	28'-8"	40'-11"	35'-5"	28'-11"

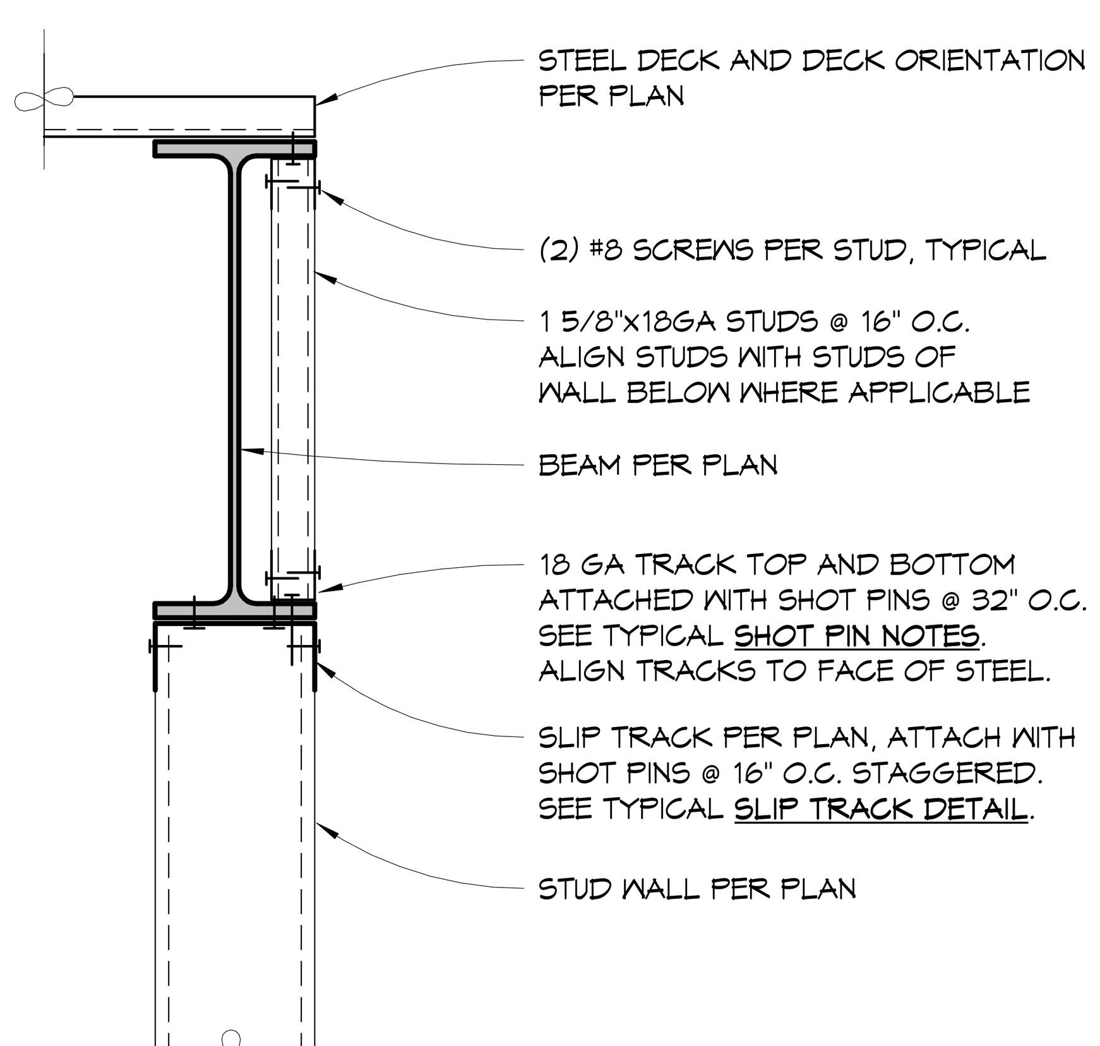
1. THIS INFORMATION IS PER ICC ESR-3064P AS REVISED IN 2023 FOR THE ABOVE REFERENCED STUDS. ALLOWABLE HEIGHTS ARE FROM THE SSMA 2022 IBC COMPLIANT CATALOGUE.
2. BRITTLE FINISHES INCLUDE WALLS WITH STUCCO OR CEMENT PLASTER ON BOTH SIDES OR ONE SIDE & GYPSUM WALL BOARD ON OTHER SIDE. DEFLECTION LIMIT= L/240.
3. FLEXIBLE FINISHES INCLUDE WALLS WITH GYPSUM WALLBOARD OR WOOD SIDING ON BOTH SIDES. DEFLECTION LIMIT = L/120.
4. WHERE LIMITING HEIGHTS ARE FOLLOWED BY "e", WEB STIFFENERS ARE REQUIRED. SEE DETAIL D ABOVE FOR ADDITIONAL INFORMATION.

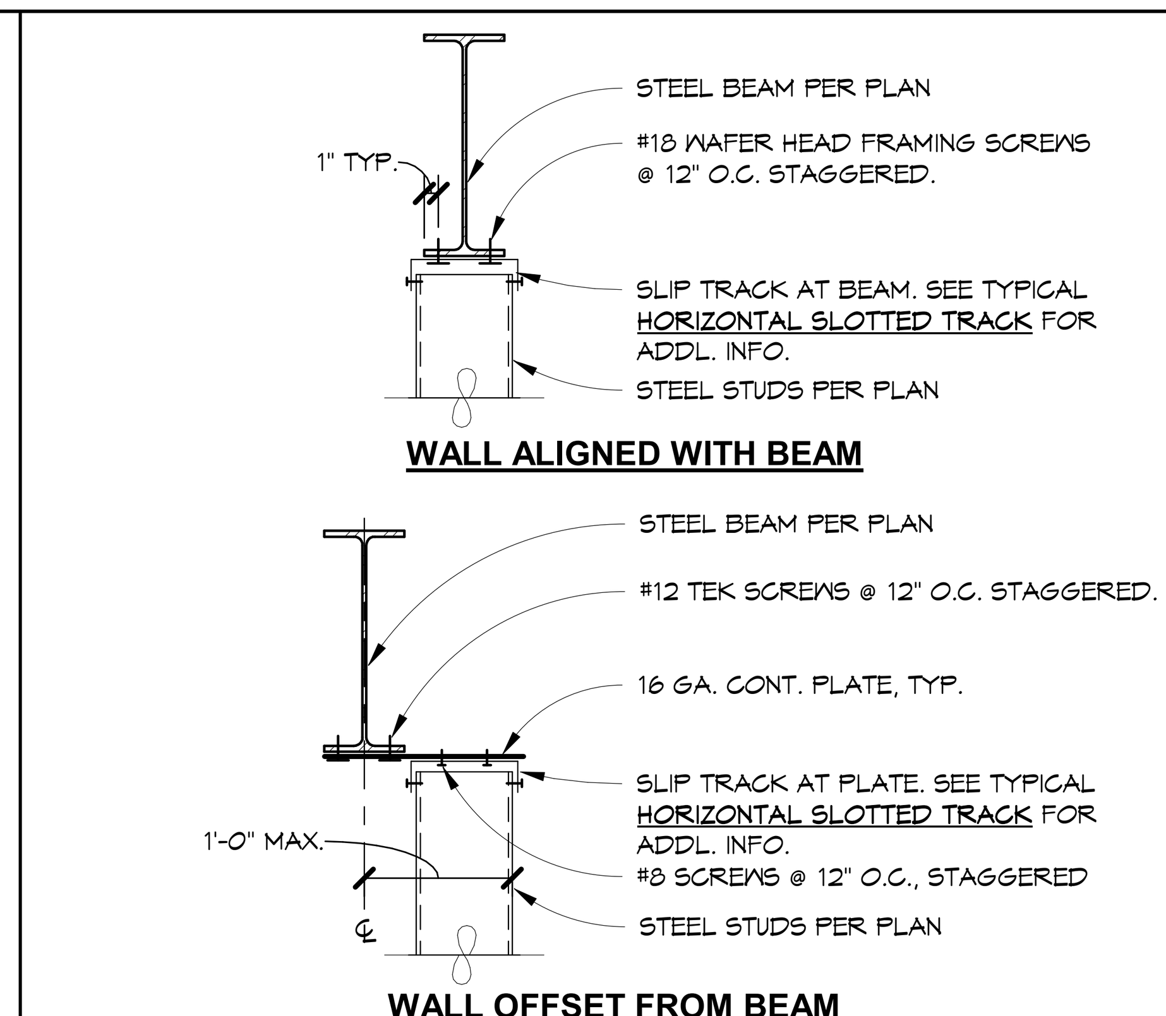
LIGHT GAUGE FRAMING SCHEDULE[1]				
WALL TYPE	SPAN LENGTH	HEADER TRACK	JAMB STUDS	WINDOW SILL TRACK(S)
3 5/8" STUDS	0'-0" TO 8'-0"	362T125-43	(2)362S162-33[3]	362T125-27
	8'-1" TO 10'-0"	362T125-54	(2)362S125-33[3]	362T125-30
	10'-1" TO 14'-0"	(2)362T125-54[3]	(2)362S125-43[3]	(2)362T125-30[3]
4" STUDS	0'-0" TO 6'-0"	400T125-27	400S162-54	400T125-27
	6'-1" TO 8'-0"	400T125-33	(2)400S162-33[3]	400T125-27
	8'-1" TO 10'-0"	400T125-54	(2)400S162-33[3]	400T125-27
	10'-1" TO 14'-0"	(2)400T125-43[3]	(2)400S162-33[3]	400T125-54
6" STUDS[4]	0'-0" TO 6'-0"	600T125-30	600S162-54	600T125-27
	6'-1" TO 8'-0"	600T125-43	(2)600S162-33[3]	600T125-27
	10'-'" TO 12'-0"	600T125-54	(2)600S162-33[3]	600T125-30
	12'-1" TO 14'-0"	(2)600T125-43[3]	(2)600S162-43[3]	600T125-33
	14'-1" TO 18'-0"	(2)600T125-54[3]	(2)600S162-54[3]	600T125-54

1. LIMITATIONS: 1) 5 PSF MAX. OUT-OF-PLANE LOAD (ASD) TO HDR, JAMB AND SILL. 2) 15'-0" MAX WALL HT. FOR 3 5/8" AND 4" STUDS. 3) 22'-0" MAX WALL HT. FOR 6" STUDS. 4) DEFLECTION LIMIT = L/240 OUT-OF PLANE.
2. ADDITIONAL TRACK REQUIRED. TRACK MUST HAVE 125 FLANGE AND MATCH STUD WIDTH AND GAUGE. SEE DETAILS FOR PLACEMENT.
3. NESTED STUD REQUIRED IN UPPER TRACK. NESTED STUD MUST HAVE 162 FLANGE AND MATCH TRACK WIDTH AND GAUGE.
4. WHERE 8" STUDS ARE REQUIRED, USE FLANGE SIZES & GAUGES SPECIFIED FOR 6" MEMBERS IN CHART.

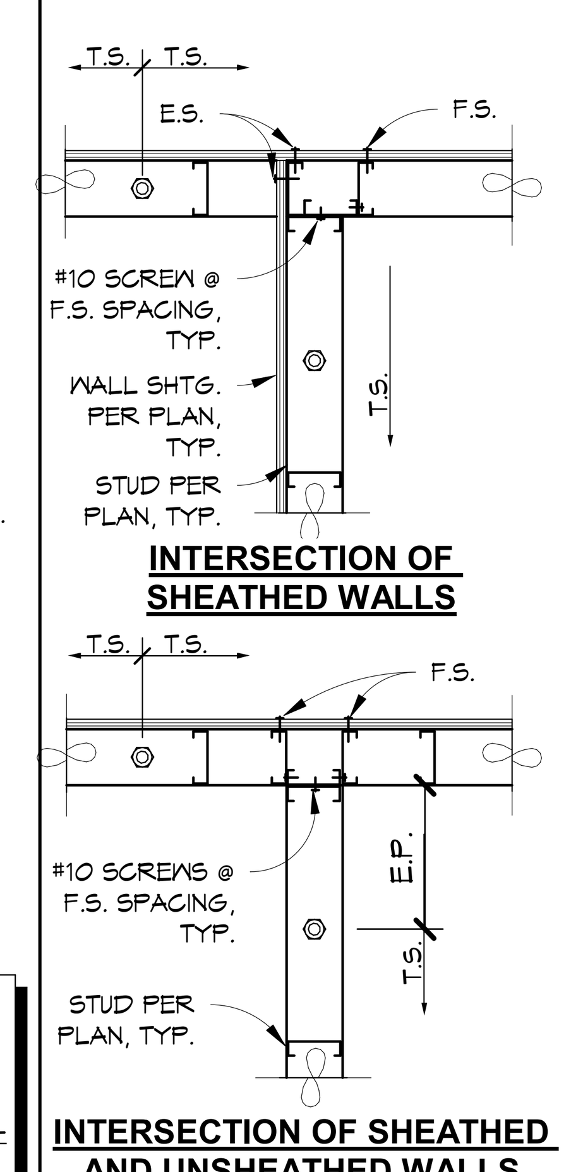
14 BEARING AND EXTERIOR WALL FRAMING AT OPENINGS
S110 NOT TO SCALE

2 NON-BEARING AND INTERIOR WALL FRAMING AT OPENINGS
S110 NOT TO SCALE

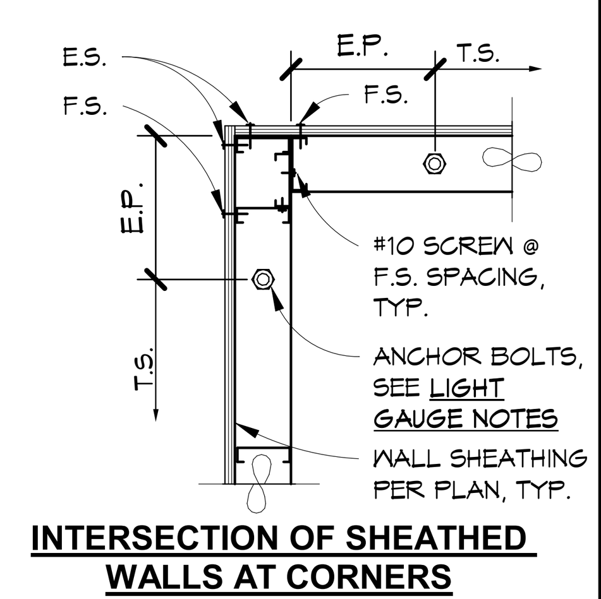


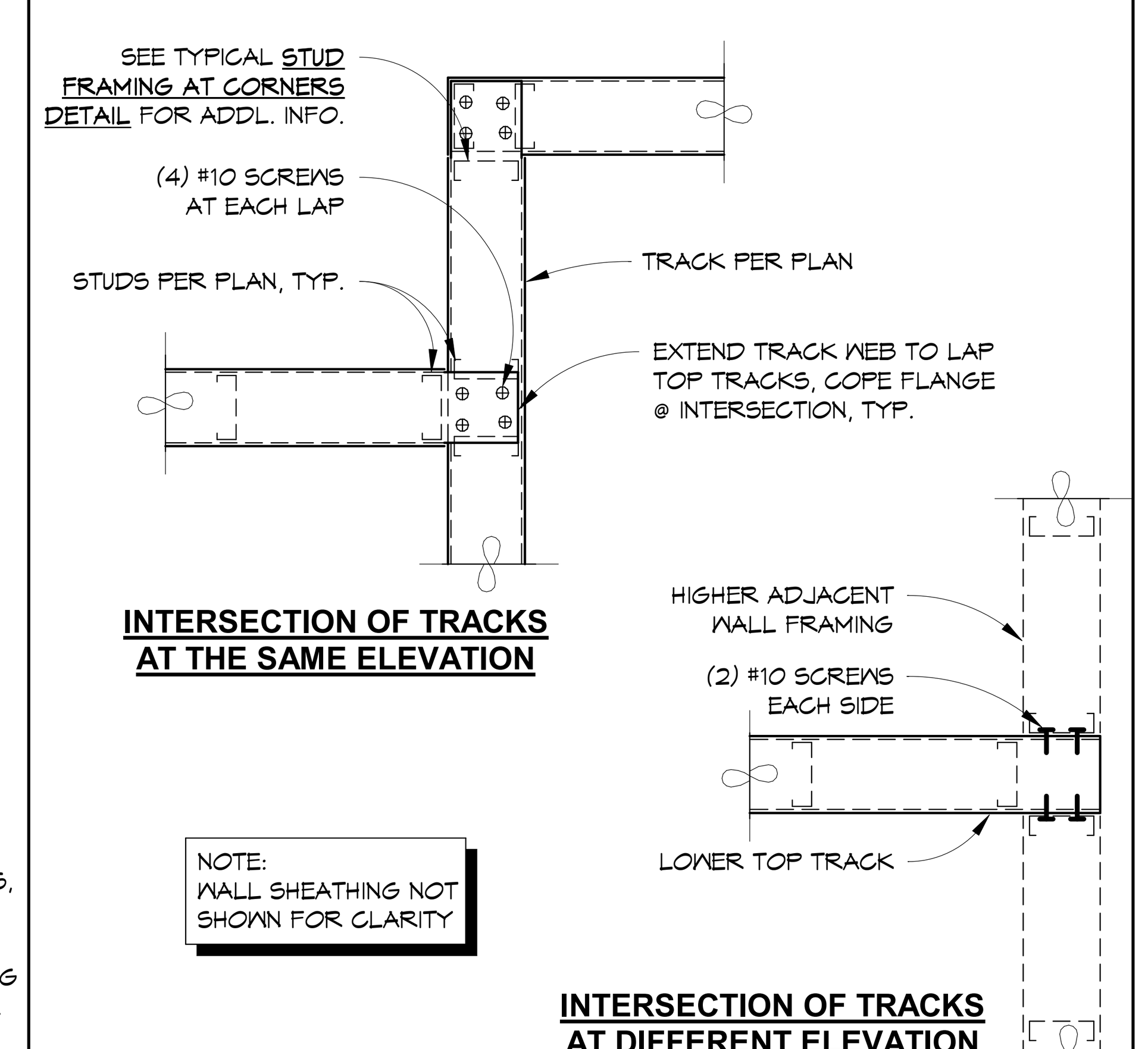


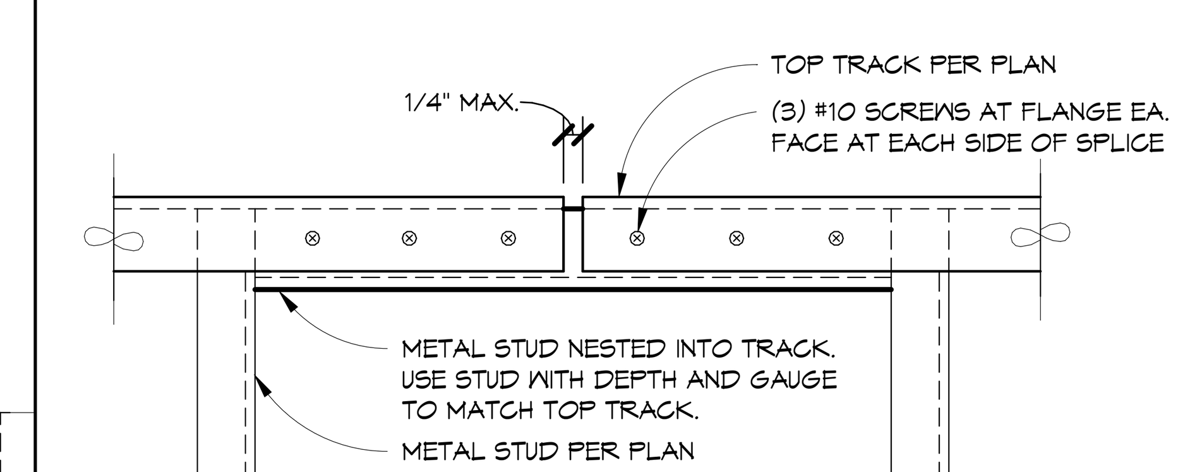
NOTE:
1. INSTALL ALL STUDS ONLY AFTER MAJOR DEAD LOADS FROM FLOOR AND/OR ROOF ABOVE HAVE BEEN APPLIED, SUCH AS CONCRETE FILL AND ROOFING MATERIAL.
2. WHERE TRACK IS INSTALLED ON A SLOPE GREATER THAN 1/8:12, SEE TYPICAL NON-BEARING WALL AT SLOPED BEAM DETAIL FOR ADDITIONAL INFORMATION.



NOTES:
1. SEE LIGHT GAUGE NOTES FOR ANCHOR BOLT SPACING REQUIREMENTS, U.N.O.
2. ABBREVIATIONS
a) E.P. = END OF PLATE
b) T.S. = TYP. SPACING
c) E.S. = EDGE SCREW
d) F.S. = FIELD SCREW







15 IN-FILL AT STEEL BEAM
S110 NOT TO SCALE

12 NON-BEARING WALL AT BEAM
S110 NOT TO SCALE

9 WALL FRMG AT INTERSECTIONS
S110 NOT TO SCALE

6 TOP TRACK FRAMING AT CORNERS
S110 NOT TO SCALE

3 TRACK SPLICE FOR LT GA STEEL
S110 NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
GAYLORD R. RANSOM
No. S2386
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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
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TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE: TYPICAL LIGHT GAUGE DETAILS

S110

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4/11/2024 5:01:07 PM
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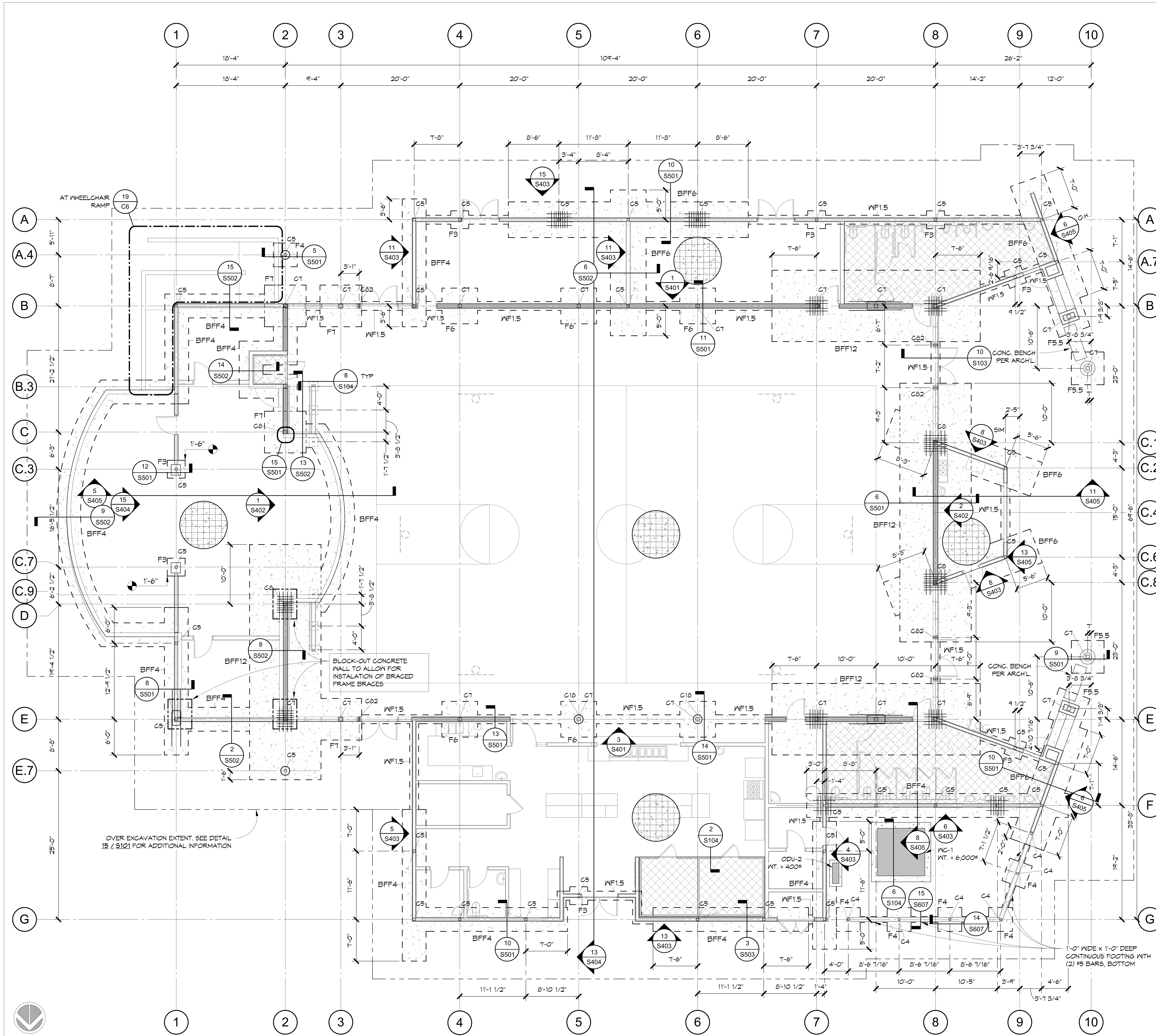

15	FOUNDATION PLAN
S401 S201	1/8" = 1'-0"

1. SEE TYPICAL SHEETS FOR ALL GENERAL AND MATERIAL NOTES, AND ALL TYPICAL SCHEDULES AND DETAILS. THE INFORMATION ON THE TYPICAL SHEETS APPLY TO THE PROJECT AND ARE NOT SPECIFICALLY REFERENCED ON PLAN WORK, UNLESS NOTED OTHERWISE. IF TYPICAL DETAILS ARE SPECIFIED ON PLANS OR NOTES, THEY WILL BE REFERENCED WITH THE WORD "TYPICAL" FOLLOWED BY **BOLD AND UNDERLINED** TEXT STATING THE TITLE OF THE TYPICAL DETAIL OR NOTE.
2. ALL DIMENSIONS SHOWN ARE TO FACE OF EXTERIOR WALLS, CENTER OF COLUMN OR CENTER OF INTERIOR WALLS UNLESS NOTED OTHERWISE. EDGE OF SLAB AT PERIMETER OF BUILDING SHALL BE INDICATED IN SPECIFIC DETAILS AND ARCHITECTURAL. VERIFY ALL BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. NOTIFY THE ARCHITECT IMMEDIATELY IF THERE ARE ANY CONFLICTS WITH THE DIMENSIONS SHOWN.
3. ALL UNCLEAR AND/OR MISSING DETAILS SHALL BE BROUGHT TO THE STRUCTURAL ENGINEER'S ATTENTION BEFORE PROCEEDING WITH CONSTRUCTION.
4. ALL PAD AND CONTINUOUS FOOTINGS ARE TO BE CENTERED ON WALLS AND COLUMNS ABOVE UNLESS NOTED OTHERWISE.
5. SEE CIVIL AND/OR ARCHITECTURAL SITE PLAN FOR LOCATION AND DIMENSIONS OF SIDEWALKS, MOW STRIPS, PLANTERS AND OTHER LANDSCAPING FEATURES.
6. SEE ARCHITECTURAL AND PLUMBING PLANS FOR LOCATION OF ALL PIPING AND DRAINS. SEE TYPICAL DETAILS FOR STRUCTURAL REQUIREMENTS AT LOCATIONS WHERE PIPES INTERSECT OR ALIGN NEXT TO FOOTINGS AND SLABS.
7. ALL EMBEDDED ITEMS SHALL BE IN PLACE AND SECURED PRIOR TO POURING OF CONCRETE.
8. ALL SILL PLATE ANCHOR BOLTS SHALL BE SIZED, SPACED, PLACED, AND HAVE THE WASHER AND MATERIAL FINISH AS SPECIFIED IN THE **LIGHT GAUGE STEEL NOTES**.
9. CONTRACTOR SHALL SUBMIT CONTROL JOINT PLAN FOR APPROVAL PRIOR TO POURING SLAB. SEE TYPICAL **CONTROL JOINT** DETAIL FOR ADDITIONAL INFORMATION.
10. ALL TOP OF FOOTINGS SHALL BE 1'-0" BELOW FINISH SLAB, UNLESS NOTED OTHERWISE.
11. ALL ITEMS ARE NEW UNLESS NOTED OTHERWISE.

1	STEEL FOUNDATION NOTES
S201	NOT TO SCALE

600S162-54 @ 16" O.C*
800S162-54 @ 16" O.C*
*STEEL STUDS. AT EXTERIOR WALL LOCATIONS, SEE TYPICAL **BEARING AND EXTERIOR WALL FRAMING AT OPENINGS FOR LIGHT GAUGE STEEL** DETAIL. AT INTERIOR WALL LOCATIONS, SEE ARCHITECTURAL AND TYPICAL **INTERIOR NON-BEARING WALL FRAMING AT OPENINGS FOR LIGHT GAUGE STEEL** DETAIL.

##

"XX" AS INDICATED ON PLAN. SEE TYPICAL **SCHEDULES** AS FOLLOWS:
- C# - COLUMN SCHEDULE
- P# - PILASTER SCHEDULE
- W# - WALL SCHEDULE
- F# - FOUNDATION SCHEDULE

T.O.S. +X'-X" — TOP OF STEEL (T.O.S.) OR BOTTOM OF STEEL (B.O.S.). +X'-X" IS THE DISTANCE FROM FINISHED FIRST FLOOR, UNLESS NOTED OTHERWISE.

S—S — STEPPED FOOTING. SEE TYPICAL **STEPPED FOOTING** DETAIL.

DEPRESSED SLAB. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

CONCRETE SLAB. PROVIDE 5" THICK MINIMUM SLAB WITH #4 @ 16" O.C. EACH WAY, U.N.O. SEE TYPICAL **FOUNDATION AND CONCRETE NOTES** AND ARCHITECTURAL DRAWINGS FOR SUB-GRADE AND VAPOR BARRIER INFORMATION.

2	STEEL LEGEND
S201	NOT TO SCALE

STRUCTURAL COLUMN SCHEDULE

MARK	TYPE	COMMENTS
C4	HSS4X4X1/4	
C5	HSS5X5X1/4	
C7	HSS7X7X5/16	
C8	HSS7X7X3/8	
C18	18" DIA. CONC. COL.	(4) #5 VERT. BARS AND #3 TIES AT 12" O.C.
C82	HSS8X2X1/4	
C84	HSS8X4X1/4	

STRUCTURAL FOUNDATION SCHEDULE

MARK	TYPE	REINFORCEMENT
BFF4	4'-0" WIDE x 2'-0" DEEP CONTINUOUS	(5) #6 CONTINUOUS BARS T&B AND #4 TIES AT 8" O.C.
BFF6	6'-0" WIDE x 2'-0" DEEP CONTINUOUS	(6) #6 CONTINUOUS BARS T&B AND #4 TIES AT 8" O.C.
BFF12	12'-0" WIDE x 3'-0" DEEP CONTINUOUS	(12) #8 CONTINUOUS BARS T&B AND #6 TIES AT 6" O.C.
F3	3'-0" SQR. x 1'-6" DEEP PAD FOOTING	(6) #5 BARS EA. WAY T& B
F4	4'-0" SQR. x 1'-6" DEEP PAD FOOTING	(6) #5 BARS EA. WAY T&B
F5.5	5'-6" SQR. x 2'-0" DEEP PAD FOOTING	(8) #5 BARS EA. WAY T&B
F6	6'-0" SQR. x 1'-6" DEEP PAD FOOTING	(8) #5 BARS EA. WAY T&B
F7	7'-0" SQR. x 3'-0" DEEP PAD FOOTING	<varies>
WF1.5	1'-6" WIDE x 1'-6" DEEP CONTINUOUS	(2) #5 CONTINUOUS BARS BOTTOM

NOTE:
FOR BFF FOOTINGS, PROVIDE 90° HOOKS AT ENDS OF CONTINUOUS BARS

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EXPIRES 6-31-24
STRUCTURAL
STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
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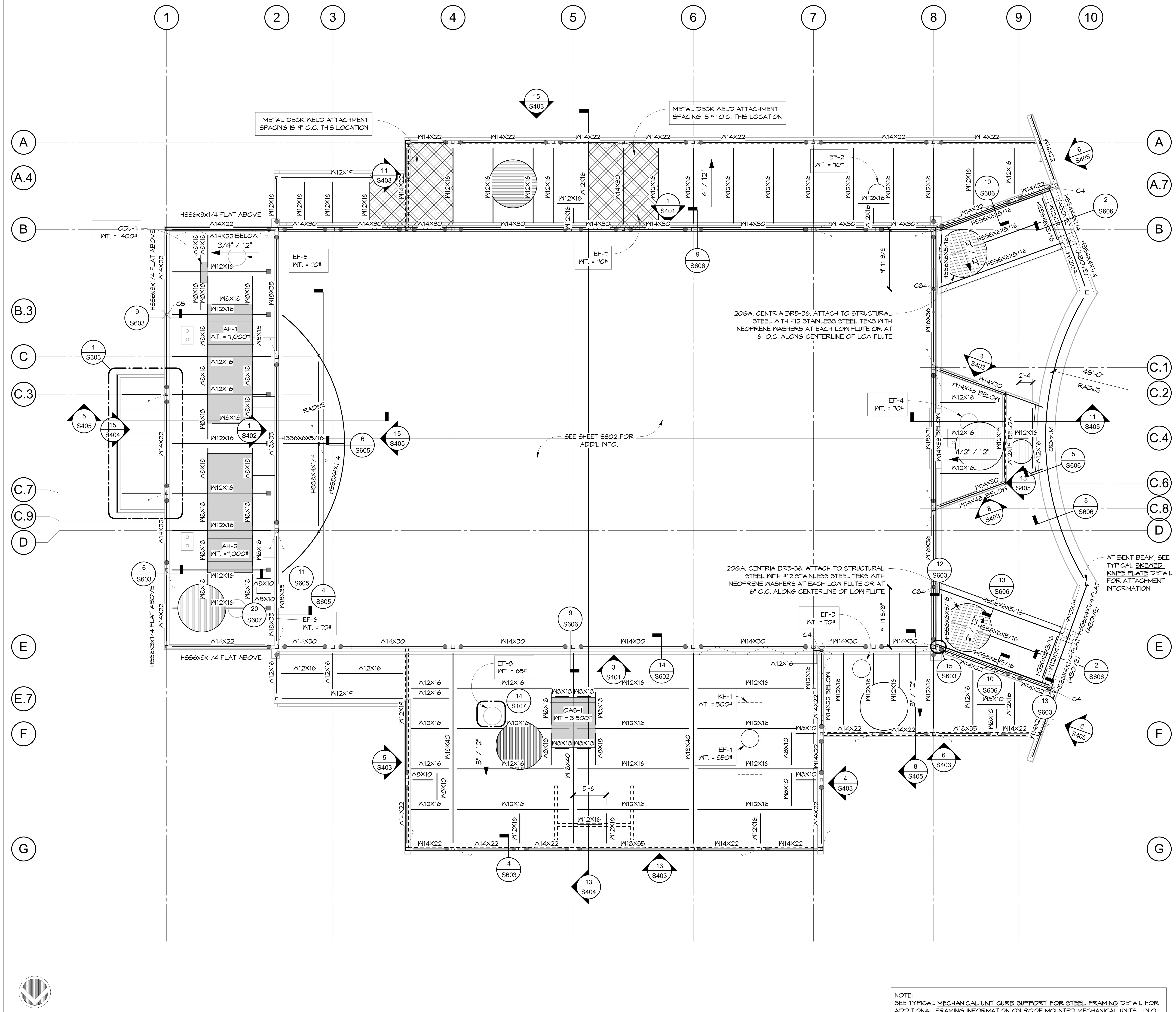
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
FOUNDATION PLAN

S201



15	LOW ROOF FRAMING PLAN
S401 S301	1/8" = 1'-0"

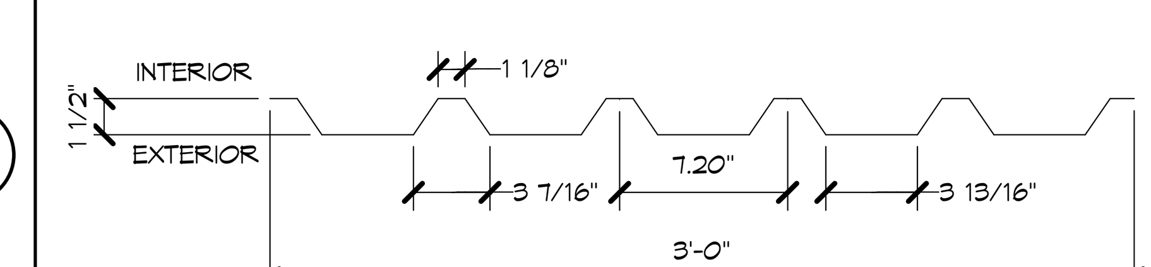
1. SEE TYPICAL SHEETS FOR ALL GENERAL AND MATERIAL NOTES, AND ALL TYPICAL SCHEDULES AND DETAILS. THE INFORMATION ON THE TYPICAL SHEETS APPLY TO THE PROJECT AND ARE NOT SPECIFICALLY REFERENCED ON PLAN WORK, UNLESS NOTED OTHERWISE. IF TYPICAL DETAILS ARE SPECIFIED ON PLANS OR NOTES, THEY WILL BE REFERENCED WITH THE WORD "TYPICAL" FOLLOWED BY **BOLD AND UNDERLINED** TEXT STATING THE TITLE OF THE TYPICAL DETAIL OR NOTE.
2. ALL UNCLEAR AND/OR MISSING DETAILS SHALL BE BROUGHT TO THE STRUCTURAL ENGINEER'S ATTENTION BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL TOP OF FRAMING ABOVE FINISH SLAB VARIES, SEE PLAN FOR INFORMATION.
4. VERIFY ROOF SLOPE(S) WITH ARCHITECTURAL PLANS.
5. SEE TYPICAL **MECHANICAL UNIT ATTACHMENT** DETAIL FOR ROOF MOUNTED EQUIPMENT. CONTRACTOR SHALL VERIFY AND COORDINATE WEIGHTS AND LOCATIONS OF ALL ROOF SUPPORTED MECHANICAL AND ELECTRICAL UNITS, AND NOTIFY THE STRUCTURAL ENGINEER OF RECORD IF ANY DISCREPANCIES ARE DETERMINED.
6. AT OPENINGS IN DECKING SEE TYPICAL **OPENINGS IN STEEL DECK** DETAILS FOR INFORMATION, UNLESS NOTED OTHERWISE. VERIFY OPENING SIZE AND LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
7. FOR FRAMING AT DRAINS, SEE TYPICAL **LARGE OPENINGS IN STEEL DECK** DETAIL AND INFORMATION ON PLANS.
8. FOR ALL STEEL TO STEEL CONNECTIONS SEE TYPICAL **BEAM-TO-COLUMN CONNECTION** AND **BEAM-TO-GIRDER CONNECTION** SCHEDULES.
9. THE FIRST SHEET OF STEEL DECKING ADJACENT AND PARALLEL TO CHORDS, COLLECTORS AND BRACED FRAME LINES (BOTH SIDES IF APPLICABLE) SHALL BE A FULL WIDTH SHEET. PROVIDE 2 ROWS OF PUDDLE WELDS AT ALL INTERIOR LATERAL RESISTING FRAME LINES.
10. ALL CHORD & COLLECTOR BEAMS TO BE INSTALLED PRIOR TO WELDING OF METAL DECKING.
11. BEAMS ARE EQUALLY SPACED BETWEEN MAIN BEAMS OR COLUMNS, U.N.O.
12. ALL ITEMS ARE NEW UNLESS NOTED OTHERWISE.

1	STEEL FRAMING NOTES
S301	NOT TO SCALE

Symbol	Description
	WALL BELOW. SEE FRAMING PLAN AT LEVEL BELOW.
## ##	"XX" AS INDICATED ON PLAN. SEE TYPICAL **SCHEDULES** AS FOLLOWS: C# - COLUMN SCHEDULE P# - PILASTER SCHEDULE W# - WALL SCHEDULE F# - FOUNDATION SCHEDULE
T.O.S. +X'-X"	TOP OF STEEL (T.O.S.) OR BOTTOM OF STEEL (B.O.S.). +X'-X" IS THE DISTANCE FROM FINISHED FIRST FLOOR, UNLESS NOTED OTHERWISE.
SIZE (STUDS) CAMBER	STEEL BEAM.
	STEEL FRAME. SEE ELEVATIONS AS INDICATED FOR FRAMING SIZES AND ORIENTATION.
	COLLECTOR CONNECTION. SEE TYPICAL **COLLECTOR BEAM TO GIRDER CONNECTION SCHEDULE** AND **COLLECTOR BEAM TO COLUMN CONNECTION SCHEDULE**.
	BRACING BEAM CONNECTION. SEE TYPICAL **BEAM CONNECTION AT BRACING BEAMS** DETAIL (15 / S105) FOR ADDITIONAL INFORMATION
	BEAM SPLICE. SEE TYPICAL **BEAM SPLICE** DETAIL.
	COLUMN DOES NOT EXTEND BEYOND FRAMING LEVEL BEING DEPICTED.
	STEEL OR COMPOSITE DECK OPENING. SEE TYPICAL **SMALL/LARGE OPENINGS IN STEEL DECK FOR FLOOR OR ROOF DECK** DETAIL, U.N.O. VERIFY ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL PLANS.
	VERCO HSB-36 STEEL DECK, U.N.O. INDICATES DIRECTION OF DECKING. SEE TYPICAL **STEEL ROOF DECK NOTES (HSB-36)** (2 / S107) AND TYPICAL **DECK ATTACHMENT LAYOUT** DETAILS.

2	STEEL LEGEND
S301	NOT TO SCALE

1. THE METAL DECK SHALL BE 1 1/2"X20 GA. BR5-36 PANEL BY CENTRIA MANUFACTURING OR EQUAL (I_{MIN} = 0.159 IN^4, S = 0.193 IN^3)
2. THE METAL PANELS SHALL BE FABRICATED FROM SIINC COATED STEEL CONFORMING TO ASTM A 653 SS GRADE 37 W/ G90 COATING.
3. ATTACHMENT OF DECK TO STRUCTURAL MEMBER SHALL BE #12 STAIINLESS STEEL TEKS W/ NEOPRENE WAHSERS AT EACH FLUTE OR AT 6" O.C. ALONG CENTERLINE OF LOW FLUDE.



3	CENTRIA BR5-36 PANEL
S301	NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER GAYLORD R. RANSOM No. S2386 STATE OF CALIFORNIA

BrooksRansom ASSOCIATES 23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-1286 RENEWAL DATE 12/31/2013 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
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TEL: 559-497-1542
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PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
LOW ROOF FRAMING PLAN

S301

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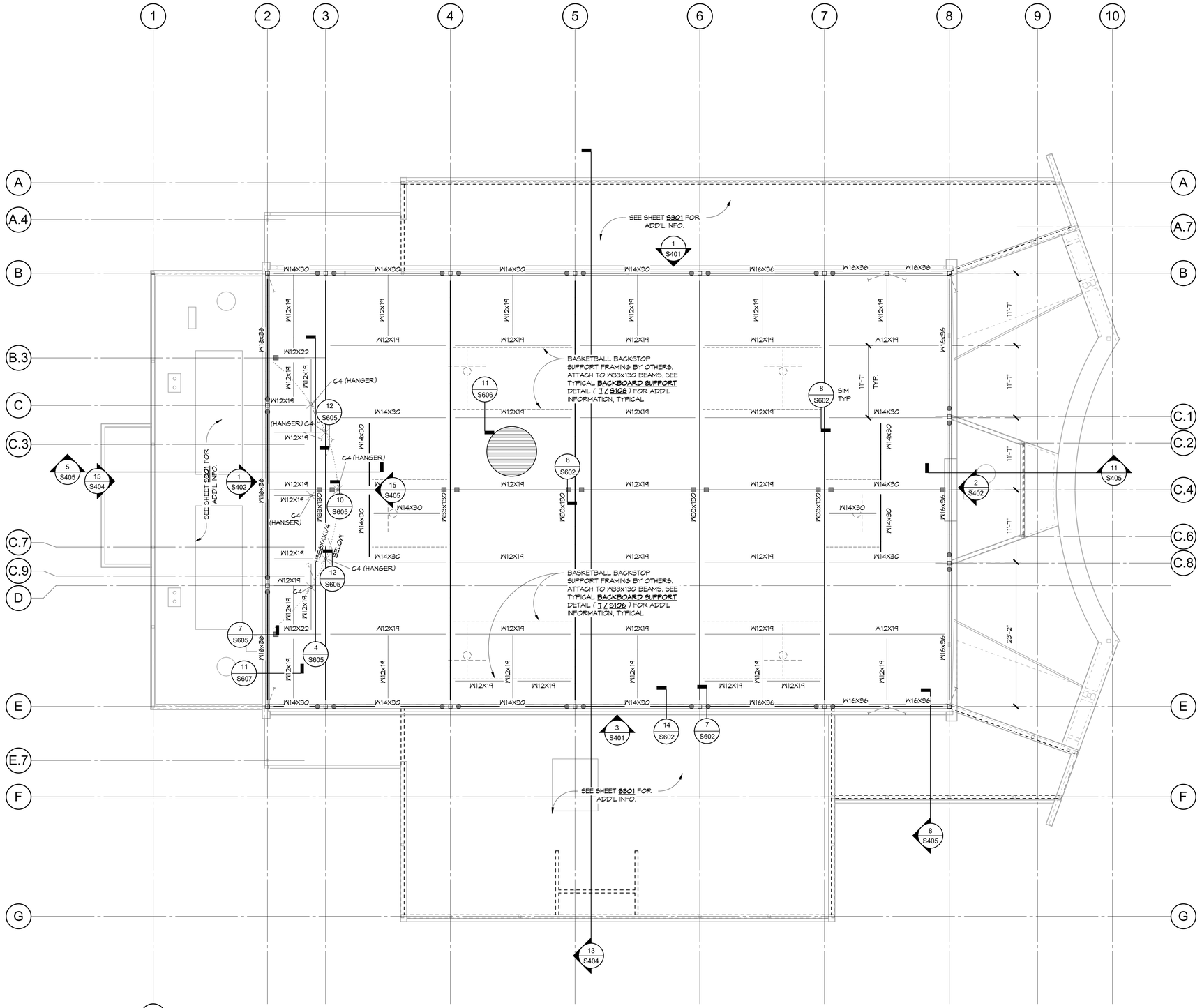

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2. ALL UNCLEAR AND/OR MISSING DETAILS SHALL BE BROUGHT TO THE STRUCTURAL ENGINEER'S ATTENTION BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL TOP OF FRAMING ABOVE FINISH SLAB VARIES, SEE PLAN FOR INFORMATION.
4. VERIFY ROOF SLOPE(S) WITH ARCHITECTURAL PLANS.
5. SEE TYPICAL **MECHANICAL UNIT ATTACHMENT** DETAIL FOR ROOF MOUNTED EQUIPMENT. CONTRACTOR SHALL VERIFY AND COORDINATE WEIGHTS AND LOCATIONS OF ALL ROOF SUPPORTED MECHANICAL AND ELECTRICAL UNITS, AND NOTIFY THE STRUCTURAL ENGINEER OF RECORD IF ANY DISCREPANCIES ARE DETERMINED.
6. AT OPENINGS IN DECKING SEE TYPICAL **OPENINGS IN STEEL DECK** DETAILS FOR INFORMATION, UNLESS NOTED OTHERWISE. VERIFY OPENING SIZE AND LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
7. FOR FRAMING AT DRAINS, SEE TYPICAL **LARGE OPENINGS IN STEEL DECK** DETAIL AND INFORMATION ON PLANS.
8. FOR ALL STEEL TO STEEL CONNECTIONS SEE TYPICAL **BEAM-TO-COLUMN CONNECTION** AND **BEAM-TO-GIRDER CONNECTION** SCHEDULES.
9. THE FIRST SHEET OF STEEL DECKING ADJACENT AND PARALLEL TO CHORDS, COLLECTORS AND BRACED FRAME LINES (BOTH SIDES IF APPLICABLE) SHALL BE A FULL WIDTH SHEET. PROVIDE 2 ROWS OF PUDDLE WELDS AT ALL INTERIOR LATERAL RESISTING FRAME LINES.
10. ALL CHORD & COLLECTOR BEAMS TO BE INSTALLED PRIOR TO WELDING OF METAL DECKING.
11. BEAMS ARE EQUALLY SPACED BETWEEN MAIN BEAMS OR COLUMNS, U.N.O.
12. ALL ITEMS ARE NEW UNLESS NOTED OTHERWISE.

1 STEEL FRAMING NOTES
S302 | NOT TO SCALE

- WALL BELOW. SEE FRAMING PLAN AT LEVEL BELOW.
- "XX" AS INDICATED ON PLAN. SEE TYPICAL **SCHEDULES** AS FOLLOWS:
  C# - COLUMN SCHEDULE
  P# - PILASTER SCHEDULE
  W# - WALL SCHEDULE
  F# - FOUNDATION SCHEDULE
- T.O.S. +X'-X" — TOP OF STEEL (T.O.S.) OR BOTTOM OF STEEL (B.O.S.). +X'-X" IS THE DISTANCE FROM FINISHED FIRST FLOOR, UNLESS NOTED OTHERWISE.
- SIZE (STUDS) / CAMBER — STEEL BEAM.
- STEEL FRAME. SEE ELEVATIONS AS INDICATED FOR FRAMING SIZES AND ORIENTATION.
- COLLECTOR CONNECTION. SEE TYPICAL **COLLECTOR BEAM TO GIRDER CONNECTION SCHEDULE** AND **COLLECTOR BEAM TO COLUMN CONNECTION SCHEDULE**.
- BRACING BEAM CONNECTION. SEE TYPICAL **BEAM CONNECTION AT BRACING BEAMS** DETAIL (**15 / S105**) FOR ADDITIONAL INFORMATION
- BEAM SPLICE. SEE TYPICAL **BEAM SPLICE** DETAIL.
- COLUMN DOES NOT EXTEND BEYOND FRAMING LEVEL BEING DEPICTED.
- STEEL OR COMPOSITE DECK OPENING. SEE TYPICAL **SMALL/LARGE OPENINGS IN STEEL DECK FOR FLOOR OR ROOF DECK** DETAIL, U.N.O. VERIFY ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL PLANS.
- ASC N-32 STEEL DECK. INDICATES DIRECTION OF DECKING. SEE TYPICAL **STEEL ROOF DECK NOTES (N-32)** (**5 / S107**) AND TYPICAL **DECK ATTACHMENT LAYOUT** DETAILS.

2 STEEL LEGEND
S302 | NOT TO SCALE

15 HIGH ROOF FRAMING PLAN
S402 S302 | 1/8" = 1'-0"

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

GONZALEZ ARCHITECTS
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MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
RAYLORD R. RANSOM
No. 52306
EXPIRES 12/31/2025
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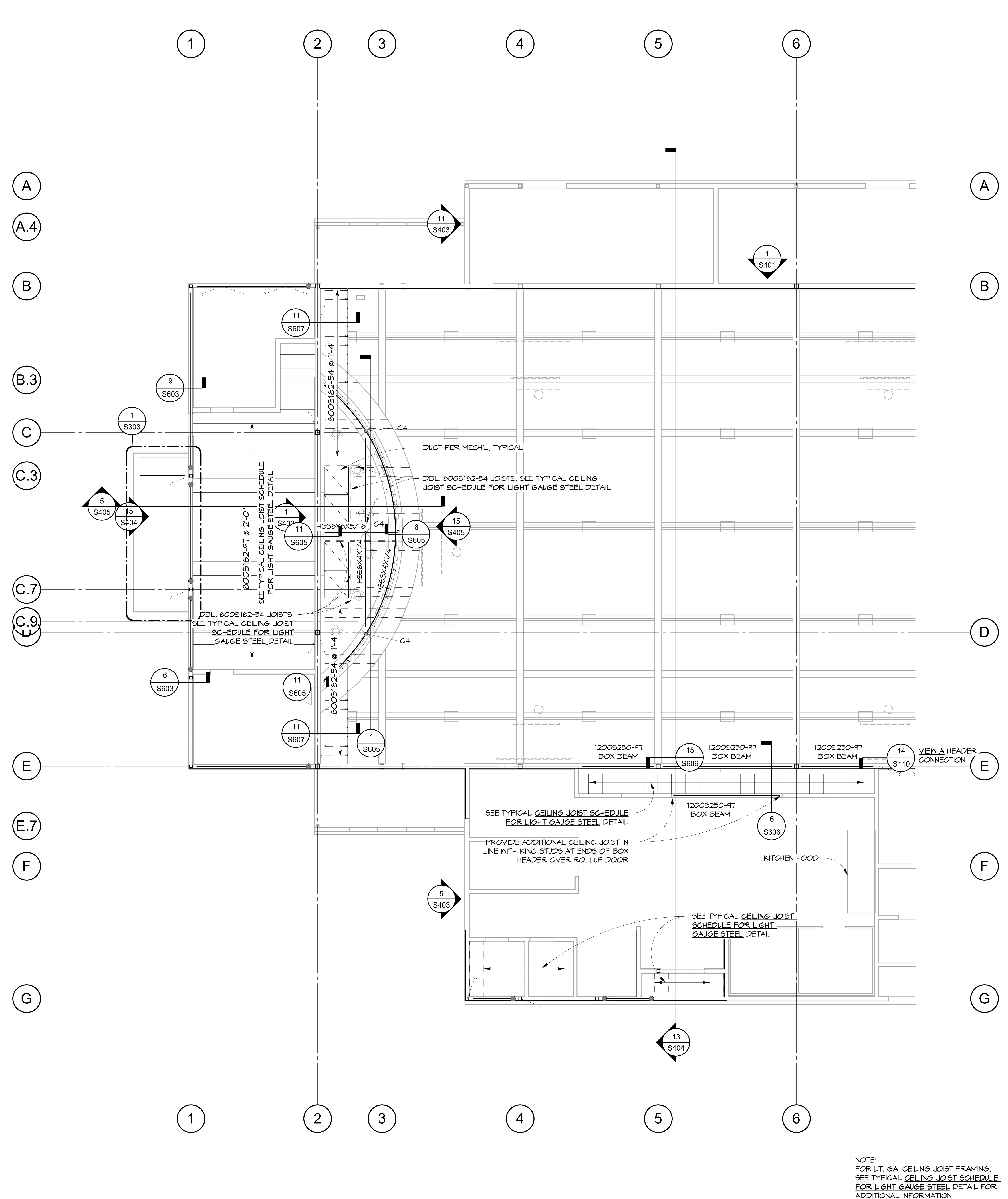
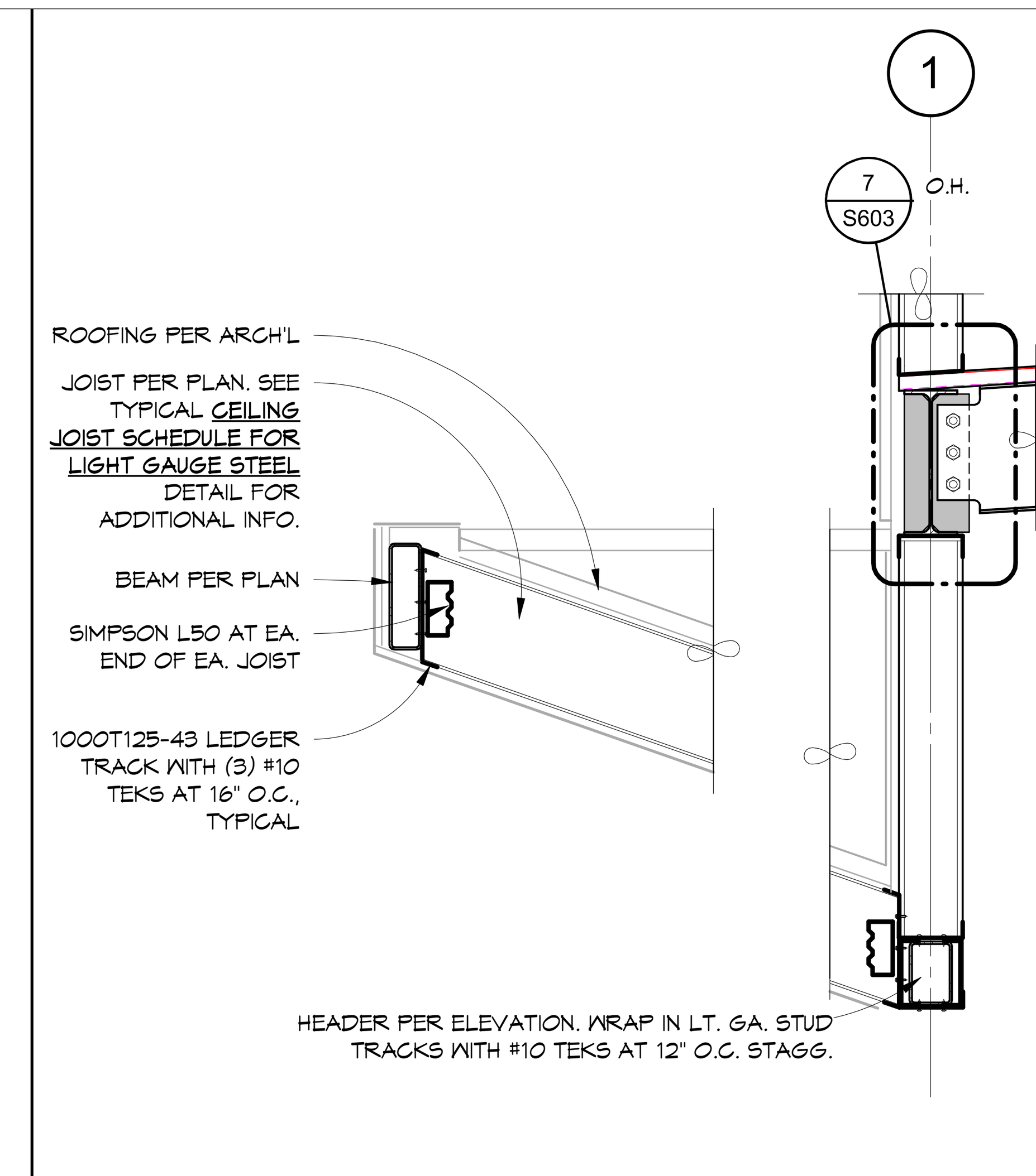
23422

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
HIGH ROOF FRAMING PLAN

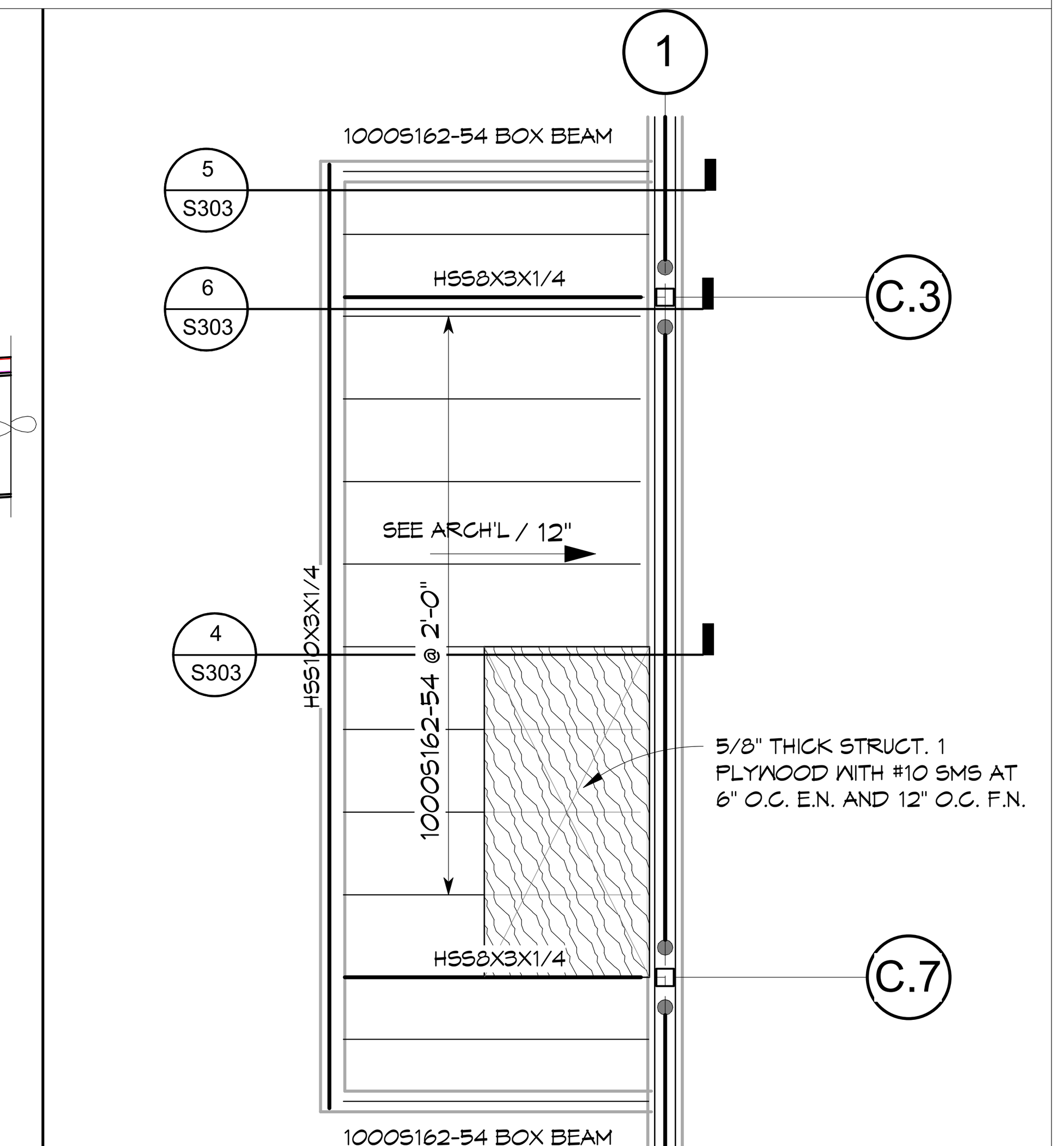
S302



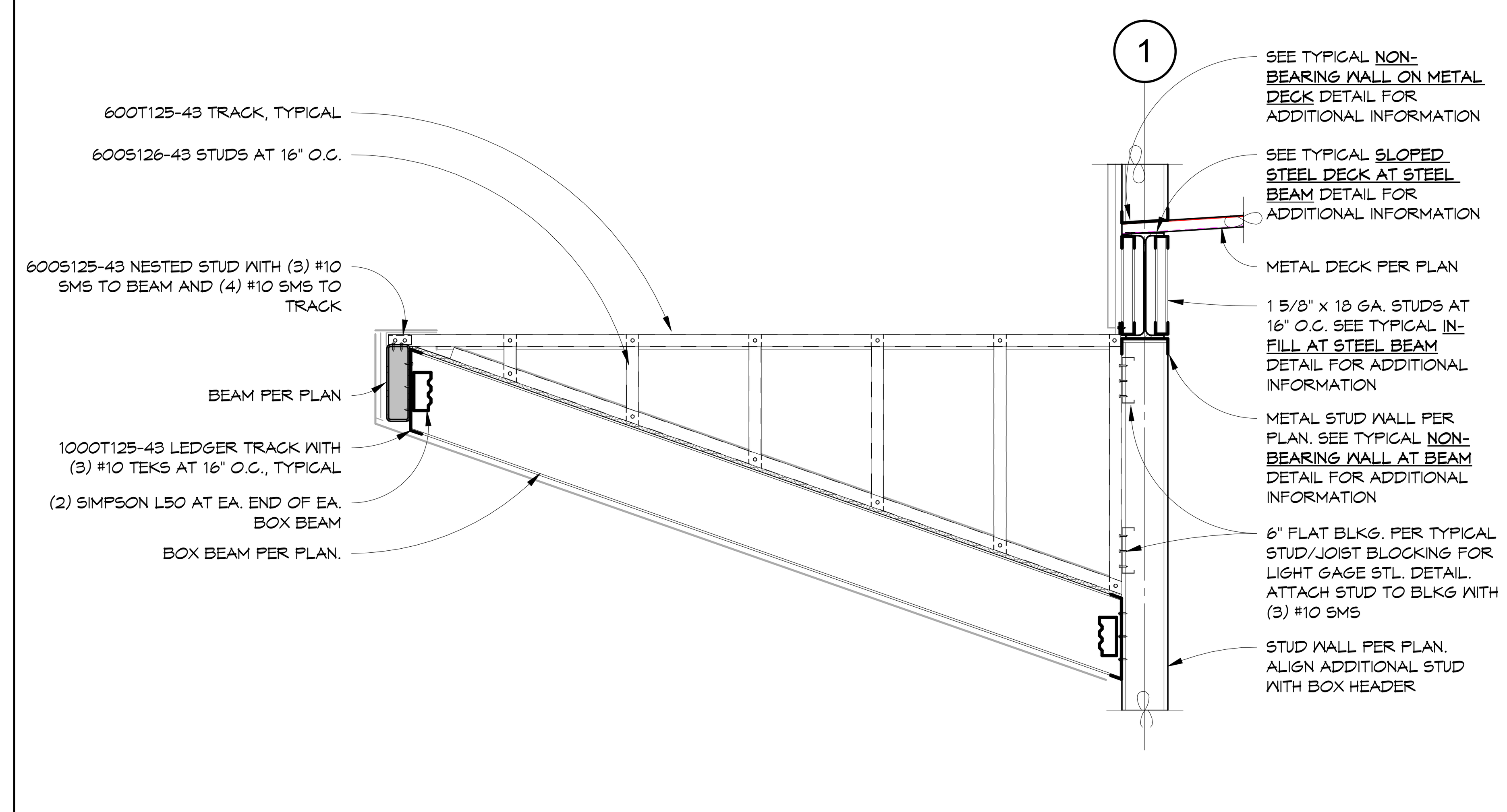
15 CEILING FRAMING PLAN
S401 S303 1/8" = 1'-0"



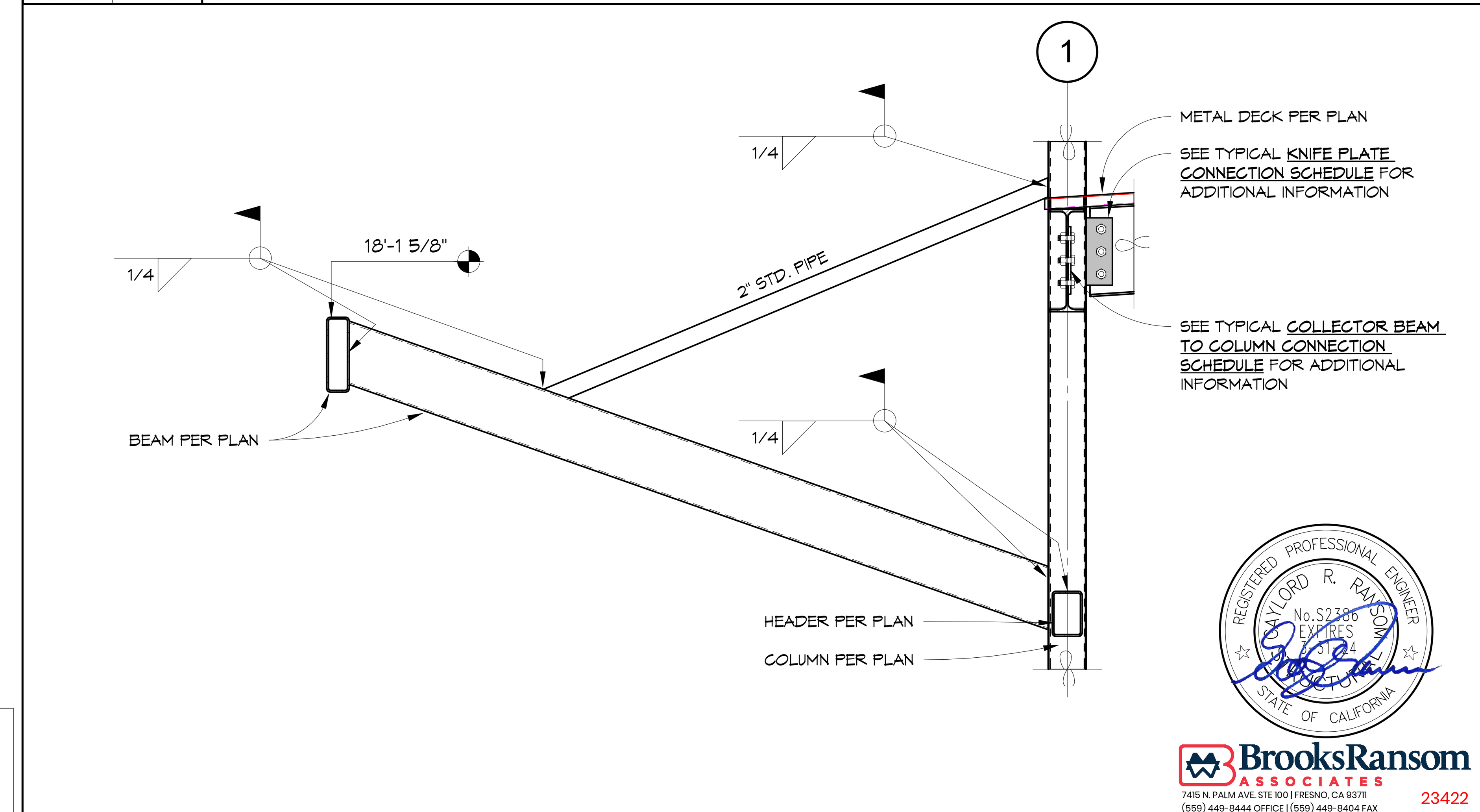
4 DETAIL
S303 S303 3/4" = 1'-0"



1 EYELASH CANOPY FRAMING PLAN
S301 S303 1/4" = 1'-0"



5 DETAIL
S303 S303 3/4" = 1'-0"



6 DETAIL
S303 S303 3/4" = 1'-0"

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LICENSED ARCHITECT — JUAN M. GONZALEZ No. C-1286 — RENEWAL DATE 12/31/2013 — STATE OF CALIFORNIA

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CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
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PROJECT NO: 2318
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SHEET TITLE:
CEILING & EYELASH CANOPY FRAMING PLAN

S303

4/11/2024 5:01:16 PM
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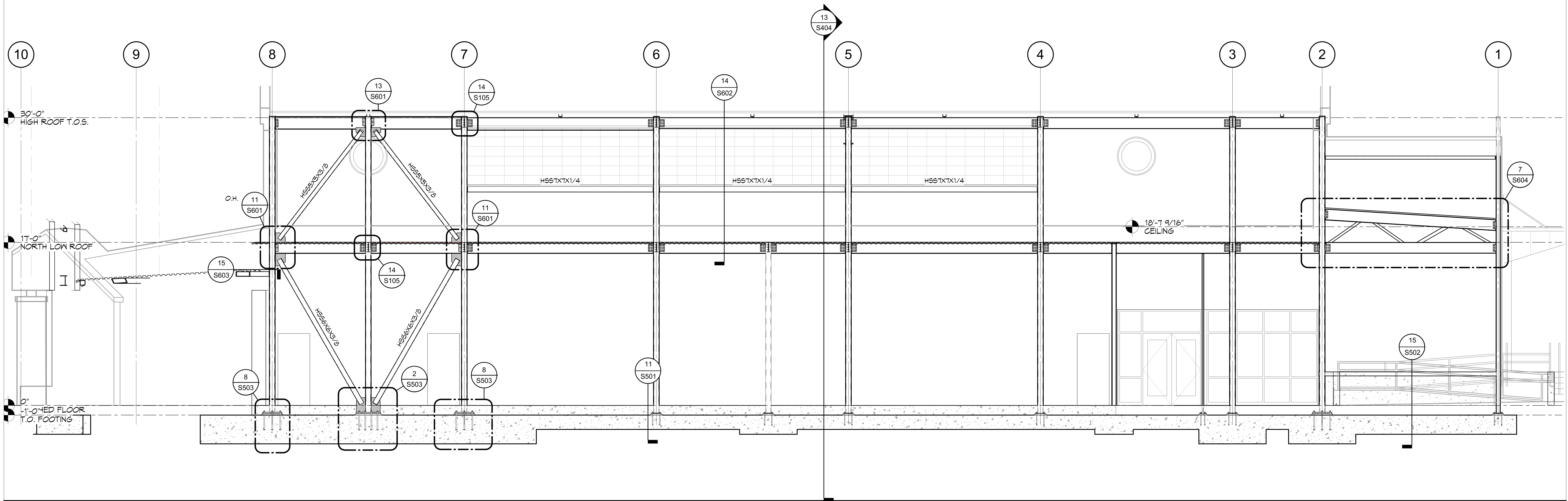
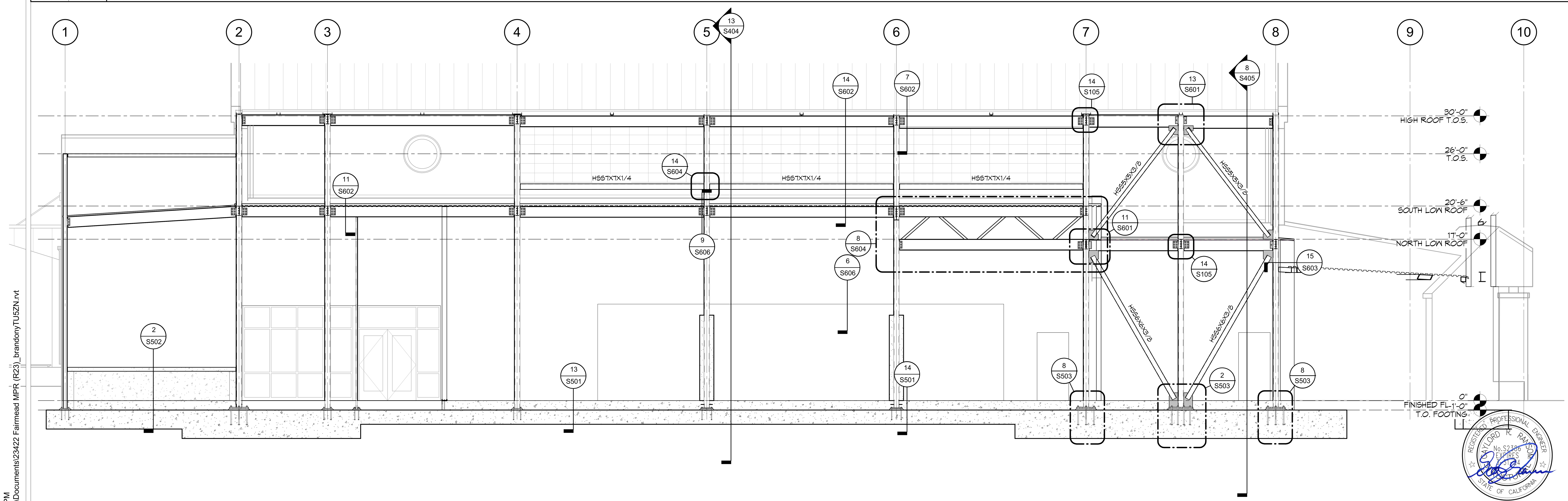


1 GRID B ELEVATION
S201 S401 3/16" = 1'-0"



3 GRID E ELEVATION
S201 S401 3/16" = 1'-0"

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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE
12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.

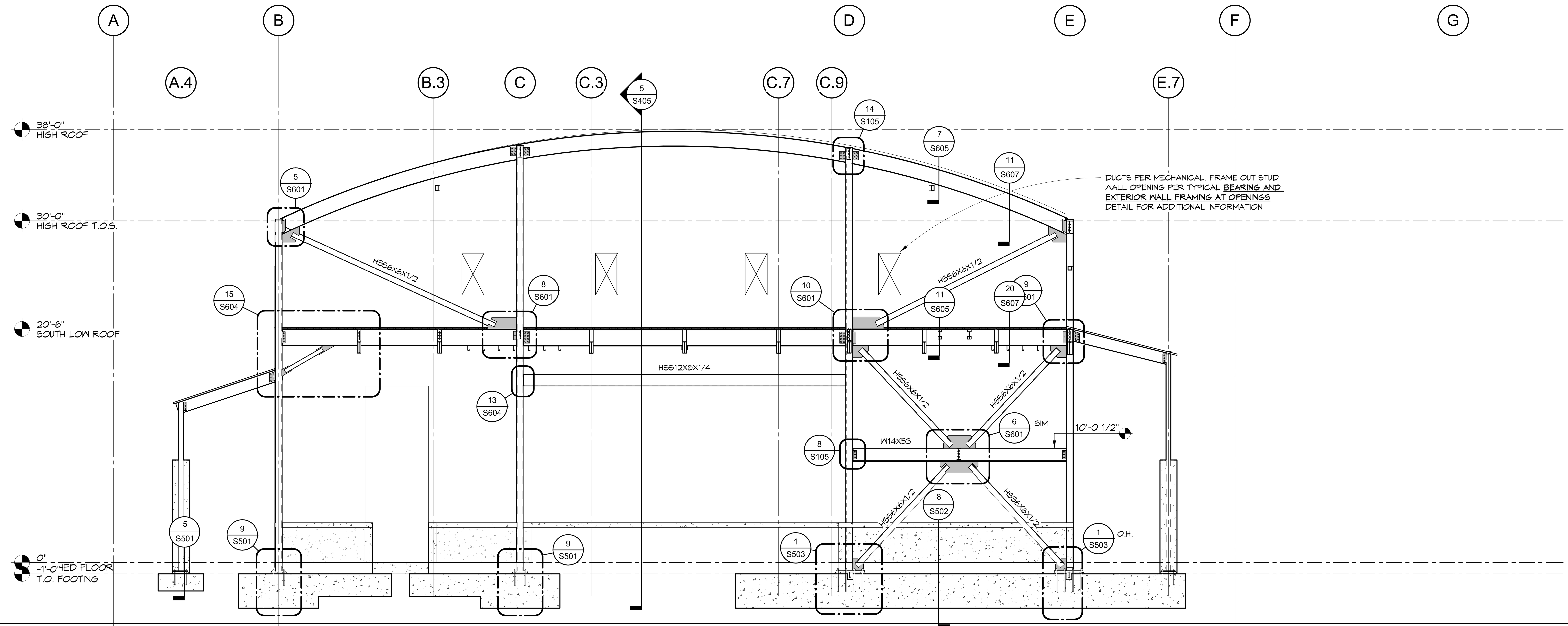
REGISTERED PROFESSIONAL ENGINEER
TAYLOR R. RANSOM
STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
7415 N. PALM AVE. STE 100 | FRESNO, CA 93711
(559) 449-8444 OFFICE | (559) 449-8404 FAX

23422

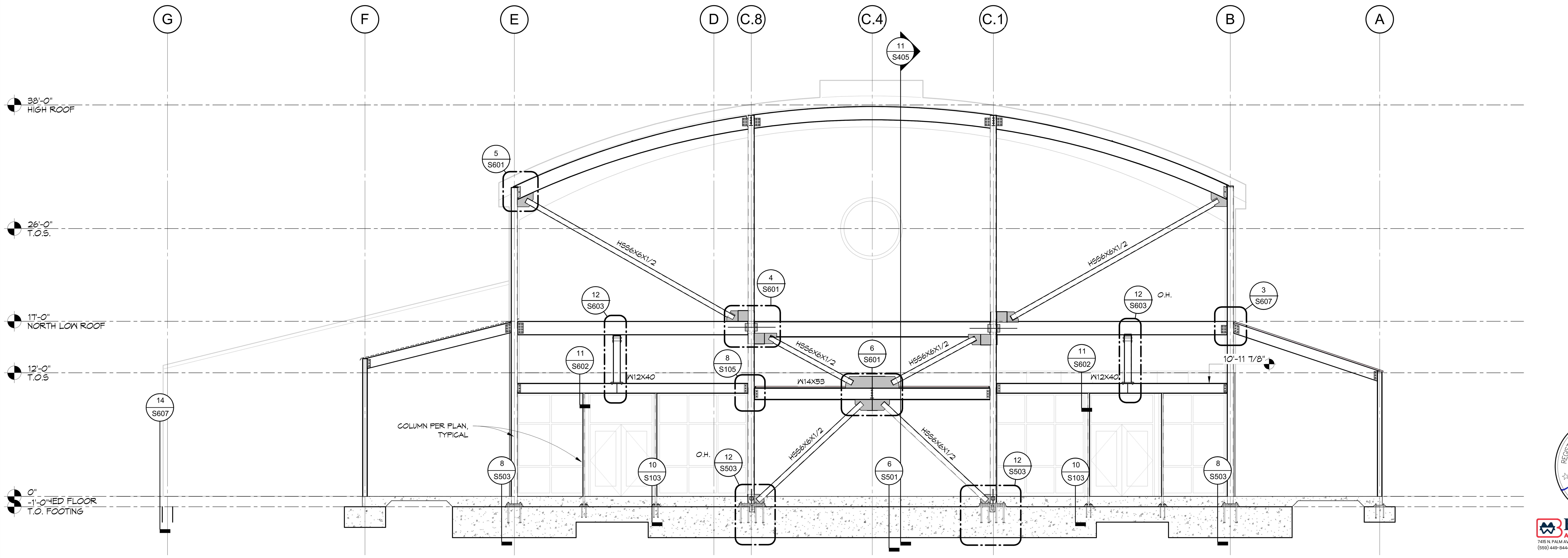
PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
BRACED FRAME ELEVATIONS

S401



1 GRID 2 ELEVATION

S201 | S402 | 3/16" = 1'-0"



2 GRID 8 ELEVATION

S201 | S402 | 3/16" = 1'-0"

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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
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REGISTERED PROFESSIONAL ENGINEER
GAYLORD R. RAY
No. S2386
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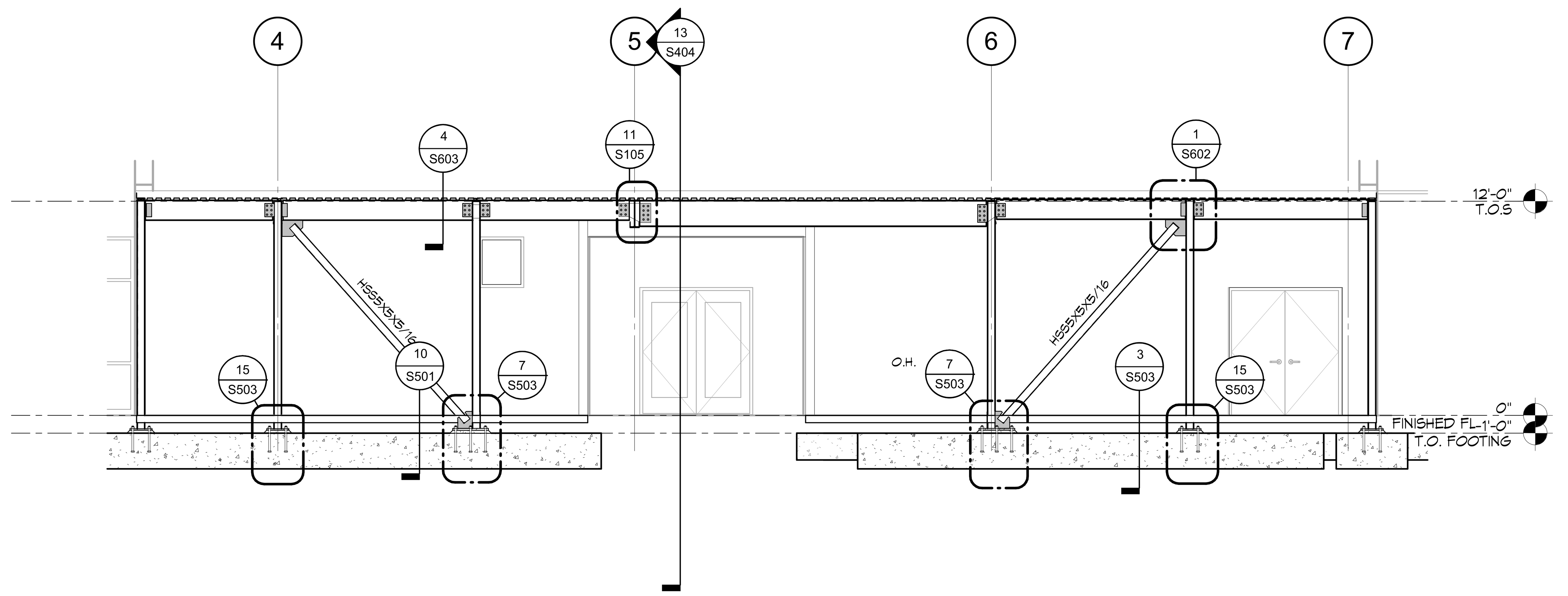
23422

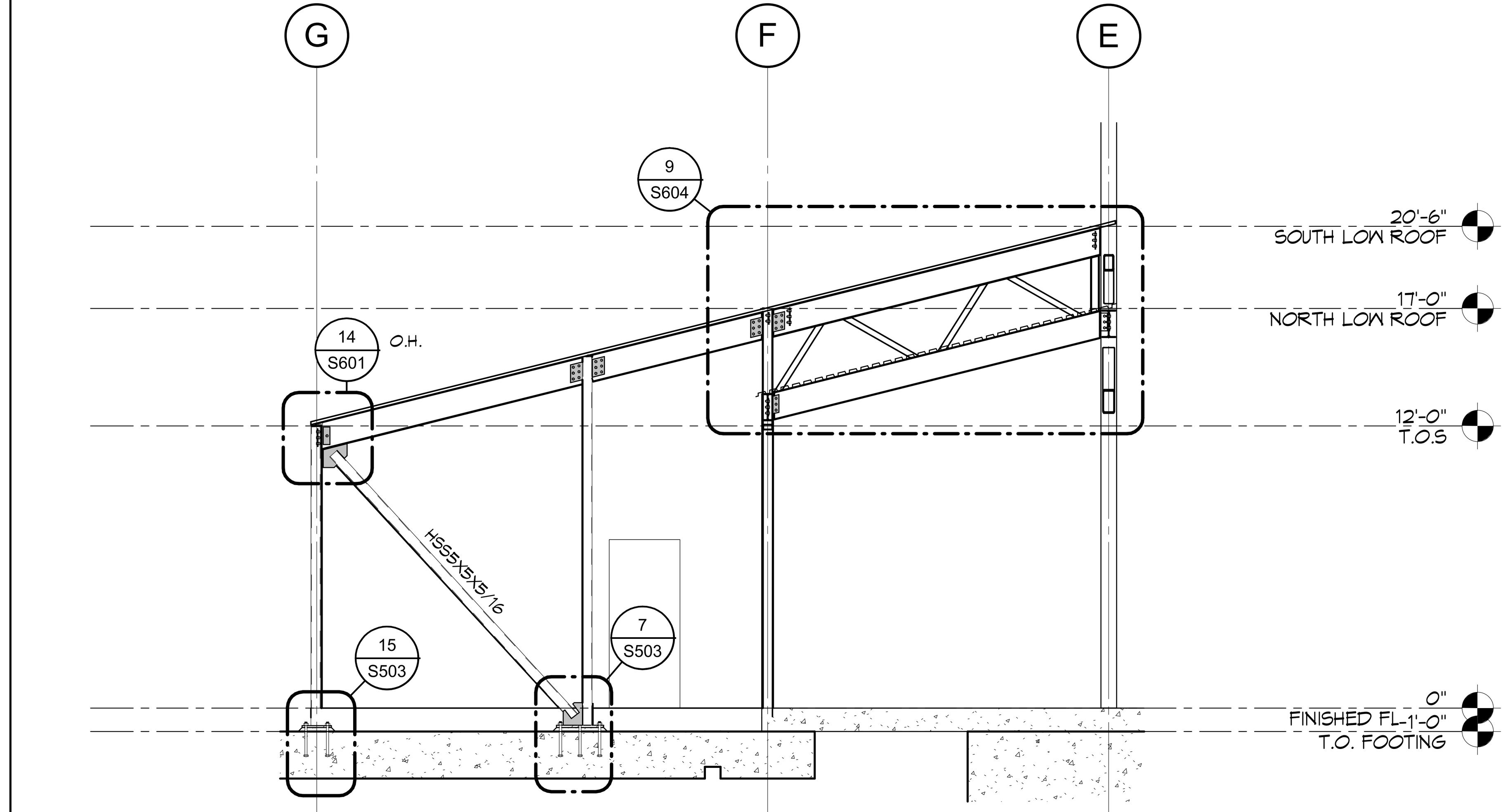
PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)

SHEET TITLE:
BRACED FRAME ELEVATIONS

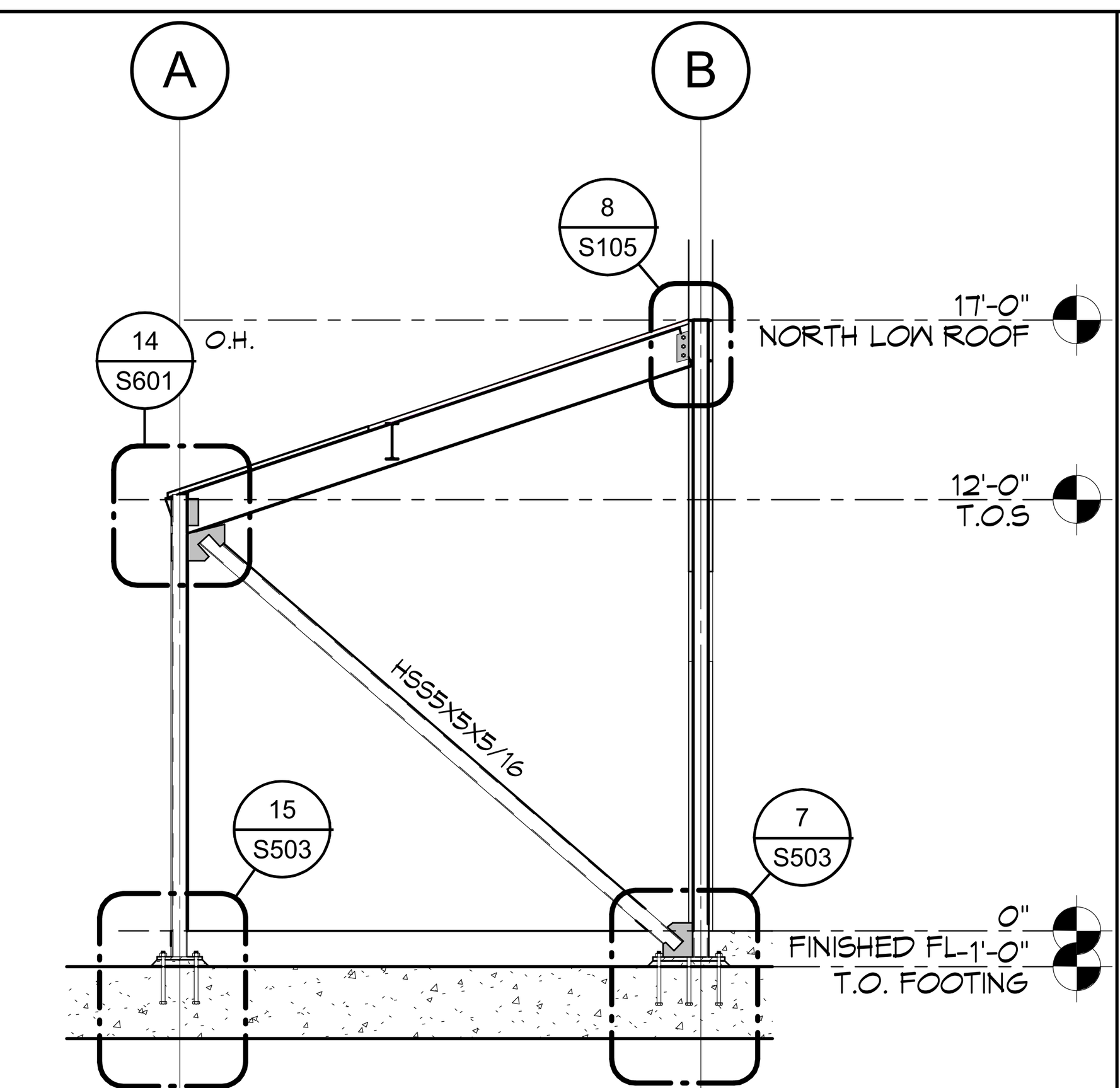
S402



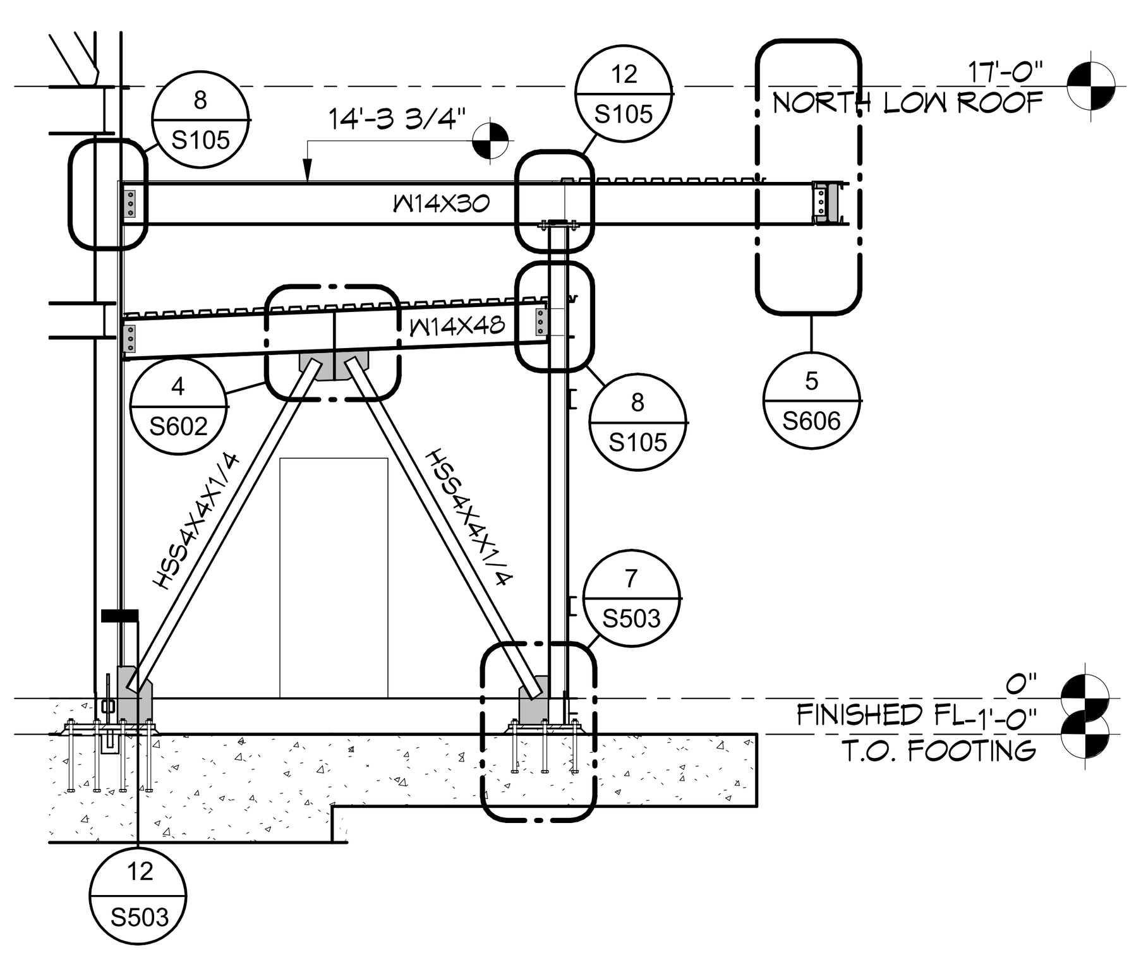
13 GRID G ELEVATION
S201 S403 3/16" = 1'-0"



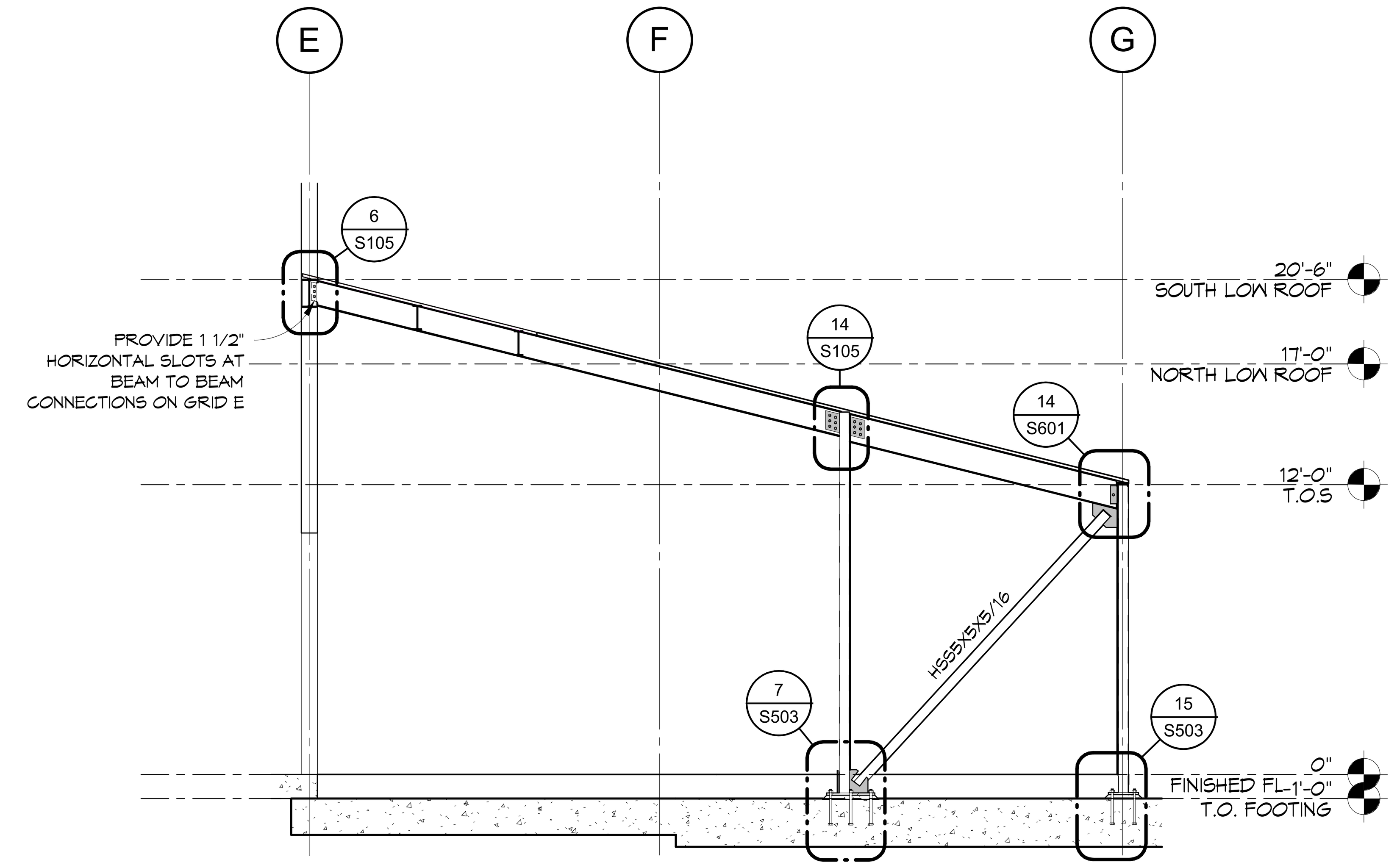
4 GRID 7 ELEVATION
S201 S403 3/16" = 1'-0"



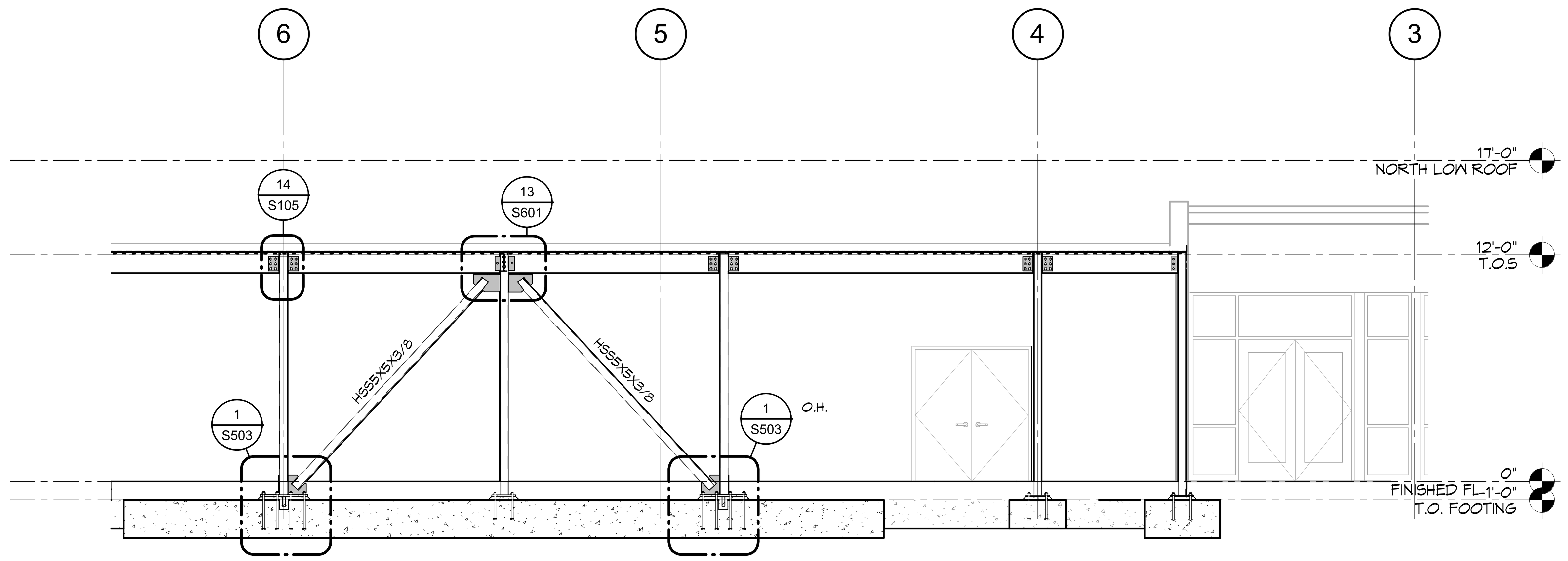
11 SOUTH BRACED FRAMES
S201 S403 3/16" = 1'-0"



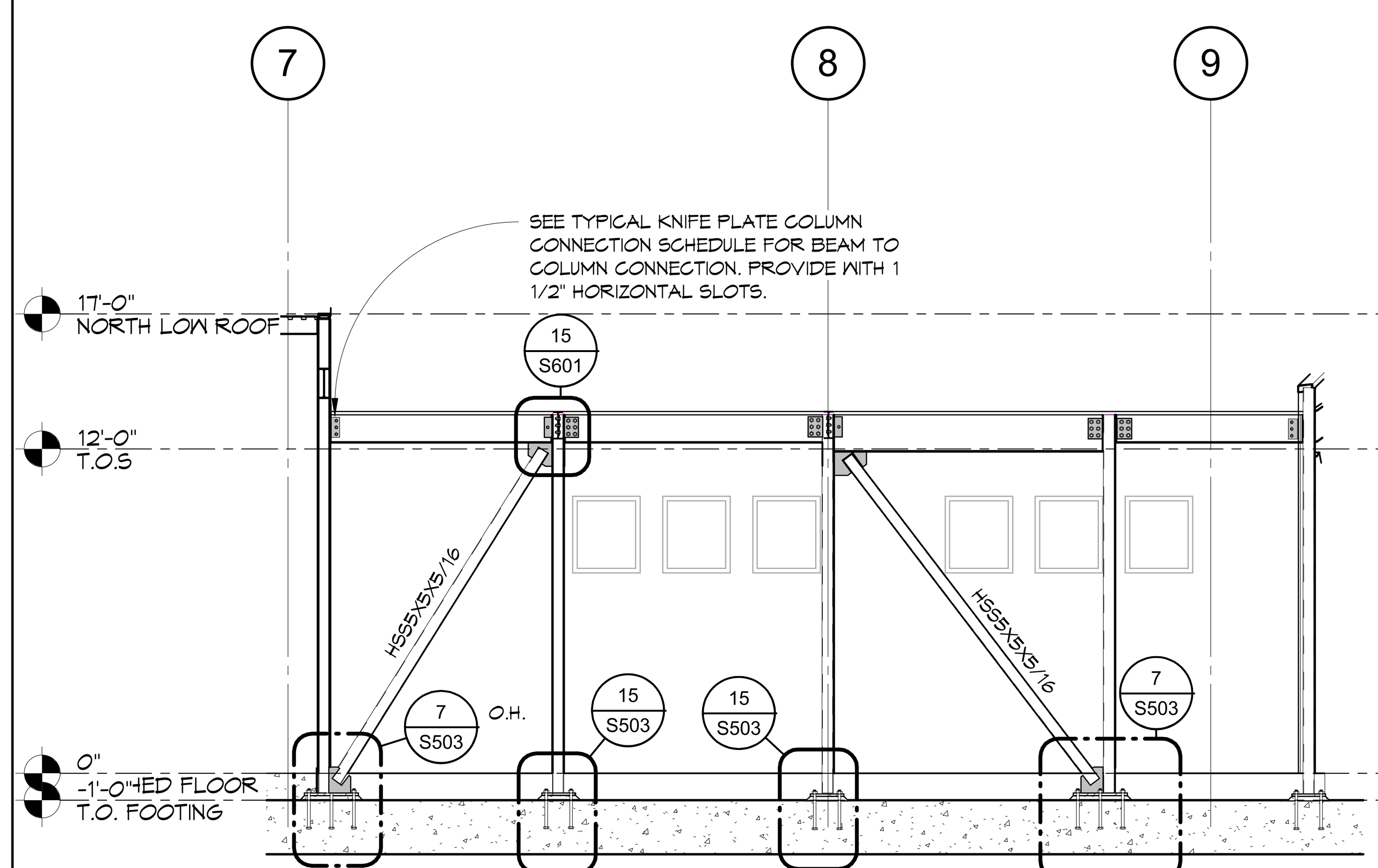
8 SNACK BAR BRACED FRAME
S201 S403 3/16" = 1'-0"



5 GRID 3.5 ELEVATION
S201 S403 3/16" = 1'-0"



15 GRID A ELEVATION
S201 S403 3/16" = 1'-0"



6 GRID F ELEVATION
S201 S403 3/16" = 1'-0"

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BrooksRansom Associates
23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
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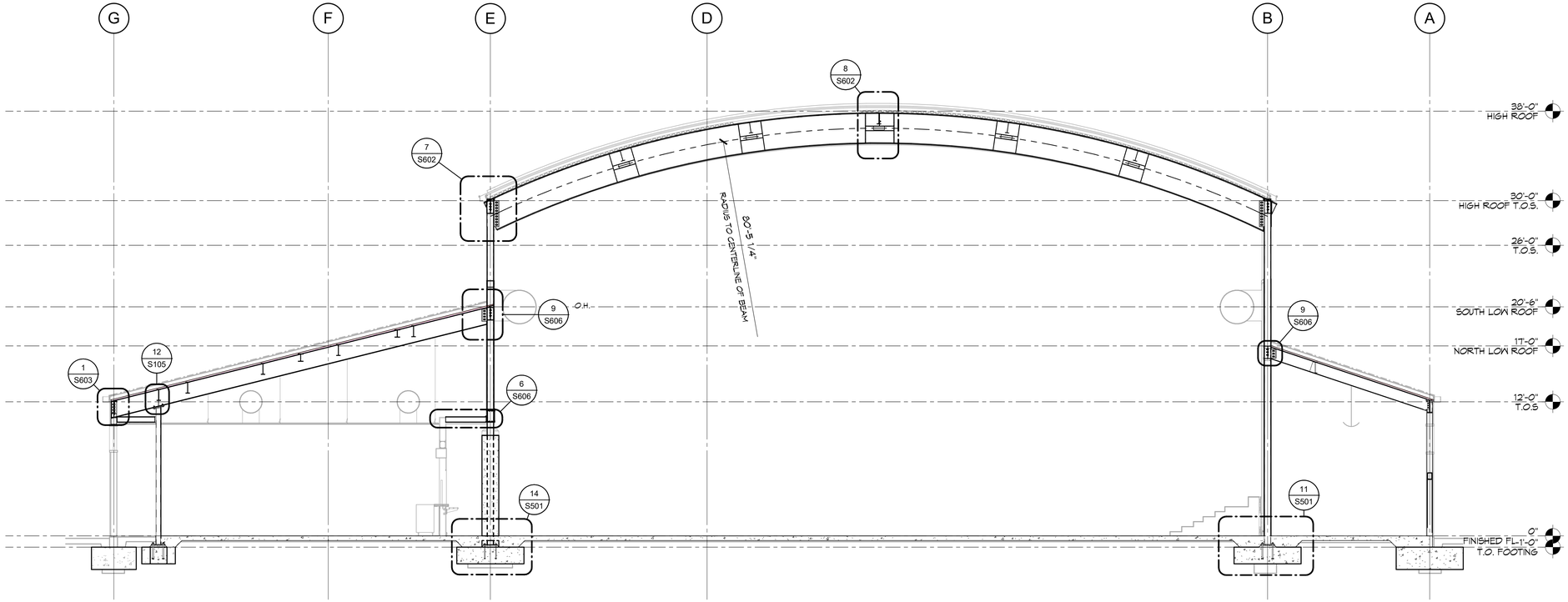
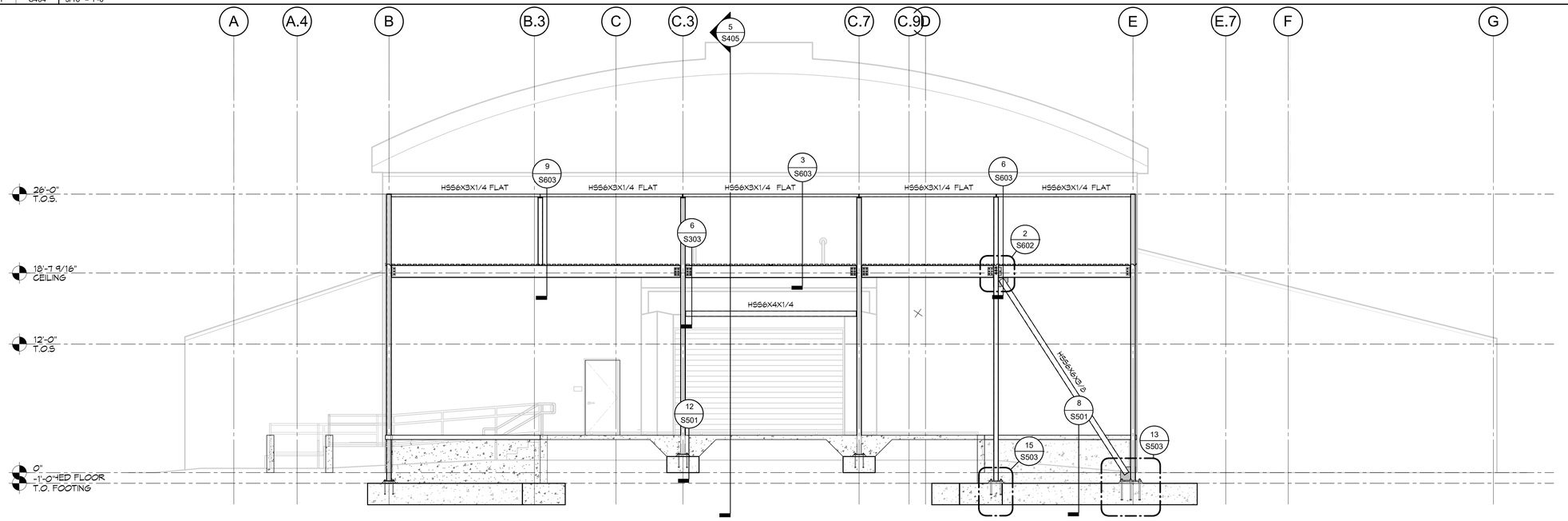
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
BRACED FRAME ELEVATIONS

S403



13 SECTION
S201 S404 3/16" = 1'-0"



15 GRID 1 ELEVATION
S201 S404 3/16" = 1'-0"

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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
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REGISTERED PROFESSIONAL ENGINEER
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No. S21867
Electrical
STATE OF CALIFORNIA

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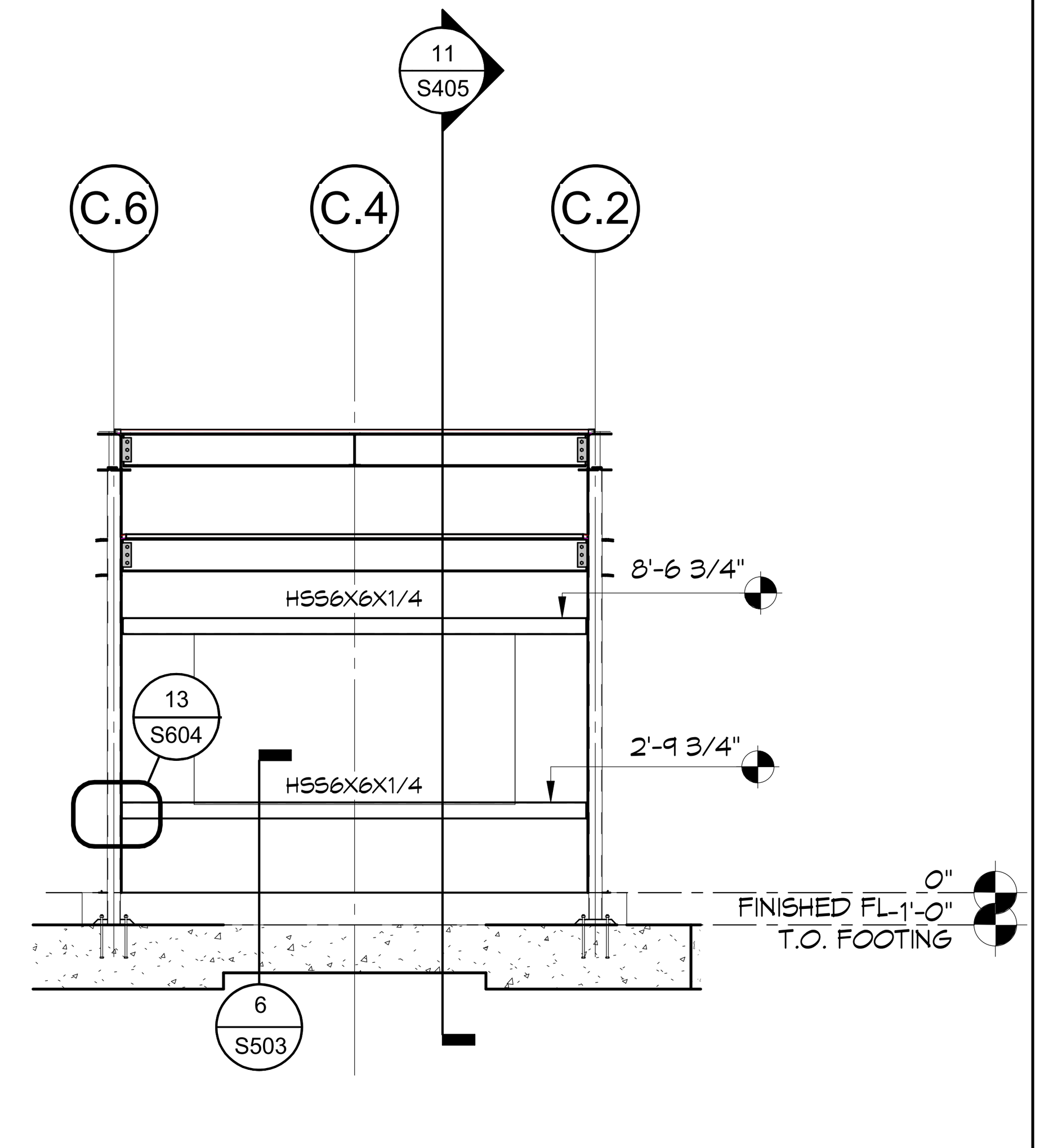
23422

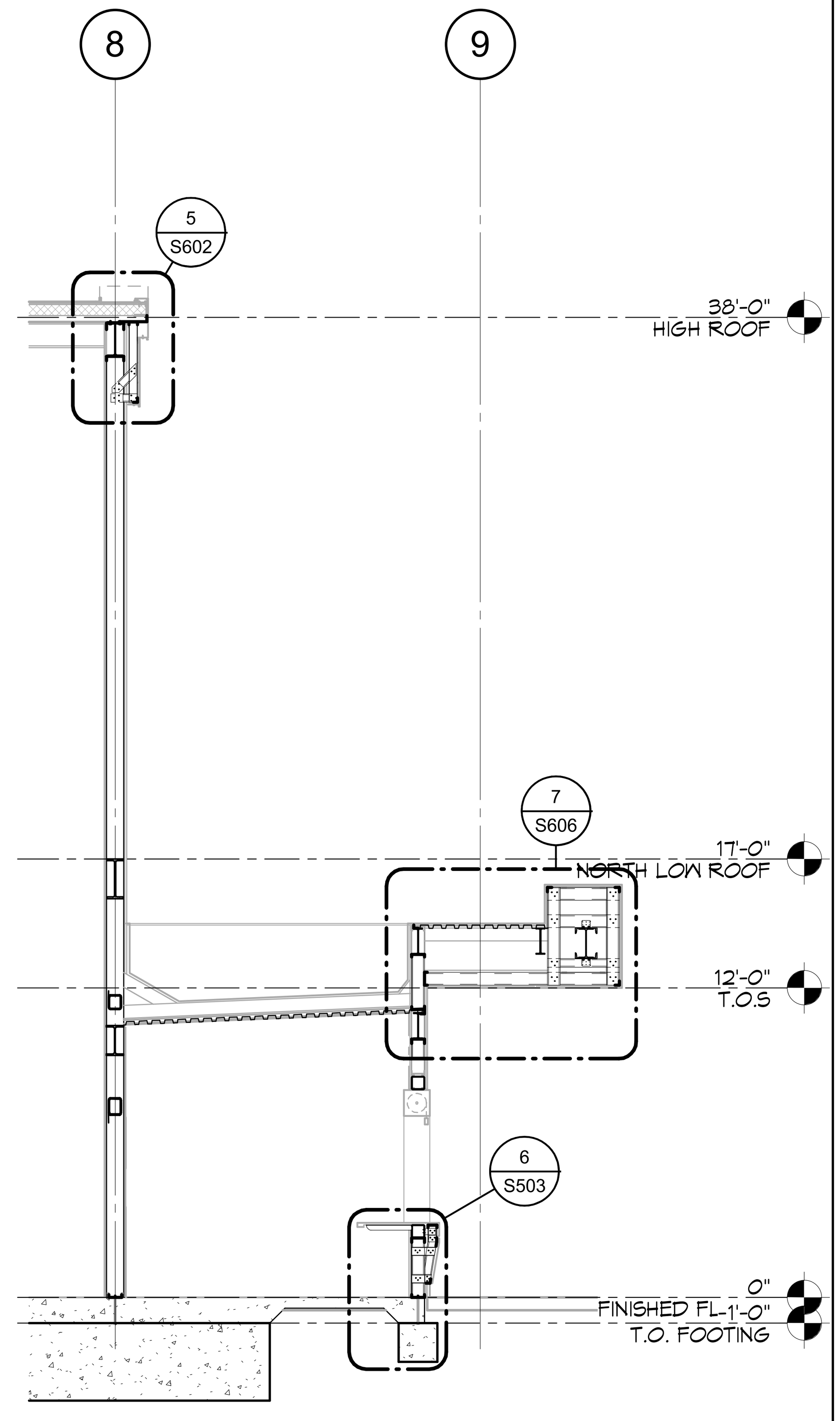
PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)

SHEET TITLE:
BUILDING SECTIONS AND ELEVATIONS

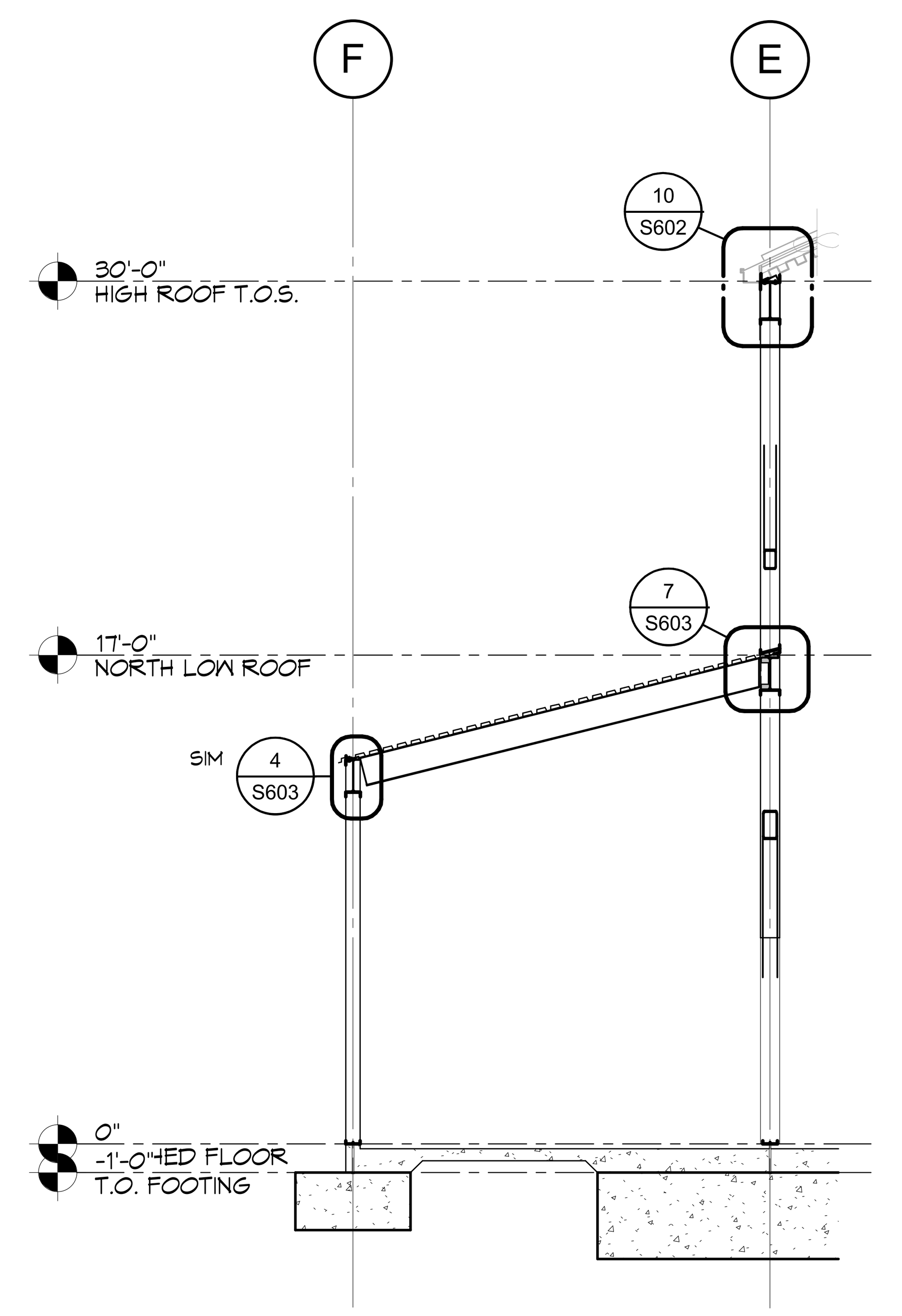
S404



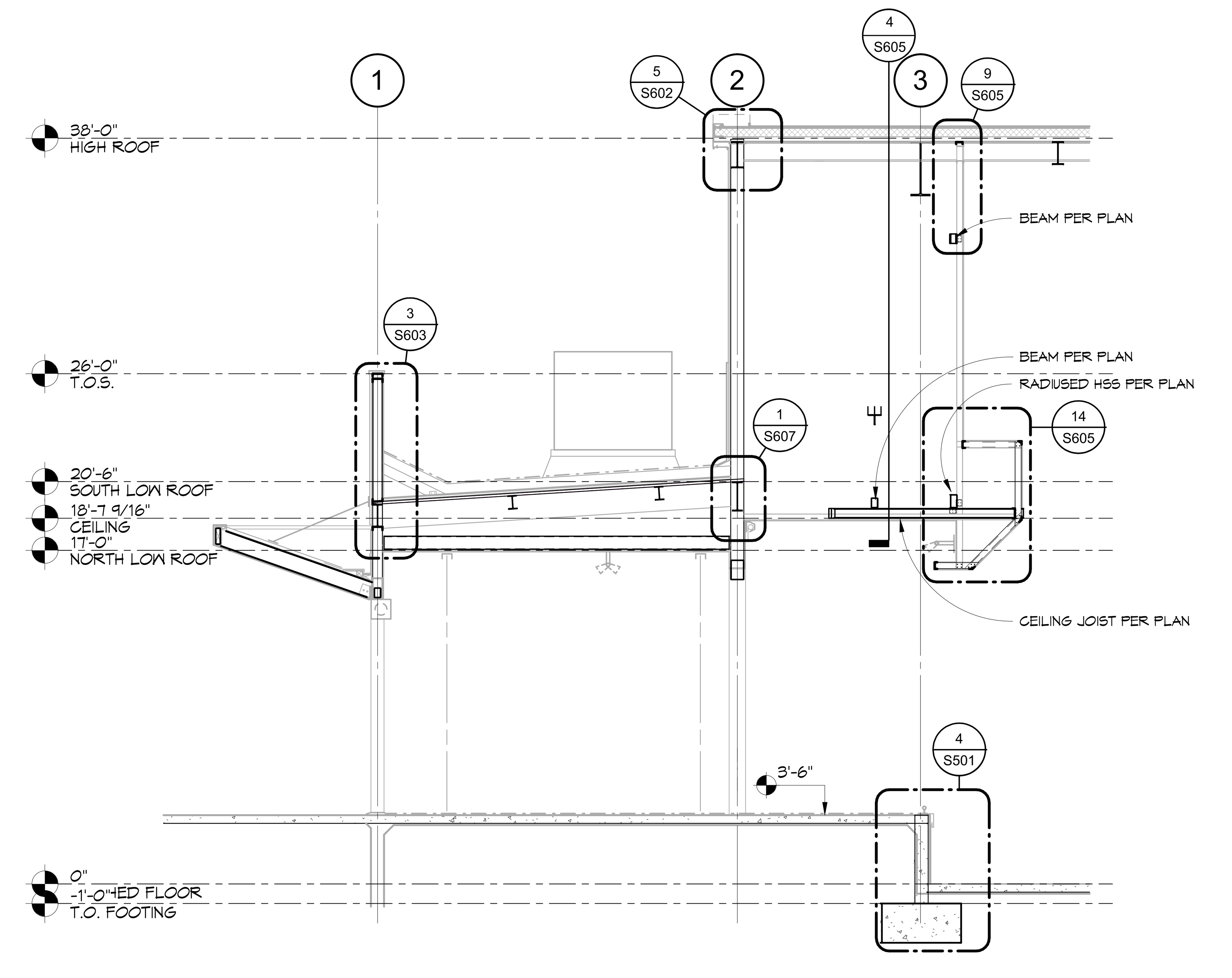
13	GRID 8.9 ELEVATION
S201 S405	3/16" = 1'-0"



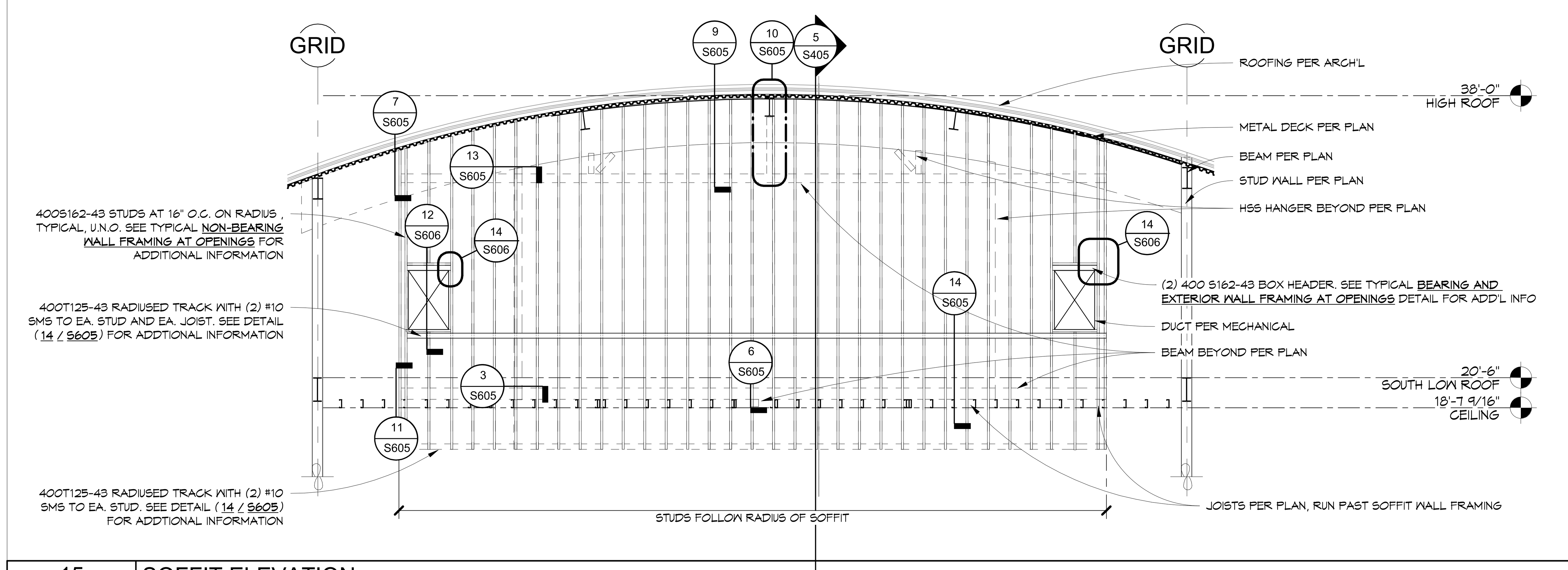
11	SECTION
S201 S405	3/16" = 1'-0"



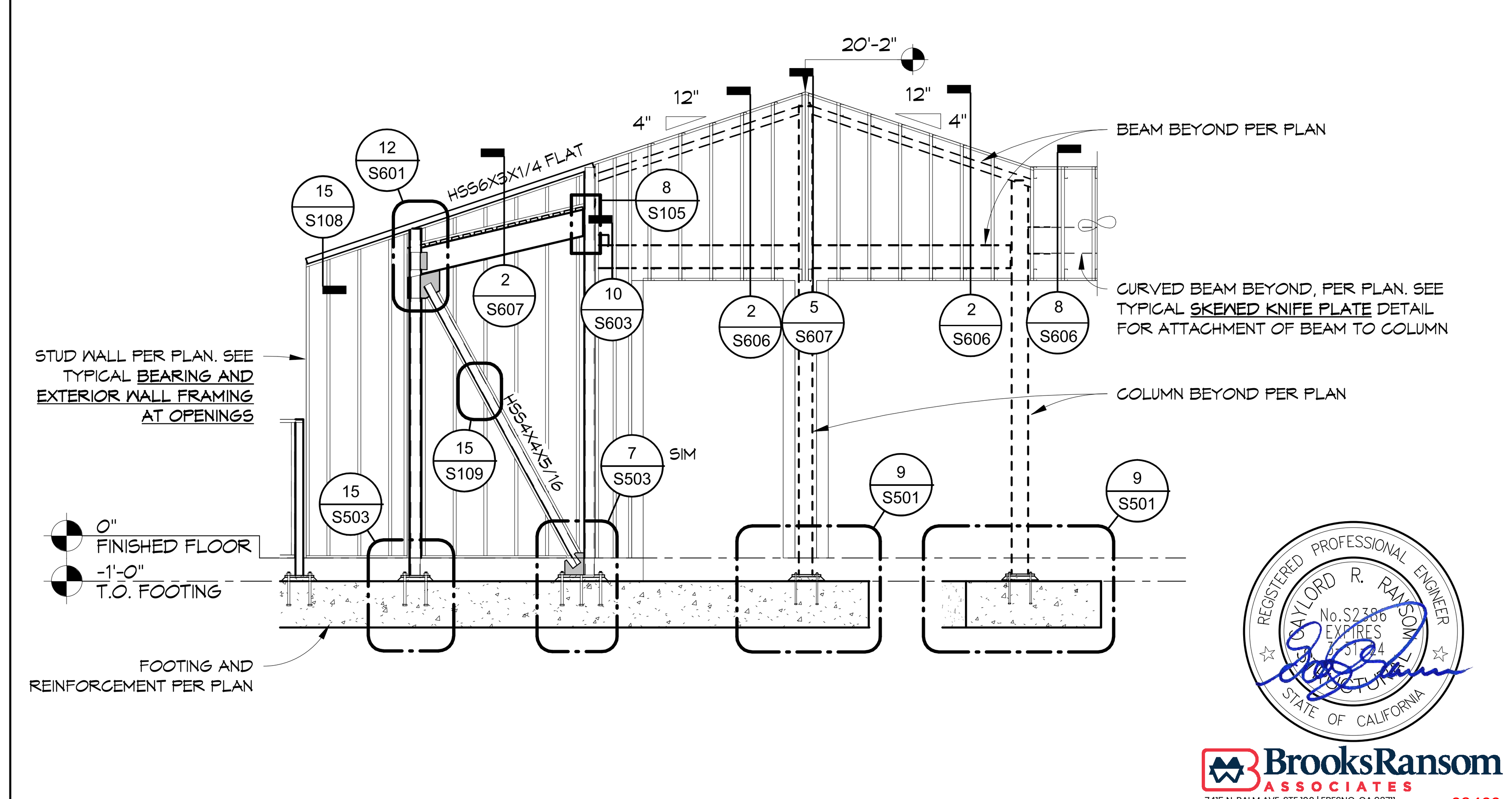
8	SECTION
S201 S405	3/16" = 1'-0"



5	SECTION
S201 S405	3/16" = 1'-0"



15	SOFFIT ELEVATION
S301 S405	NOT TO SCALE



6	WEST BRACED FRAMES
S201 S405	3/16" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
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GONZALEZ ARCHITECTS
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TEL: 559-497-1542
FAX: 559-497-1549

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)

SHEET TITLE:
BUILDING SECTIONS AND ELEVATIONS

S405

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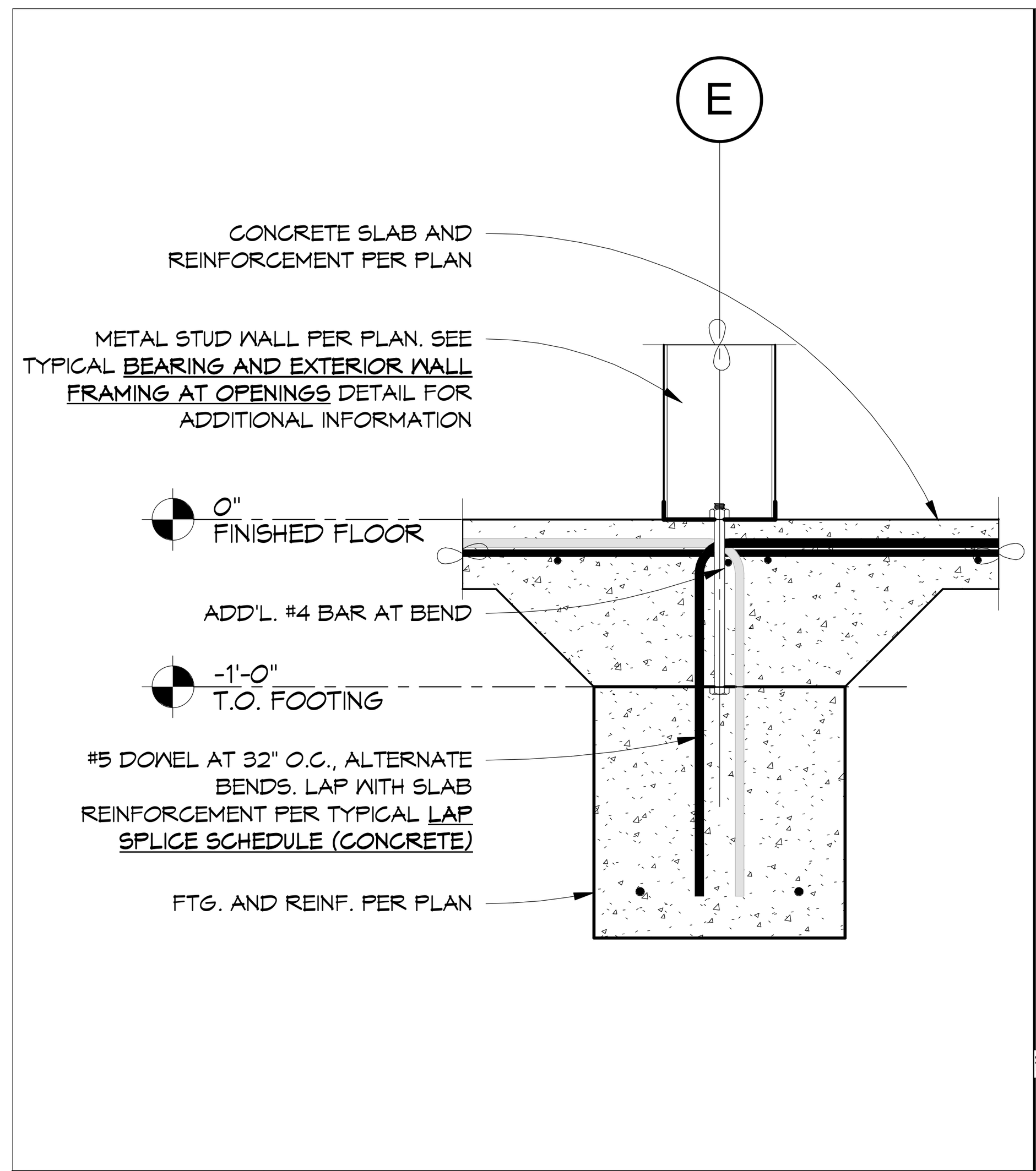
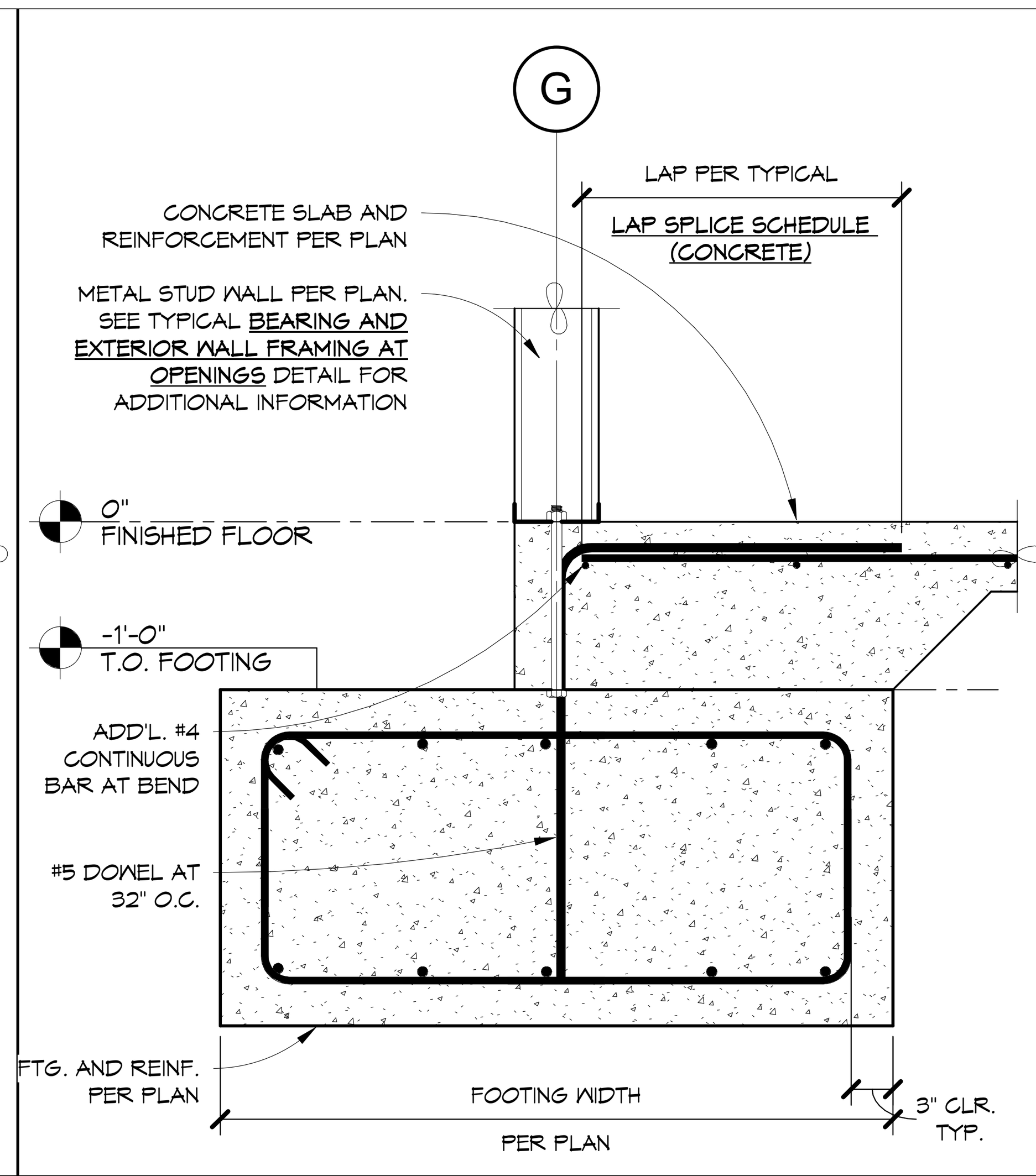
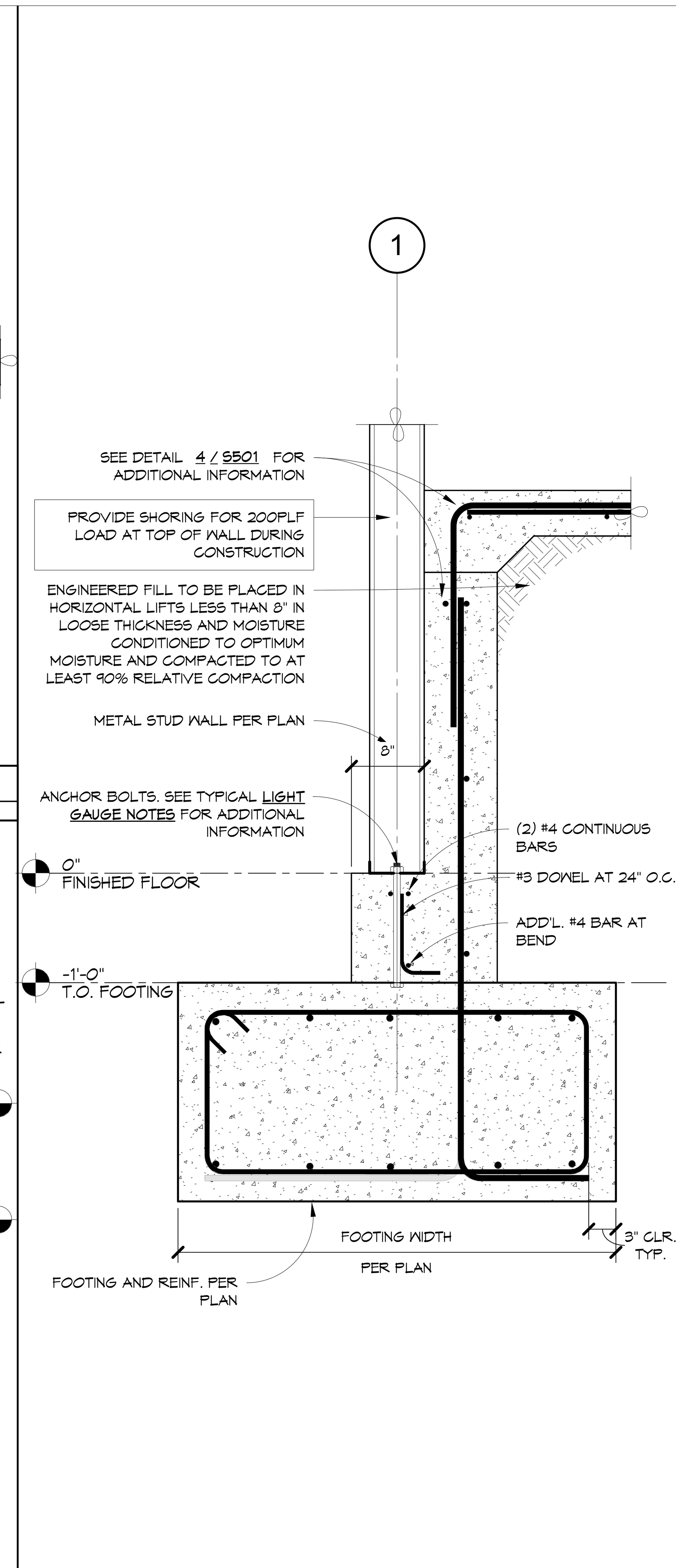
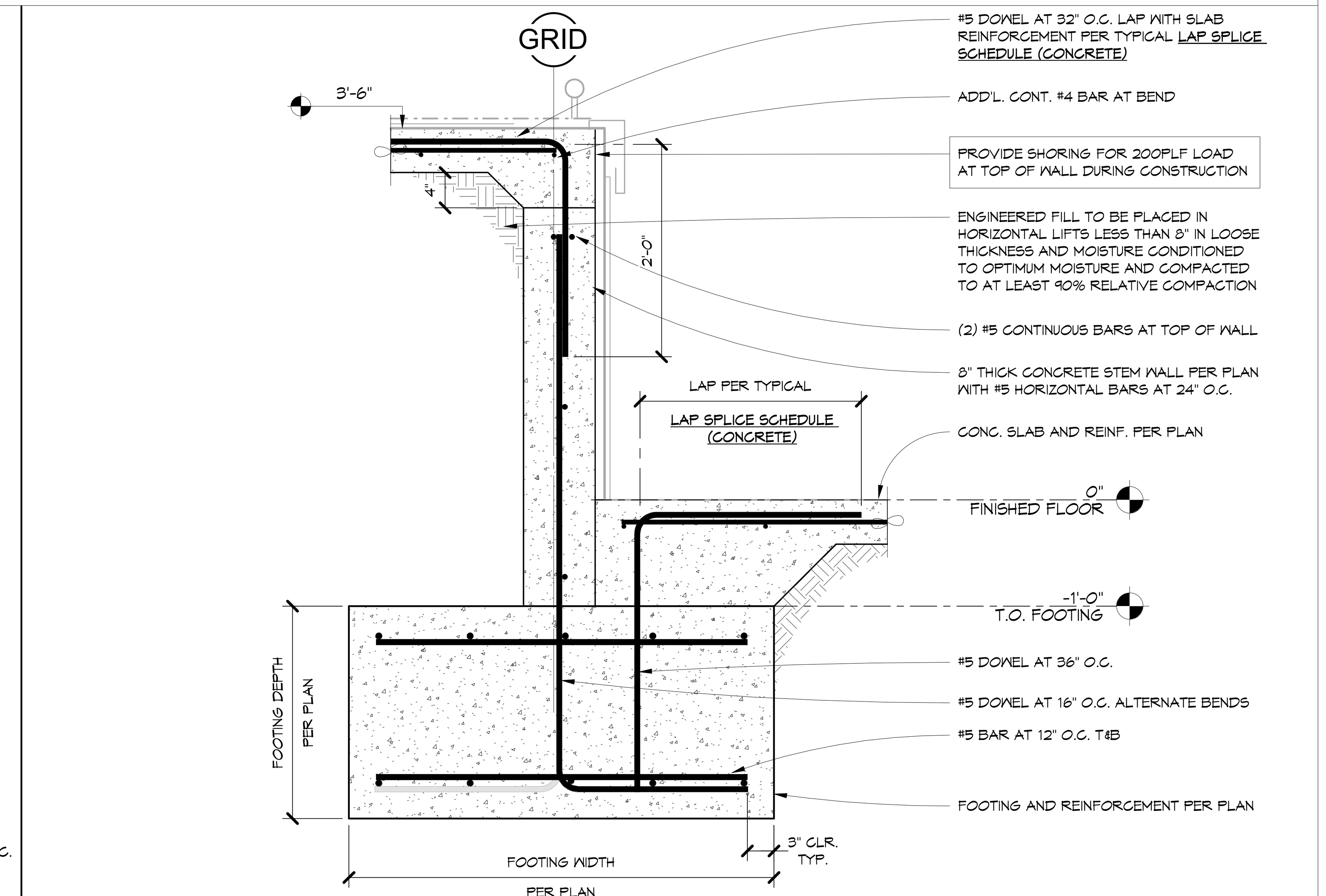


13 DETAIL
S201 S501 1" = 1'-0"

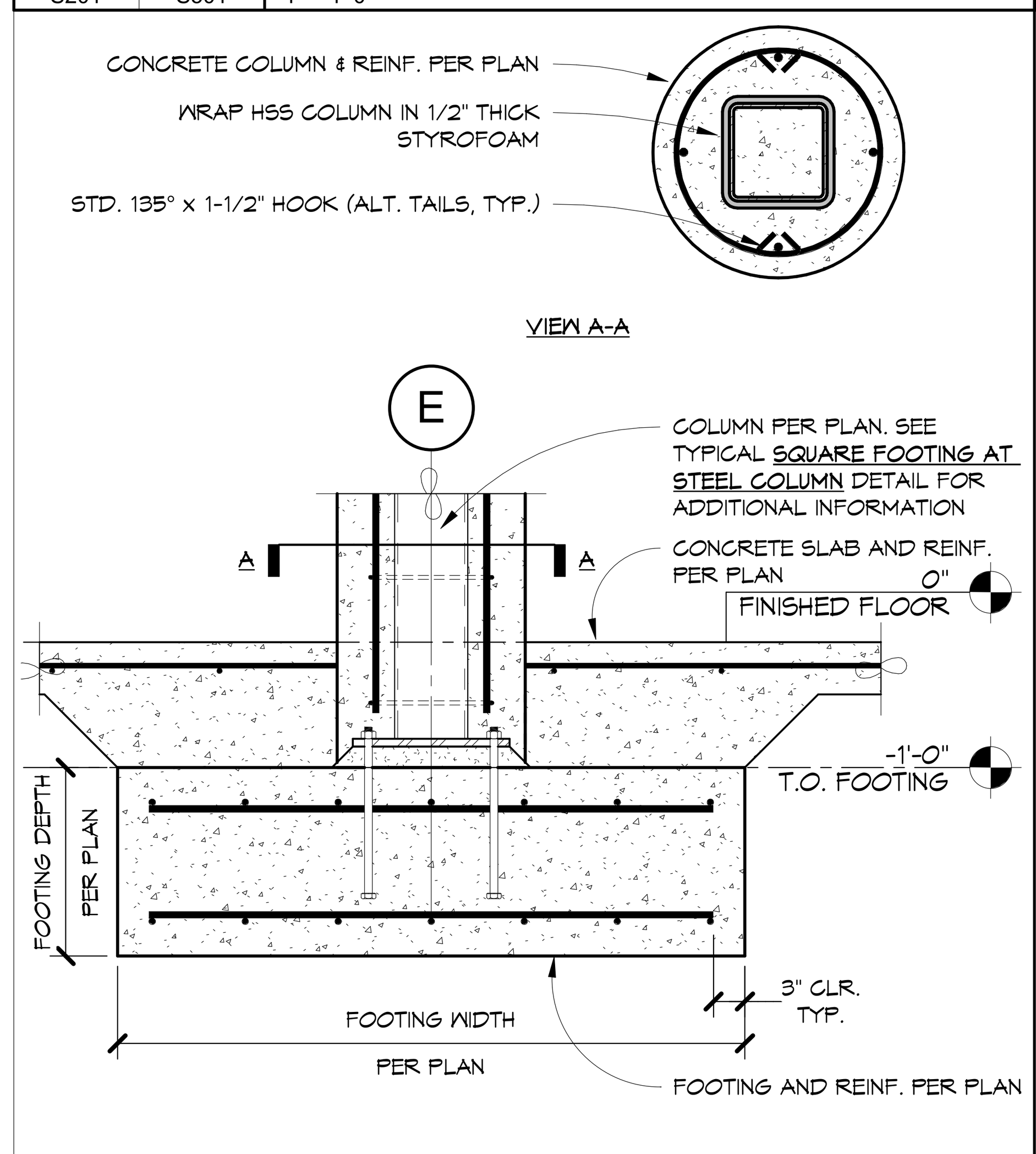


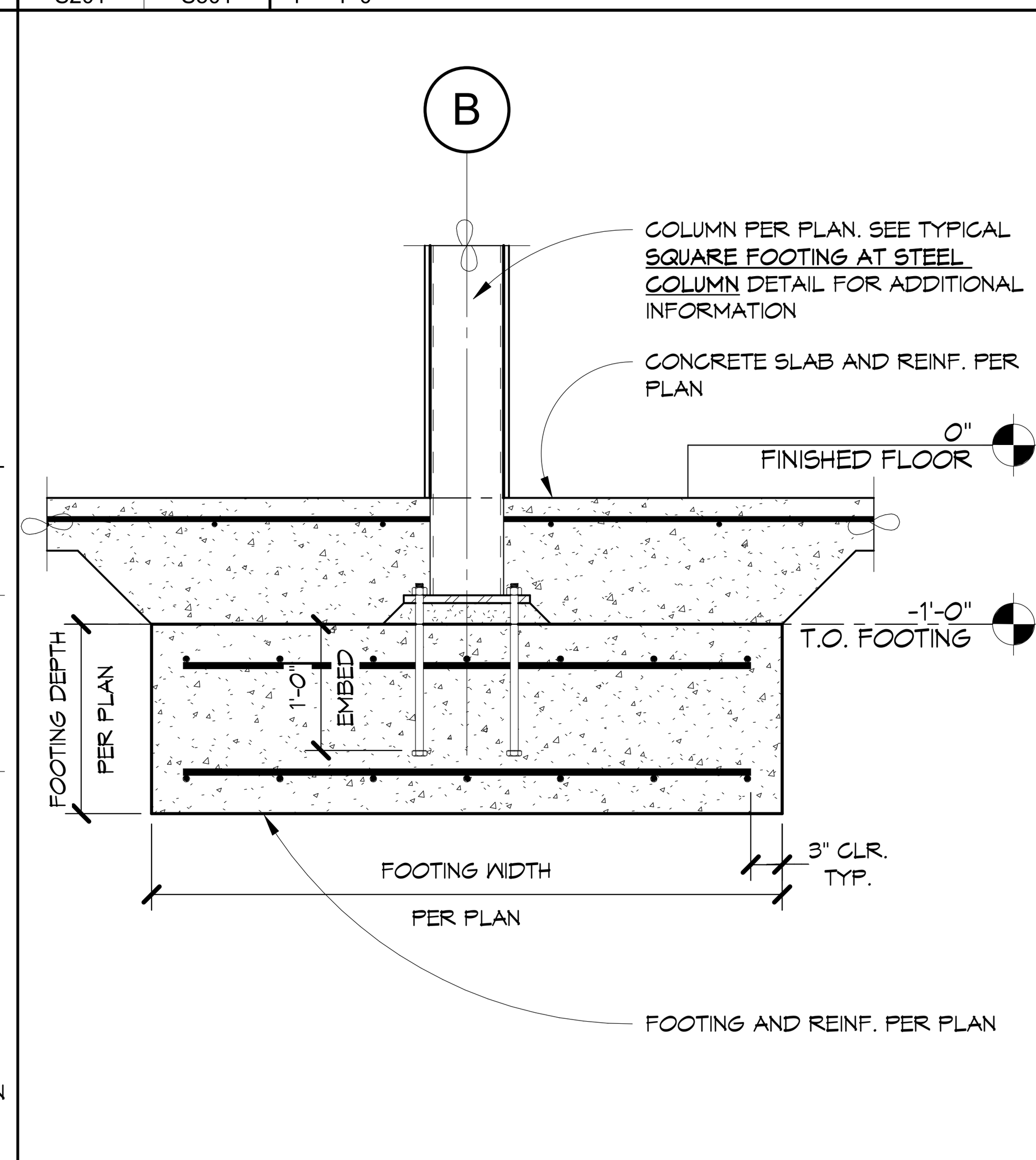
10 DETAIL
S201 S501 1" = 1'-0"

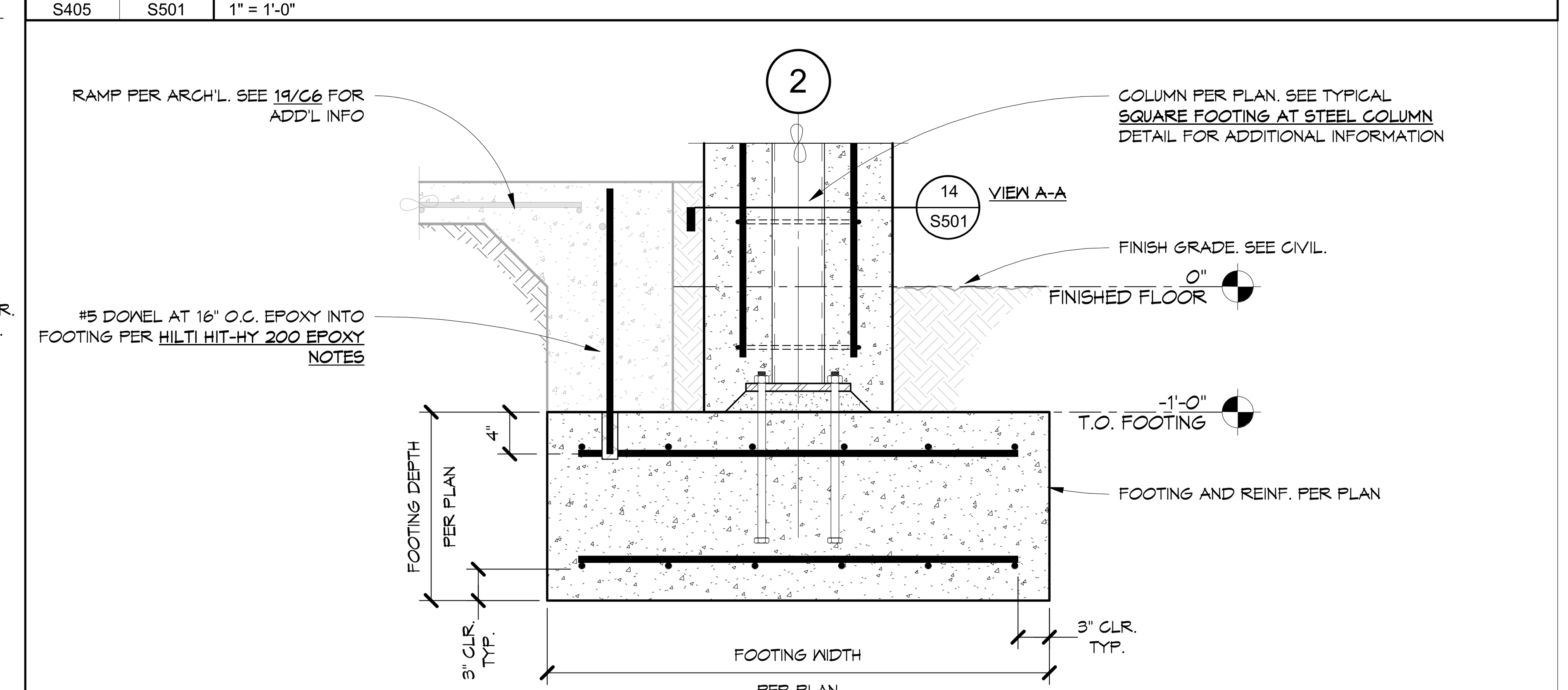




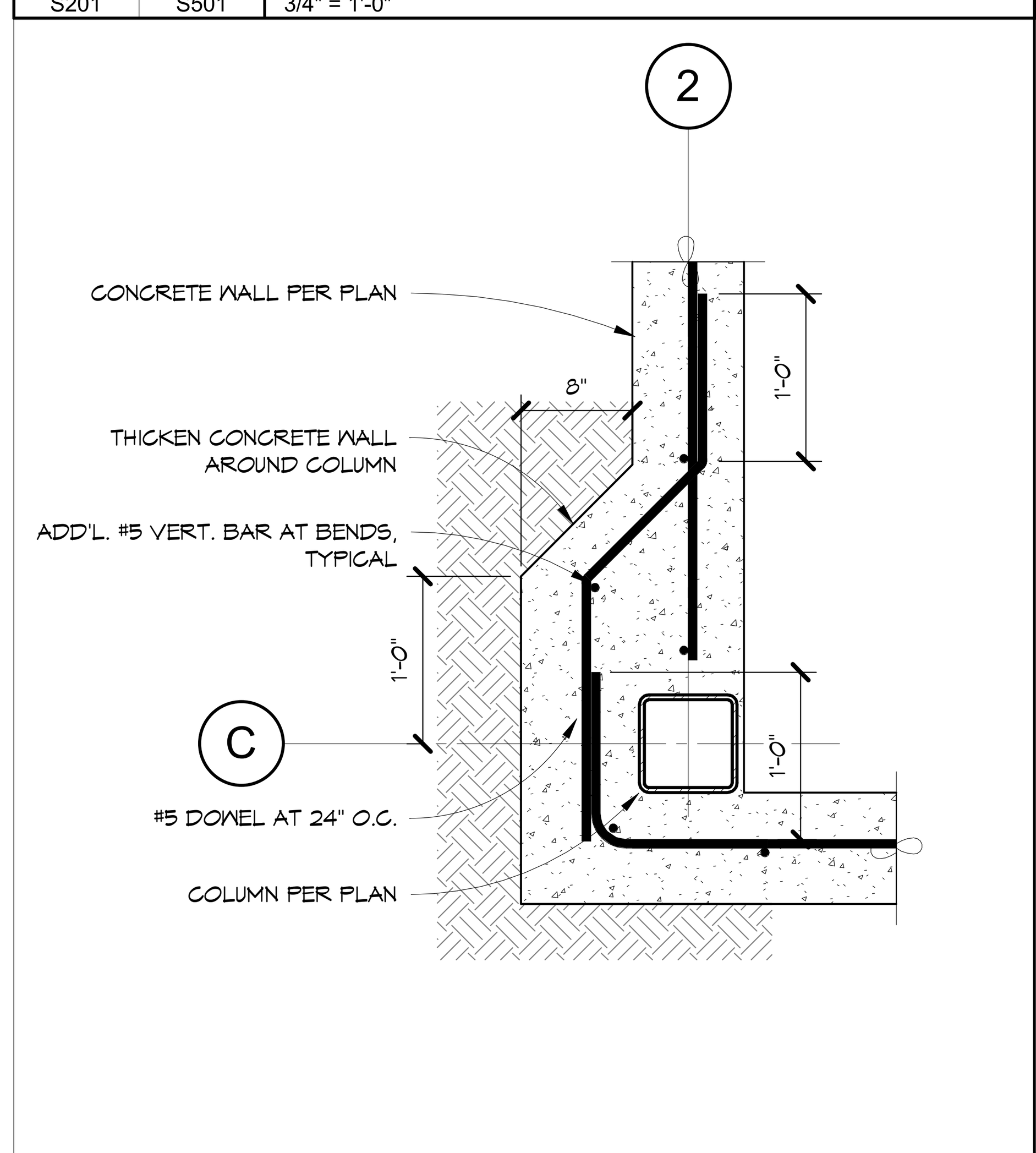
4 DETAIL
S405 S501 1" = 1'-0"

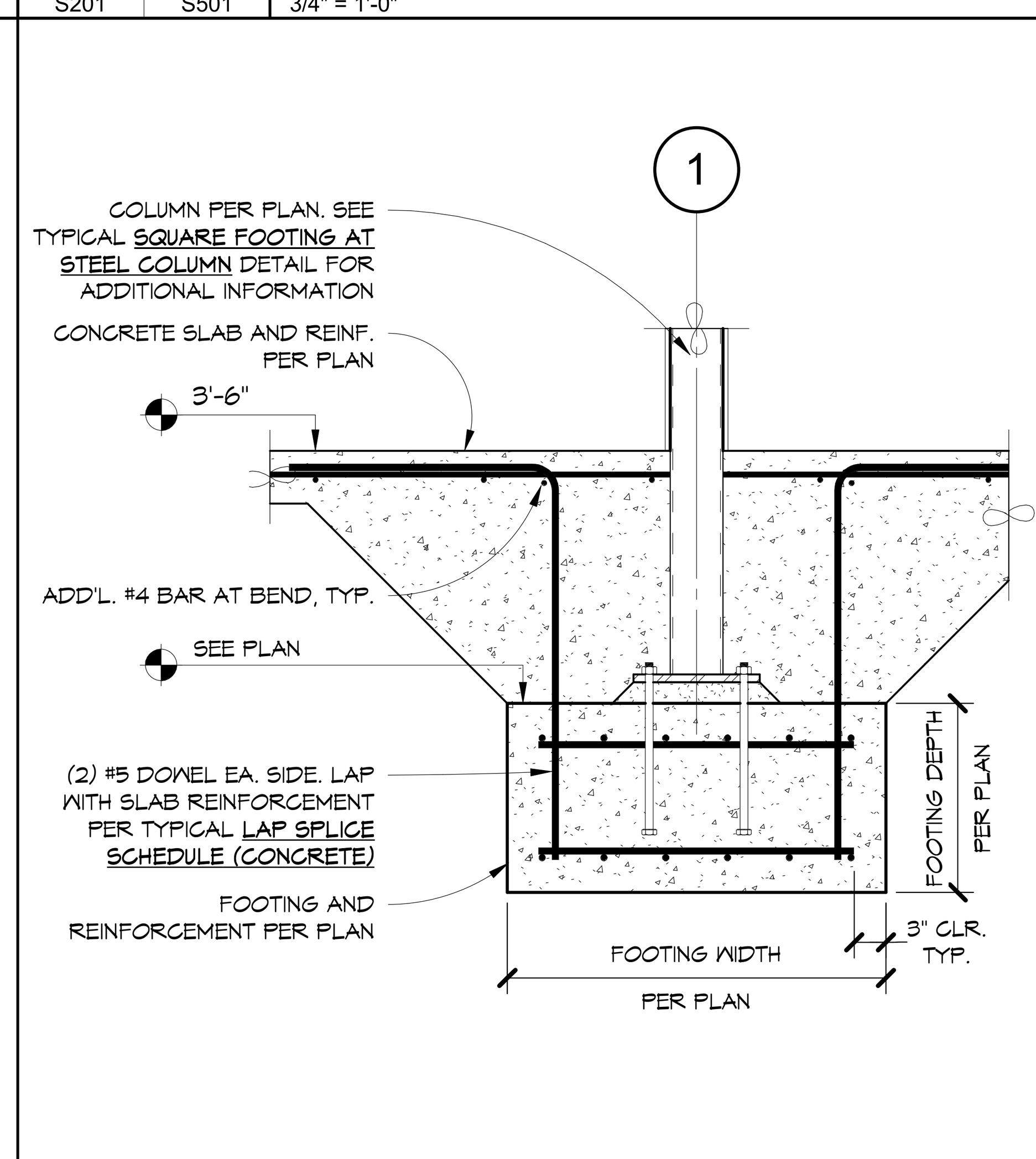


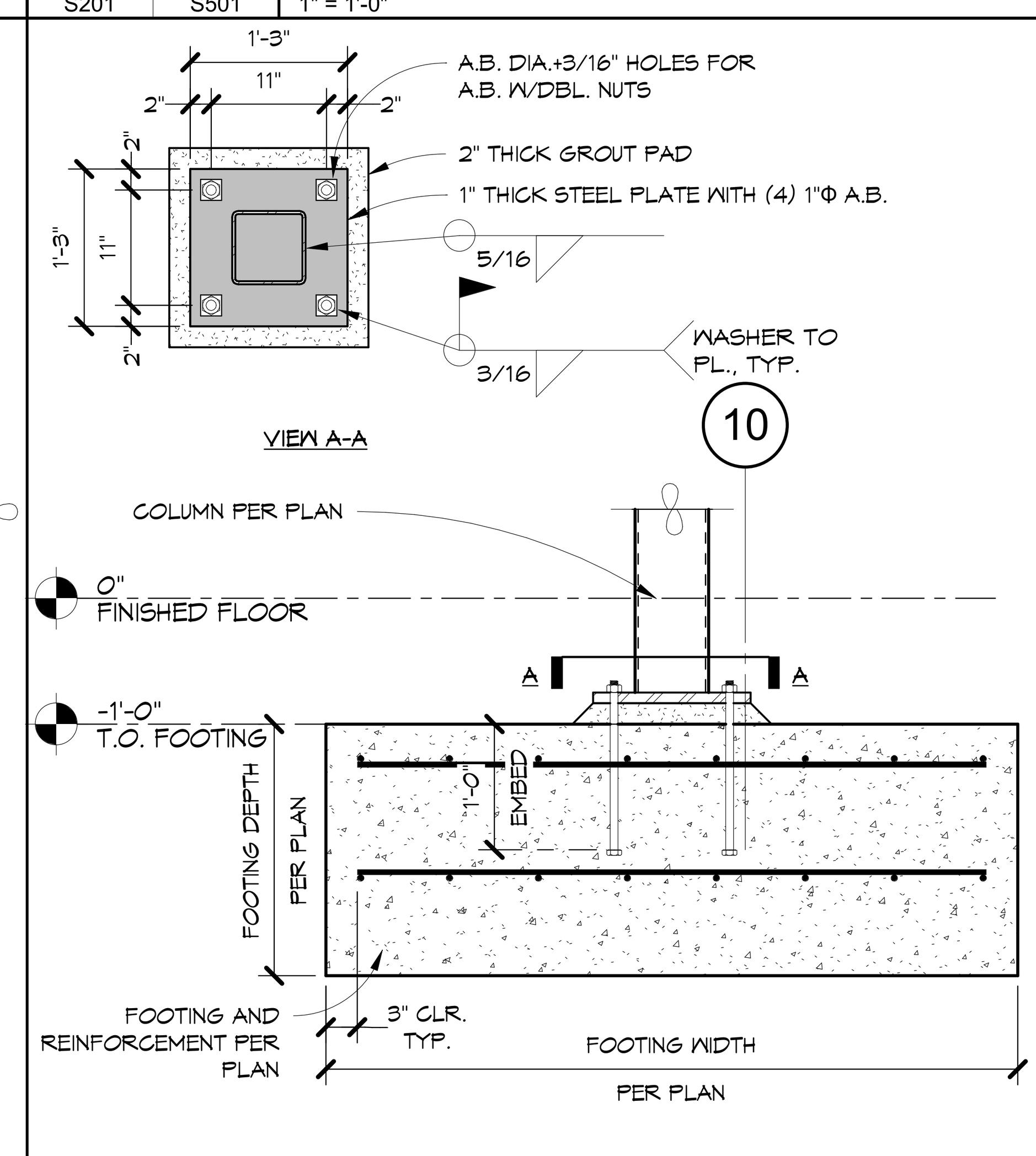


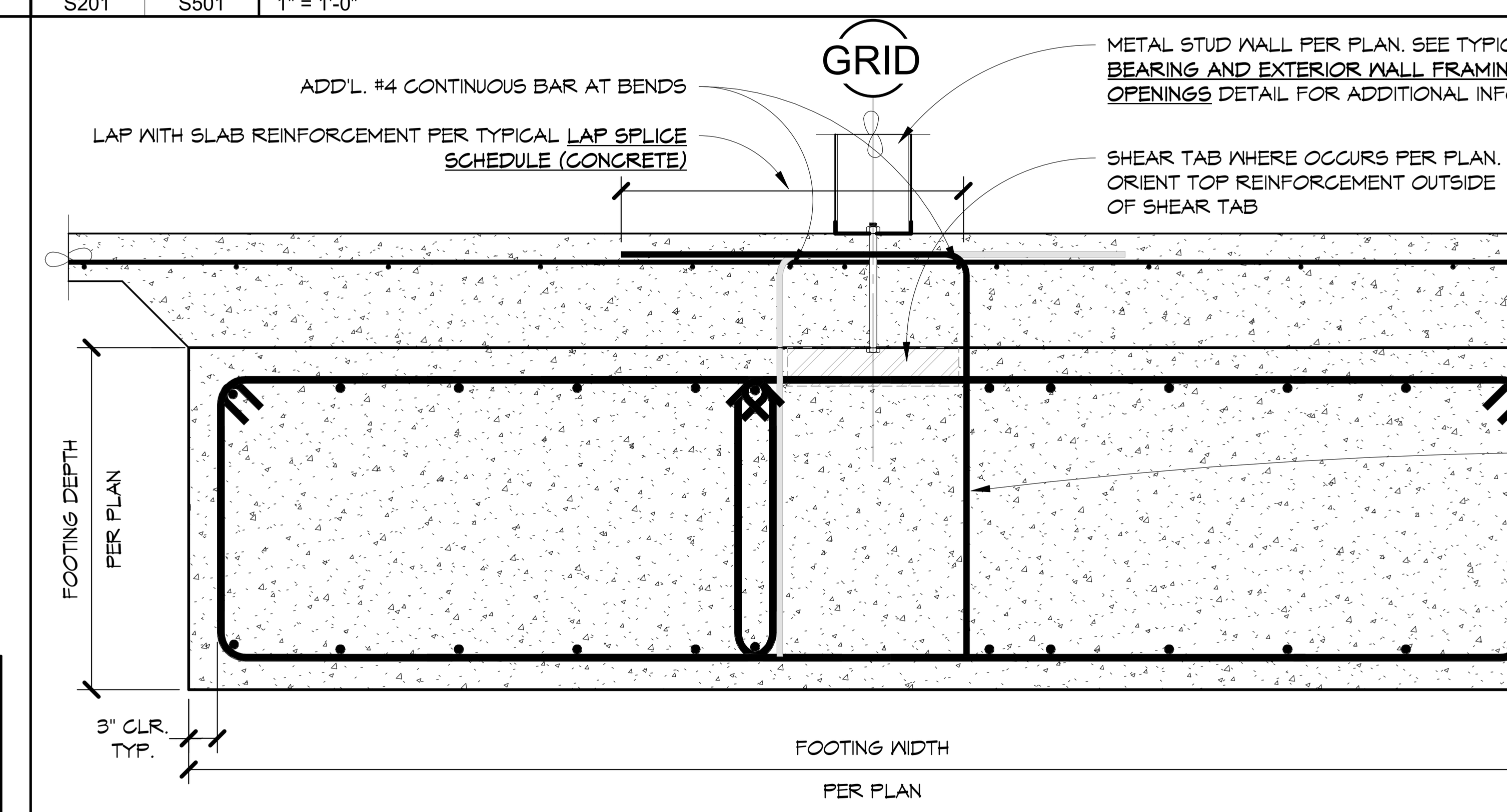


14	DETAIL	11	DETAIL	8	DETAIL	5	DETAIL
S201 S501	3/4" = 1'-0"	S201 S501	3/4" = 1'-0"	S201 S501	1" = 1'-0"	S201 S501	1" = 1'-0"









15	DETAIL	12	DETAIL	9	DETAIL	6	DETAIL
S201 S501	1" = 1'-0"	S201 S501	3/4" = 1'-0"	S201 S501	3/4" = 1'-0"	S201 S501	3/4" = 1'-0"

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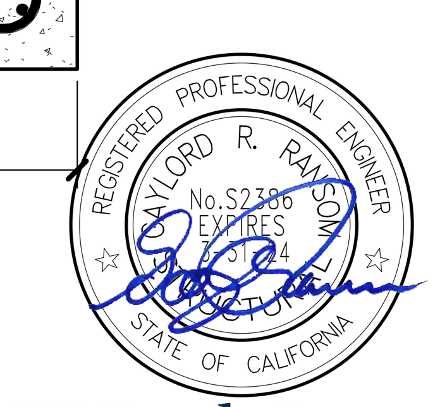

BrooksRansom ASSOCIATES
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(559) 449-8444 OFFICE | (559) 449-8404 FAX
23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
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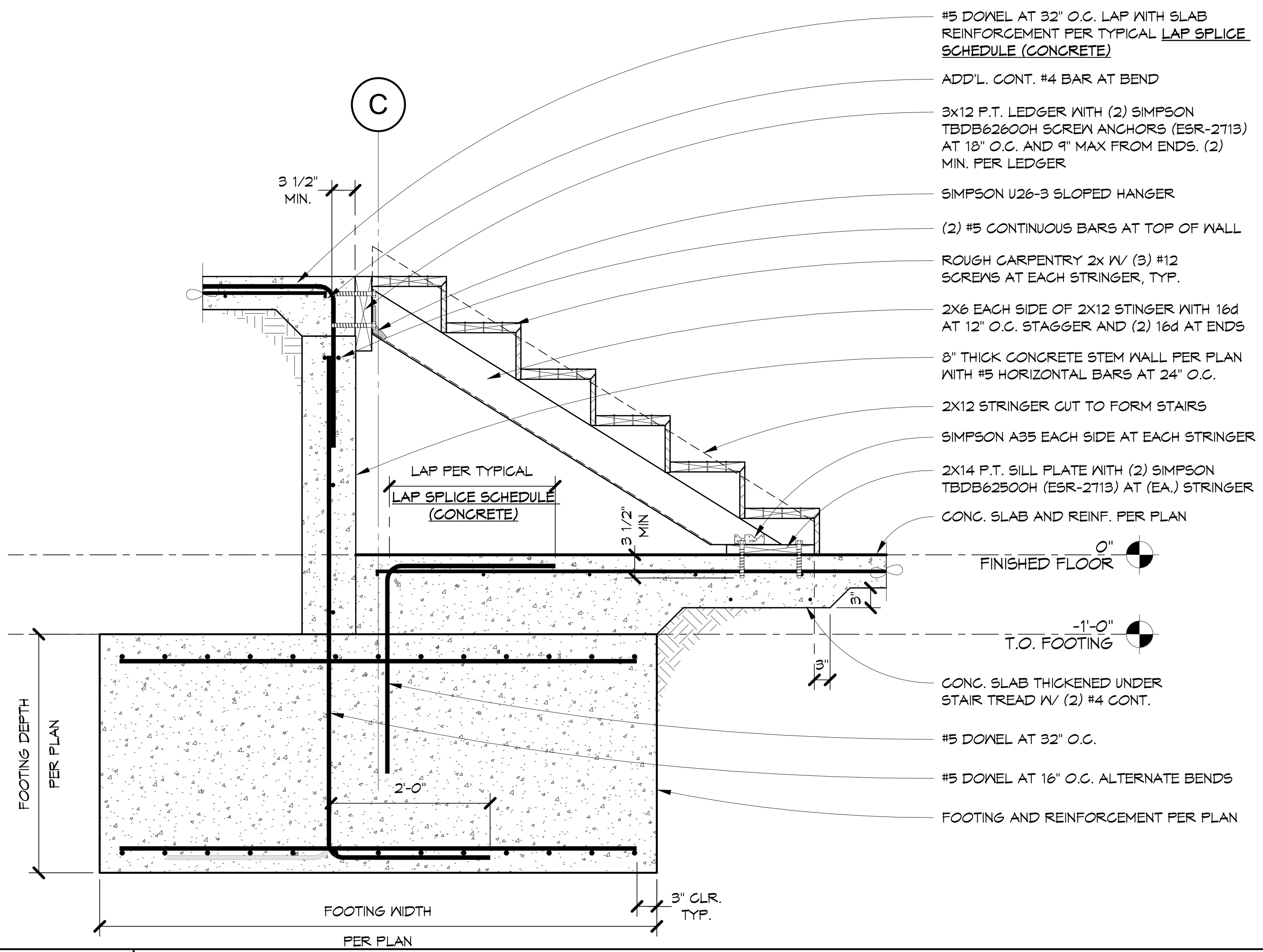
FAX: 559-497-1549
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711

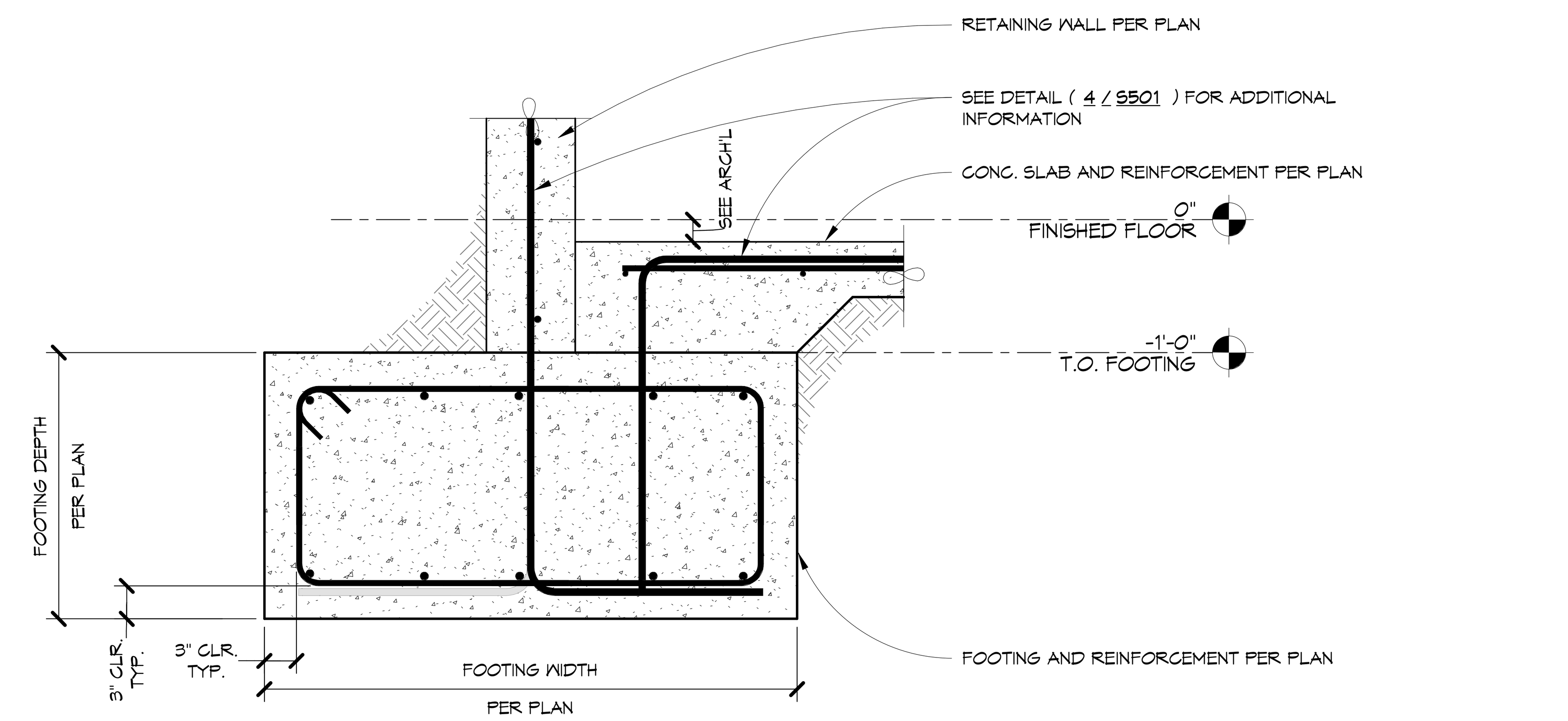
MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
FOUNDATION DETAILS

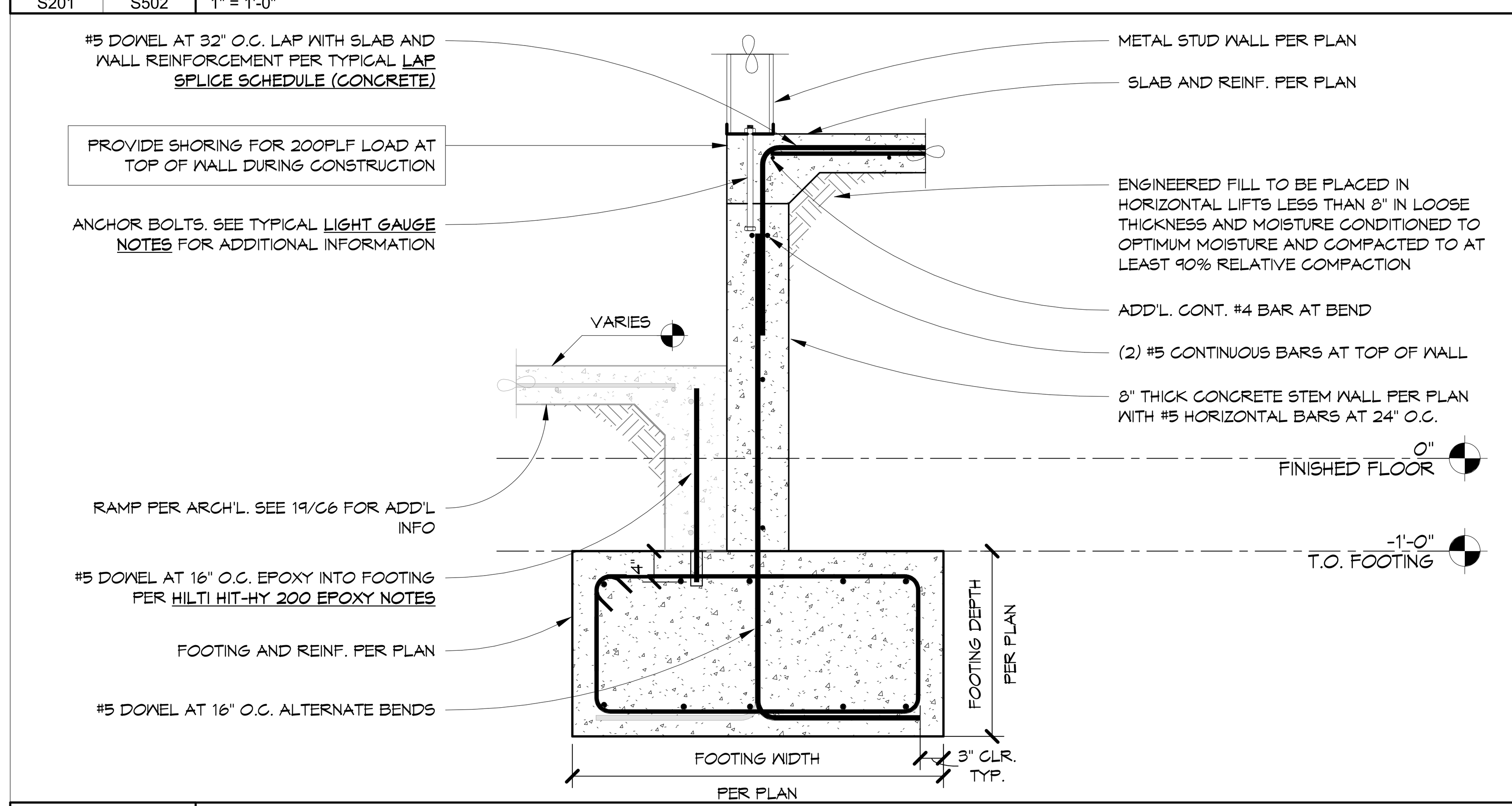
S501



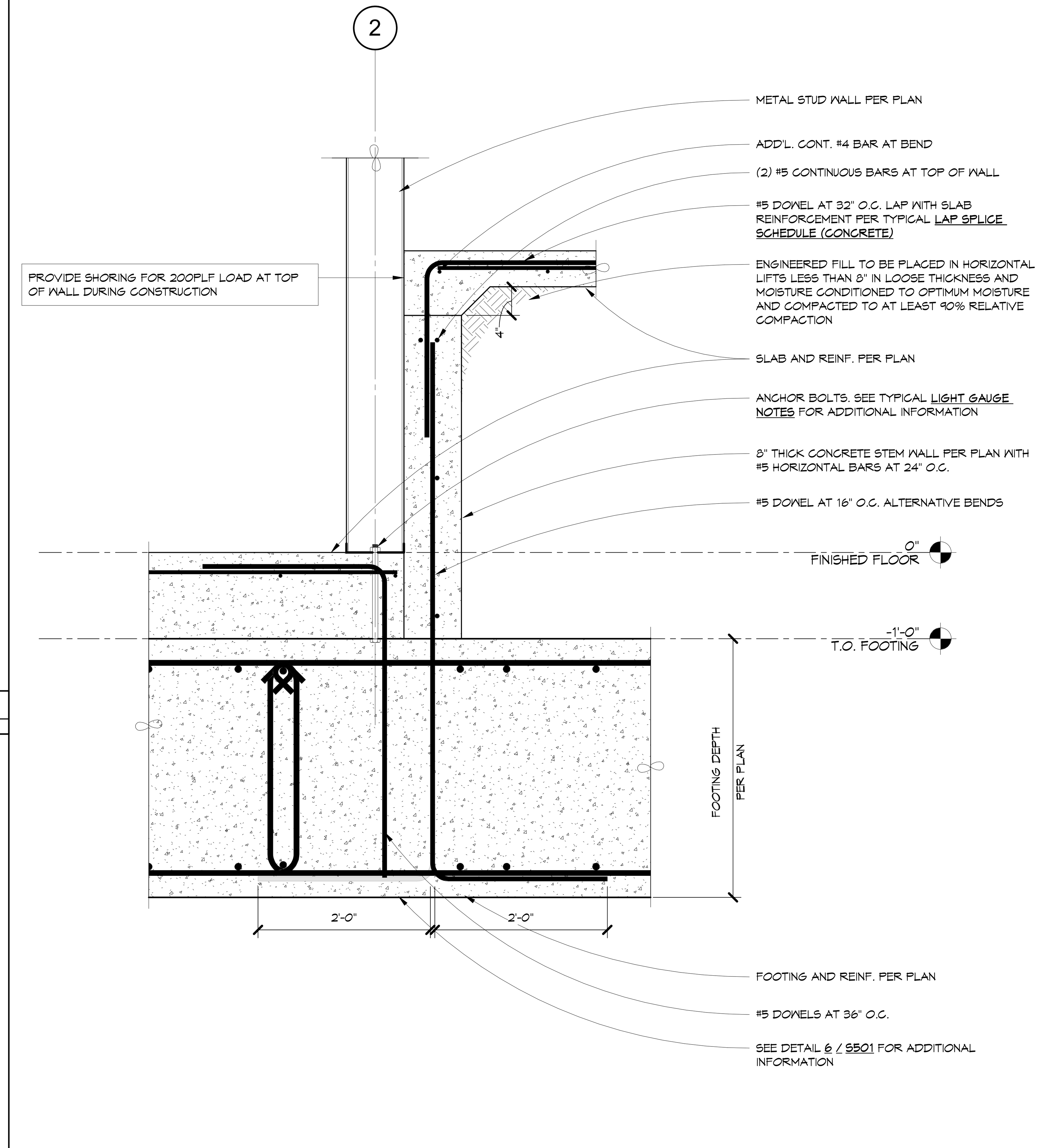
13 DETAIL
S201 S502 3/4" = 1'-0"



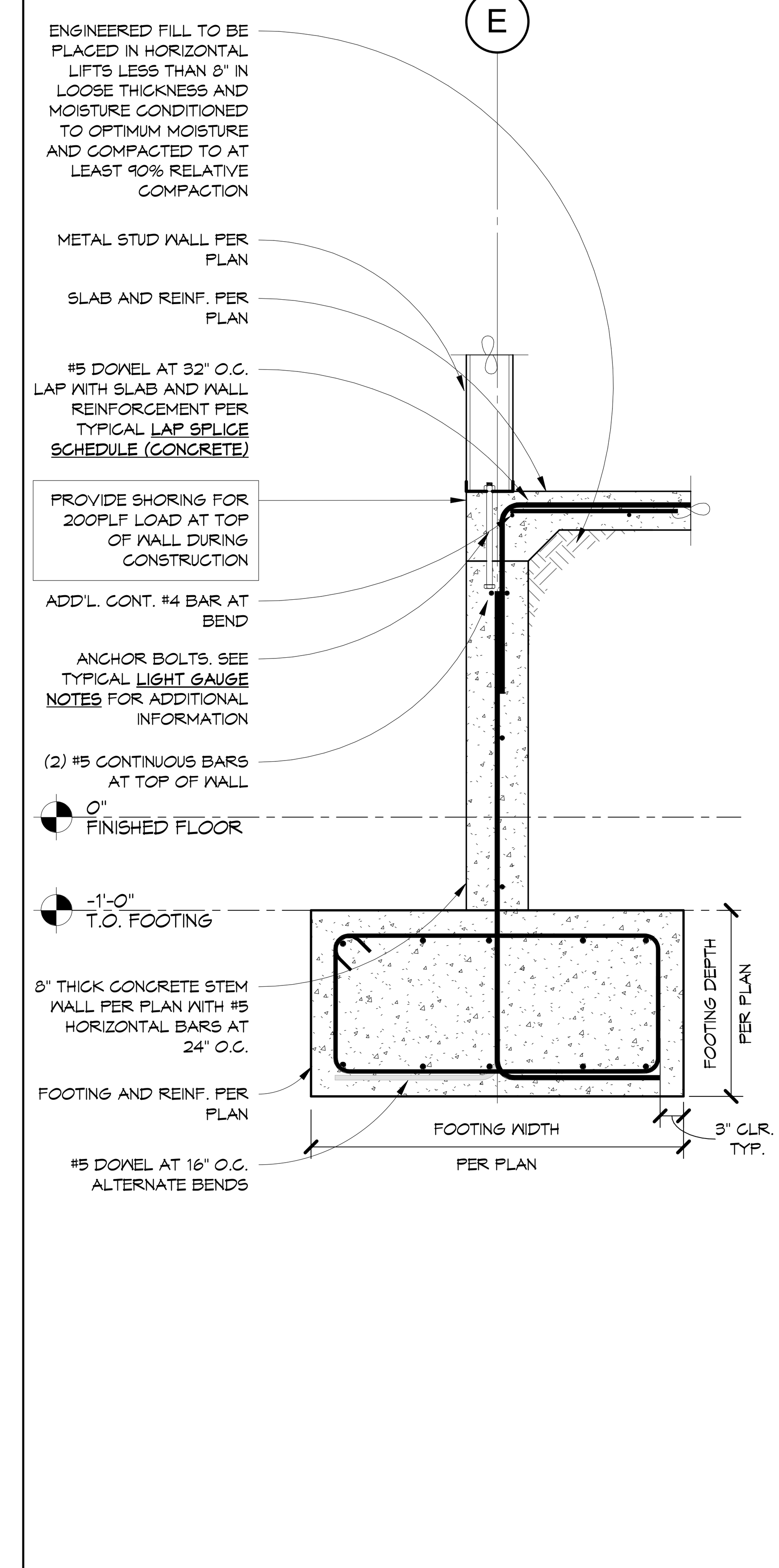
14 DETAIL
S201 S502 1" = 1'-0"



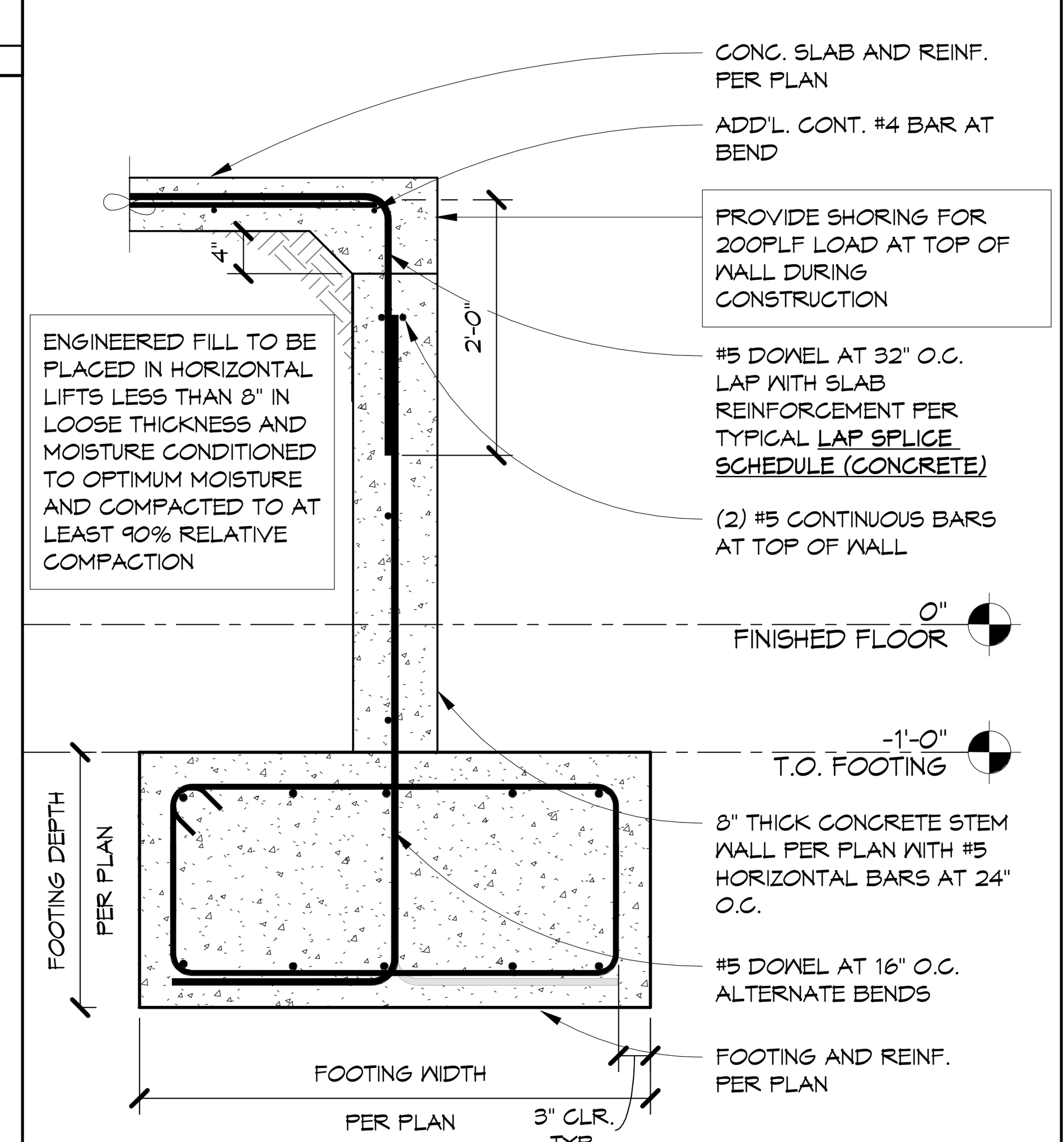
15 DETAIL
S201 S502 3/4" = 1'-0"



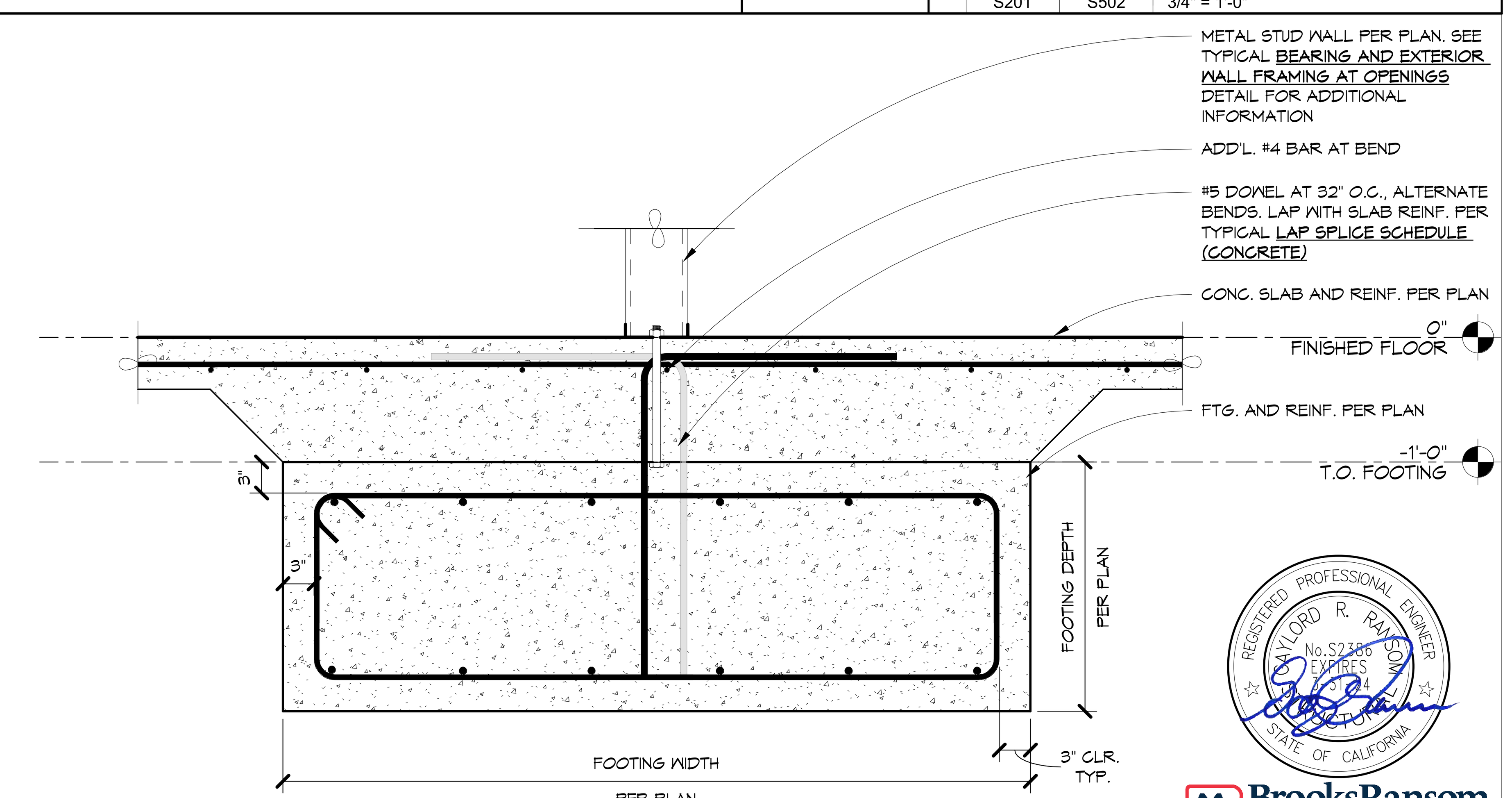
8 DETAIL
S201 S502 1" = 1'-0"



2 DETAIL
S201 S502 3/4" = 1'-0"



9 DETAIL
S201 S502 3/4" = 1'-0"



6 DETAIL
S201 S502 1" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER GAYLORD R. RANSOM No. S2386 STATE OF CALIFORNIA

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23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-1286 RENEWAL DATE 12/31/2013 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
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TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
FOUNDATION DETAILS

S502

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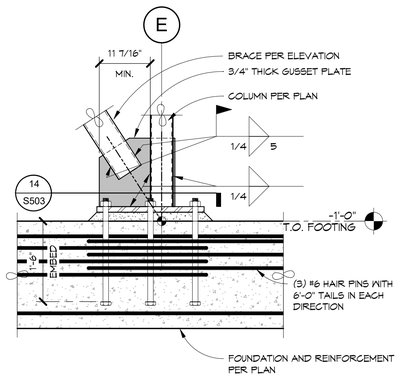
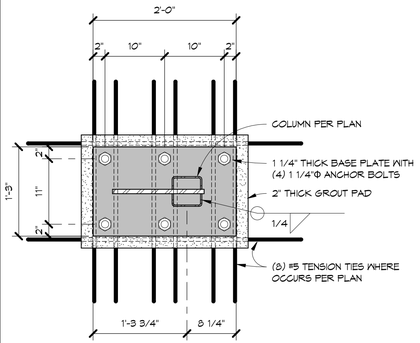
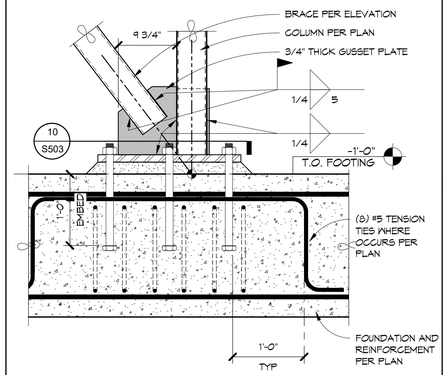


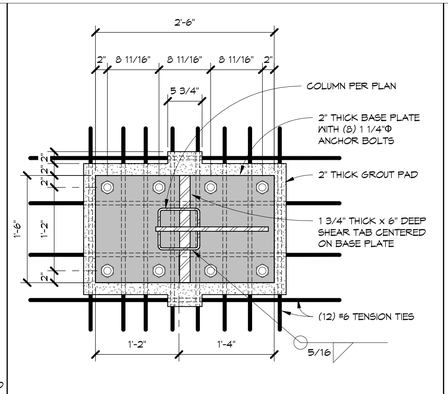
13	DETAIL		
S404	S503	3/4" = 1'-0"	



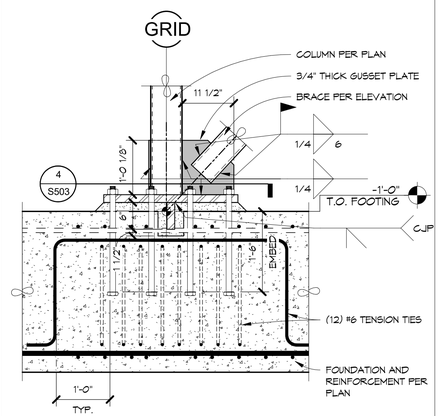
10	DETAIL		
S503	S503	1" = 1'-0"	



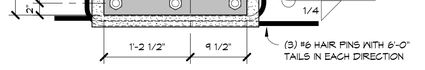
7	DETAIL		
S403	S503	1" = 1'-0"	



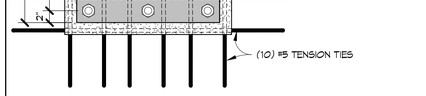
4	DETAIL		
S503	S503	1" = 1'-0"	



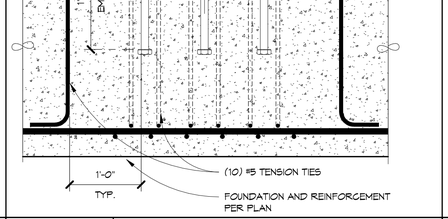
1	DETAIL		
S402	S503	3/4" = 1'-0"	



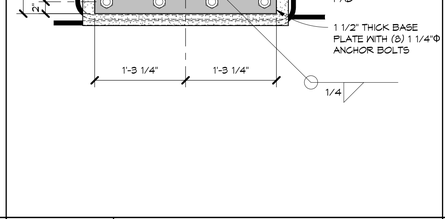
14	DETAIL		
S503	S503	1" = 1'-0"	



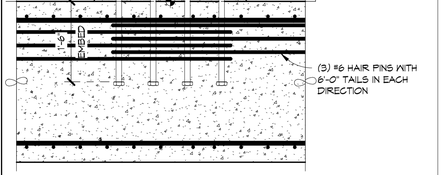
11	DETAIL		
S503	S503	1" = 1'-0"	



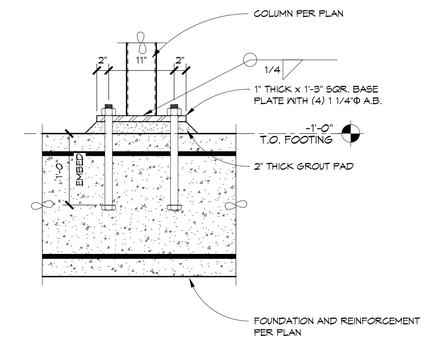
8	DETAIL		
S401	S503	1" = 1'-0"	



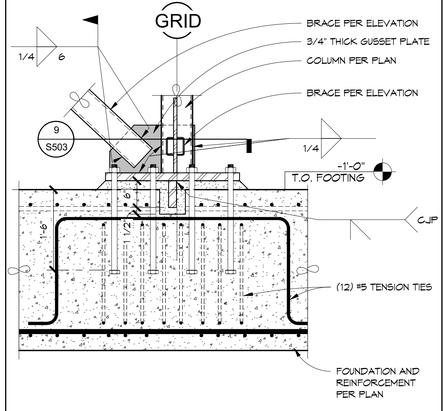
5	DETAIL		
S503	S503	1" = 1'-0"	



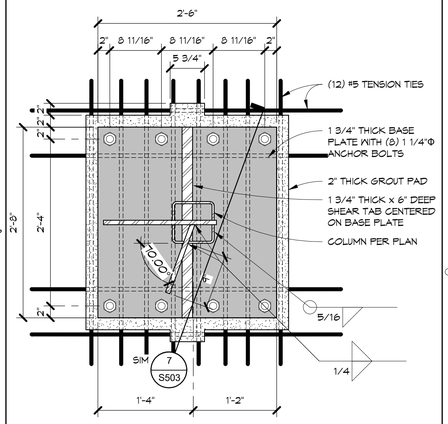
2	DETAIL		
S401	S503	3/4" = 1'-0"	



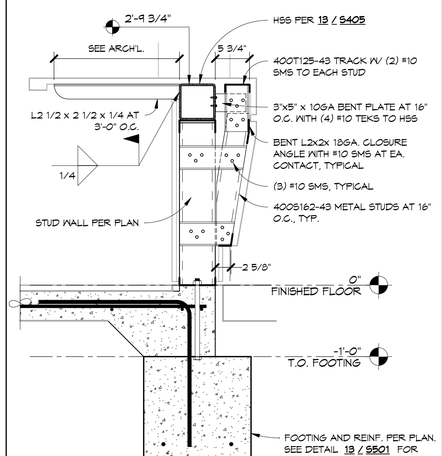
15	DETAIL		
S403	S503	1" = 1'-0"	



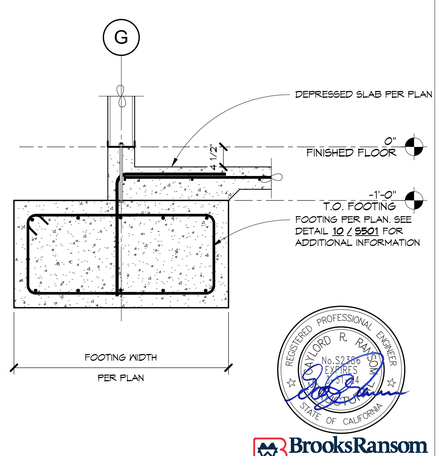
12	DETAIL		
S402	S503	3/4" = 1'-0"	



9	DETAIL		
S503	S503	1" = 1'-0"	



6	DETAIL		
S405	S503	1" = 1'-0"	



3	DETAIL		
S201	S503	3/4" = 1'-0"	

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

ARCHITECTS
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.
GONZALEZ
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711

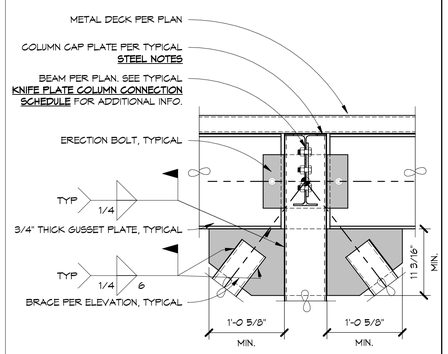
REGISTERED PROFESSIONAL ENGINEER
TAYLORD R. RANSOM
No. S23422
EXPIRES
STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
745 N. PALM AVE, STE 300 | FRESNO, CA 93728
(559) 449-8444 OFFICE | (559) 449-8404 FAX
23422

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
FOUNDATION DETAILS

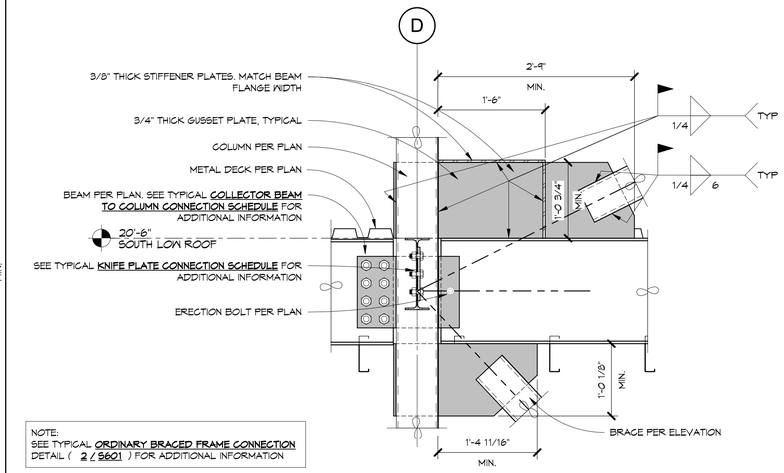
S503

4/11/2024 5:01:36 PM
C:\Users\Brandon\Documents\23422 Fairmead MPR (R23)_brandonyTU5ZN.rvt



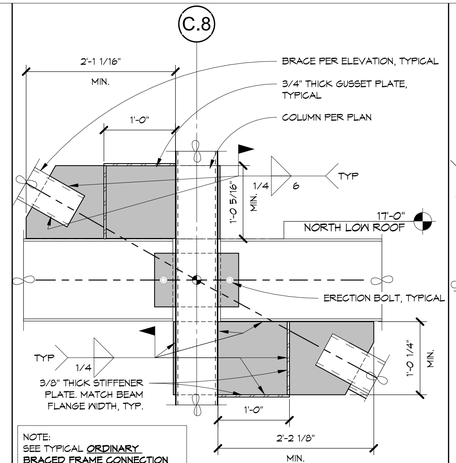
NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

13	DETAIL	
S401	S601	1" = 1'-0"



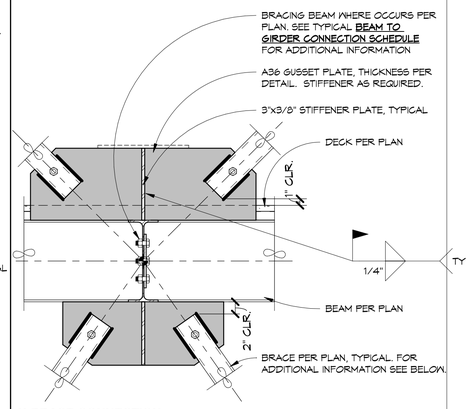
NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

10	DETAIL	
S402	S601	1" = 1'-0"

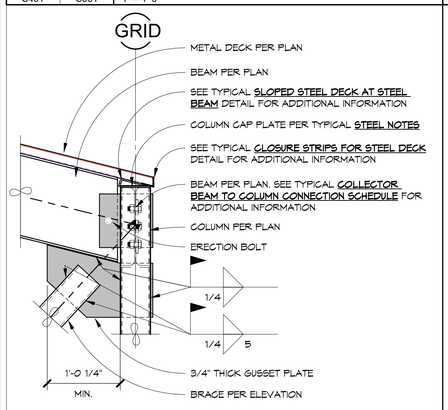


NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

4	DETAIL	
S402	S601	1" = 1'-0"

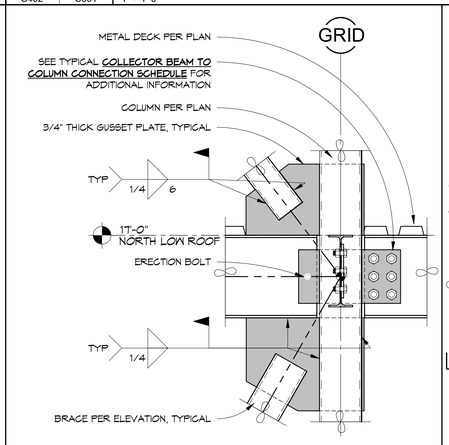


X-BRACE CONNECTION



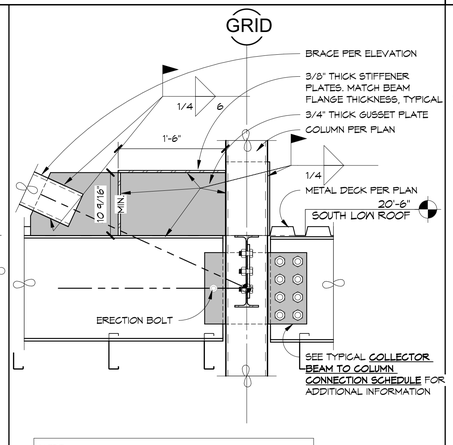
NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

14	DETAIL	
S403	S601	1" = 1'-0"



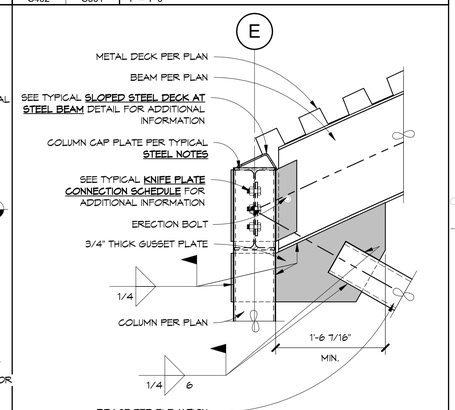
NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

11	DETAIL	
S401	S601	1" = 1'-0"



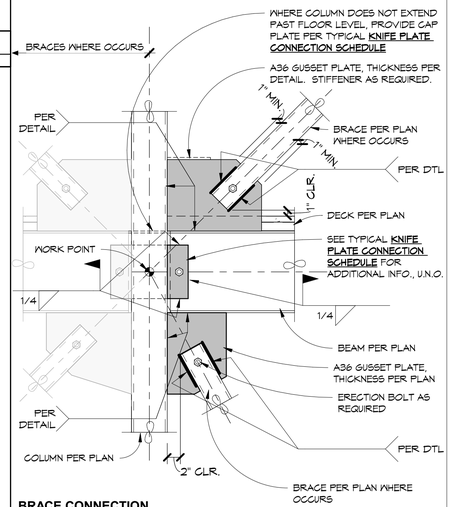
NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

8	DETAIL	
S402	S601	1" = 1'-0"



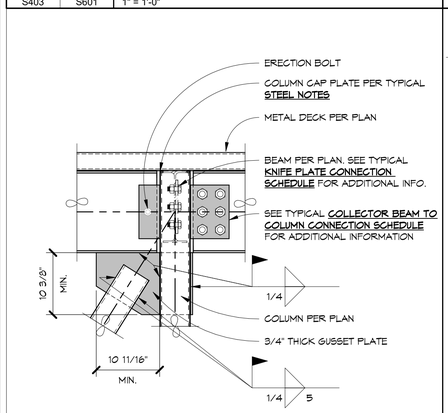
NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

5	DETAIL	
S402	S601	1" = 1'-0"



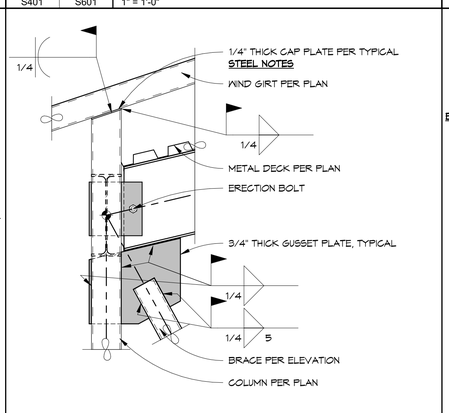
BRACE CONNECTION

2	ORDINARY BRACED FRAME CONN.	
	S601	NOT TO SCALE



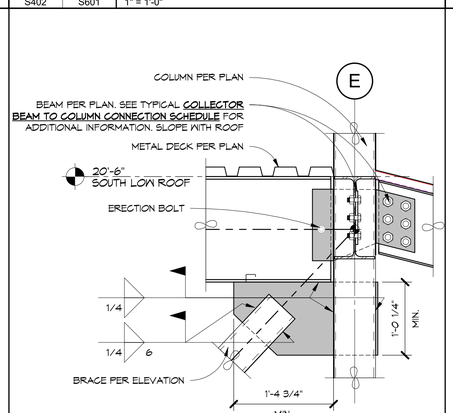
NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

15	DETAIL	
S403	S601	1" = 1'-0"



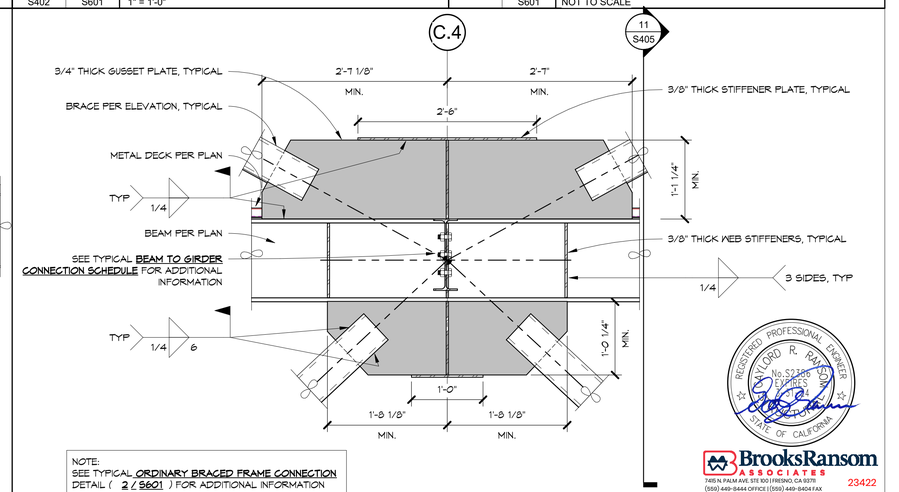
NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

12	DETAIL	
S405	S601	1" = 1'-0"



NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

9	DETAIL	
S402	S601	1" = 1'-0"



NOTE:
SEE TYPICAL ORDINARY BRACED FRAME CONNECTION DETAIL (2 / S601) FOR ADDITIONAL INFORMATION

6	DETAIL	
S402	S601	1" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
TAYLORD R. RANSOM
No. S23422
EXPIRES 12/31/2025
STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
745 N. PALM AVE. STE 300 | FRESNO, CA 93711
(559) 449-8444 OFFICE | (559) 449-8404 FAX
23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
BRACED FRAME DETAILS

S601

4/11/2024 5:01:40 PM
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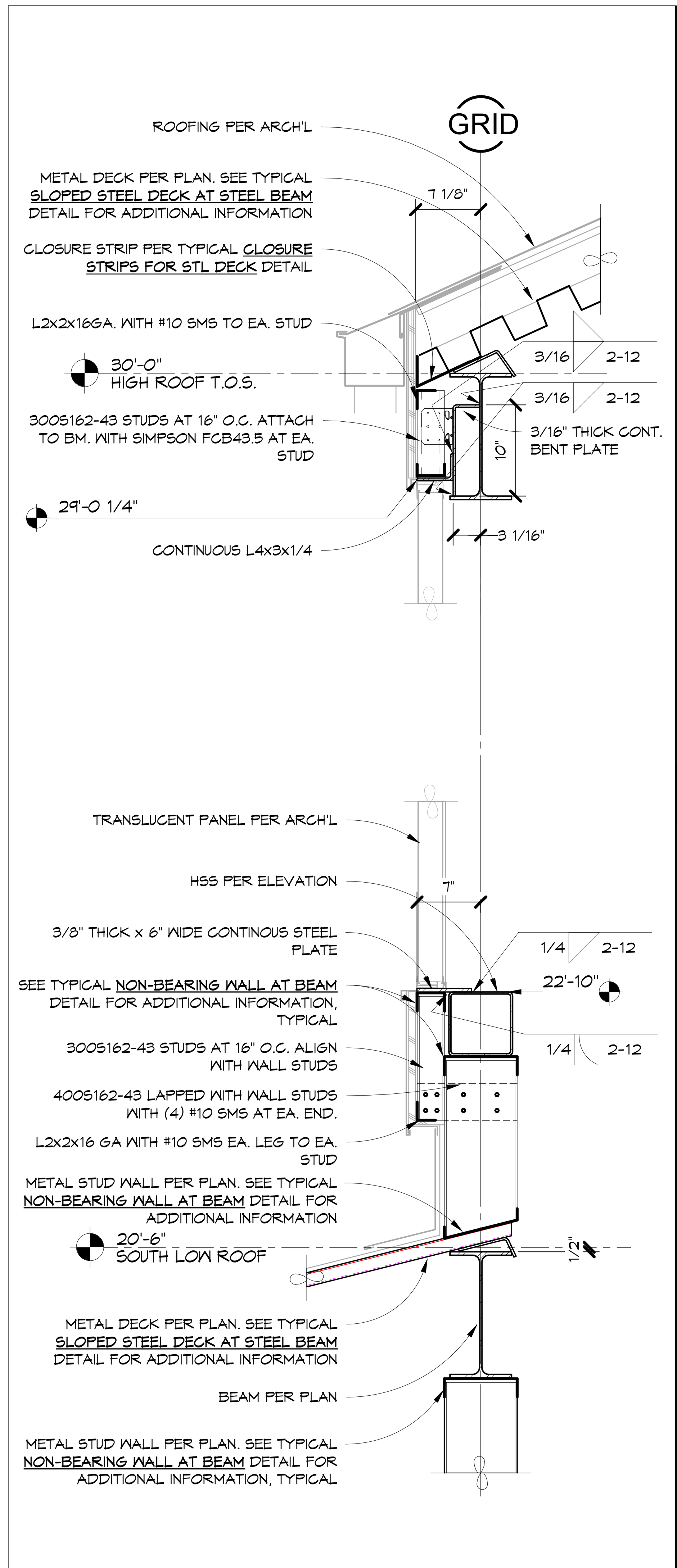
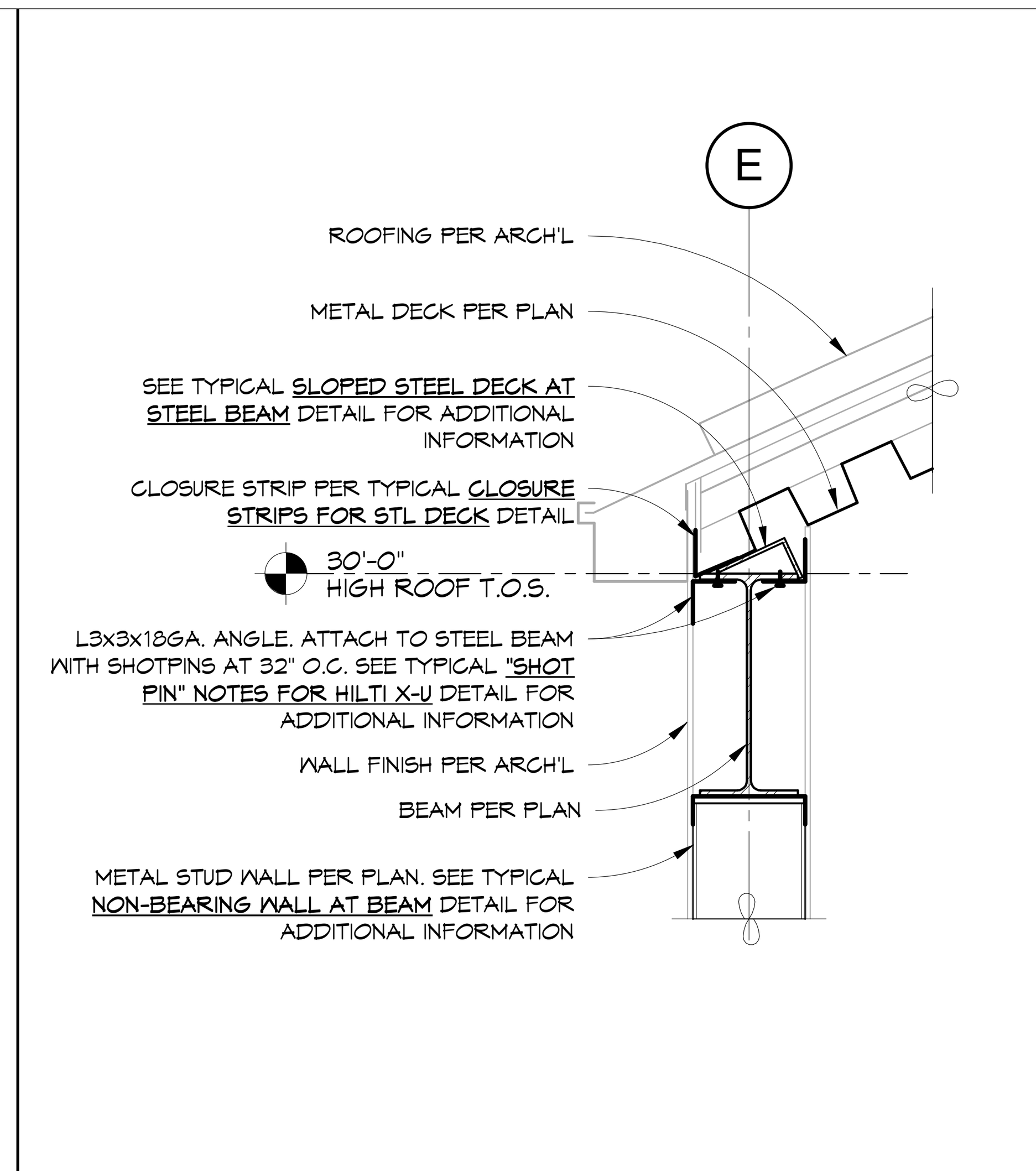
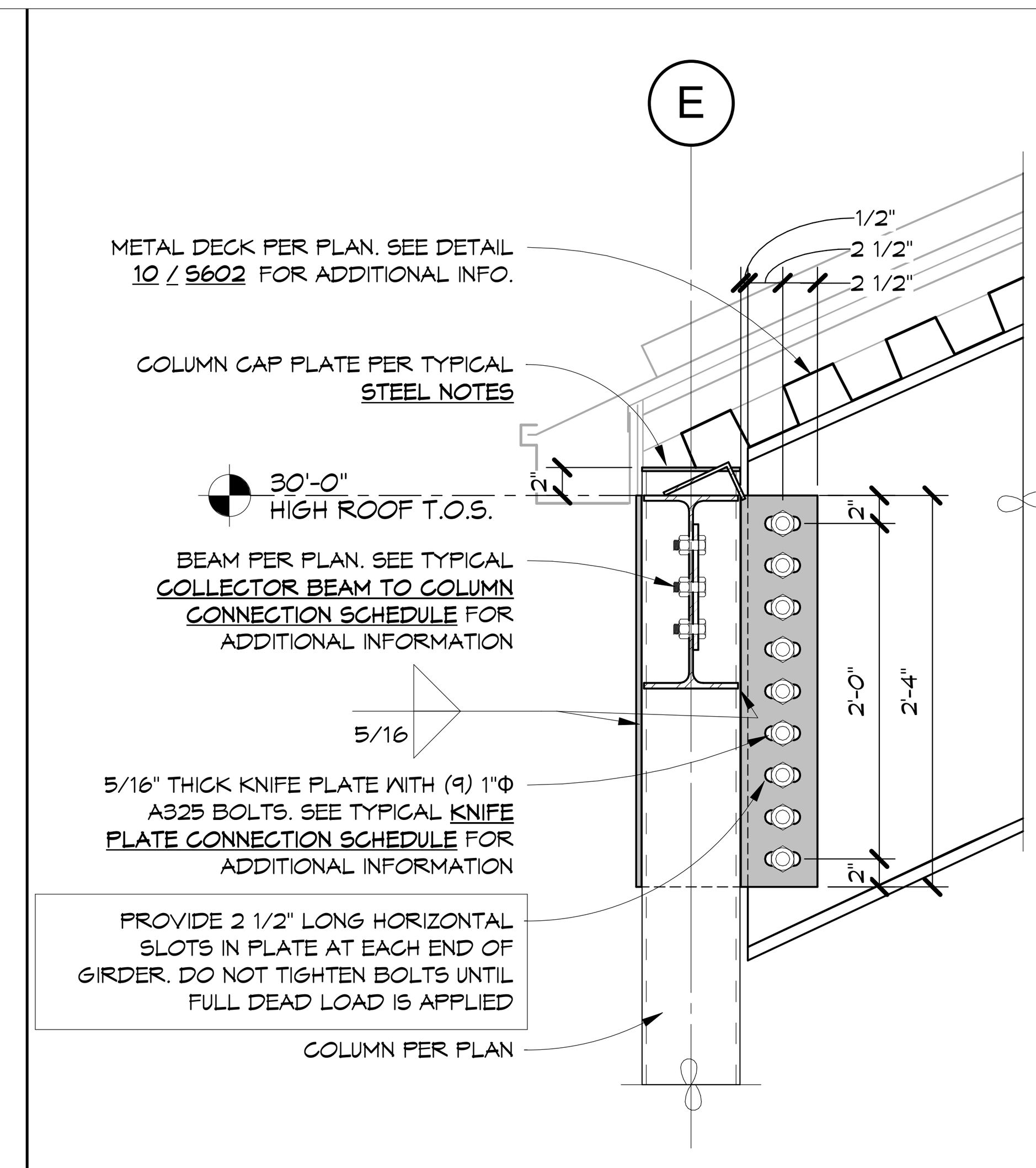


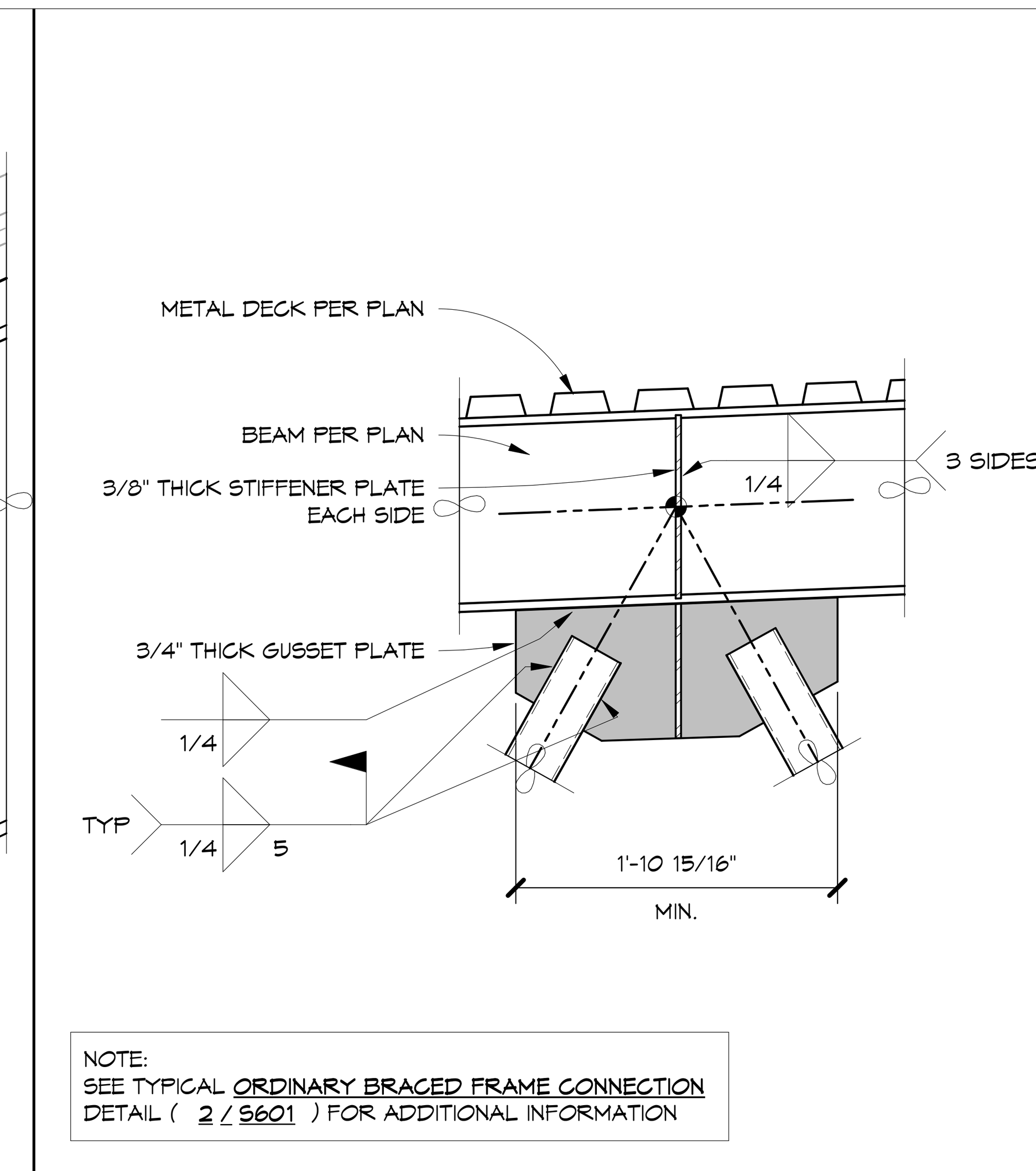
14 DETAIL
S301 S602 1" = 1'-0"



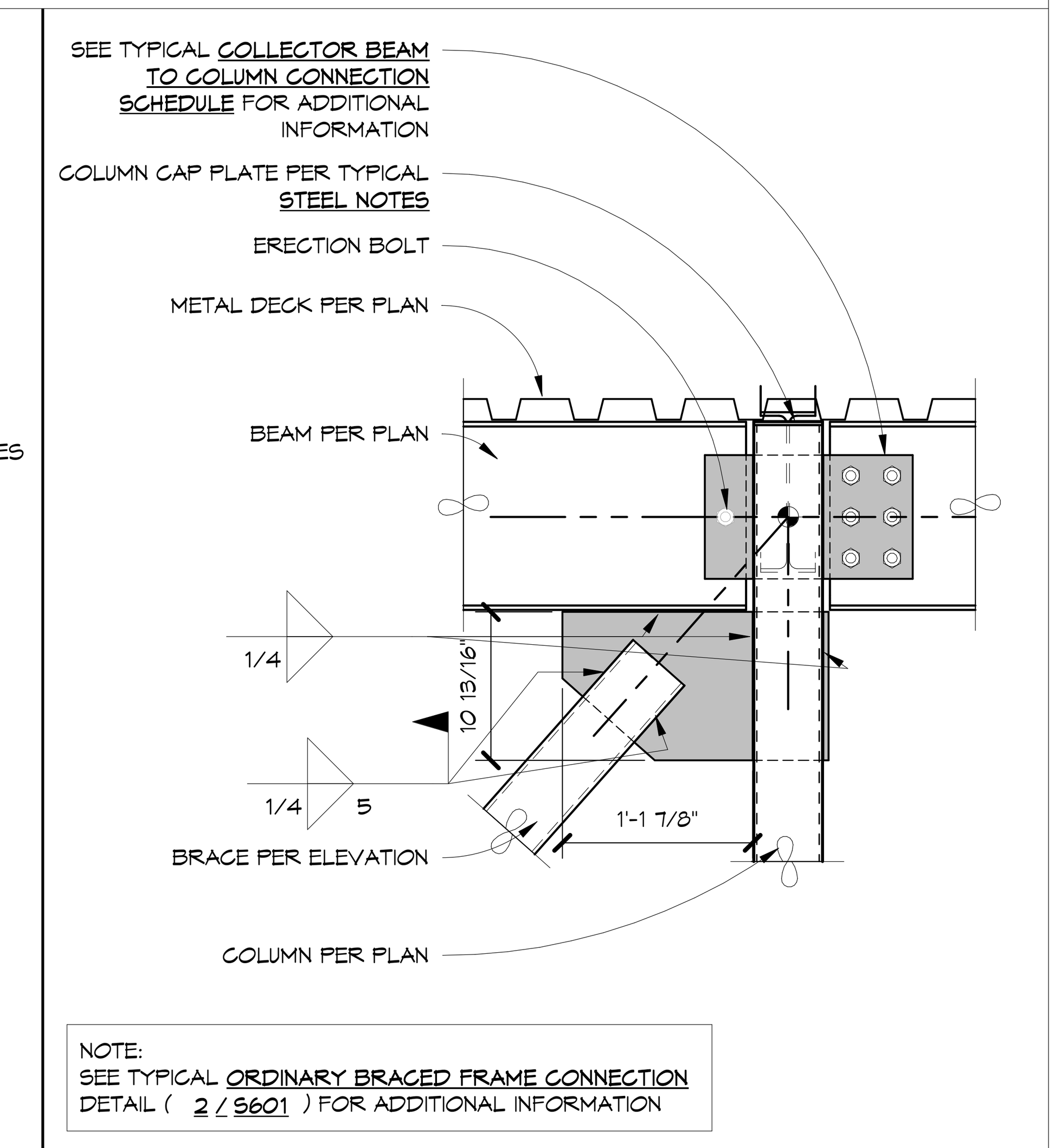
10 DETAIL
S405 S602 1" = 1'-0"



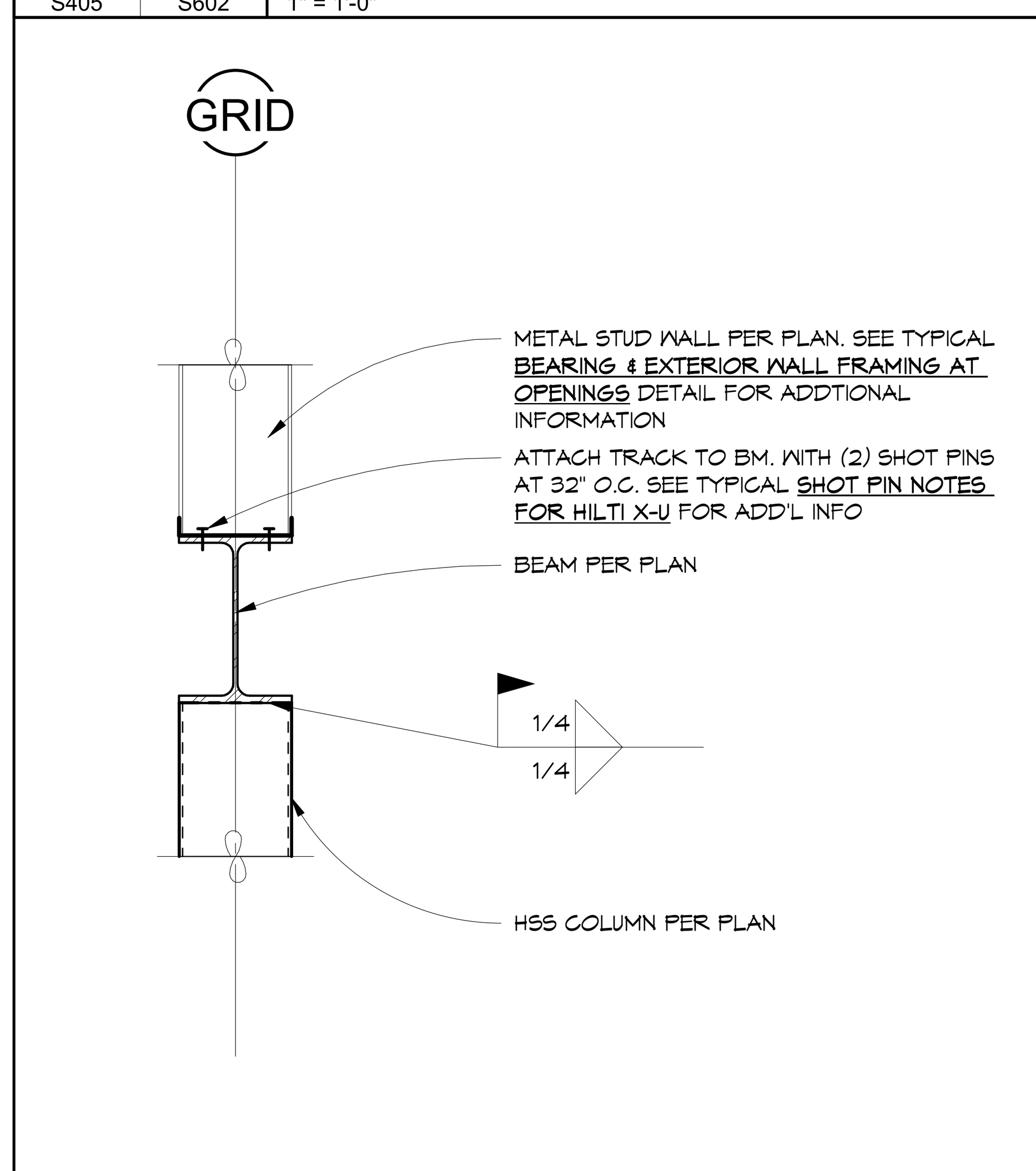
7 DETAIL
S302 S602 1" = 1'-0"



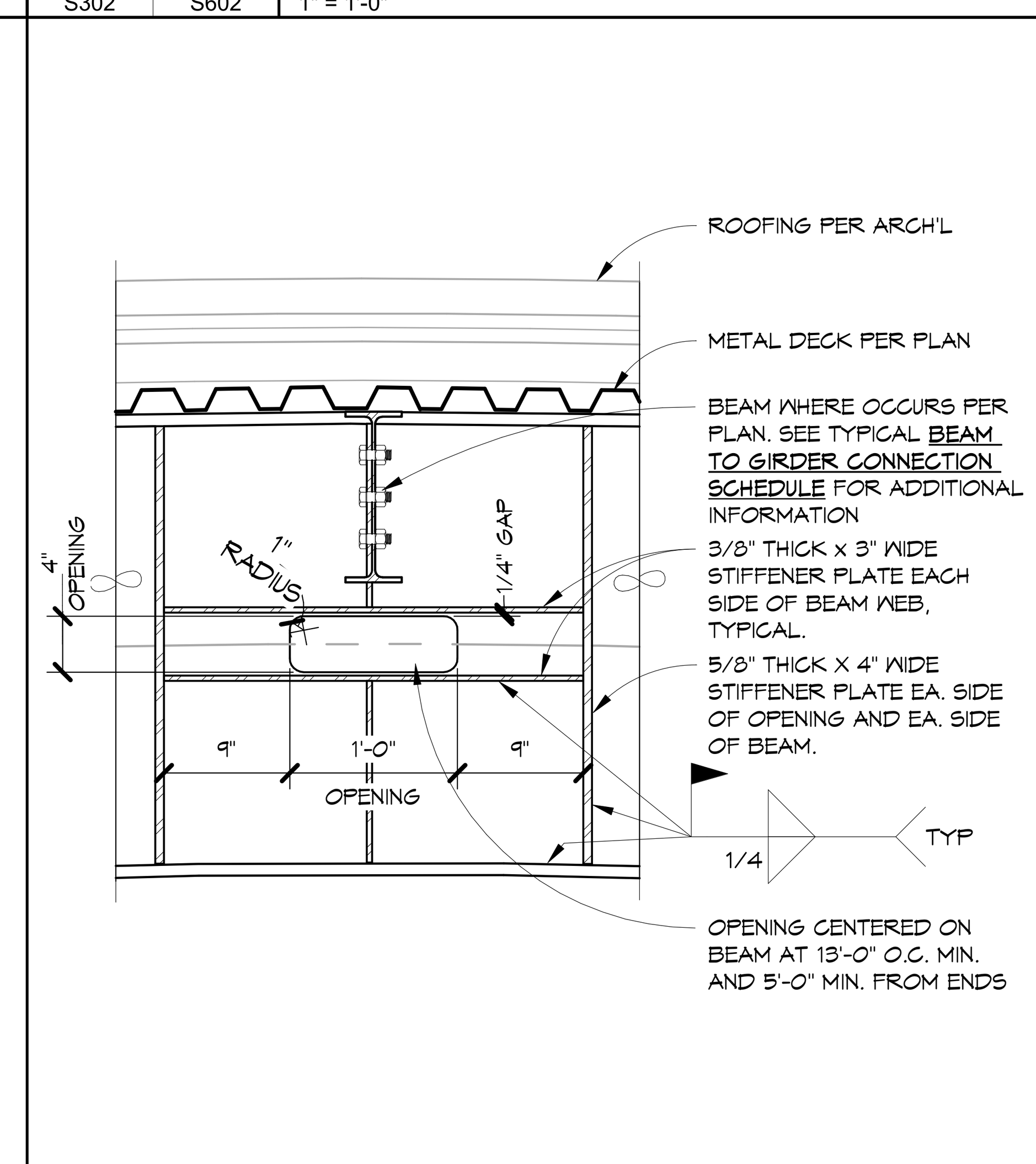
4 DETAIL
S403 S602 1" = 1'-0"



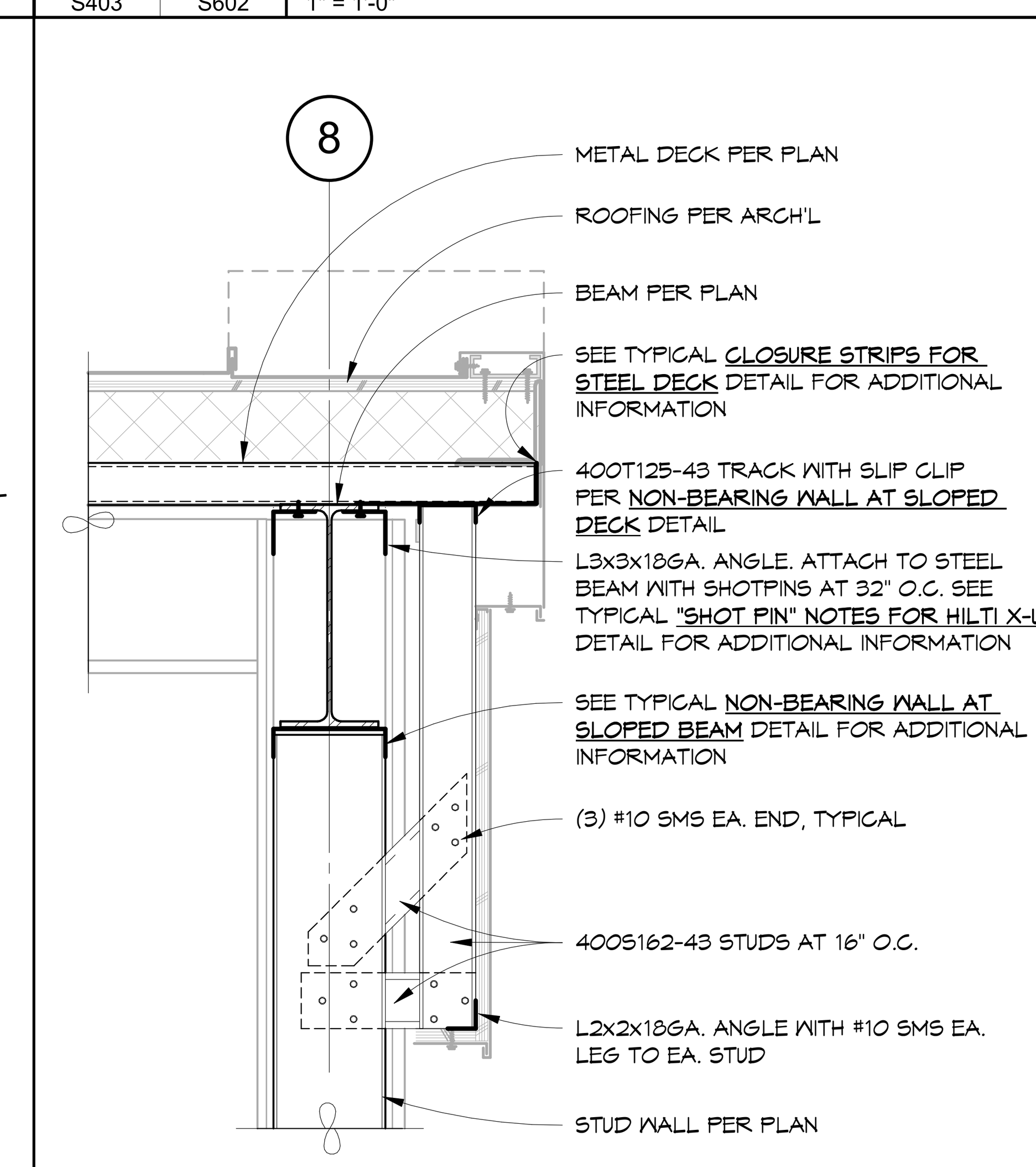
1 DETAIL
S403 S602 1" = 1'-0"



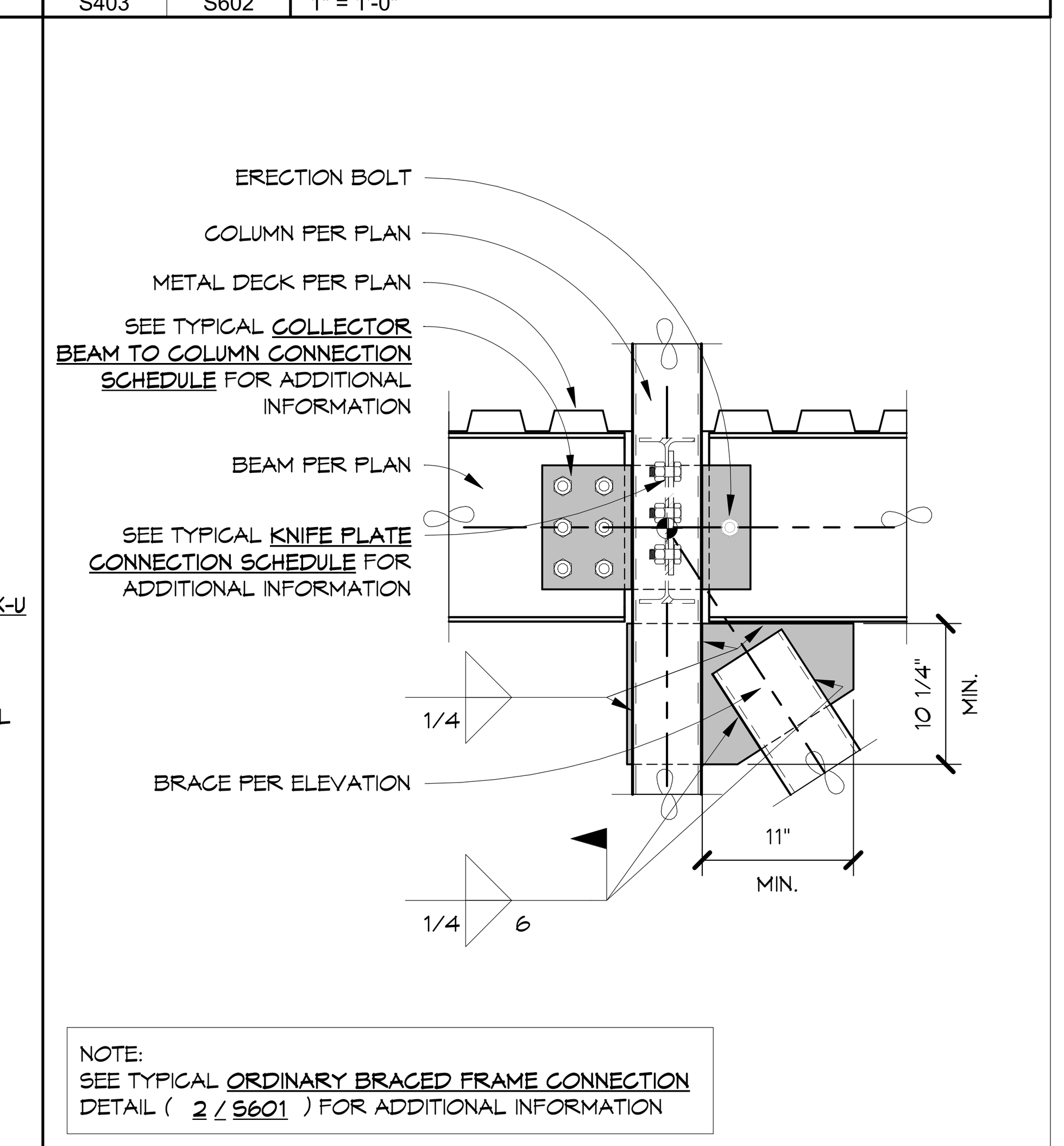
11 DETAIL
S401 S602 1" = 1'-0"



8 DETAIL
S302 S602 1" = 1'-0"



5 DETAIL
S405 S602 1" = 1'-0"



2 DETAIL
S404 S602 1" = 1'-0"

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

REGISTERED PROFESSIONAL ENGINEER
GAYLORD R. RANSOM
No. S2386
STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
23422

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)

SHEET TITLE:
BRACED FRAME AND HIGH ROOF FRAMING DETAILS

S602

4/11/2024 5:01:43 PM
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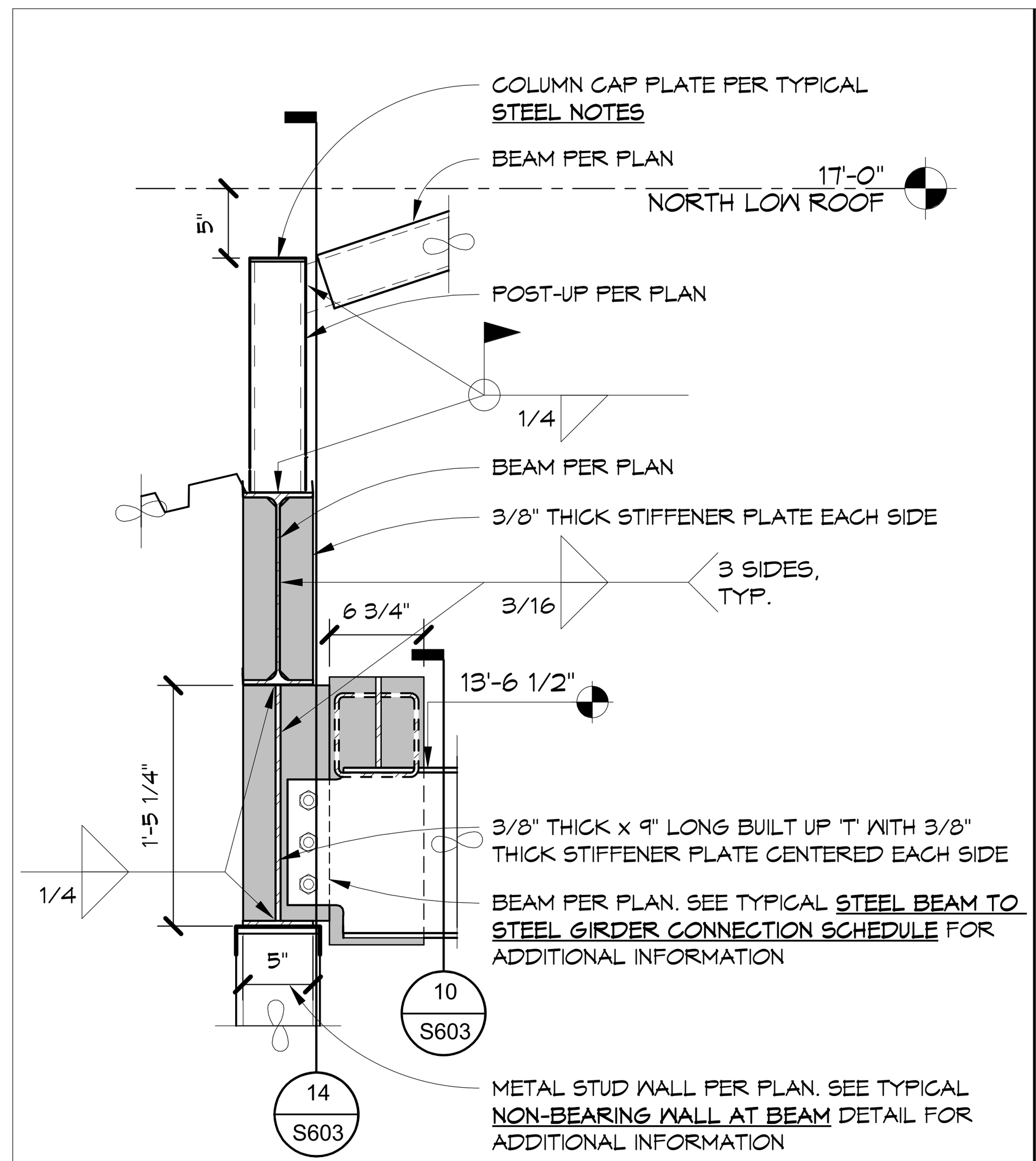
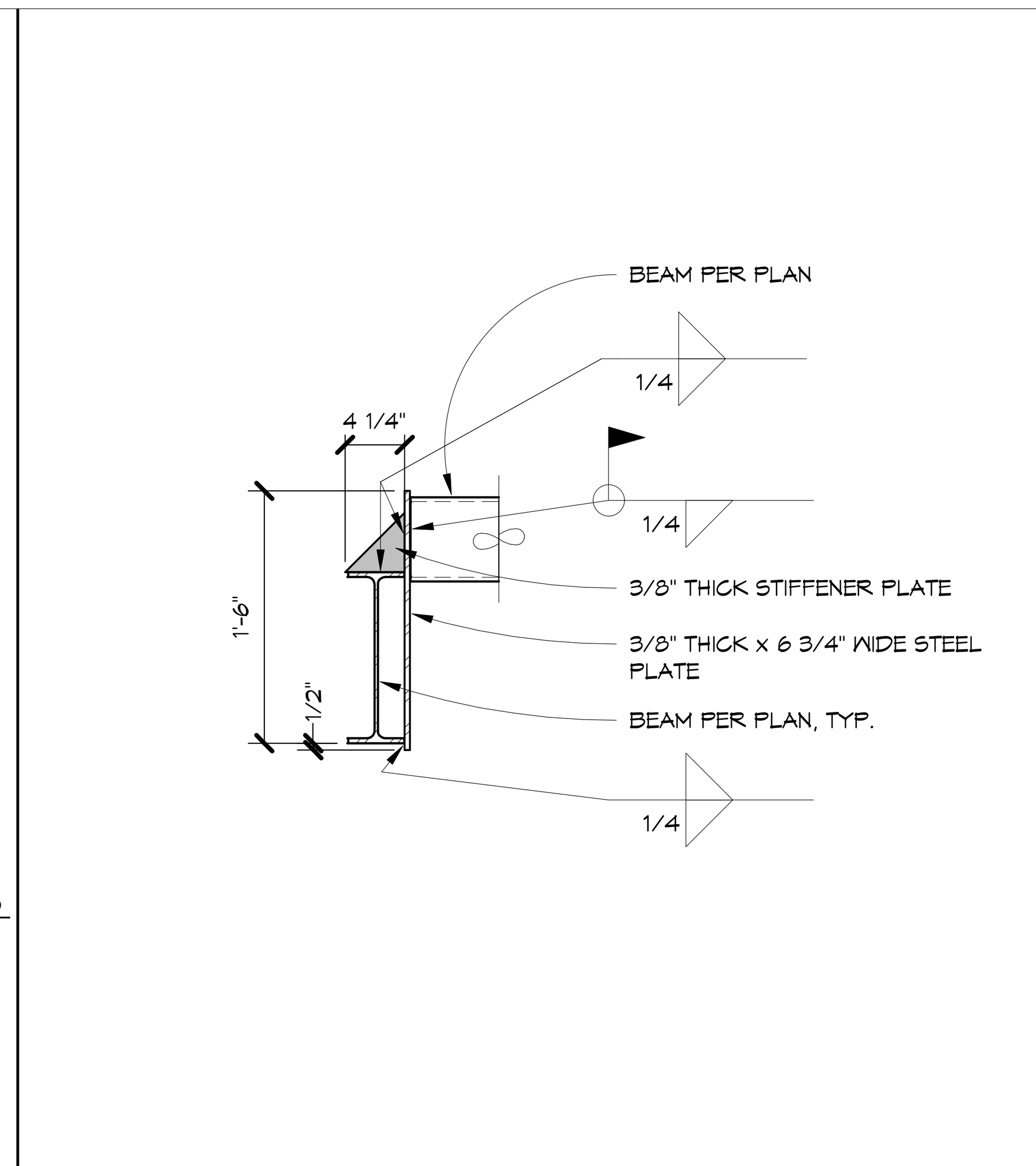
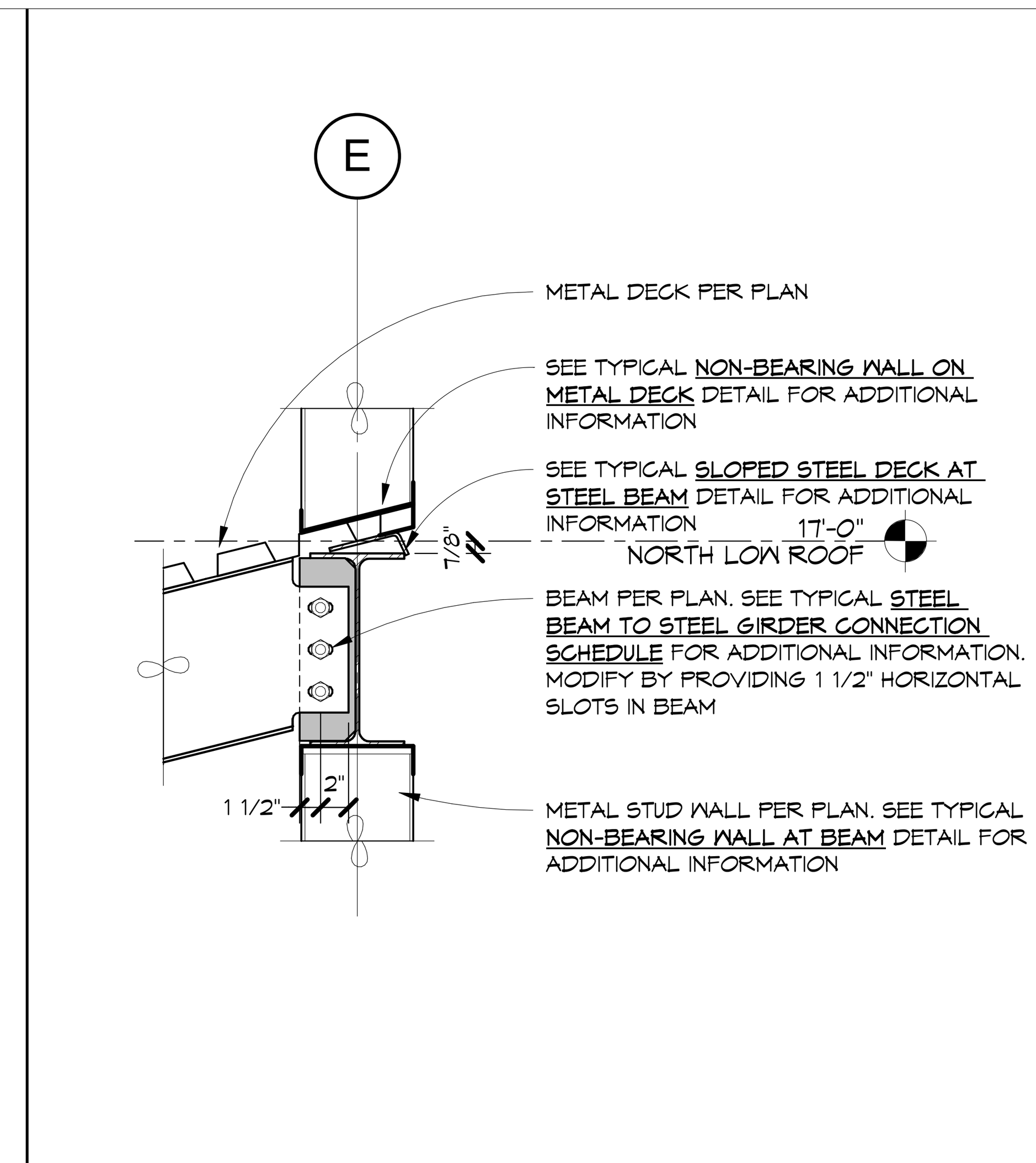


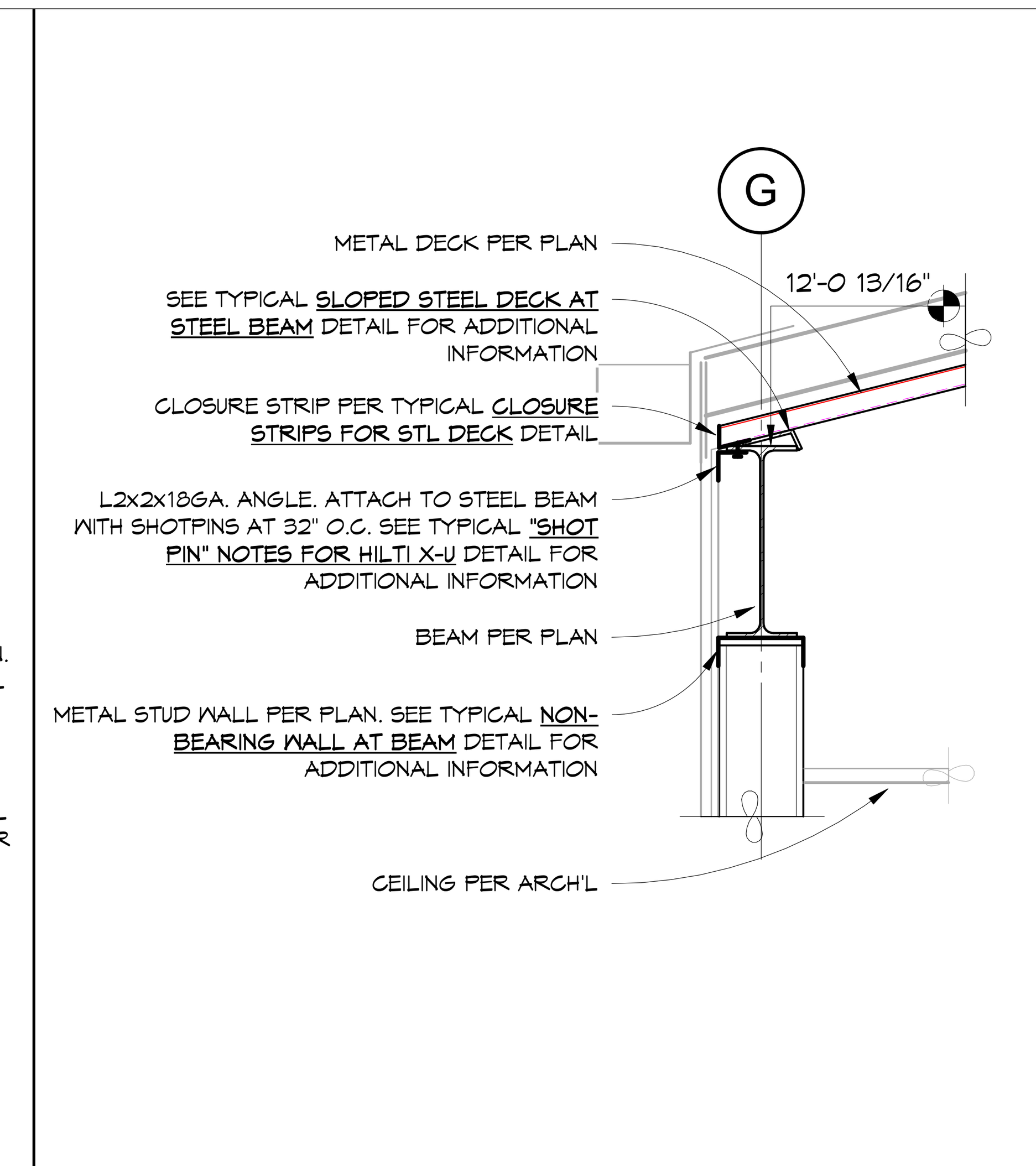
13 DETAIL
S301 S603 1" = 1'-0"



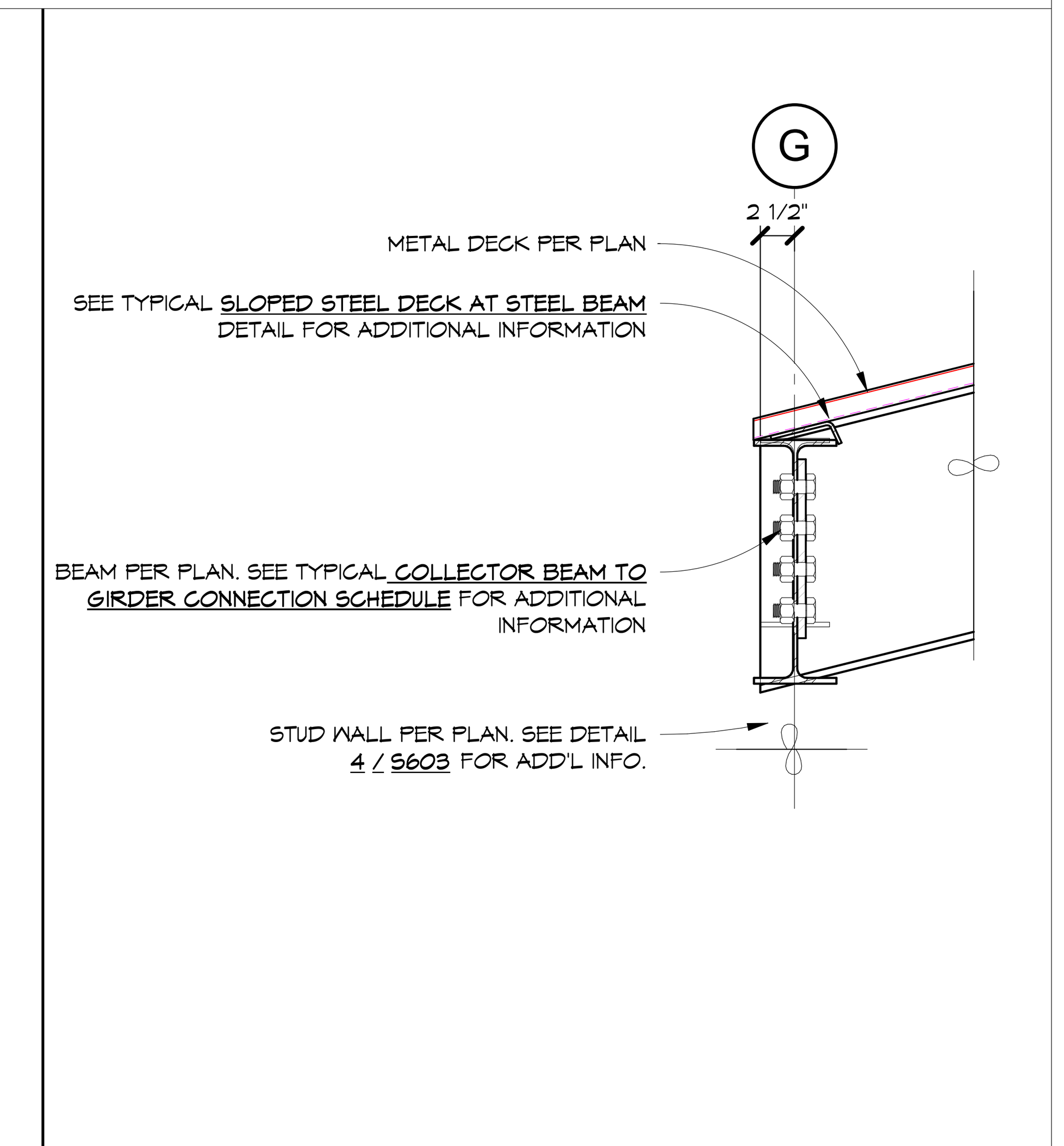
10 DETAIL
S405 S603 1" = 1'-0"



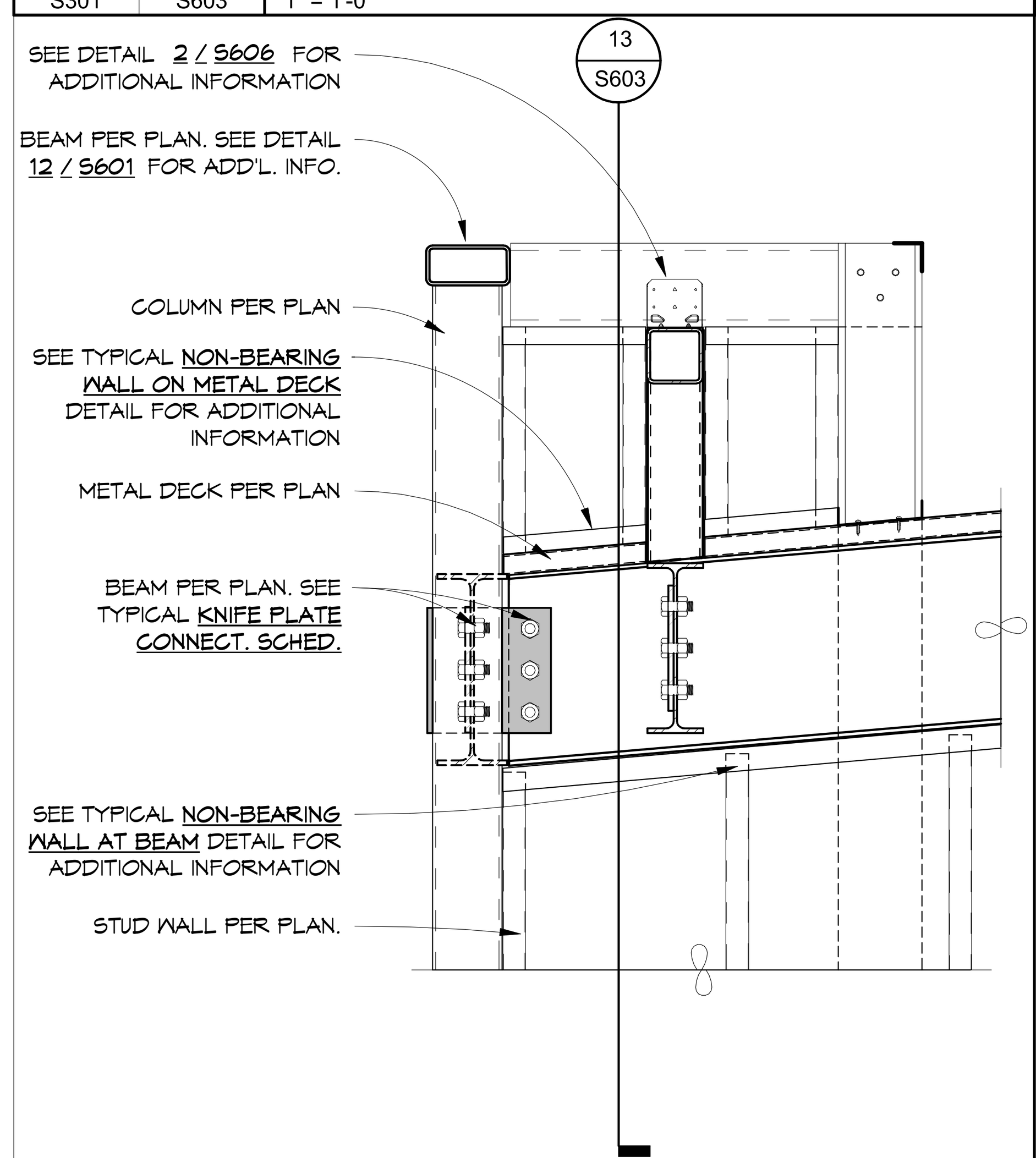
7 DETAIL
S303 S603 1" = 1'-0"



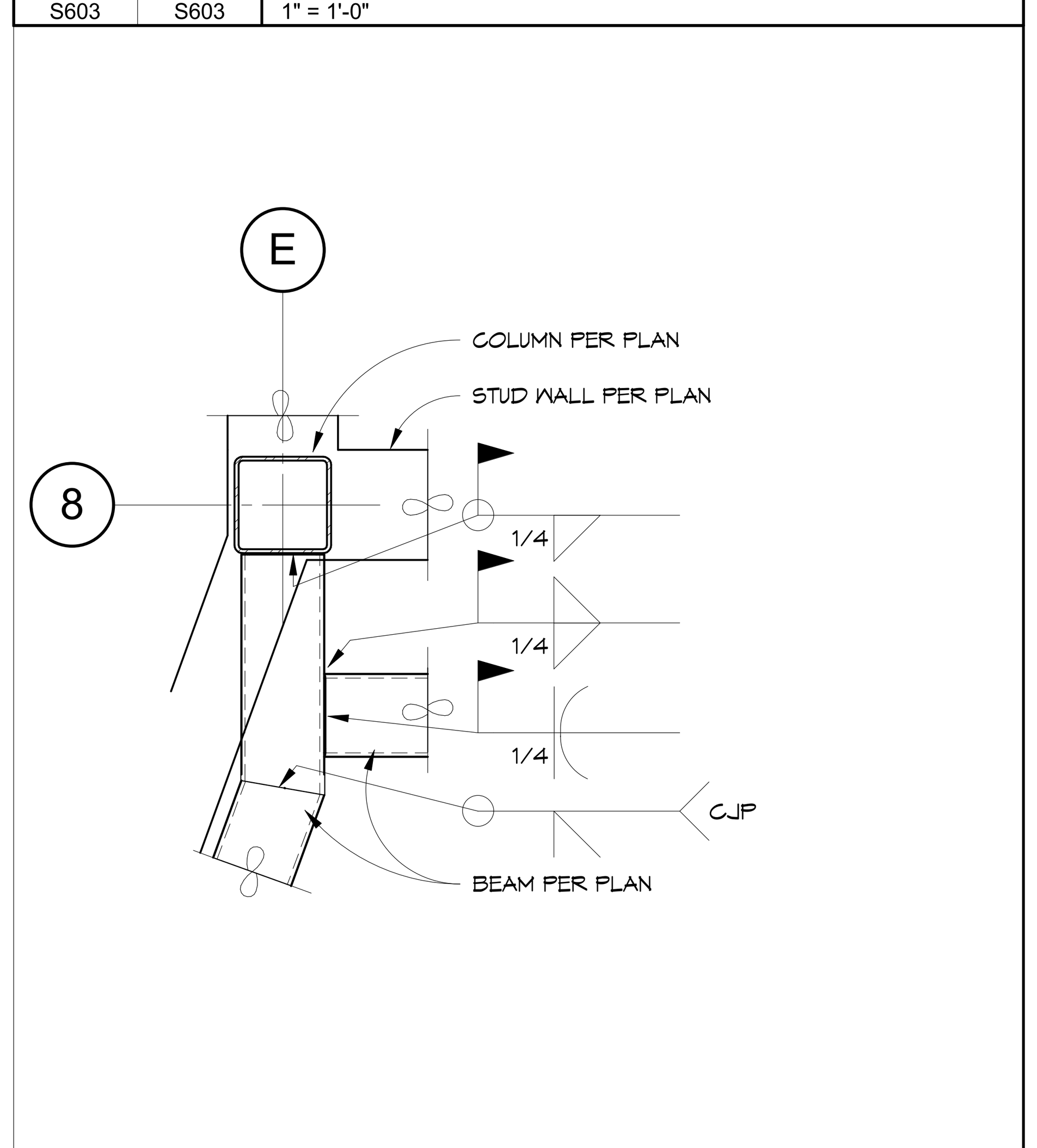
4 DETAIL
S301 S603 1" = 1'-0"



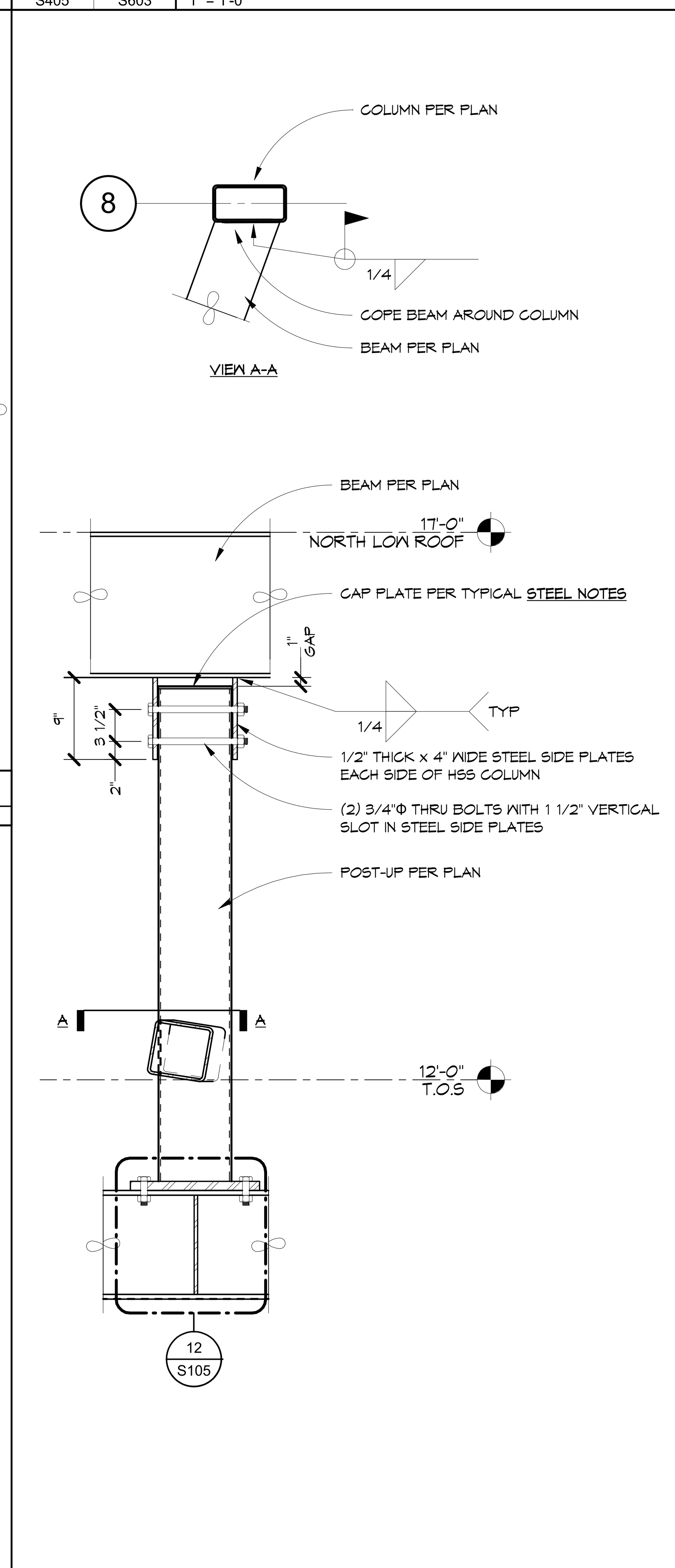
1 DETAIL
S404 S603 1" = 1'-0"



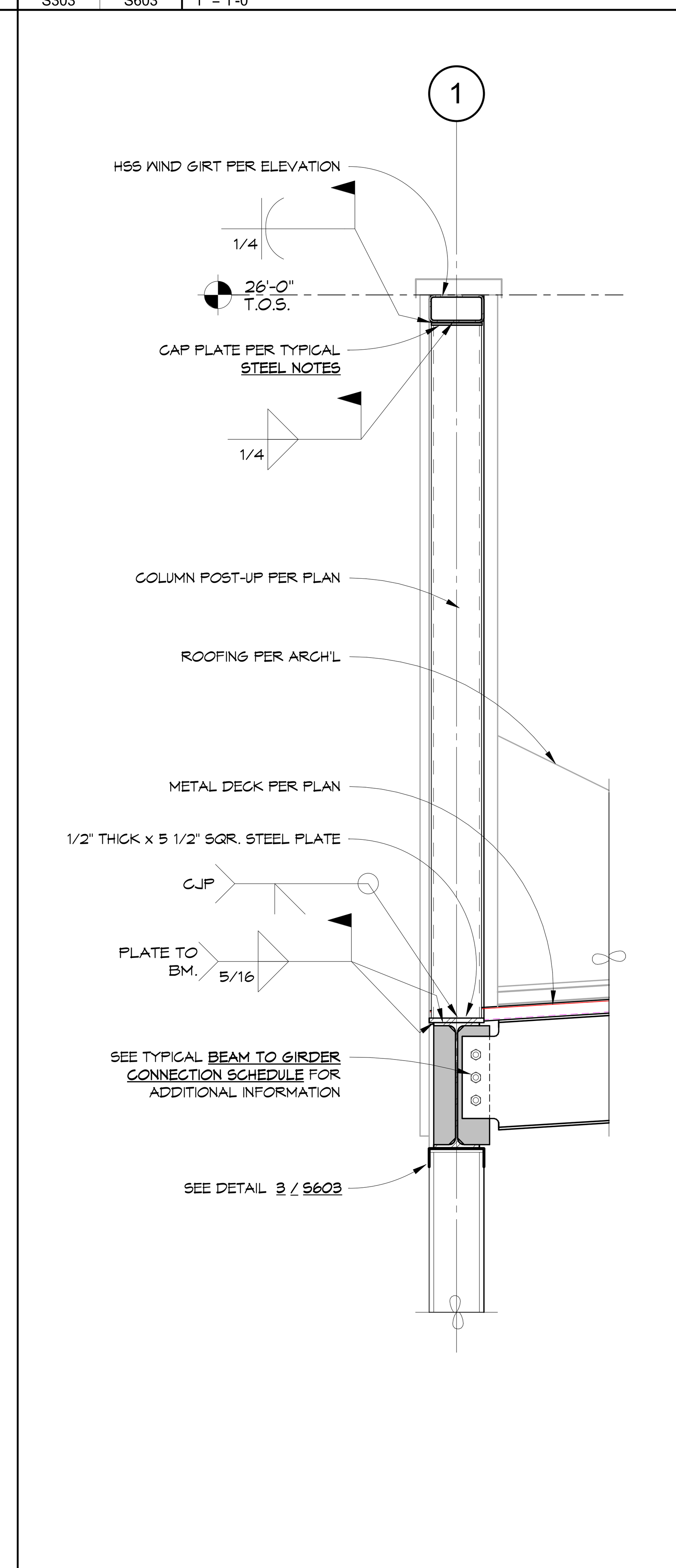
14 DETAIL
S603 S603 1" = 1'-0"



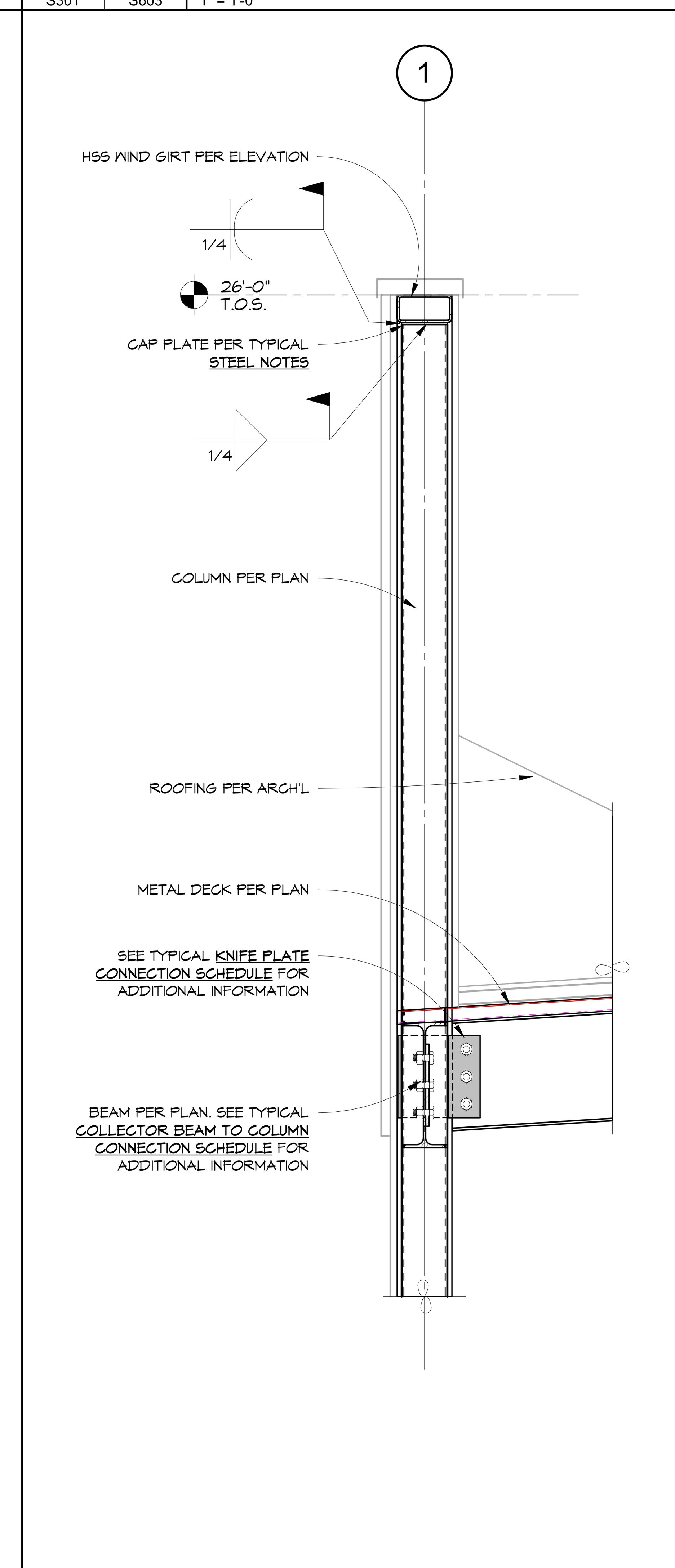
15 DETAIL
S301 S603 1" = 1'-0"



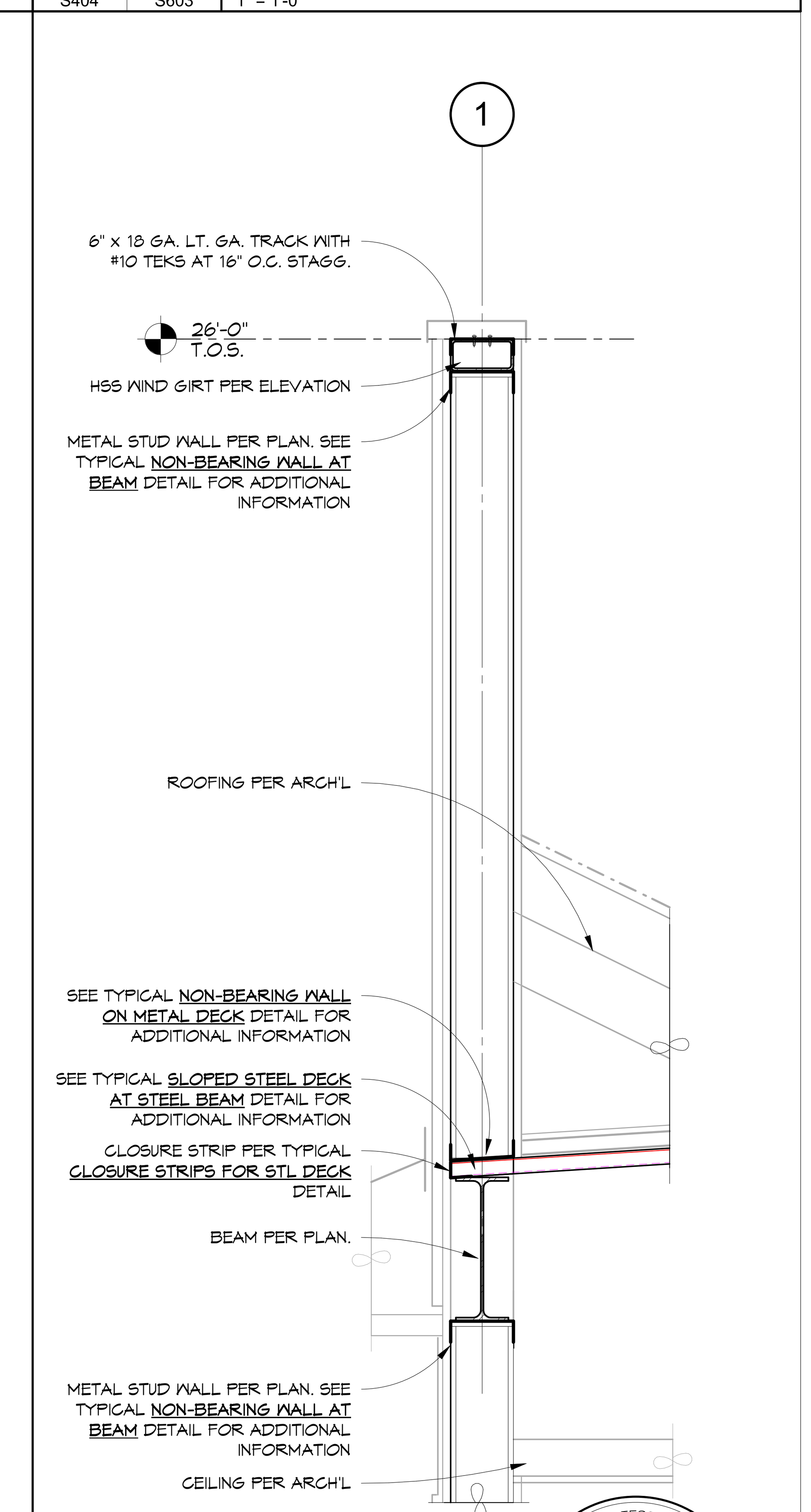
12 DETAIL
S301 S603 1" = 1'-0"



9 DETAIL
S301 S603 1" = 1'-0"



6 DETAIL
S301 S603 1" = 1'-0"



3 DETAIL
S404 S603 1" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER GAYLORD R. RANSOM No. S2386 STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
7405 N. PALM AVE. STE 100 | FRESNO, CA 93711
(559) 449-8444 OFFICE | (559) 449-8404 FAX
23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-1286 RENEWAL DATE 12/31/2013 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

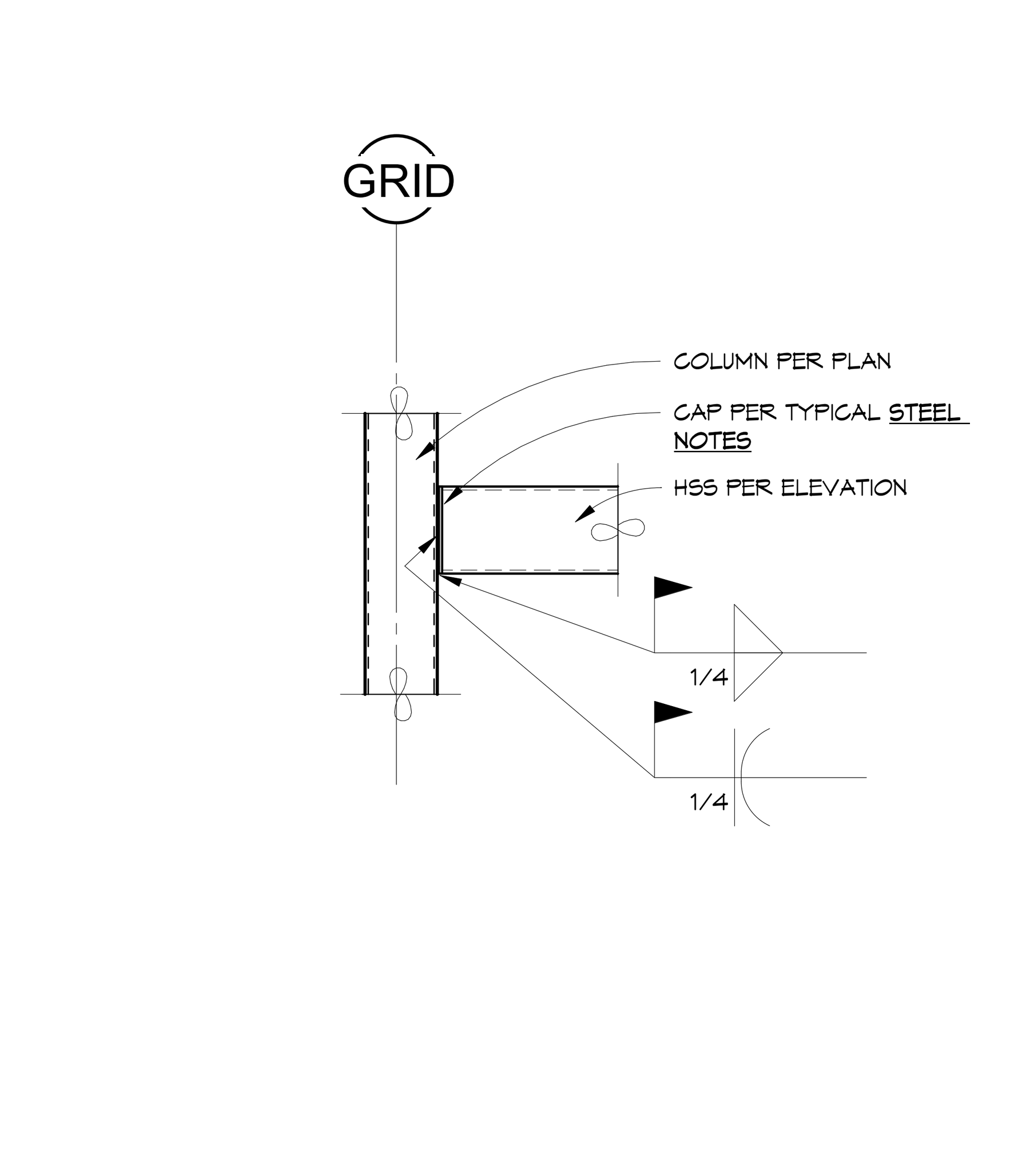
GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)

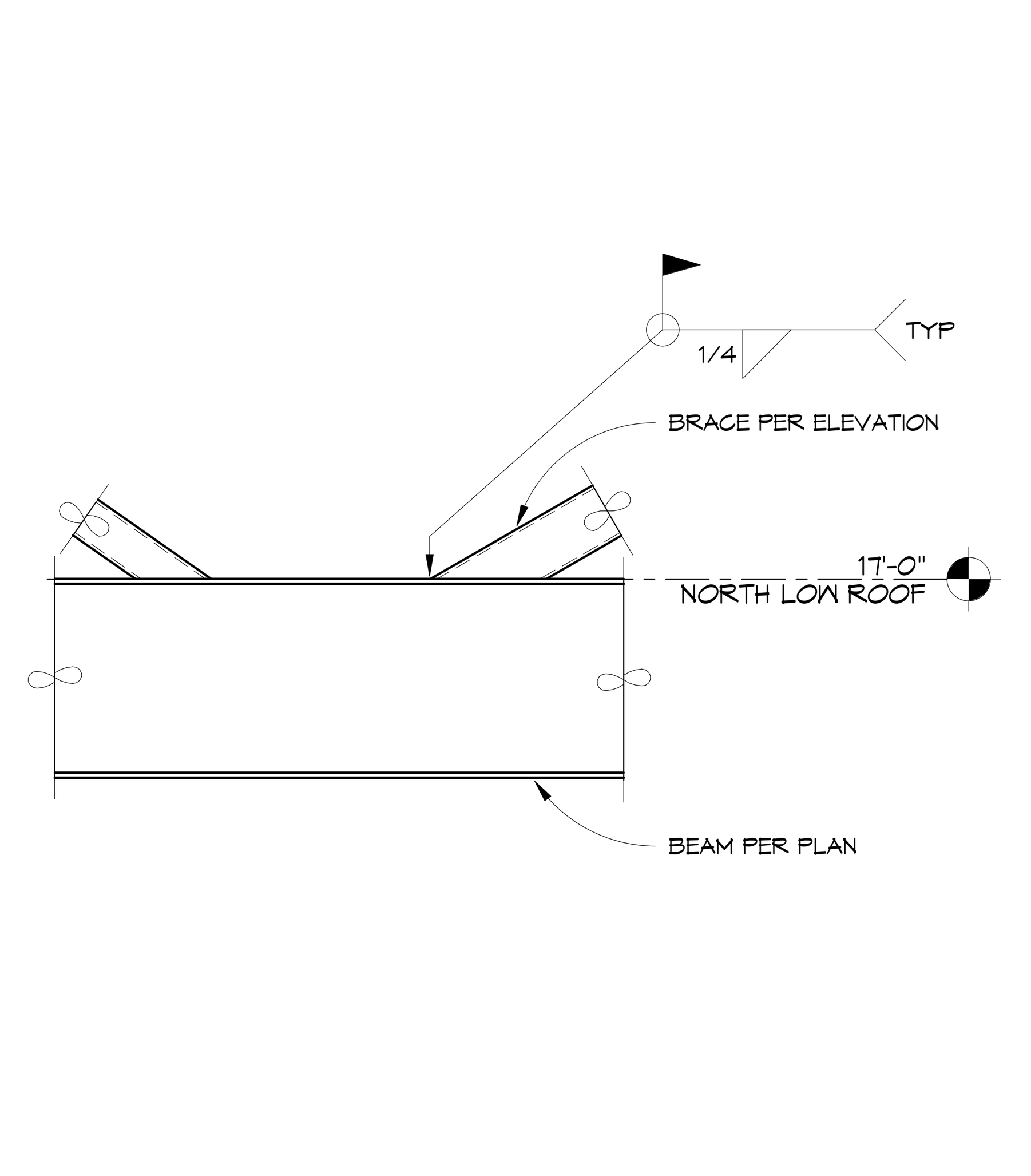
SHEET TITLE:
LOW ROOF FRAMING DETAILS

S603

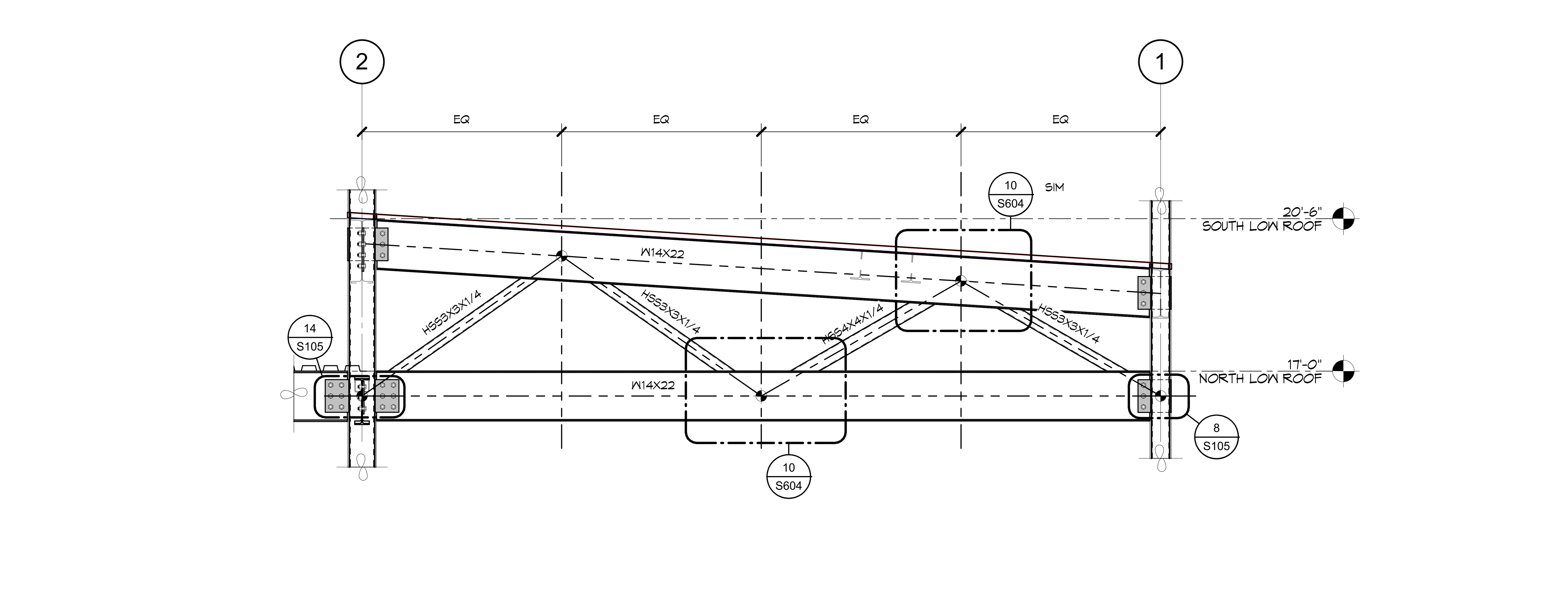
4/11/2024 5:01:46 PM
C:\Users\BrandonY\Documents\23422 Fairmead MPR (R23)_brandonyTU5ZN.rvt



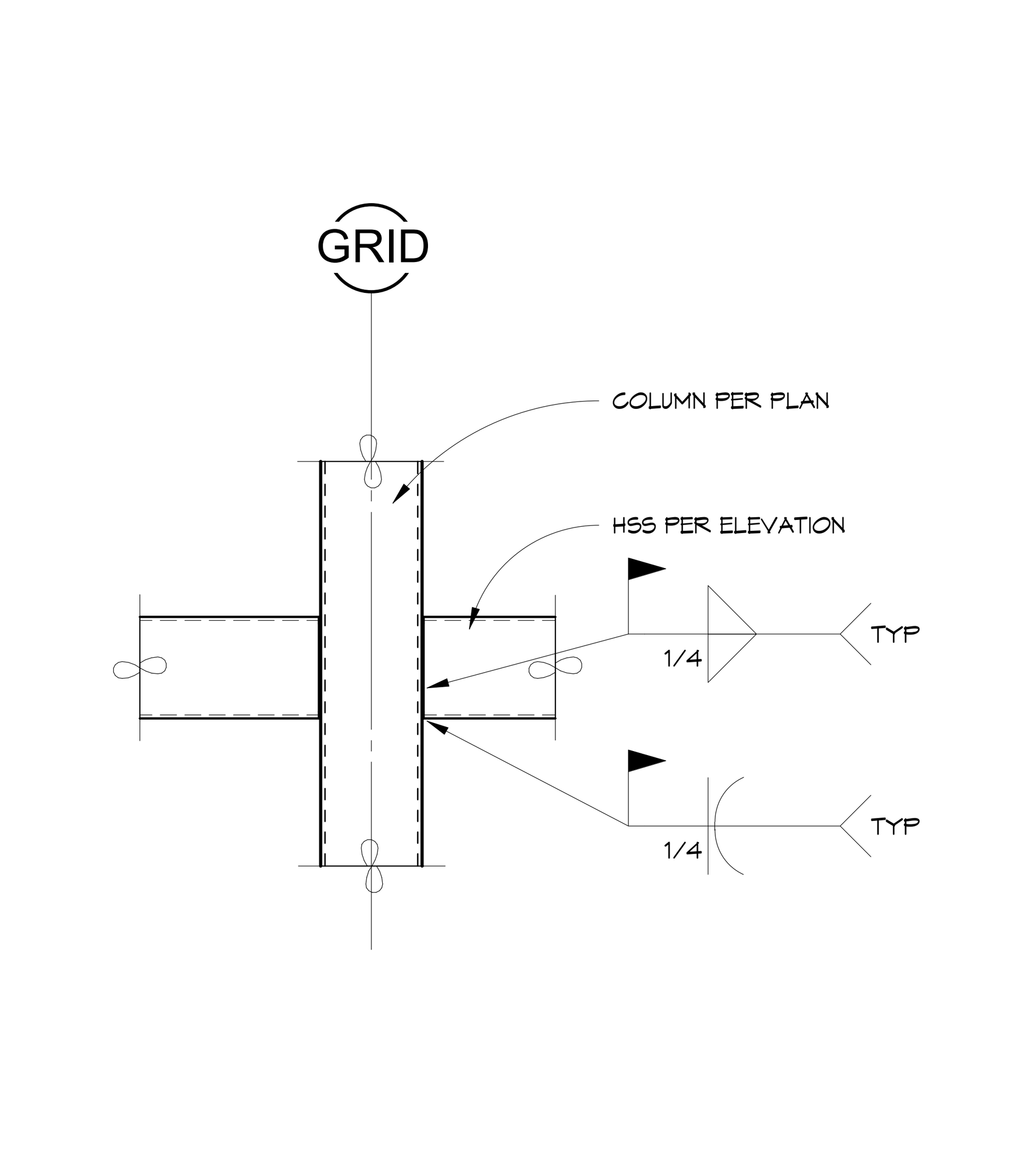
13 DETAIL
S402 S604 1" = 1'-0"



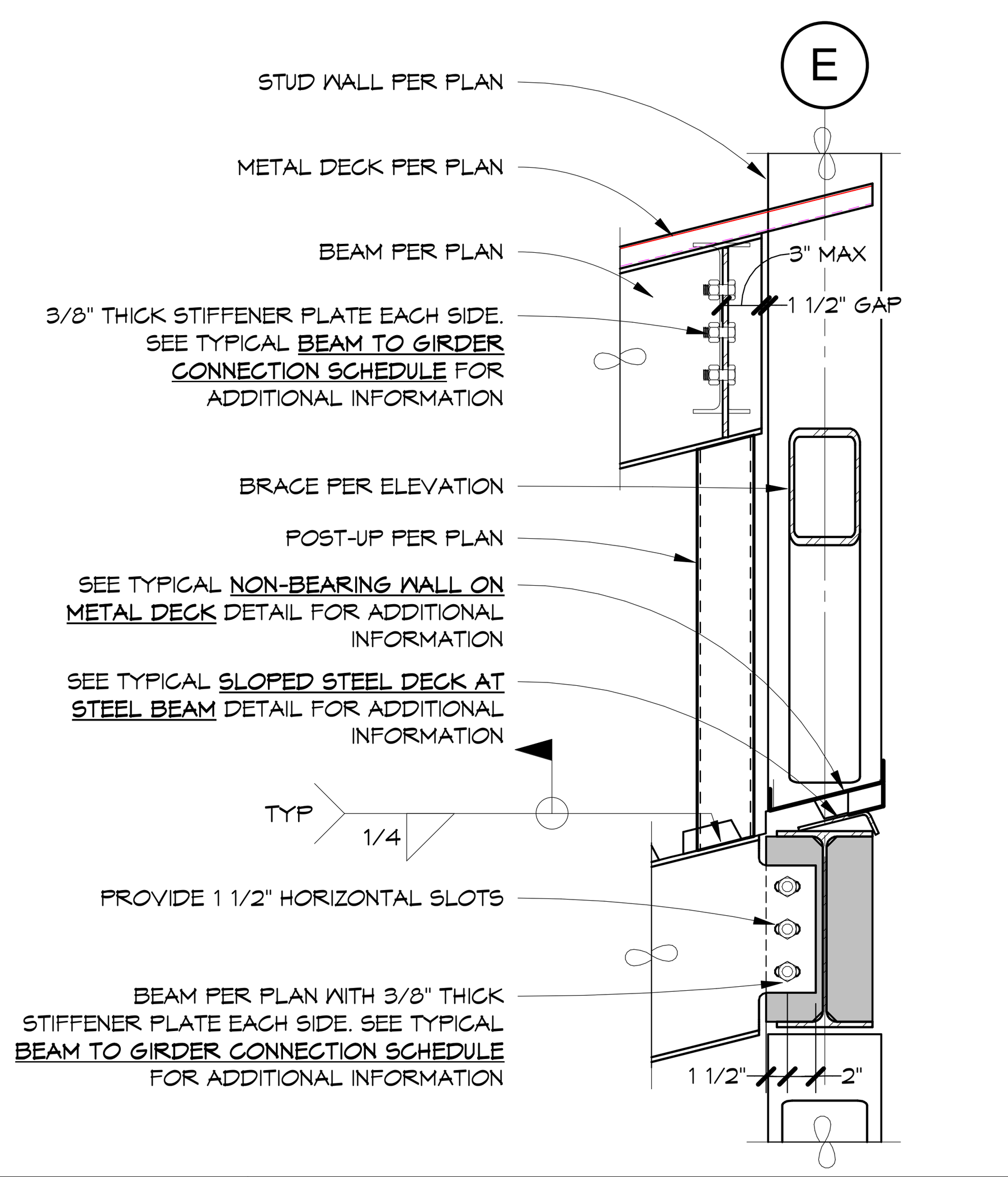
10 DETAIL
S604 S604 1" = 1'-0"



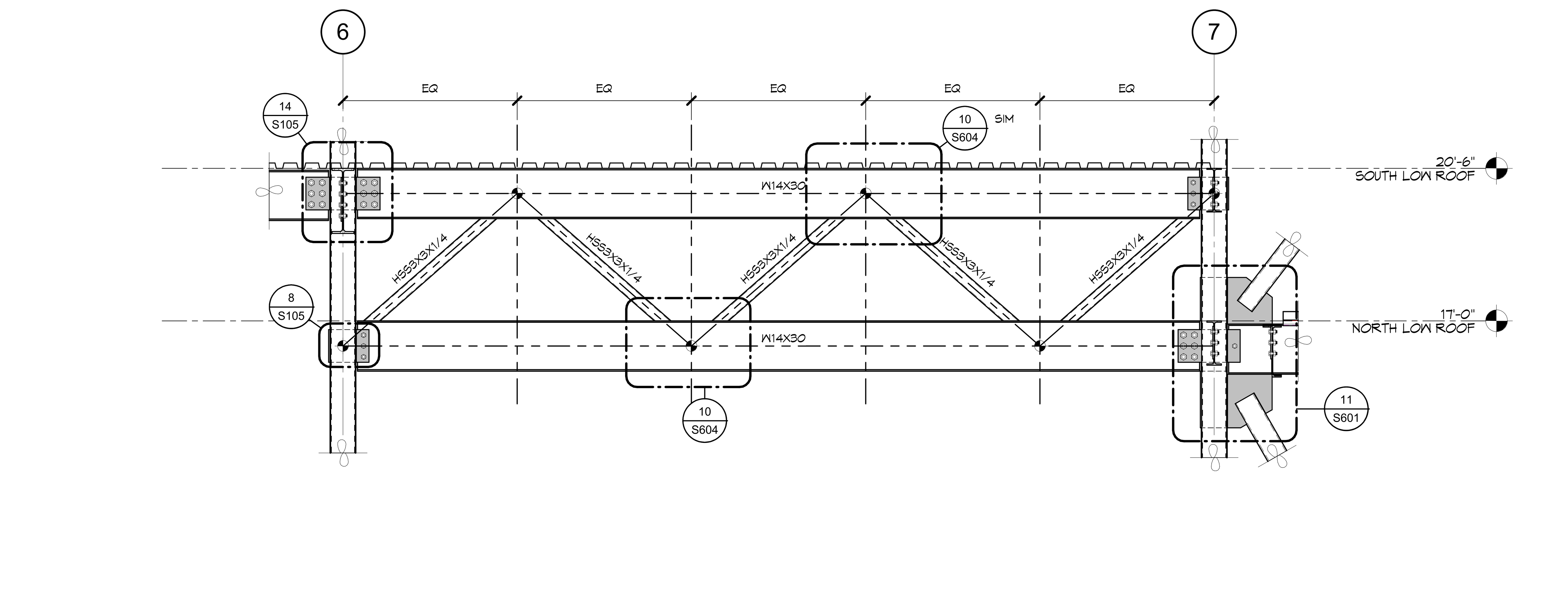
7 DETAIL
S401 S604 1/2" = 1'-0"



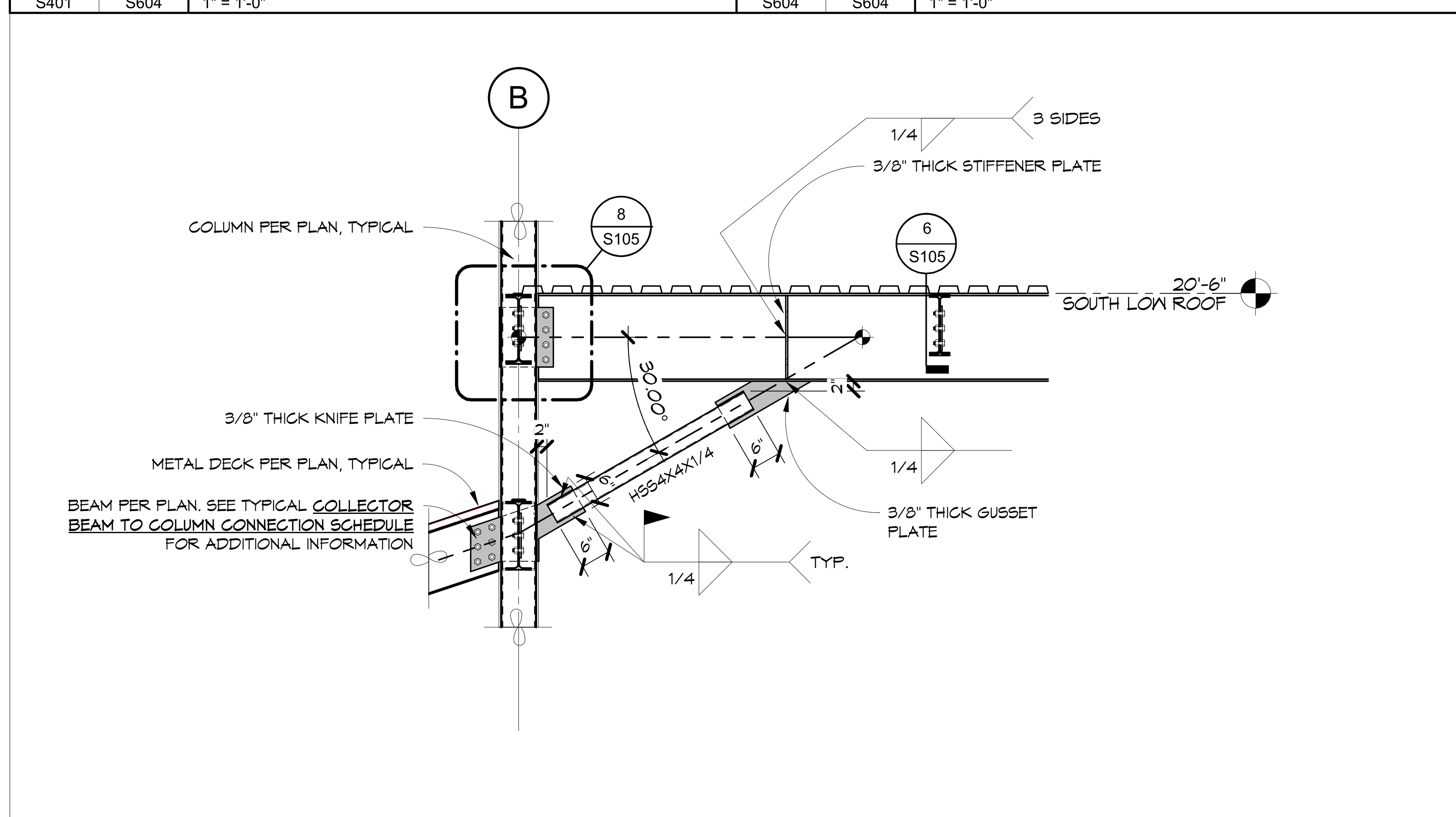
14 DETAIL
S401 S604 1" = 1'-0"



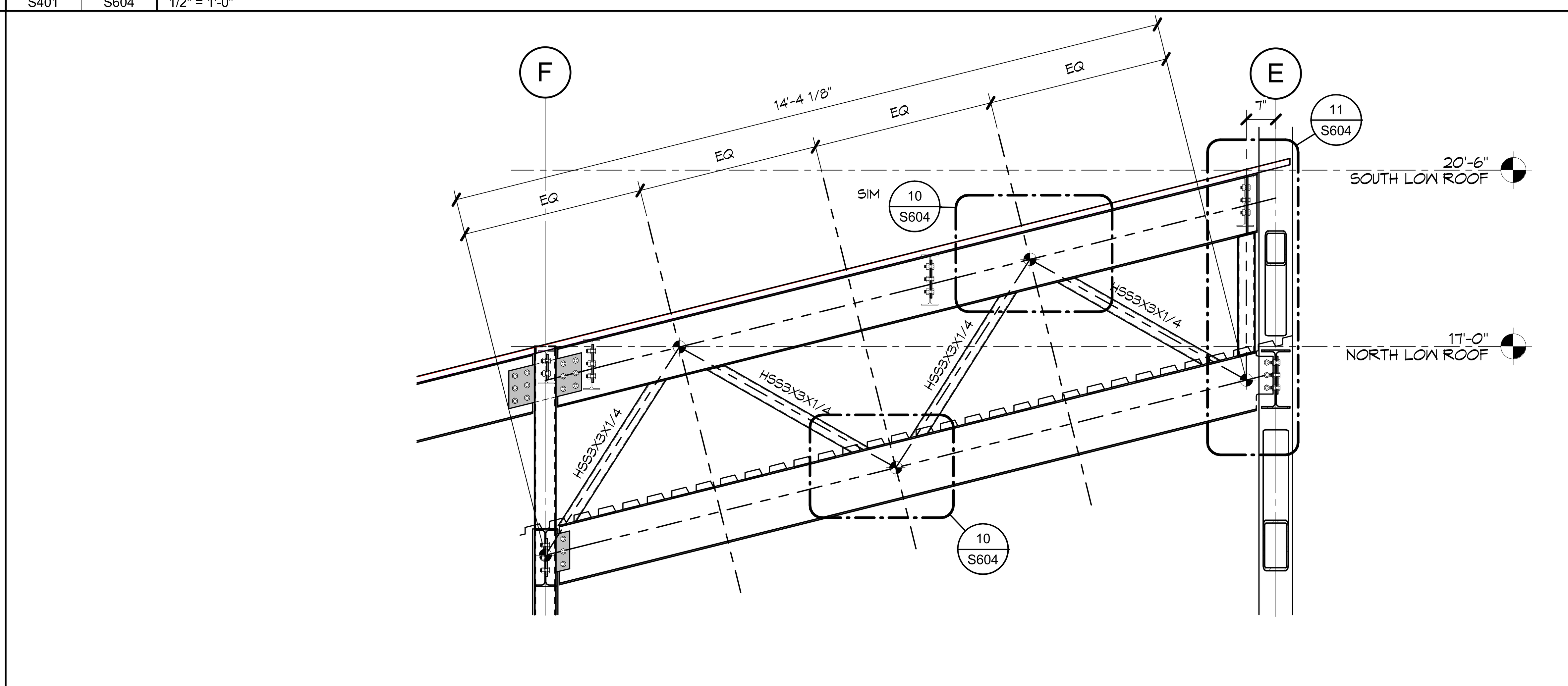
11 DETAIL
S604 S604 1" = 1'-0"



8 DETAIL
S401 S604 1/2" = 1'-0"



15 DETAIL
S402 S604 1/2" = 1'-0"



9 DETAIL
S403 S604 1/2" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
GAYLORD R. RANSOM
No. S2386
STATE OF CALIFORNIA

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(559) 449-8444 OFFICE | (559) 449-8404 FAX
23422

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

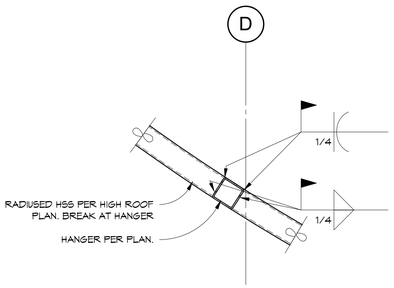
MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

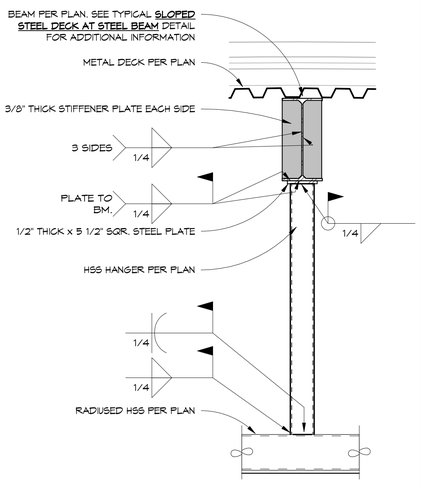
GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
DETAILS

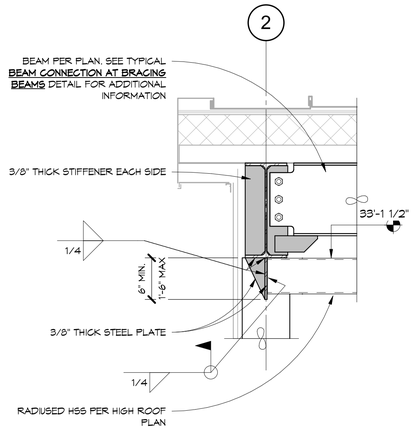
S604



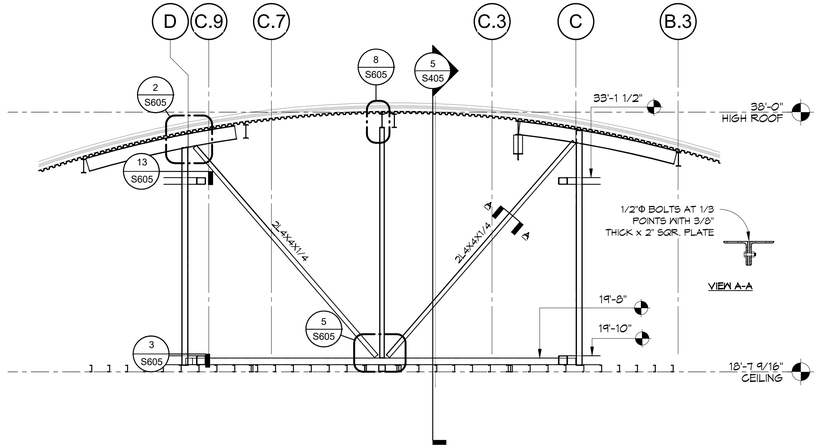
13	DETAIL	
S405	S605	1" = 1'-0"



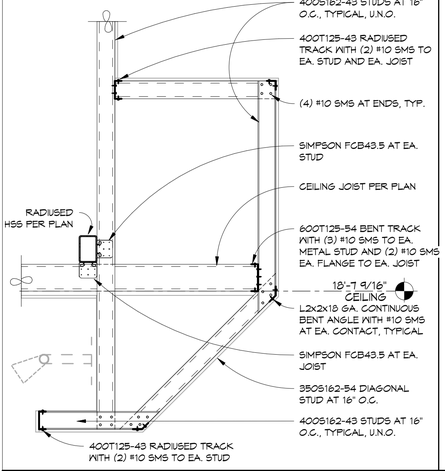
10	DETAIL	
S302	S605	1" = 1'-0"



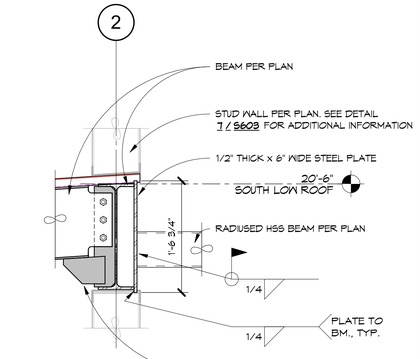
7	DETAIL	
S302	S605	1" = 1'-0"



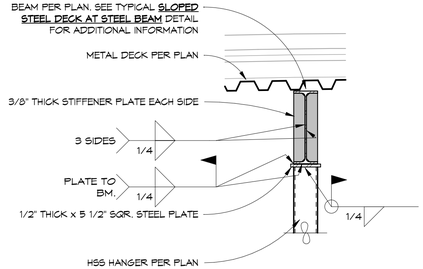
4	DETAIL	
S301	S605	3/16" = 1'-0"



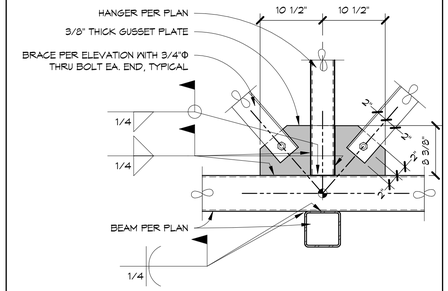
14	DETAIL	
S405	S605	3/4" = 1'-0"



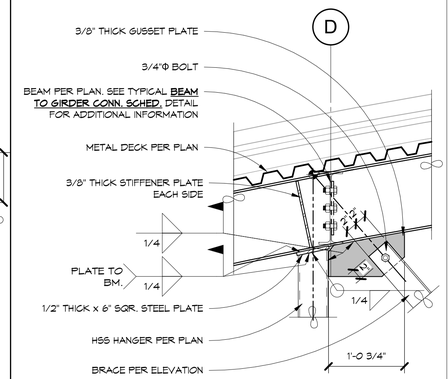
11	DETAIL	
S301	S605	1" = 1'-0"



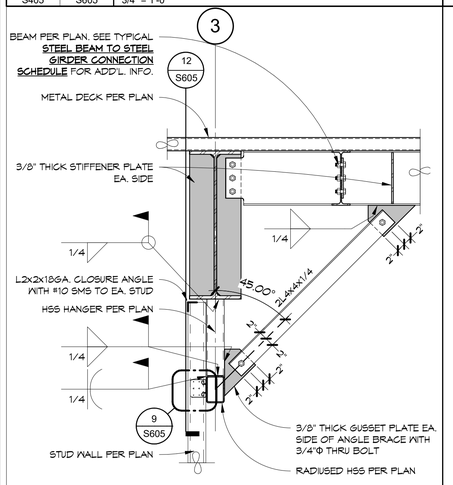
8	DETAIL	
S605	S605	1" = 1'-0"



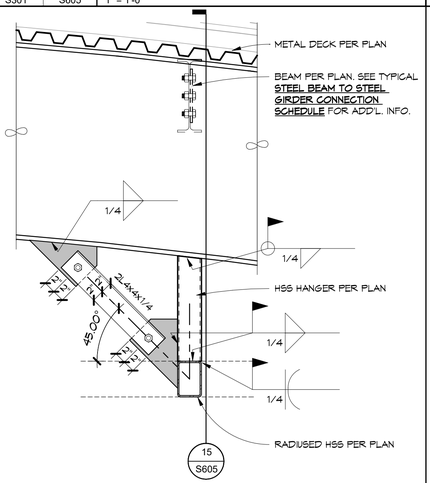
5	DETAIL	
S605	S605	1" = 1'-0"



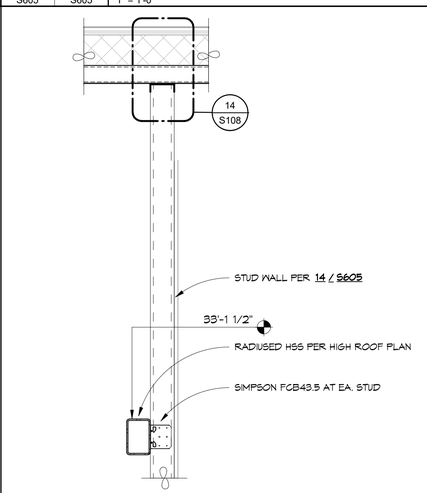
2	DETAIL	
S605	S605	1" = 1'-0"



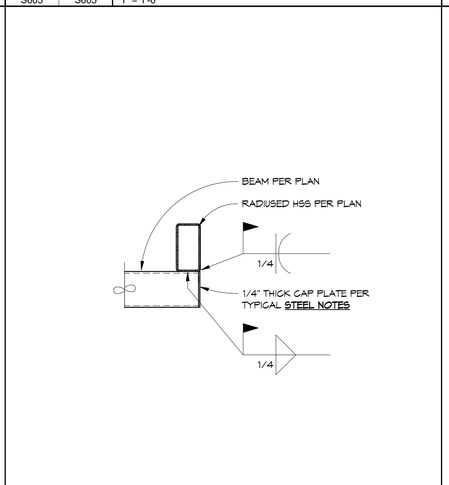
15	DETAIL	
S605	S605	3/4" = 1'-0"



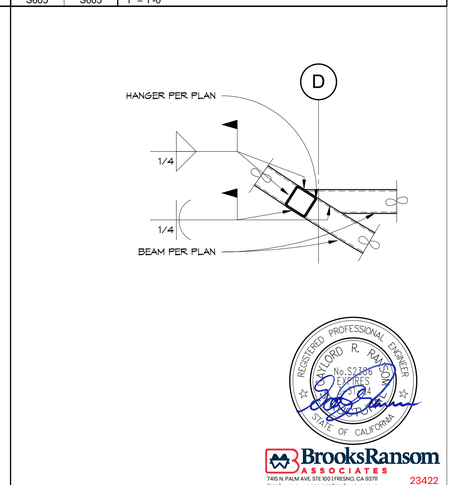
12	DETAIL	
S302	S605	1" = 1'-0"



9	DETAIL	
S405	S605	1" = 1'-0"



6	DETAIL	
S301	S605	1" = 1'-0"



3	DETAIL	
S405	S605	1" = 1'-0"

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 TEL: 559-497-1542 JUAN M. GONZALEZ, A.I.A.
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
DETAILS

S605

REGISTERED PROFESSIONAL ENGINEER
TAYLOR R. RANSOM
No. S23422
EXPIRES 12/31/25
STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
7485 N. PALM AVE, STE 100 | FRESNO, CA 93711
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23422

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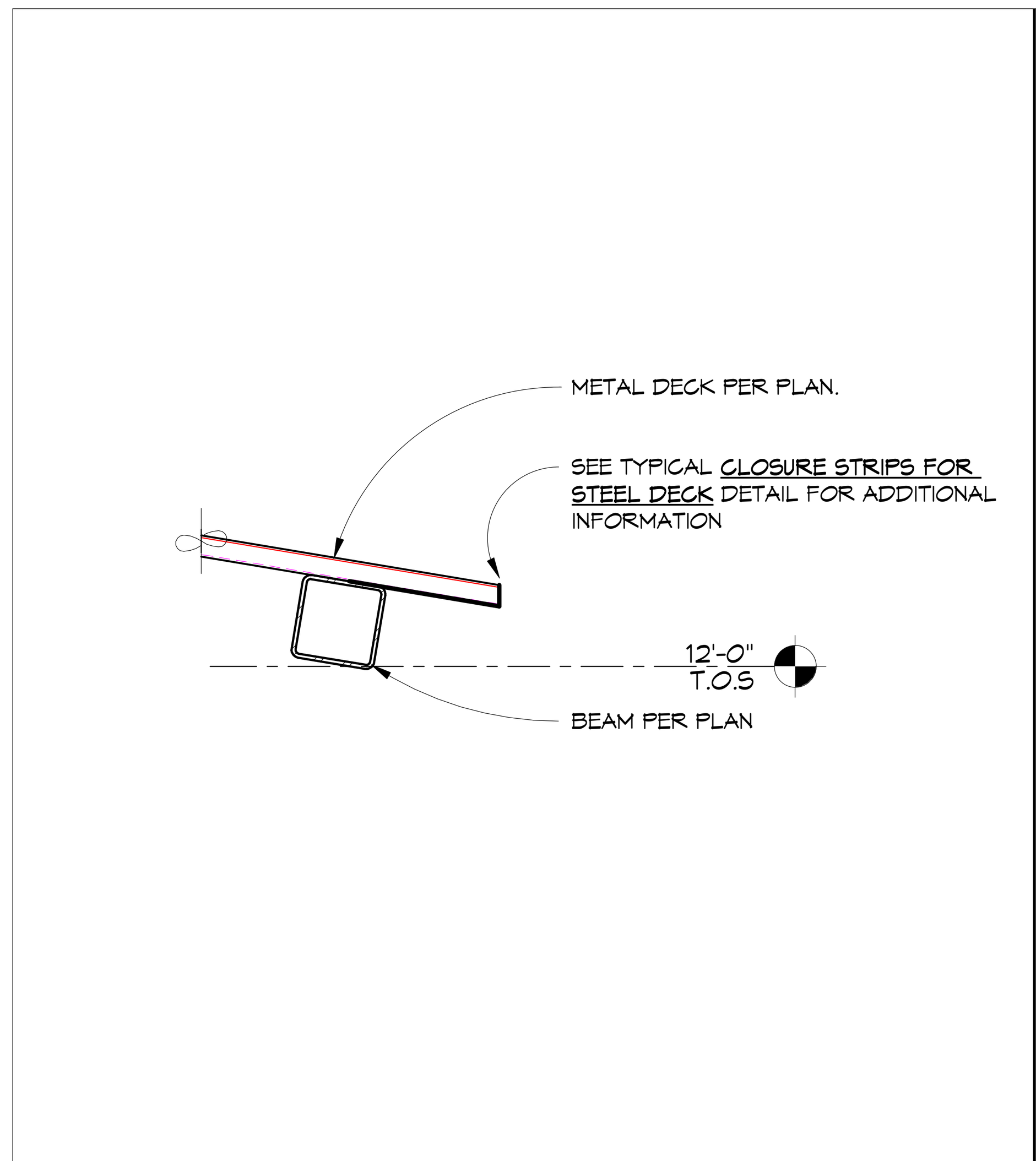
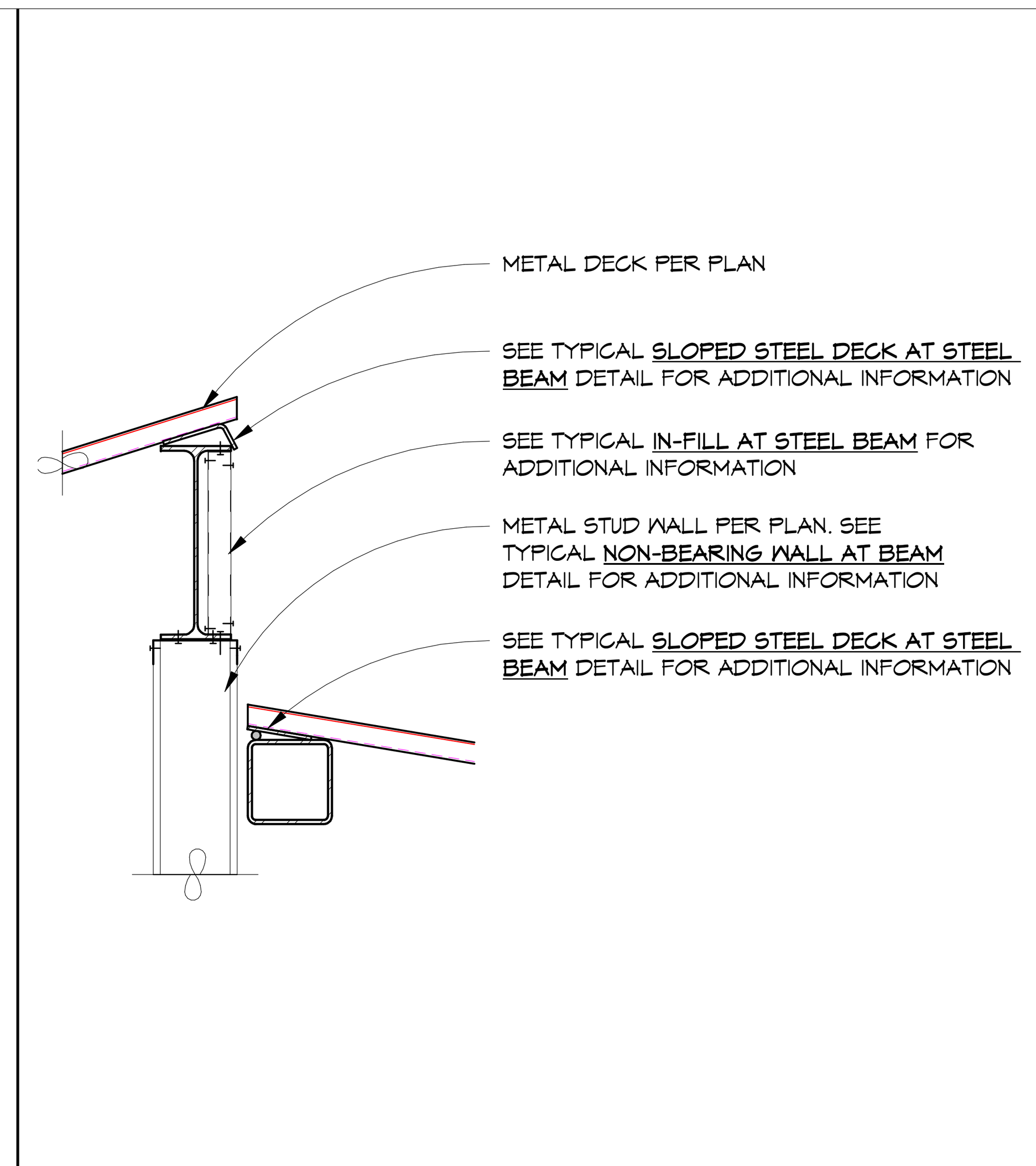
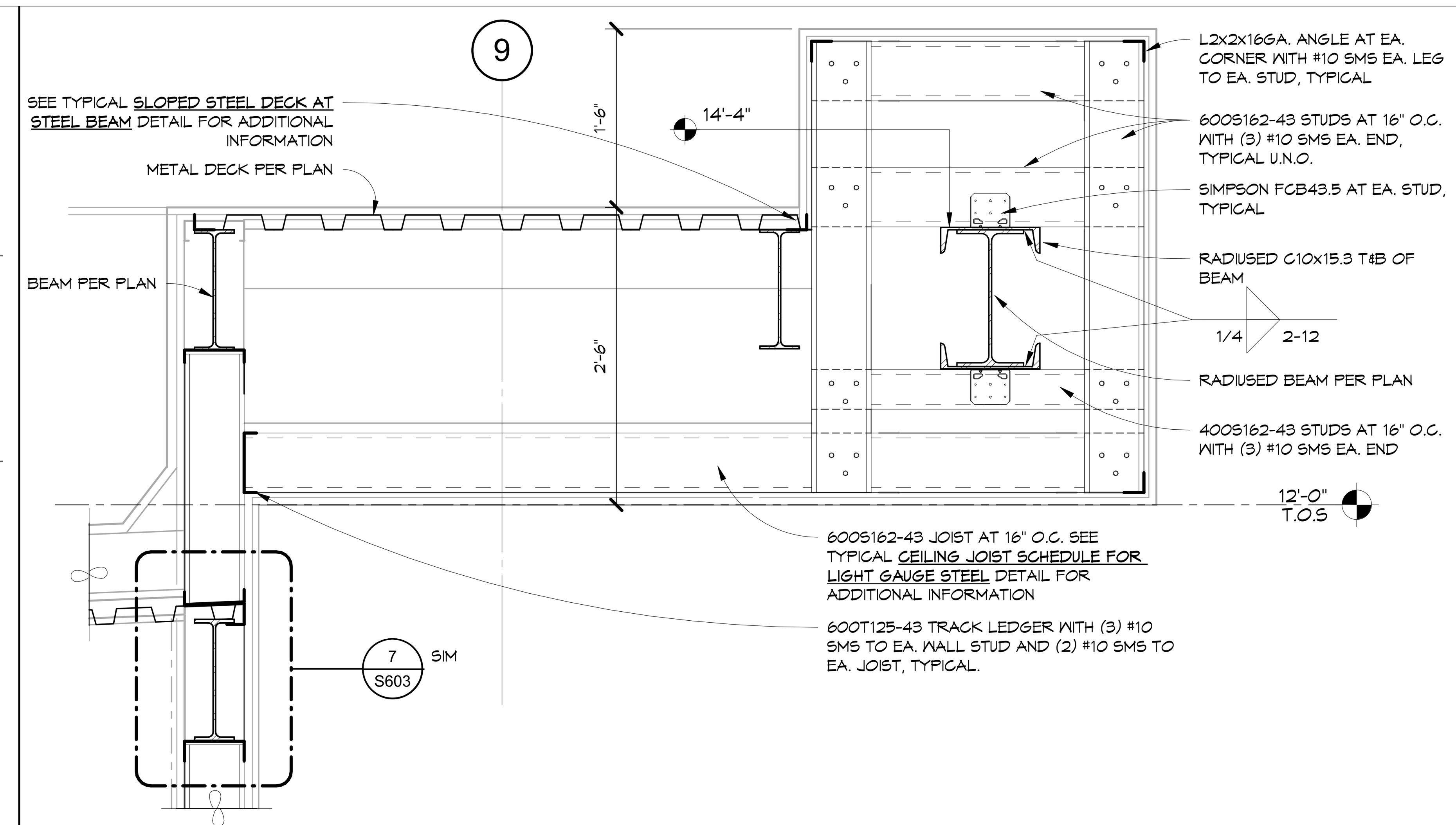


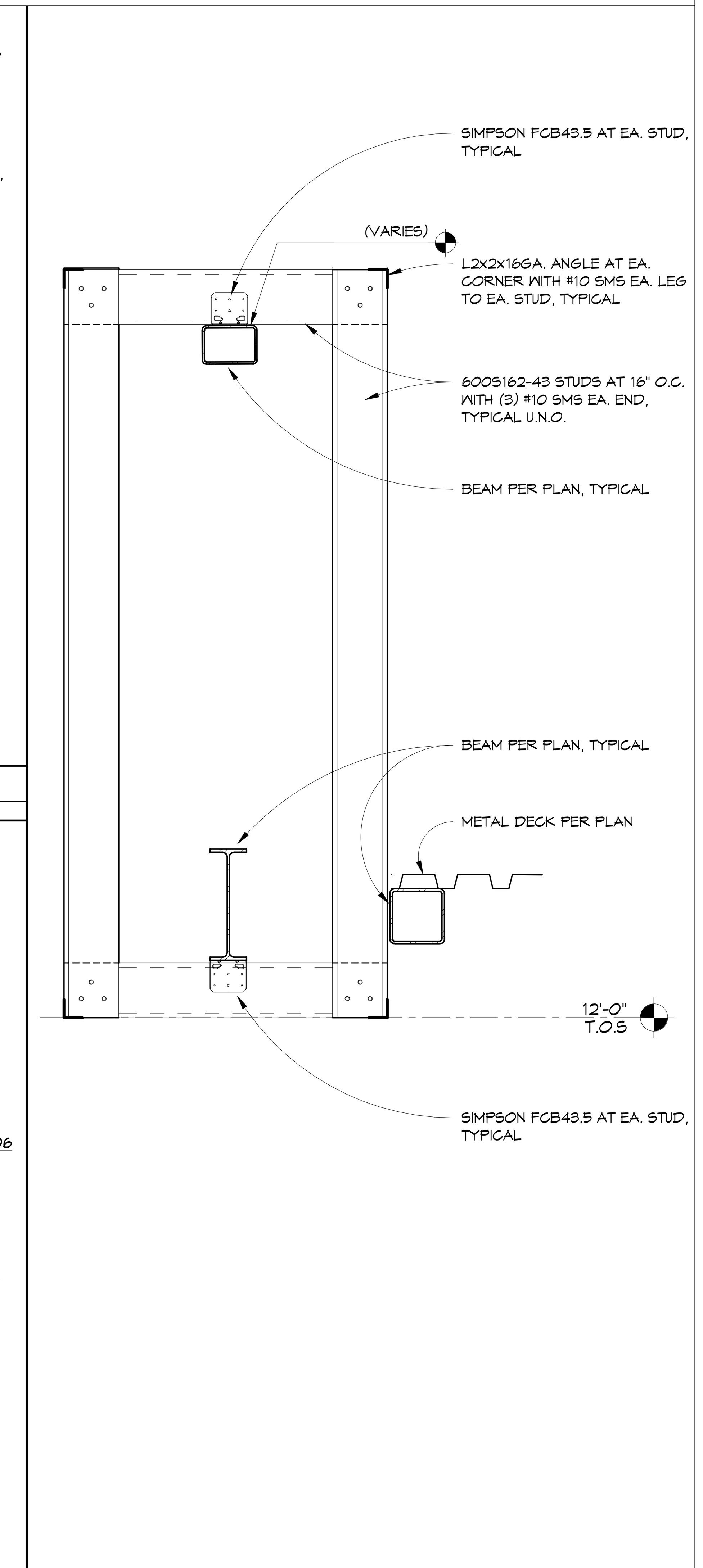
13 DETAIL
S301 S606 1" = 1'-0"



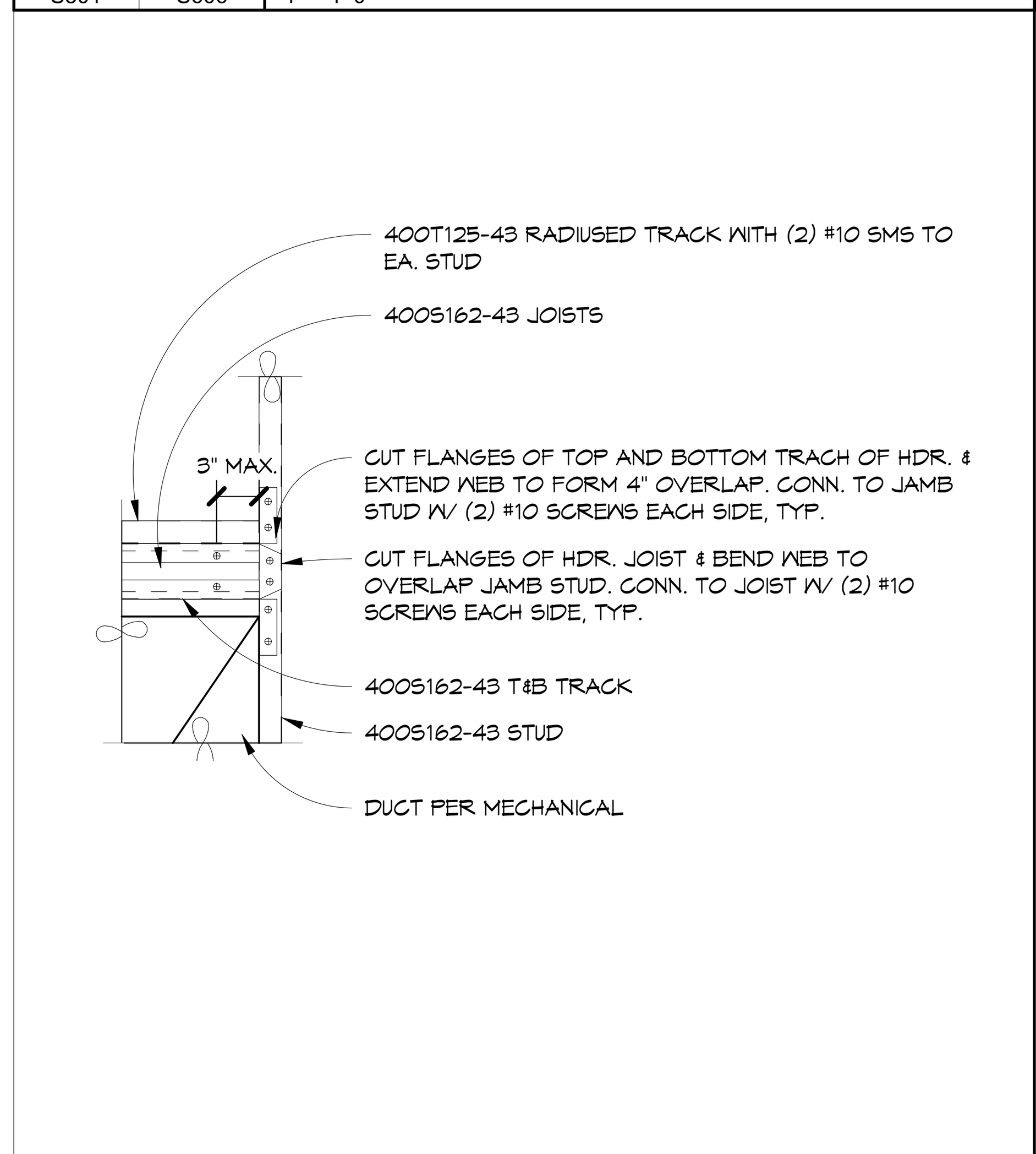
10 DETAIL
S301 S606 1" = 1'-0"



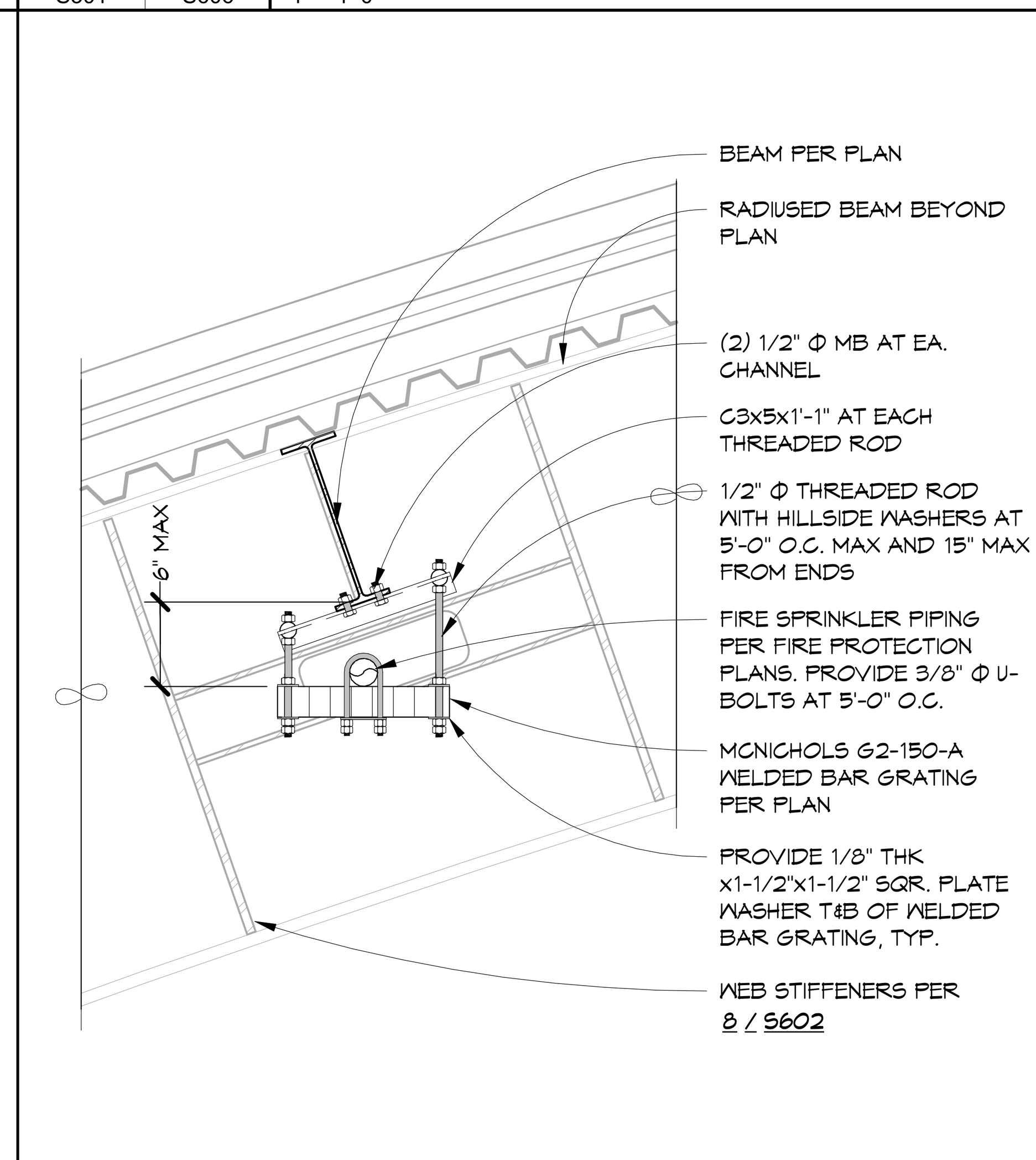
7 DETAIL
S405 S606 1" = 1'-0"



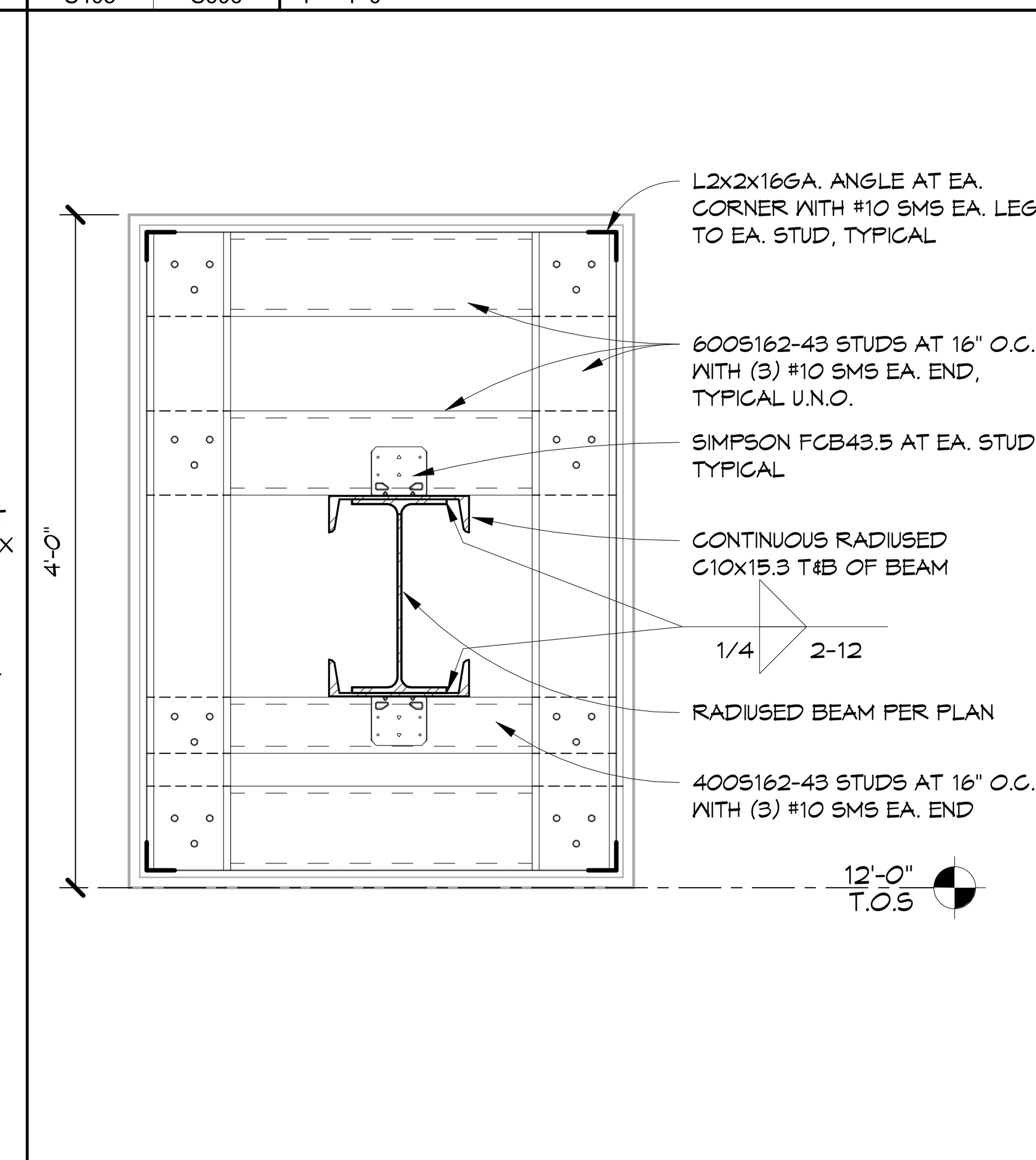
2 DETAIL
S301 S606 1" = 1'-0"



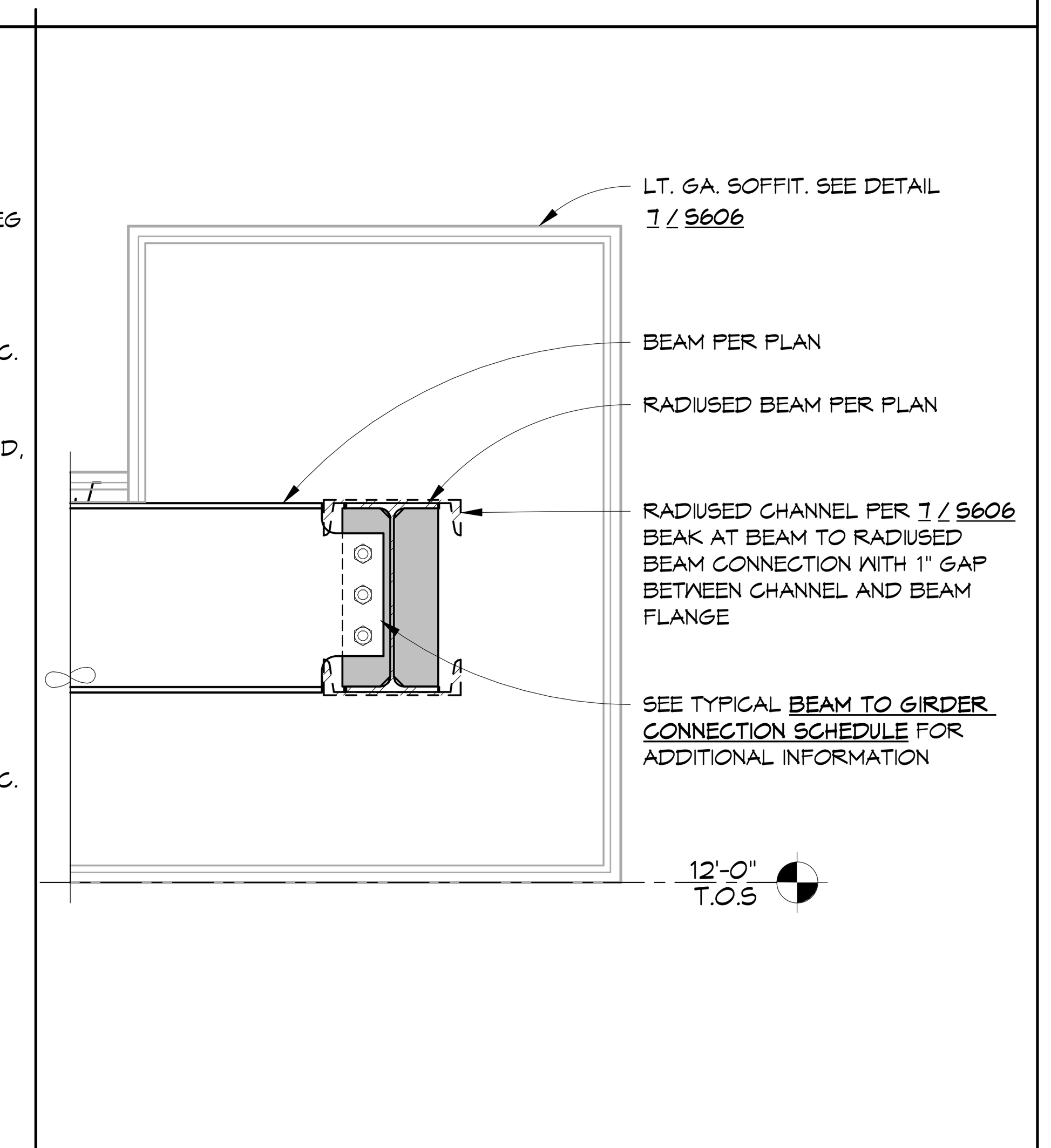
14 DETAIL
S405 S606 1" = 1'-0"



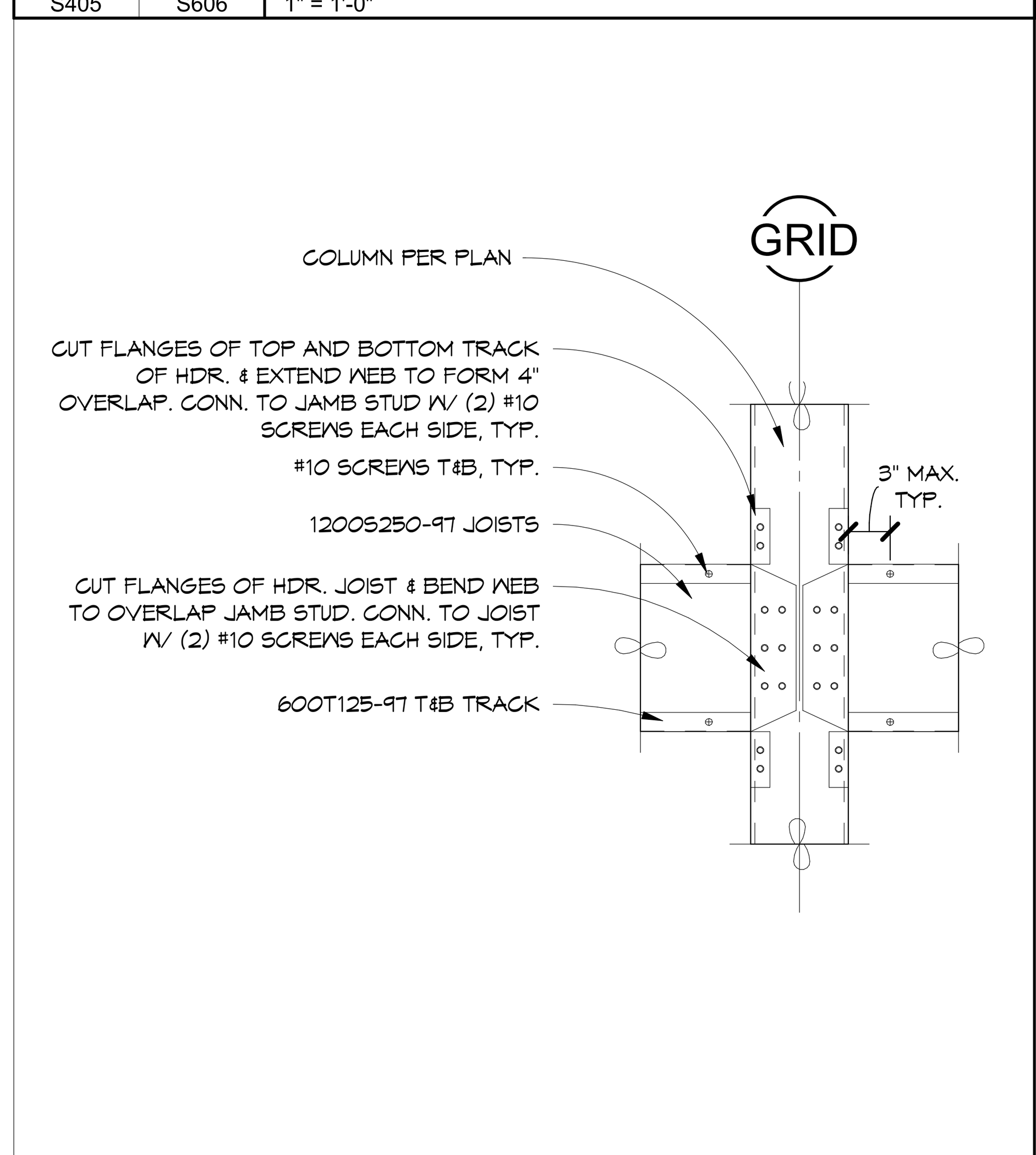
11 DETAIL
S302 S606 1" = 1'-0"



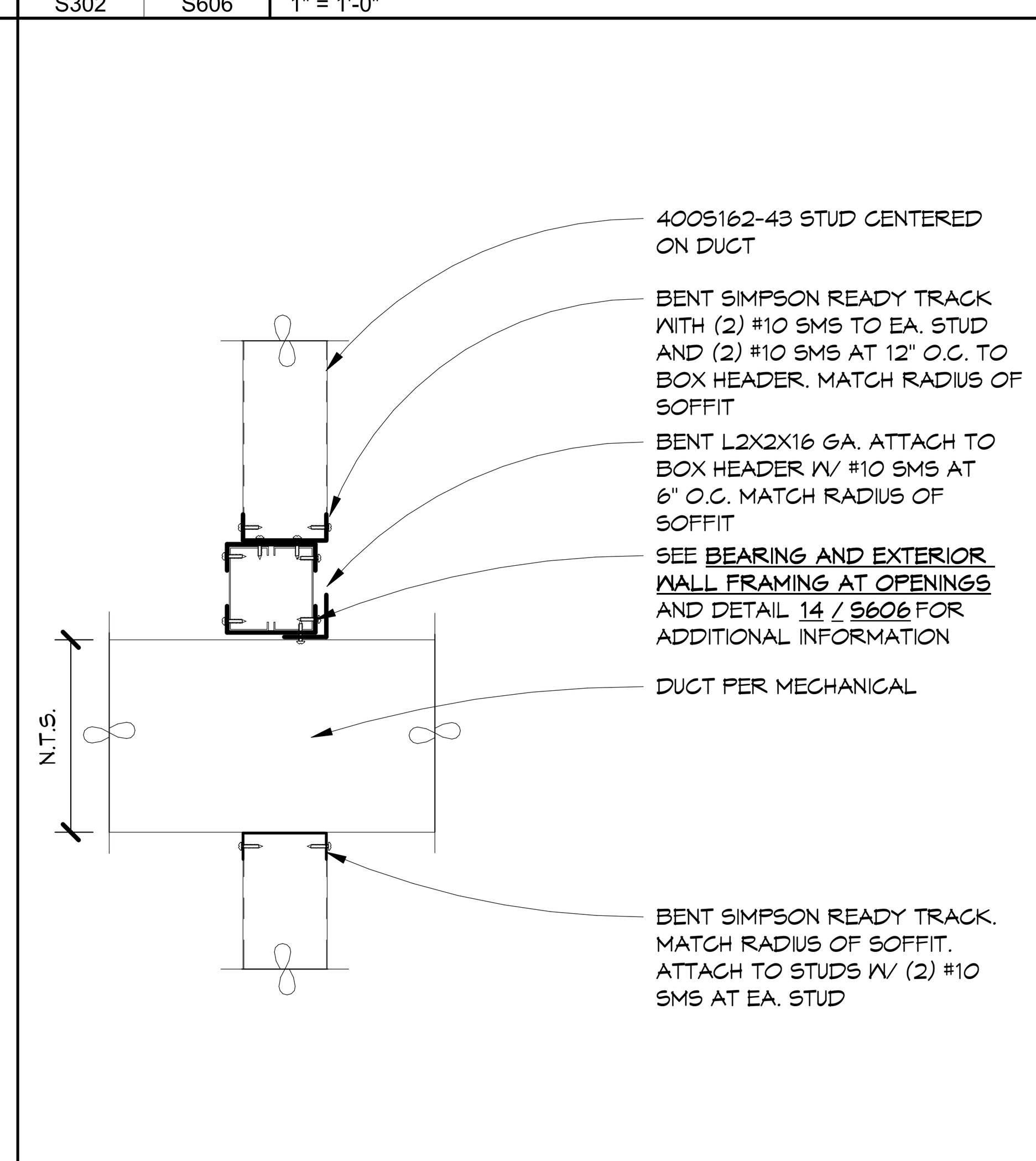
8 DETAIL
S301 S606 1" = 1'-0"



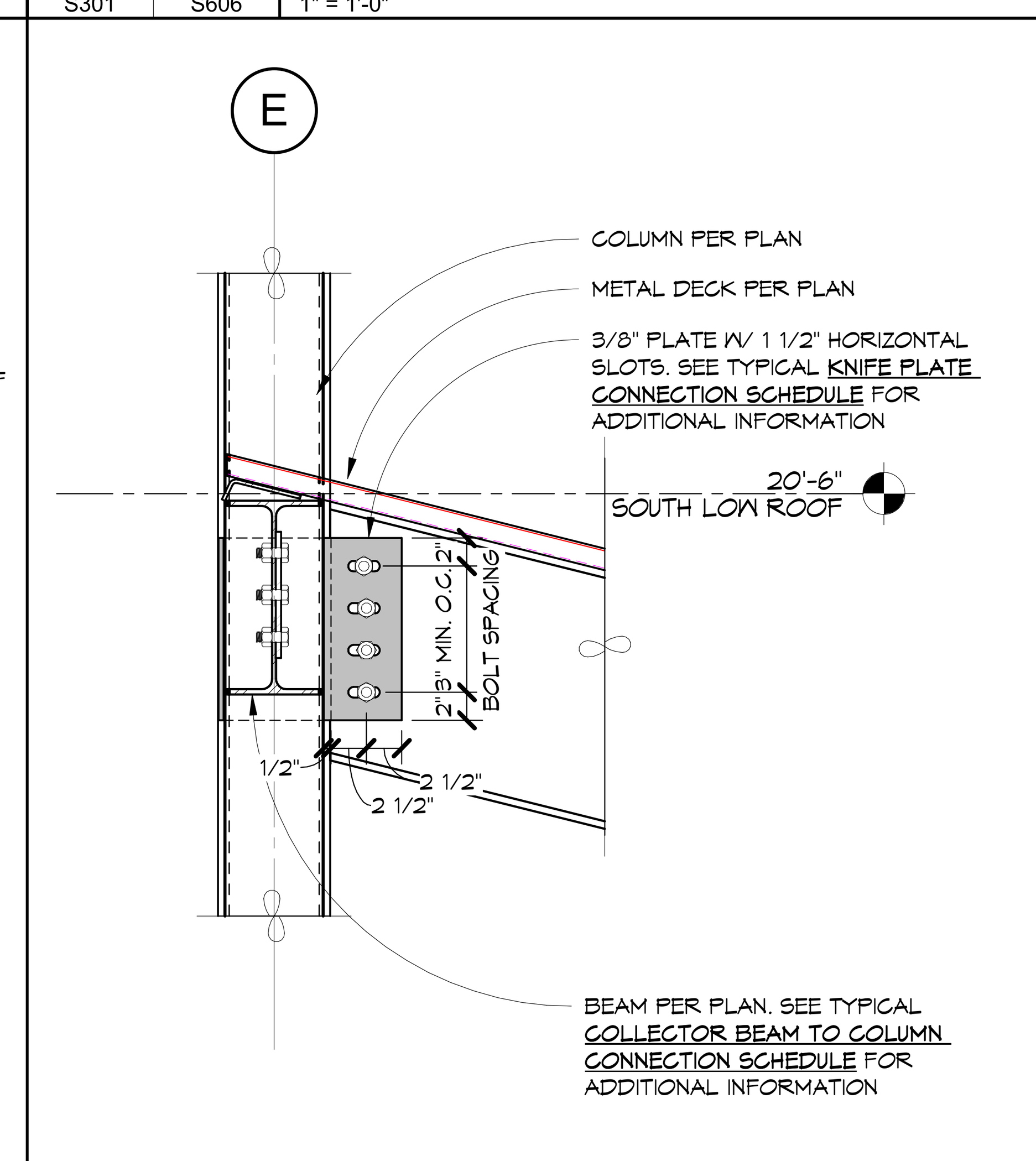
5 DETAIL
S301 S606 1" = 1'-0"



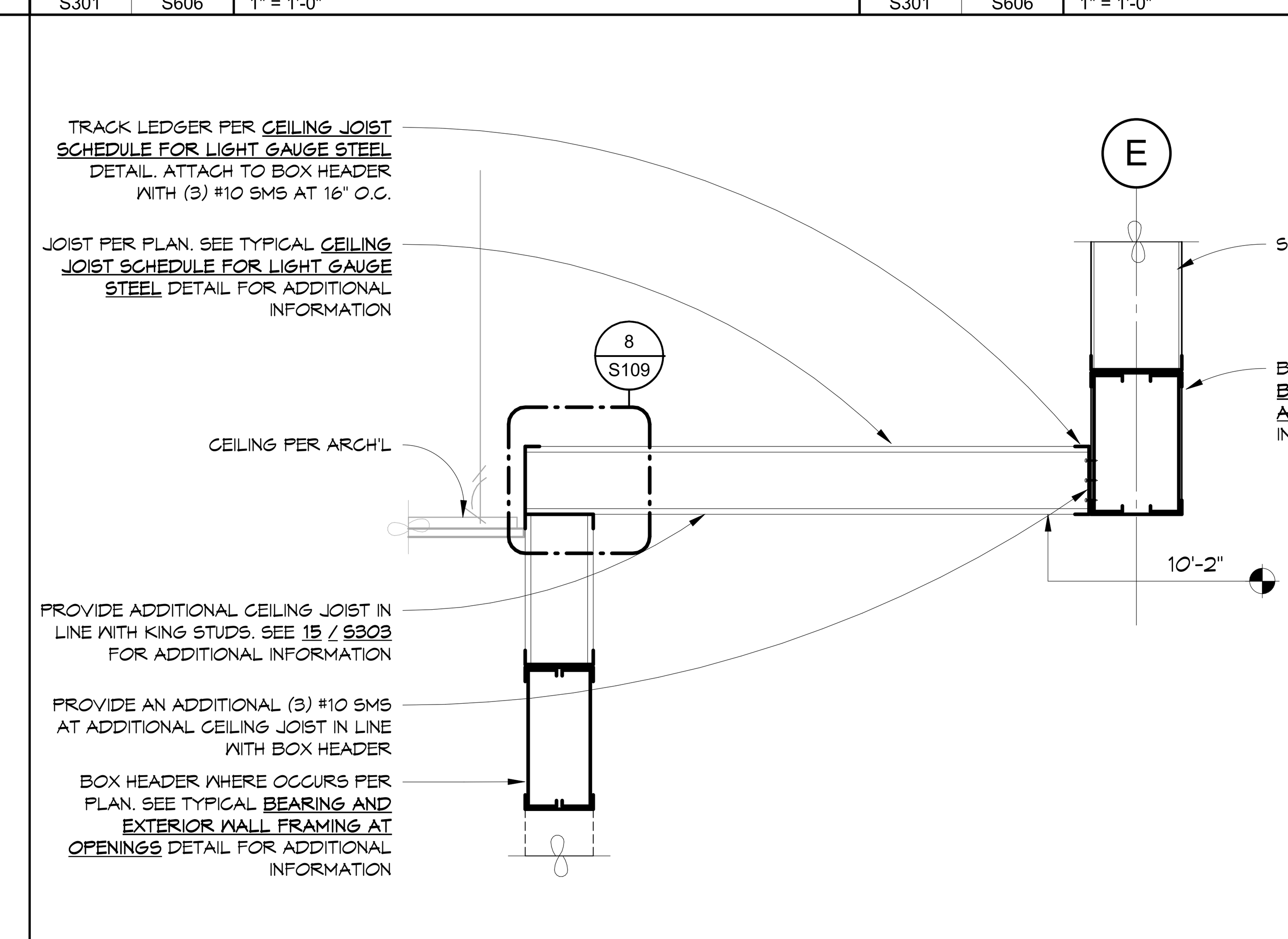
15 DETAIL
S303 S606 1" = 1'-0"



12 DETAIL
S405 S606 1 1/2" = 1'-0"



9 DETAIL
S301 S606 1" = 1'-0"



6 DETAIL
S303 S606 1" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
TAYLORD R. RANSOM
No. S2586
STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
7415 N. PALM AVE. STE 100 | FRESNO, CA 93711
(559) 449-8444 OFFICE | (559) 449-8404 FAX
23422

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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-1286
RENEWAL DATE 12/31/2013
STATE OF CALIFORNIA

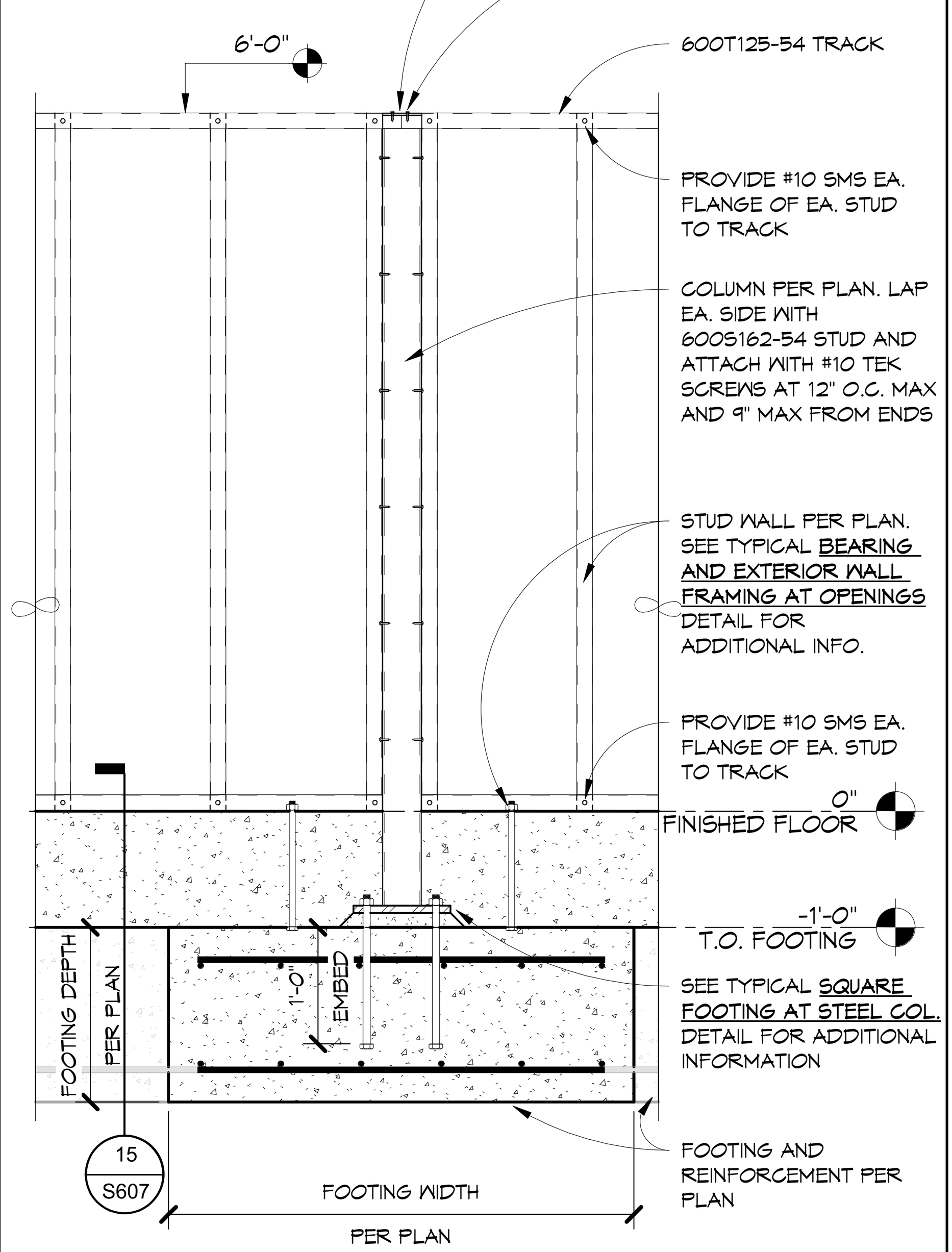
MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

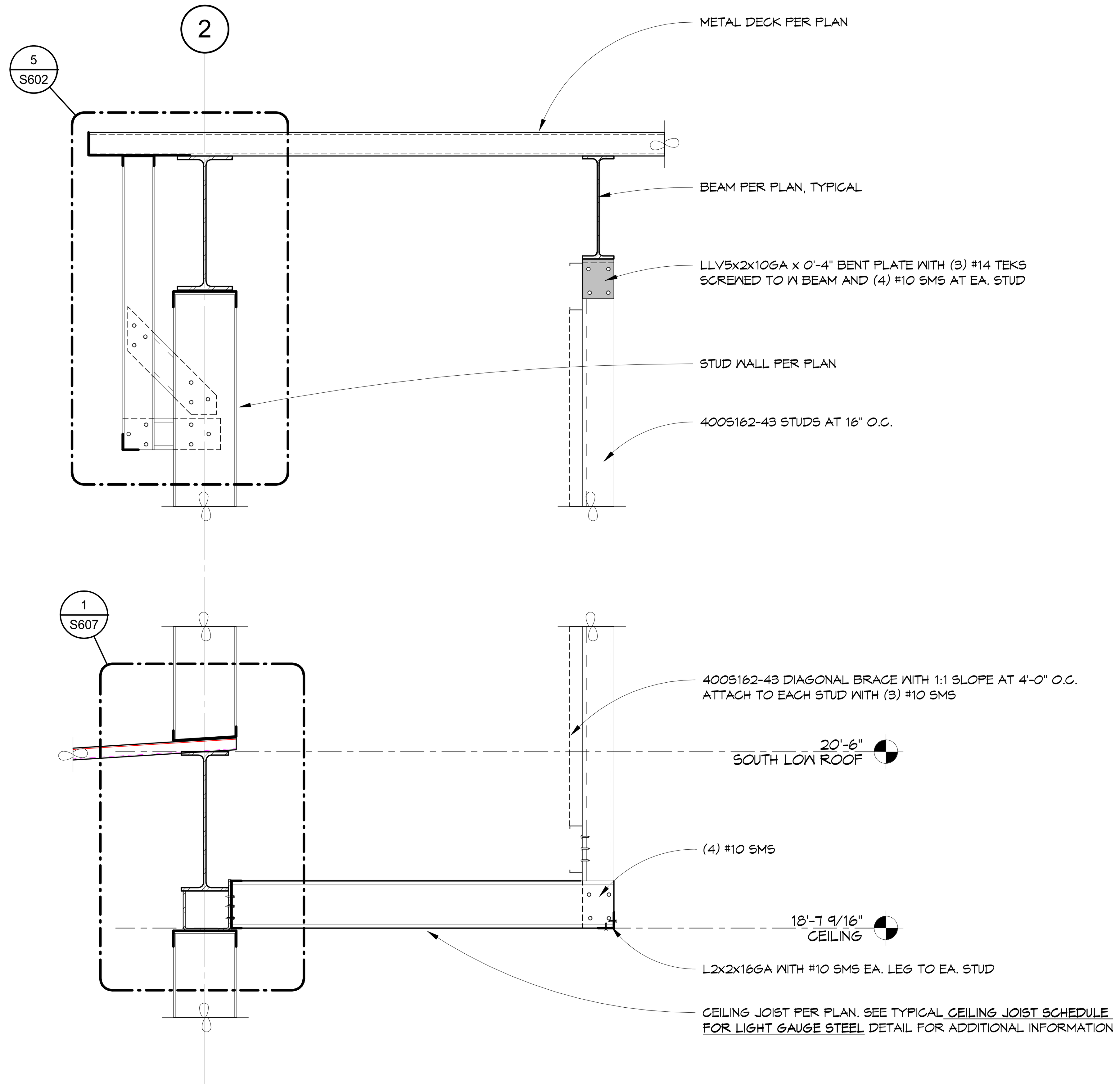
GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
DETAILS

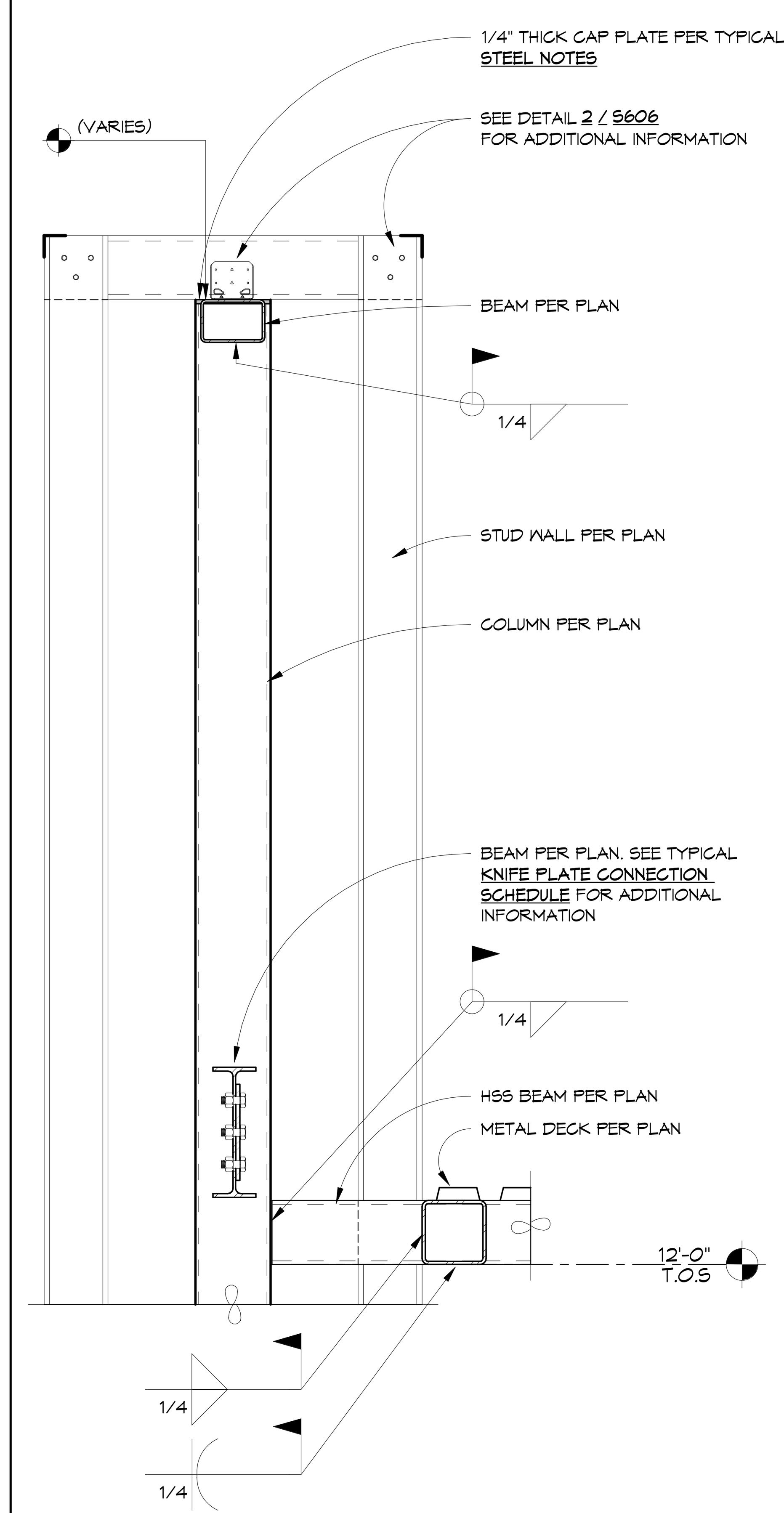
S606



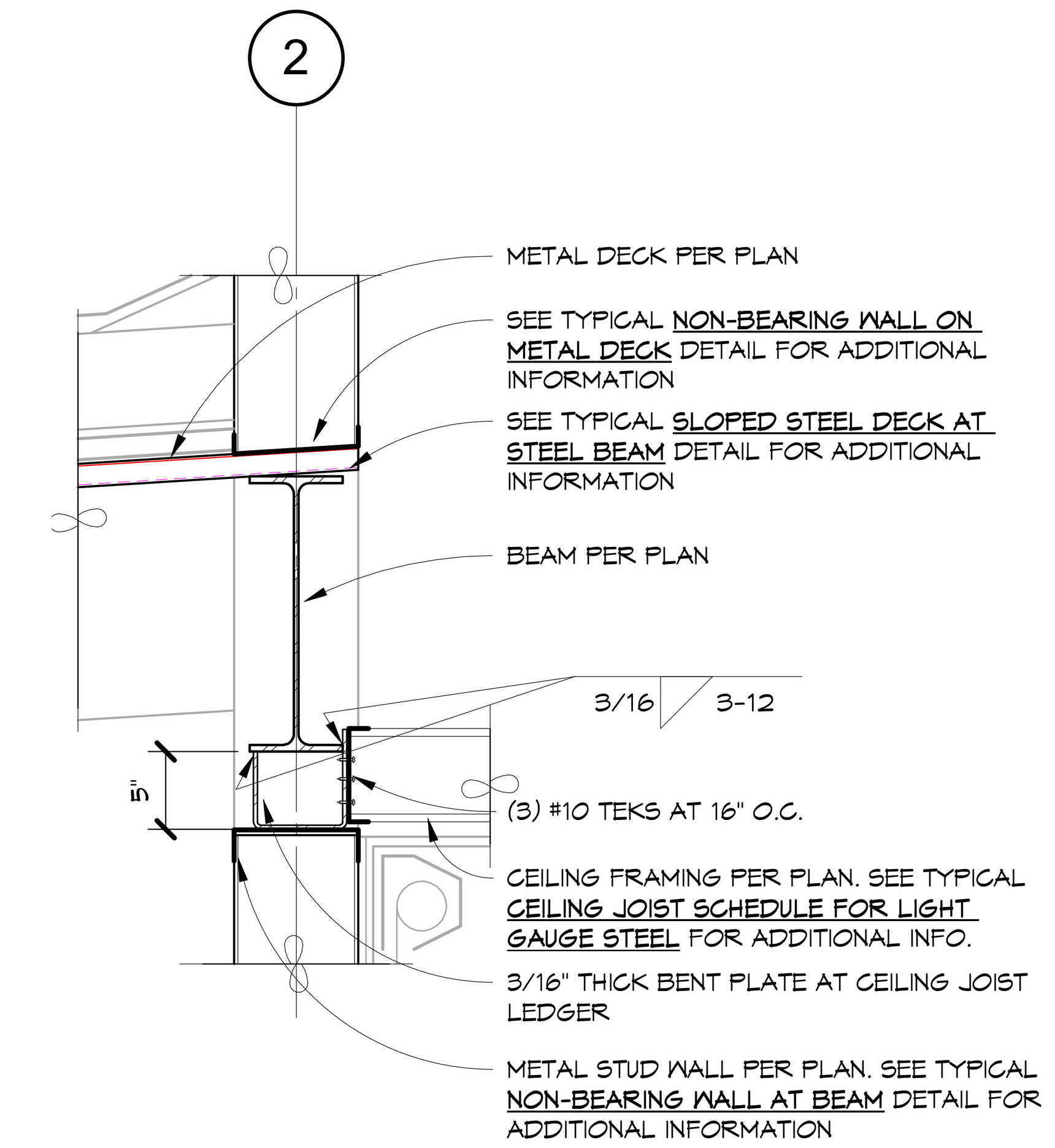
14	DETAIL
S201 S607	3/4" = 1'-0"



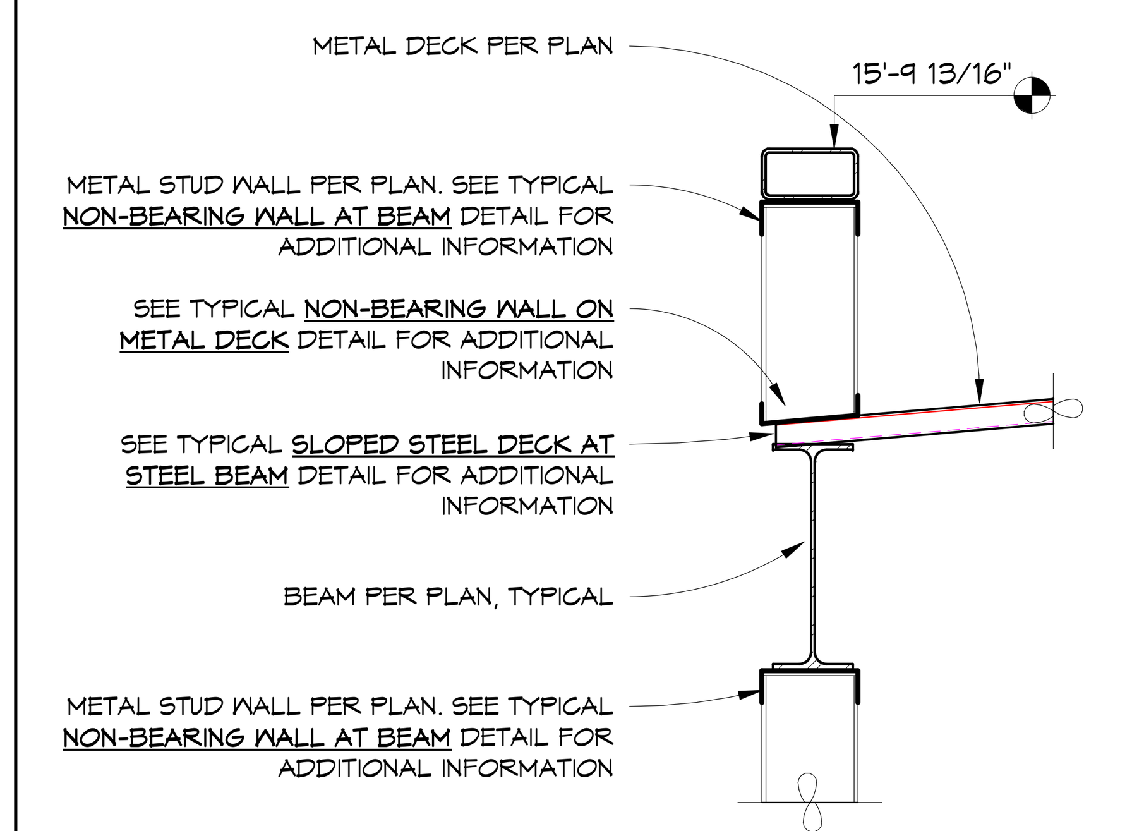
11	DETAIL
S302 S607	1" = 1'-0"



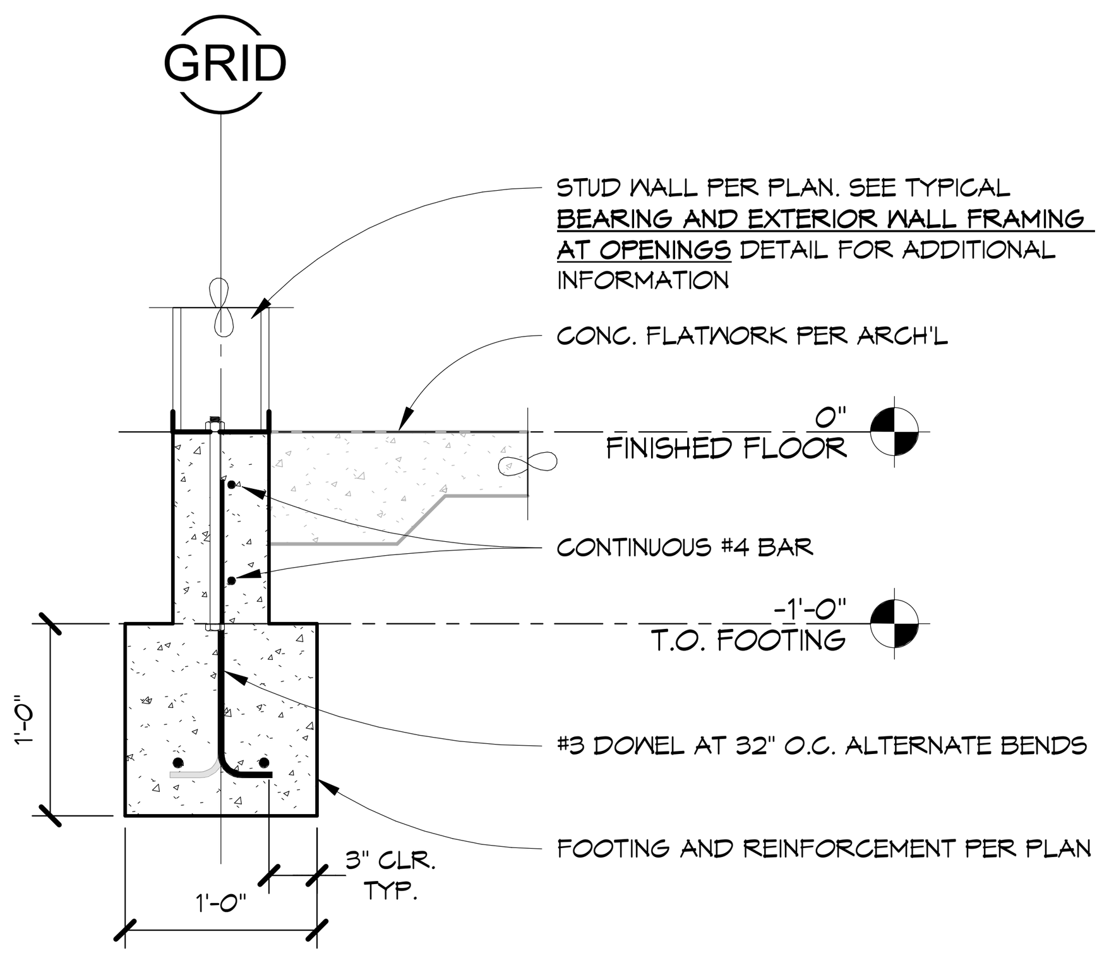
5	DETAIL
S405 S607	1" = 1'-0"



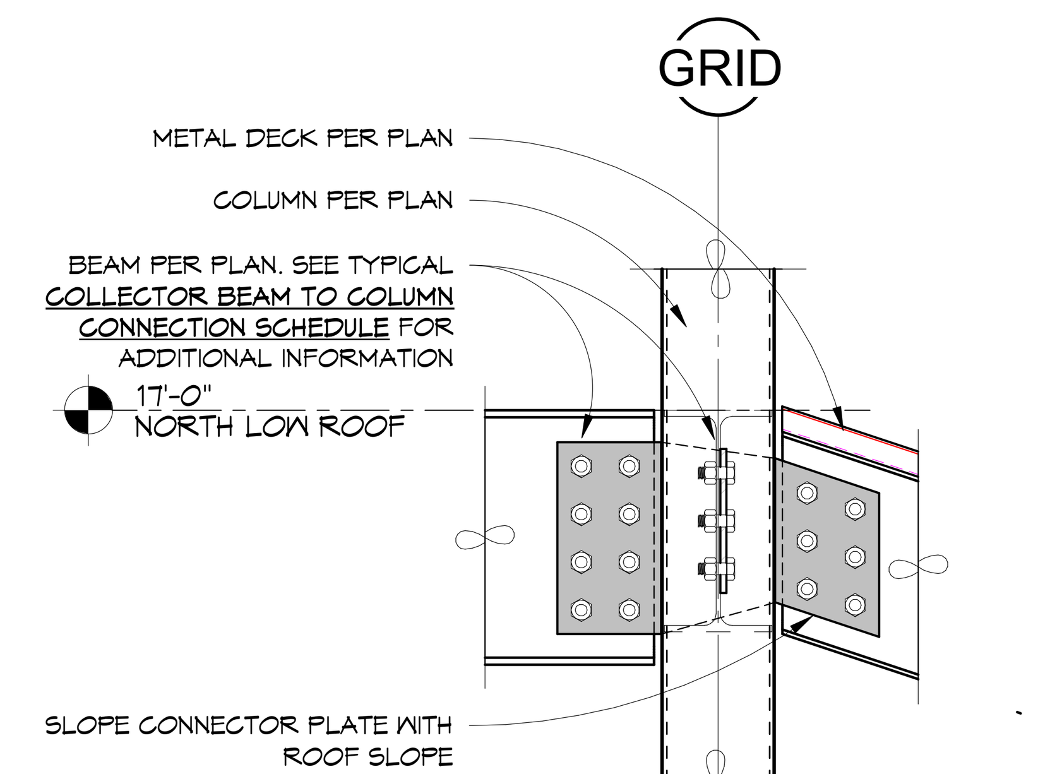
1	DETAIL
S405 S607	1" = 1'-0"



2	DETAIL
S405 S607	1" = 1'-0"



15	DETAIL
S201 S607	1" = 1'-0"



REGISTERED PROFESSIONAL ENGINEER TAYLORD R. RANSOM No. S2386 STATE OF CALIFORNIA

BrooksRansom ASSOCIATES
7405 N. PALM AVE. STE 100 | FRESNO, CA 93711
(559) 449-8444 OFFICE | (559) 449-8404 FAX
23422

3	DETAIL
S402 S607	1" = 1'-0"

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-1286 RENEWAL DATE 12/31/2013 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 2024-04-12
(BID SET)
SHEET TITLE:
DETAILS

S607

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ADDITIONAL SEISMIC BRACING NOTES REQUIREMENTS:

A. CONTRACTOR SHALL OBTAIN THE SERVICES OF A SEISMIC DESIGN SERVICE TO PROVIDE ENGINEERED SEISMIC SUPPORTS AND RESTRAINTS FOR THE PROJECT. MASON WEST, INC, AJ ENGINEERING, OR PRE-APPROVED EQUAL.

1. ALL SEISMIC DESIGNS, INCLUDING DESIGNS USING MASON WEST OPM-0043 8TH EDITION, 2022 HCAI (OSHPD) PRE-APPROVALS, SHALL BE SUBMITTED AS PROJECT SPECIFIC ENGINEERED DESIGNS SEALED AND SIGNED BY A LICENSED CALIFORNIA PROFESSIONAL ENGINEER AS DESCRIBED IN 2022 CALIFORNIA ADMINISTRATIVE CODE SECTION. ALL SEISMIC DESIGNS SHALL INCLUDE PROJECT / APPLICATION SPECIFIC SEISMIC DESIGN DEMAND CALCULATIONS. SAID SEISMIC DESIGN DEMAND CALCULATIONS SHALL ACCOUNT FOR SEISMIC FORCES IN ALL APPLICABLE DIRECTIONS INCLUDING AXIAL, LATERAL, VERTICAL TENSION, VERTICAL COMPRESSION, ETC. DESIGNS SHALL ACCOUNT FOR PRYING, ECCENTRICITY, UNEVEN LOADING, WEAK AXIS BENDING, ETC.
2. SEISMIC RESTRAINT LAYOUTS FOR PIPING SHALL BE FURNISHED ON SHOP DRAWINGS OR ADDED TO THE CONTRACTOR'S SHOP DRAWINGS AND SHALL INCLUDE:
    - a. THE NUMBER, SIZE AND LOCATION OF SEISMIC BRACES INCLUDING CUSTOM BRACE LOCATIONS.
    - b. MAXIMUM SUPPORT LOADS AND SEISMIC LOADS AT THE SEISMIC BRACE LOCATIONS.
    - c. REFERENCE TO SPECIFIC DETAILS OR PAGES FROM THE HCAI (OSHPD) PRE-APPROVED SYSTEM (OPM).
3. POINT LOADS APPLIED TO THE OVERHEAD STRUCTURE DUE TO COMPONENT HANGERS AND SEISMIC BRACING SHALL BE PREPARED BY THE ENGINEERING FIRM IN RESPONSIBLE CHARGE OF DESIGNING THE SEISMIC BRACING MENTIONED ABOVE WHEN REQUIRED BY THE PROJECT OWNER. POINT LOADS SHALL INCLUDE ALL APPLICABLE FORCES INCLUDING BUT NOT LIMITED TO GRAVITY, VERTICAL AND HORIZONTAL SEISMIC, AND THERMAL REACTIONS.
4. INSTALLATIONS NOT ADDRESSED BY THE OPM APPROVAL SHALL BE DESIGNED, DETAILED AND SUBMITTED ALONG WITH THE SHOP DRAWINGS.
5. ADDITIONAL SECONDARY STEEL SHALL BE PROVIDED WHERE REQUIRED FOR THE SUPPORT OF PIPING AND AT ALL SEISMIC BRACING LOCATIONS WITHIN THE BUILDING. REFER TO THE STRUCTURAL DRAWINGS FOR ADDITIONAL SUPPORT REQUIREMENTS.
6. SUBMIT SEISMIC RESTRAINT LAYOUT DRAWINGS AND CUSTOM DETAILS FOR APPROVAL OF THE PROJECT STRUCTURAL ENGINEER PER THE REQUIREMENTS LISTED IN THE HCAI (OSHPD) PRE-APPROVAL (OPM).
7. SEISMIC RESTRAINT LAYOUT DRAWINGS SHALL BEAR THE STAMP AND SIGNATURE OF THE REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA WHO DESIGNED THE LAYOUT OF THE BRACES.

TYPICAL KITCHEN EQUIPMENT PLUMBING NOTES:

1. REFER TO KITCHEN LAYOUT PLANS FOR EXACT LOCATIONS AND HEIGHTS OF ALL PLUMBING CONNECTIONS TO EQUIPMENT AND FOR ADDITIONAL PLUMBING REQUIREMENTS.
2. ALL FAUCETS, STRAINERS AND TAILPIECES FOR KITCHEN SINKS SHALL BE FURNISHED BY THE KITCHEN EQUIPMENT SUPPLIER, INSTALLED BY THE PLUMBING CONT'R.
3. PLUMBING CONT'R. TO CONNECT ALL INDIRECT WASTE (I.W.) PIPING FULL SIZE TO KITCHEN EQUIPMENT AS REQUIRED AND PIPE TO THE NEAREST FLOOR SINK.
4. ALL FINAL CONNECTIONS TO EQUIPMENT TO BE DONE BY THE PLUMBING CONT'R.
5. INSTALL J.R. SMITH #5005 SHOCK ABSORBER IN CW LINE TO GARBAGE DISPOSER AND IN CW & HW LINES TO PRERINSE FAUCET.
6. PROVIDE S.O.V.'S AT ALL CONNECTIONS TO KITCHEN EQUIPMENT. S.O.V.'S SHALL BE IN A READILY ACCESSIBLE LOCATION.
7. PROVIDE CW & HW STOPS FOR ALL FAUCET CONNECTIONS.
8. EACH PLUMBING FIXTURE DISCHARGING INTO GREASE INTERCEPTOR SHALL BE INDIVIDUALLY TRAPPED AND VENTED.
9. ALL KITCHEN EQUIPMENT AND SINKS HAVING INDIRECT WASTES DISCHARGING TO A FLOOR SINK SHALL HAVE MINIMUM 1" AIR GAP. REFER TO DETAIL A/P3.02.
10. ALL PLUMBING, CONDUITS AND GAS LINES SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE TO AS GREAT AN EXTENT AS POSSIBLE. OTHERWISE INSTALL AT LEAST 6" OFF FLOOR AND 1/2" FROM WALLS USING STANDOFF BRACKETS AND NOT ACROSS ANY AISLE, TRAFFIC AREA OR DOOR OPENING. MULTIPLE RUNS OR CLUSTERS INCLUDING BEVERAGE LINES SHALL BE ENCASED IN AN APPROVED SEALED ENCLOSURE.
11. ALL LIQUID WASTE SHALL BE DRAINED BY MEANS OF INDIRECT WASTE PIPES INTO A FLOOR SINK. FLOOR SINKS ARE TO BE INSTALLED FLUSH WITH THE FINISHED FLOOR SURFACE AND HAVE SUITABLE EASILY REMOVABLE SAFETY COVER GRATES. FLOOR SINK TO BE 50% EXPOSED WHEN NO ACCESS IS PROVIDED FOR CLEANING OR BE IN LINE WITH THE FRONT FACE OF ELEVATED FREESTANDING EQUIPMENT.
12. APPROVED BACKFLOW PREVENTION DEVICES SHALL BE PROPERLY INSTALLED UPSTREAM OF ANY POTENTIAL HAZARD BETWEEN THE POTABLE WATER SUPPLY AND A SOURCE OF CONTAMINATION. HOSES SHALL NOT BE ATTACHED TO A FAUCET OR HOSE BIBB UNLESS AN APPROVED BACKFLOW PREVENTER IS PROVIDED.
13. PROVIDE ESCUTCHEON COVERS, RINGS, ETC. AT ALL FLOOR WALL & CEILING PIPE PENETRATIONS. ALL FLOOR GAPS, HOLES, ETC. AROUND LINES AT PENETRATIONS SHALL BE SEALED AND CAULKED PER HEALTH DEPARTMENT REQUIREMENTS.

GENERAL MECHANICAL AND PLUMBING NOTES:

1. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO CONSTRUCT THE BUILDING IN ACCORDANCE WITH THE 2022 EDITION OF TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WOULD NOT COMPLY WITH SAID TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUESTED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
2. THE APPLICABLE CODES AND REGULATIONS FOR THIS PROJECT INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

   CALIFORNIA CODE OF REGULATIONS
   - TITLE 8, INDUSTRIAL RELATIONS
   - TITLE 19, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
   - TITLE 24, PART 1, ADMINISTRATIVE REGULATIONS

   2022 CALIFORNIA BUILDING CODE, PART 2, TITLE 24 CCR
   2022 CALIFORNIA ELECTRICAL CODE, PART 3, TITLE 24 CCR
   2022 CALIFORNIA MECHANICAL CODE, PART 4, TITLE 24 CCR
   2022 CALIFORNIA PLUMBING CODE, PART 5, TITLE 24 CCR
   2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 CCR

   NFPA 101 2021 EDITION
   OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
3. LAYOUT OF MATERIALS, EQUIPMENT AND SYSTEMS IS GENERALLY DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED. SOME WORK MAY BE SHOWN OFFSET FOR CLARITY. THE PLUMBING BUILDING PLANS HAVE BEEN PREPARED TO MATCH THE ARCHITECTURAL PLANS. IF DIFFERENCES OCCUR, THE ARCHITECTURAL PLANS ARE TO TAKE PRECEDENCE. THE ACTUAL LOCATIONS OF ALL MATERIALS, PIPING, DUCTWORK, FIXTURES, EQUIPMENT, SUPPORTS, ETC. SHALL BE CAREFULLY PLANNED, PRIOR TO INSTALLATION OF ANY WORK, TO AVOID ALL INTERFERENCE WITH EACH OTHER, OR WITH STRUCTURAL, ELECTRICAL, ARCHITECTURAL, OR OTHER ELEMENTS. ALL PIPE OFFSET ELBOWS FOR COORDINATION BETWEEN TRADES ARE NOT SHOWN. CONTRACTOR SHALL INCLUDE SUFFICIENT FUNDS FOR THE COORDINATION OFFSETS IN THE BID. VERIFY THE PROPER VOLTAGE AND PHASE OF ALL EQUIPMENT WITH THE ELECTRICAL PLANS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER PRIOR TO INSTALLATION OF ANY WORK OR THE ORDERING OF ANY EQUIPMENT.
4. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER-DRIVEN PINS IN EXISTING NON-PRESTRESSED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRE-STRESSED CONCRETE (PRE- OR POST-TENSIONED), LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.
5. MEP COMPONENT ANCHORAGE NOTE:

   ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE THERE IS NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.

   1. ALL PERMANENT EQUIPMENT AND COMPONENTS.

   2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.

   3. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

   THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

   A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

   B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

   THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.
6. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

   PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25, 1617A.1.26.

   THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAi OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

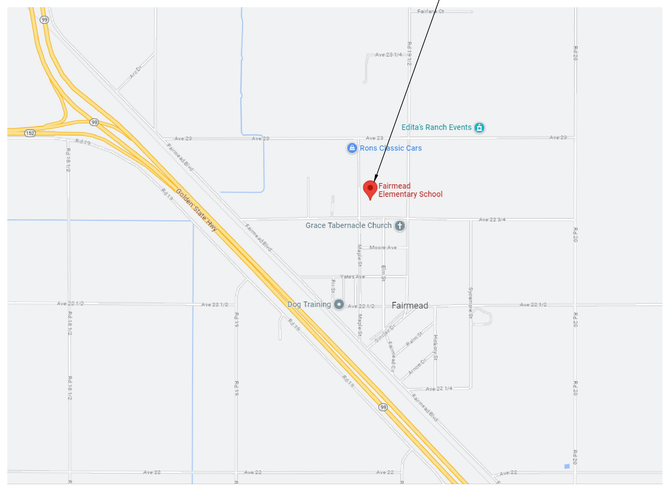
   MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP):

   MP ☐ MD ☐ PP ☐ A. OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

   MP ☐ MD ☐ PP ☒ B. OPTION 2: SHALL COMPLY WITH HCAi (OSHPD) PREAPPROVAL: OPM-0043-13 (MASON WEST, SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED DISTRIBUTION SYSTEMS), AS INCLUDED IN THESE DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

   BRACE ALL PIPING GREATER THAN 3" DIAMETER; USE Ip=1.0 FOR SEISMIC DESIGN CALCULATIONS. EXCEPTION: NATURAL GAS PIPING GREATER THAN 1" DIAMETER, USE Ip=1.5 FOR SEISMIC DESIGN CALCULATIONS.
7. PENETRATIONS THROUGH FIRE RATED WALLS, FLOOR/CEILING, AND ROOF/CEILING ASSEMBLIES SHALL BE SEALED USING AN APPROVED SYSTEM CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES WHEN SUBJECTED TO THE REQUIREMENTS OF THE TEST STANDARD SPECIFIC TO FIRE STOPS PER 2022 CBC SECTION 714. THIS INCLUDES EXISTING PIPE AND CONDUIT THROUGH NEW ASSEMBLIES. CUSTOM DESIGNED SYSTEMS WHICH COMBINE COMPONENTS FROM DIFFERENT APPROVED SYSTEMS BUT HAVE NOT BEEN TESTED AS A COMPLETE ASSEMBLY WILL NOT BE ACCEPTABLE. FOR FIRE STOPS FOR PIPE PENETRATIONS SEE SPECIFICATIONS.
8. FIELD VERIFY THE EXACT LOCATION, DEPTH AND SIZE OF ALL NEW POINTS OF CONNECTION TO EXISTING UTILITIES PRIOR TO COMMENCING NEW UTILITY WORK.
9. ALL DOMESTIC WATER PIPING SHALL BE A MINIMUM OF 1/2" SIZE UNLESS NOTED OTHERWISE. USE A REDUCING DROP ELL AT FIXTURE CONNECTION WHEN APPLICABLE.
10. INSTALLATION, TYPE AND MANUFACTURERS MODELS OF DOMESTIC WATER METERS, BACKFLOW PREVENTERS, FIRE HYDRANTS, DETECTOR CHECK VALVES, MANHOLES, DRAIN INLETS/OUTLETS AND OTHER APPURTENANCE OF SITE UTILITY SYSTEMS SHALL BE DONE IN STRICT ACCORDANCE WITH GOVERNING AUTHORITY REQUIREMENTS.
11. CONTRACTOR SHALL EXCAVATE AND BACKFILL THE GAS SERVICE TRENCH FOR THE LOCAL GAS UTILITY. THE LOCAL GAS UTILITY SHALL INSTALL THEIR GAS SERVICE LINE TO THE GAS METER. TRENCHING SHALL BE IN ACCORDANCE WITH UTILITY STANDARDS. ALL CHARGES AND FEES INCURRED BY THE UTILITY FOR NEW GAS SERVICE SHALL BE PAID BY THE CONTRACTOR.
12. ALL DOMESTIC WATER PIPING SHALL BE A MINIMUM OF 1/2" SIZE UNLESS NOTED OTHERWISE. USE A REDUCING DROP ELL AT FIXTURE CONNECTION WHEN APPLICABLE.
13. BACKFLOW PREVENTER SHALL BE INSTALLED AT THE MINIMUM HEIGHT ABOVE FINISH GRADE AS ALLOWED BY GOVERNING AUTHORITY.
14. RUN A BLUE 18 GAUGE TRACE WIRE WITH NON-METALLIC DOMESTIC WATER SERVICE. TERMINATE ABOVE GRADE AT EACH END.

FOR PLUMBING WORK AT FAIRMEAD ELEMENTARY SCHOOL, 19421 AVE 22 3/4, CHOWCHILLA, CA 93610, REFER TO SHEET P1.03



NORTH

VICINITY MAP

SCALE: NONE

WALL LEGEND

● ● ● ● ● ● ●	**1 Hour Fire Barrier Wall** 6" x 18 ga. metal studs @ 16" o.c. with 5/8" Gypsum board on both faces of wall.
∧∧∧∧∧∧∧∧∧∧∧∧∧∧∧∧	Smoke Barrier Wall @ Interior Walls
∧∧∧∧∧∧∧∧∧∧∧∧∧∧∧∧	Sound Walls

PLUMBING SHEET INDEX

P1.01 - PLUMBING NOTES, LEGEND, AND VICINITY MAP
P1.02 - PLUMBING CALCULATIONS
P1.03 - PLUMBING SITE PLAN
P2.01 - PLUMBING FLOOR PLAN
P2.02 - PLUMBING ROOF PLAN
P2.03 - ENLARGED PLUMBING FLOOR PLANS - UNDERGROUND
P2.04 - ENLARGED PLUMBING FLOOR PLANS - ABOVEGROUND WASTE AND VENT
P205 - ENLARGED PLUMBING FLOOR PLANS - ABOVEGROUND DOMESTIC WATER
P3.01 - PLUMBING DETAILS
P3.02 - PLUMBING DETAILS
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P3.06 - PLUMBING DETAILS
P3.07 - PLUMBING DETAILS
P3.08 - PLUMBING DETAILS
P4.01 - PLUMBING SCHEDULES
P4.02 - PLUMBING SCHEDULES

	PLUMBING LEGEND	
SYMBOL	ITEM	ABBR
━━━━	SOIL or WASTE	S or W
– – – – –	VENT	V
	VENT RISER	VR
	VENT THRU ROOF	VTR
—— - ——	DOMESTIC COLD WATER	CW
—— - - ——	DOMESTIC HOT WATER	HW
—— - - - ——	DOMESTIC HOT WATER RETURN	HWR
—G—	LOW PRESSURE NATURAL GAS	G
— 2#G —	2 PSI GAS	2#G
— 5#G —	5 PSI GAS	5#G
- -GSM- -	GAS SERVICE MAIN BY THE LOCAL GAS UTILITY	GSM
—C—	CONDENSATE DRAIN	CD
━RWL━	RAIN WATER LEADER	RWL
━OD━	OVERFLOW DRAIN	OD
━SD━	STORM DRAIN	SD
━IW━	INDIRECT WASTE	IW
—F—	FIRE PROTECTION LINE	F
—— ——	EXISTING PIPING	(E)
(E)	EXISTING	
(N)	NEW	
	ABOVE CEILING	ABV CLG
	BELOW FLOOR	BEL FLR
	BELOW GRADE	BEL GR
	TYPICAL	TYP
	CONTINUATION	CONT
	DOWN	DN
—Φ—	FLOOR CLEANOUT	FCO
—Φ—	CLEANOUT TO GRADE	COTG
——┤	WALL CLEANOUT	WCO
——○	PIPING TURN UP	
——⊃	PIPING TURN DOWN	
—✕—	POINT OF CONNECTION	POC
—⊗—	SHUT-OFF VALVE IN BOX	SOV
—⋈—	SHUT-OFF VALVE	SOV
	SHUT-OFF VALVE IN RISER	-
	SHUT-OFF VALVE IN DROP	-
—⋈—	GATE VALVE	-
	BUTTERFLY VALVE	-
—⋈—	GLOBE VALVE	-
	CHECK VALVE	-
⊣▽⊢	PLUG VALVE	-
⊣○⊢	BALL VALVE	-
	BALANCE COCK	-
—▷—	REDUCER	-
━○━	MANHOLE	MH
	FLOW LINE	FL
—‖—	UNION	-
	RELIEF VALVE	-
	BALANCING VALVE	-
	PRESSURE GAUGE	-
	THERMOMETER	-
#	SYMBOL DENOTES FOODSERVICE FURNISHED EQUIPMENT, U.O.N. FOR KITCHEN EQUIPMENT PLUMBING SCHEDULE AND INTERCONNECTIONS BETWEEN FOODSERVICE EQUIPMENT AND PLUMBING, REFER TO SHEET P4.03. REFER TO KITCHEN DESIGN PLANS, FOODSERVICE SHEETS AND SPECIFICATION SECTION 11 40 00 FOR ADDITIONAL PLUMBING REQUIREMENTS, AND EQUIPMENT DETAILS.	
## ###	DENOTES PHOTO OF AREA, TYP.	

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FILE NO.: 20-10 APPL. NO.: 02-121993

JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
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ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
Plumbing Notes, Legend, and Vicinity Map

P1.01

19 March 2024 5:32 PM p:\2023\23123 chowchilla esd fairmead es mpb\4-drawings\5 P\P1.01 - PLBG NOTES, LEGEND, & VICINITY MAP.dwg david s

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Muli-Purpose Bldg\2.Working Dwgs Phase\WD_2318_Fairmead Multi-Purpose.pln

RAINWATER PIPING - SIZING FOR 1.5 INCHES PER HOUR RAINFALL RATE

2022 CPC TABLE 1103.1 (EXCERPT): SIZING ROOF DRAINS... AND VERTICAL RAINWATER PIPING

SIZE OF DRAIN PIPE, INCHES	FLOW GPM	MAXIMUM ALLOWANCE HORIZONTAL PROJECTED ROOF AREA 1.5" PER HOUR.
3	92	5867 SQ FT
4	192	12266 SQ FT

2019 CPC TABLE 1103.2 (EXCERPT): SIZING OF HORIZONTAL RAINWATER PIPING

SIZE OF DRAIN PIPE, INCHES	SLOPE VS. FLOW GPM	MAXIMUM ALLOWANCE HORIZONTAL PROJECTED ROOF AREA 1.5" PER HOUR.
3	1/8"/FT = 34	2192 SQ FT
3	1/4"/FT = 48	3094 SQ FT
3	1/2"/FT = 68	4384 SQ FT
4	1/8"/FT = 78	5014 SQ FT
4	1/4"/FT = 110	7067 SQ FT
4	1/2"/FT = 156	10027 SQ FT

GAS DEMAND AND PIPE SIZING

TOTAL DEMAND: 515 CFH (515 MBH)
5 PSI NATURAL GAS
INLET PRESSURE: 5 PSI
PRESSURE DROP: 3.5 PSI
SPECIFIC GRAVITY: 0.60

TOTAL DEVELOPED LENGTH FROM GAS METER TO 5PSI GAS REGULATOR : 837 FT.
TOTAL MAXIMUM GAS SUPPLY: 2" PIPE AT 850 FT. = 6720 CFH.
CPC 2022 TABLE 1215.2(6) 850FT. COLUMN

TOTAL DEMAND: 515 CFH (515 MBH)
7"-14" W.C. NATURAL GAS
INLET PRESSURE: LESS THAN 2 PSI
PRESSURE DROP: 0.5 IN. W.C.
SPECIFIC GRAVITY: 0.60

TOTAL DEVELOPED LENGTH FROM 5PSI GAS REGULATOR TO MOST REMOTE FIXTURE IS 91 FT.
CPC 2022 TABLE 1215.2(1) 100FT. COLUMN

TOTAL DEMAND: 515 CFH (515 MBH)

2" GAS PIPE WILL DELIVER:	1160 CFH (1160 MBH)
1-1/2" GAS PIPE WILL DELIVER:	600 CFH (600 MBH)
1-1/4" GAS PIPE WILL DELIVER:	400 CFH (400 MBH)
1" GAS PIPE WILL DELIVER:	195 CFH (195 MBH)
3/4" GAS PIPE WILL DELIVER:	104 CFH (104 MBH)
1/2" GAS PIPE WILL DELIVER:	50 CFH (50 MBH)

GAS FIRED EQUIPMENT:

WATER HEATER (WH-1) 200 CFH (200 MBH)

KITCHEN EQUIPMENT: (SEE ARCHITECTURAL SHEET A-7)

K.E.S. #

#15- 6 BURNER RANGE AND OVEN	215 CFH (245 MBH)
#16- DOUBLE OVEN	100 CFH (100 MBH)
TOTAL GAS LOAD:	515 CFH (515 MBH)

TOTAL SYSTEM GAS LOAD: 515 CFH (515 MBH)

DOMESTIC WATER DEMAND AND SIZING

Project No.: 23123
Project: FAIRMEAD E.S. M.P. BLDG.

Date: 12/11/23
Location: CHOWCHILLA
Prepared By: LEG

Meter Size: 2"

System Type (1): Predominantly Flushometer Valves: X
Predominantly Flush Tanks:

136 Water Fixture Units Equal 75 GPM
Total distance from Water Meter to most remote Plumbing Fixture 550 Ft.
Total rise for Head Loss 6 Ft. x 0.43 3.0 PSI
PSI required for Water Closet (25 PSI) 25.0 PSI
PSI Flow Loss through Water Meter 0.0 PSI
PSI Flow Loss through Backflow Preventer (10 - 12 PSI) 10.0 PSI
Line Loss between Pump Stations and Job Sets (5 PSI) 0.0 PSI
Area Minimum PSI 42.0 PSI
Total Loss in PSI 38.0 PSI
Total Remaining PSI available 4.0 PSI
4.0 PSI available divided by 550 Total Feet x 100 7.0 PSI / 100'

6" Pipe will deliver		GPM (2) for		F.V. Fixture Units
4" Pipe will deliver		GPM (2) for		F.V. Fixture Units
3" Pipe will deliver	130	GPM (2) for	400	F.V. Fixture Units
2-1/2" Pipe will deliver	85	GPM (2) for	170	F.V. Fixture Units
2" Pipe will deliver	60	GPM (2) for	75	F.V. Fixture Units
1-1/2" Pipe will deliver	37	GPM (2) for	22	F.V. Fixture Units
1-1/4" Pipe will deliver	28	GPM (2) for	10	F.V. Fixture Units
1" Pipe will deliver	16	GPM (2) for	0	F.V. Fixture Units
3/4" Pipe will deliver	8.0	GPM (2) for	0	F.V. Fixture Units
1/2" Pipe will deliver	4.0	GPM (2) for	0	F.V. Fixture Units

Notes:
(1) Mark an 'X' in the predominant system type.
(2) Based on 6 FPS maximum velocity [Iron Pipe]
F.V. is Flushometer Valve

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MARK	DATE	DESCRIPTION

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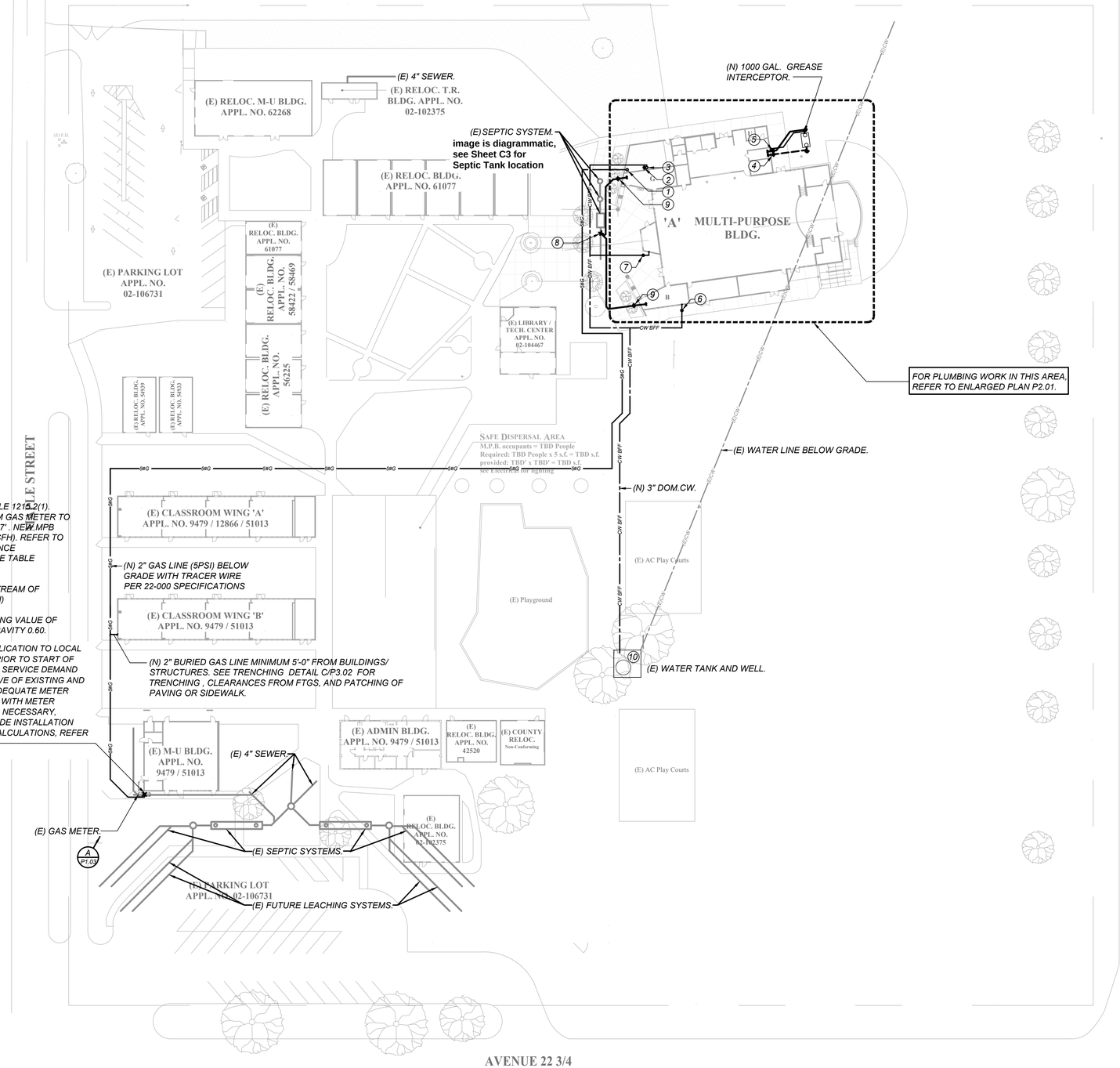
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
Plumbing Calculations

P1.02



PLUMBING SITE PLAN

SCALE: 1"=40'-0"

GAS CALC. SUMMARY:

LOCAL GAS UTILITY: PG&E
METER #230,574 GAS METER.
GAS PIPE SIZE PER 2022 CPC TABLE 1215.2(1).
TOTAL DEVELOPED LENGTH FROM GAS METER TO MOST REMOTE CONNECTION = 837' . NEW MPB GAS DEMAND = 515 MBTUH (515 CFH). REFER TO SHEET P1.02 FOR (N) GAS APPLIANCE CONNECTED LOADS AND LINE SIZE TABLE 1215.2(1).

GAS SUPPLY PRESSURE DOWNSTREAM OF METER = 7" W.C. (WATER COLUMN)

BASED ON A NATURAL GAS HEATING VALUE OF 1,000 BTUH/CFH AND SPECIFIC GRAVITY 0.60.

CONTRACTOR SHALL SUBMIT APPLICATION TO LOCAL GAS UTILITY WITHIN 3-MONTHS PRIOR TO START OF CONSTRUCTION TO ANALYZE GAS SERVICE DEMAND AT EXISTING GAS METER INCLUSIVE OF EXISTING AND NEW GAS LOAD TO DETERMINE ADEQUATE METER ACCOMMODATIONS OR PROCEED WITH METER UPGRADE FOR THIS PROJECT. AS NECESSARY, OWNER TO ARRANGE FOR UPGRADE INSTALLATION AND PAY ALL COSTS. FOR GAS CALCULATIONS, REFER TO SHEET P1.02.

(E) GAS METER.

(E) GAS METER ASSEMBLY

SCALE: NONE

detail # A P1.03

1. *(N) 2" (5PSI) GAS LINE FROM GAS METER TO GPRV-1 UP IN WALL. ROUTE ABOVE CEILING TO WATER HEATER AND KITCHEN EQUIPMENT.*
2. *(N) 3" DOM.CW. WITH S.O.V. BELOW GRADE FROM (E) WELL. 3" CW LINE UP IN WALL TO ABOVE CEILING.*
3. *(N) RP-1 1" RP DEVICE AND MAKE-UP WATER FOR WATER CHILLER UNIT. (N) (2) 1" DRAINS FROM CHILLER UNIT, 1-1/2" DRAIN FROM RP DEVICE AND TERMINATE INTO FLOOR SINK. FLOOR SINK TO BE SET 1 INCH ABOVE GRADE TO PREVENT RAIN WATER COLLECTION.*
4. *(N) 4" GREASE WASTE LINE BELOW GRADE . 2-WAY C.O.T.G. FROM GI-1 TO SERVE KITCHEN. REFER TO DETAILS C/P3.01 AND A/P3.04.*
5. *(N) 4" SANITARY SEWER AND 2-WAY C.O.T.G. BELOW GRADE FROM (N) BUILDING TO (E) SEPTIC SYSTEM. REFER TO DETAIL C/P3.01.*
6. *(N) 2-1/2" DOM. C.W. LINE WITH S.O.V BELOW GRADE. 2-1/2" CW LINE UP IN WALL TO ABOVE CEILING.*
7. *(N) 1-1/4" DOM. C.W. LINE WITH S.O.V. IN BOX BELOW GRADE. 1-1/4" CW LINE UP IN WALL TO ABOVE CEILING. REFER TO DETAIL A/P3.01.*
8. *(N) 4" SANITARY SEWER P.O.C. TO (E) 4" SEPTIC SYSTEM. FIELD VERIFY EXACT LOCATION, SIZE AND DEPTH PRIOR TO INSTALL.*
9. *(N) 4" SANITARY SEWER C.O.T.G. TO (E) 4" SEPTIC SYSTEM. FIELD VERIFY EXACT LOCATION, SIZE AND DEPTH PRIOR TO INSTALL. SEE DETAIL B/P3.01*
10. *(N) RP-2 3" RP DEVICE P.O.C. TO (E) WELL. FIELD VERIFY EXACT LOCATION OF (N) RP DEVICE AND POINT OF CONNECTION WITH EXISTING PIPING AND CLEARANCES.*

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STATE OF CALIFORNIA

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE 12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

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TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

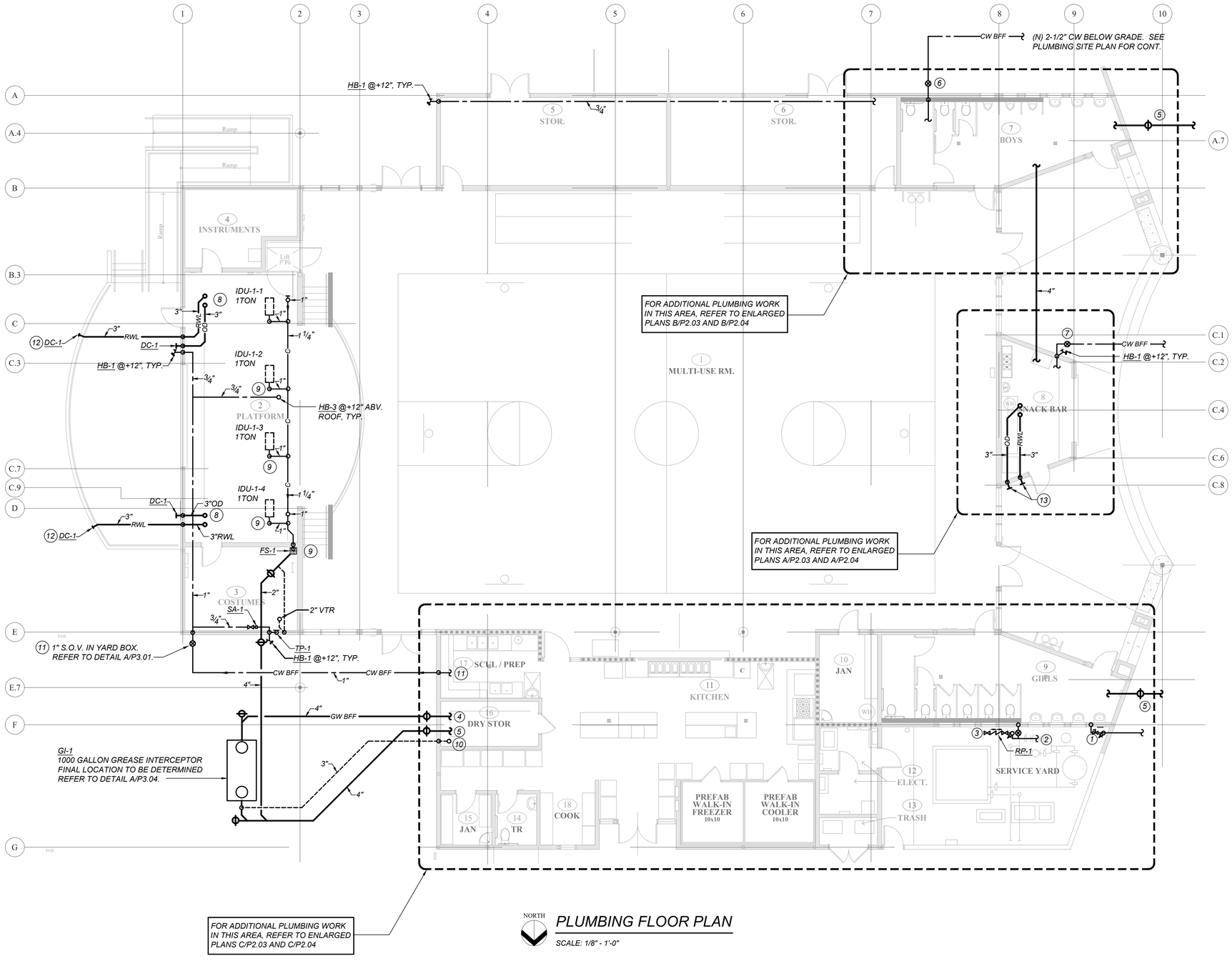
MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
Plumbing Site Plan

P1.03

RAIN WATER LEADER.



PLUMBING FLOOR PLAN

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

PLUMBING KEYNOTES: (THIS SHEET ONLY)

1. *(N) 2" (5PSI) GAS LINE FROM GAS METER TO GPRV-1 UP IN WALL. ROUTE ABOVE CEILING TO WATER HEATER AND KITCHEN EQUIPMENT. GAS SHUT-OFF SIGN MOUNTED ON WALL ABOVE VALVE. SEE DETAIL G/P3.01.*
2. *(N) 3" DOM.CW. w/ S.O.V. IN YARD BOX BELOW GRADE FROM (E) WELL. 3" CW LINE UP IN WALL TO ABOVE CEILING. REFER TO YARD BOX DETAIL A/P3.01. SEE PLUMBING SITE PLAN FOR CONTINUATION.*
3. *(N) RP-1 1" RP DEVICE AND MAKE-UP WATER FOR WATER CHILLER UNIT. (N) (2) 1" DRAINS FROM CHILLER UNIT, 1-1/2" DRAIN FROM RP DEVICE AND TERMINATE INTO FLOOR SINK. FLOOR SINK TO BE SET 1 INCH ABOVE GRADE TO PREVENT RAIN WATER COLLECTION.*
4. *(N) 4" GREASE WASTE ,4 C.O.T.G. BELOW GRADE TO GI-1 GREASE INTERCEPTOR. REFER TO DETAIL C/P3.01 AND DETAIL A/P3.04.*
5. *(N) 4" SANITARY SEWER , 4" C.O.T.G. TO (E) SEPTIC SYSTEM. REFER TO CLEANOUT DETAIL BP3.01. SEE SITE PLUMBING SITE PLAN FOR CONT.*
6. *(N) 2-1/2" DOM. C.W. LINE WITH S.O.V BELOW GRADE. 2-1/2" CW LINE UP IN WALL TO ABOVE CEILING. REFER TO DETAIL A/P3.01.*
7. *(N) 1-1/4" DOM. C.W. LINE WITH S.O.V BELOW GRADE. 1-1/4" CW LINE UP IN WALL TO ABOVE CEILING. REFER TO DETAIL A/P3.01.*
8. *RAINWATER LEADER AND OVERFLOW DRAIN PIPING DOWN FROM ROOF DRAIN TO SPACE ABOVE CEILING. REFER TO PLUMBING ROOF PLAN P2.02.*
9. *CONNECT CONDENSATE DRAIN PIPING TO MECH. INDOOR UNIT. REFER TO MECHANICAL DRAWINGS. OFFSET PIPING ABOVE CEILING AND DROP DOWN IN WALL TO FS-1. REFER TO INDIRECT WASTE AIR GAP DRAIN.*
10. *3" VENT FROM GI-1 UP IN WALL AND VENT THRU ROOF.*
11. *1" CW LINE DOWN IN WALL FROM ABOVE CEILING. ROUTE BELOW GRADE, UP IN WALL TO SUPPLY WATER TO HOSE BIBS AT PLATFORM AREA.*
12. *3" RWL ROUTE BELOW SLAB TERMINATE THRU FACE OUTDOOR PLATFORM RETAINING WALL 6" ABOVE FINISH GRADE WITH DOWNSPOUT COVER. TYPICAL OF 2.*
13. *3"RWL TO TERMINATE 12" ABOVE FINISH FLOOR WITH DOWNSPOUT COVER. 3" OWL TO TERMINATE 16" ABOVE FINISH FLOOR WITH DOWNSPOUT COVER.*

NOTE:
ALL ABOVE GRADE RAINWATER LEADER AND OVERFLOW PIPING SHALL BE INSTALLED WITH FOAMED PLASTIC, RUBBER BASED ELASTOMERIC PREFORMED PIPE INSULATION. REFER TO SPECIFICATION SECTION 220000.

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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-12865 RENEWAL DATE 12/31/2025 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
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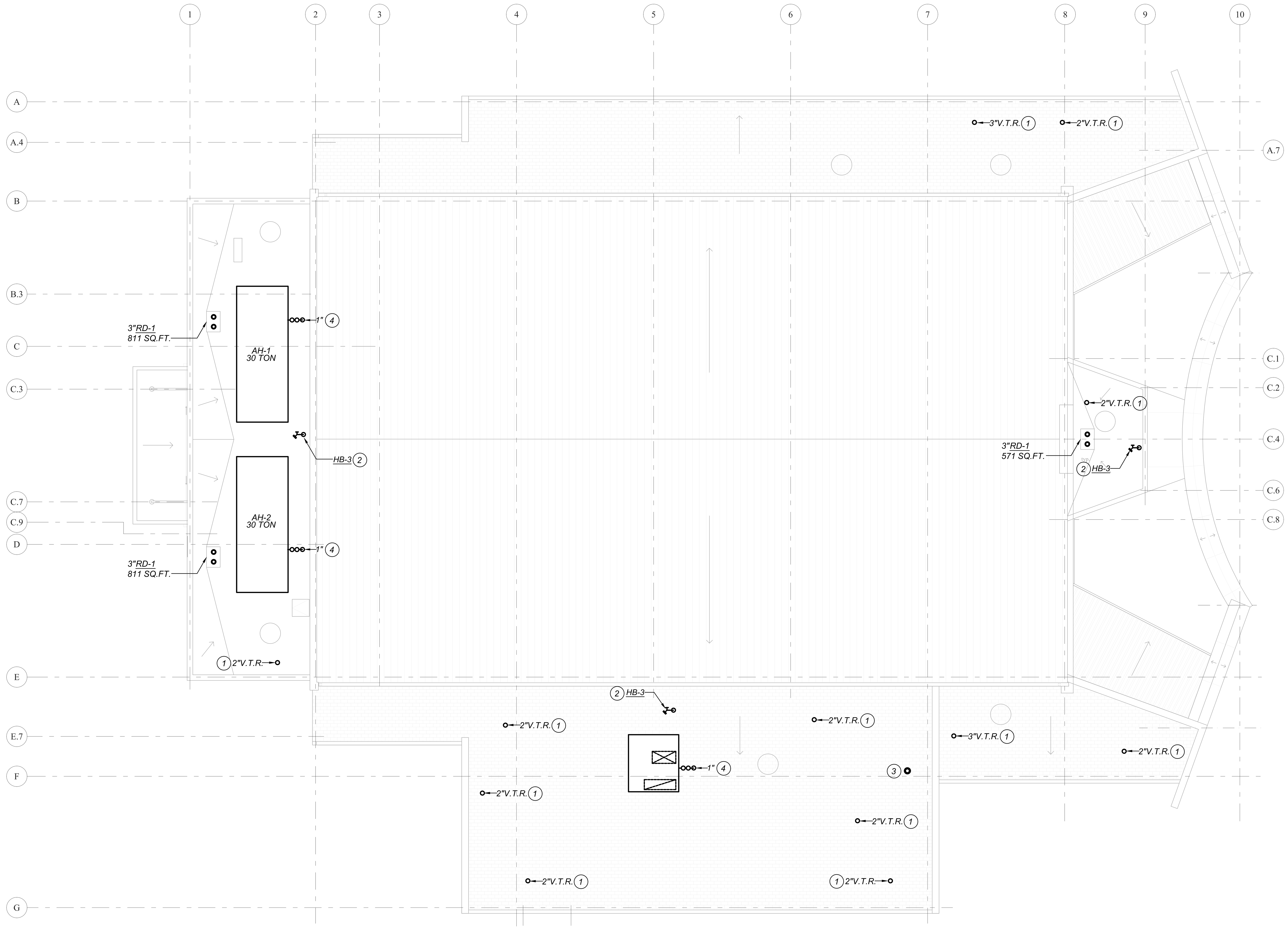
PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE: Plumbing Floor Plan

P2.01



NORTH

PLUMBING ROOF PLAN

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

PLUMBING KEYNOTES: (THIS SHEET ONLY)

1. VENT THRU ROOF. MAINTAIN MINIMUM 10'-0" CLEARANCE FROM OUTSIDE AIR INTAKE, +1'-0" FROM VERTICAL SURFACES. TYPICAL ALL VENT RISERS.
2. 3/4"CW UP THRU ROOF TO HOSE BIBB, AT +12" ABV. FIN. ROOF. REFER TO DETAIL C/P3.02, TYP.
3. EXTEND 4" SCH. 40 CPVC COMBUSTION AIR INTAKE AND EXHAUST (concentric vent) UP THRU ROOF FROM WATER HEATER WITH 10' CLEARANCE. M REFER TO DETAIL B/P3.03. TERMINATE IN COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION GUIDELINES.
4. CONNECT CONDENSATE DRAIN PIPING TO ROOF MOUNTED MECH. UNIT. REFER TO MECHANICAL DRAWINGS FOR CONNECTION LOCATION. DROP DOWN THRU ROOF. REFER TO SHEET C/P101 FOR CONTINUATION. REFER TO DETAIL E/P3.01 FOR CONDENSATE DRAIN CONNECTION. TYPICAL.

FILE NO.: 20-10 APPL. NO.: 02-121993

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CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
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PROJECT NO: 2318

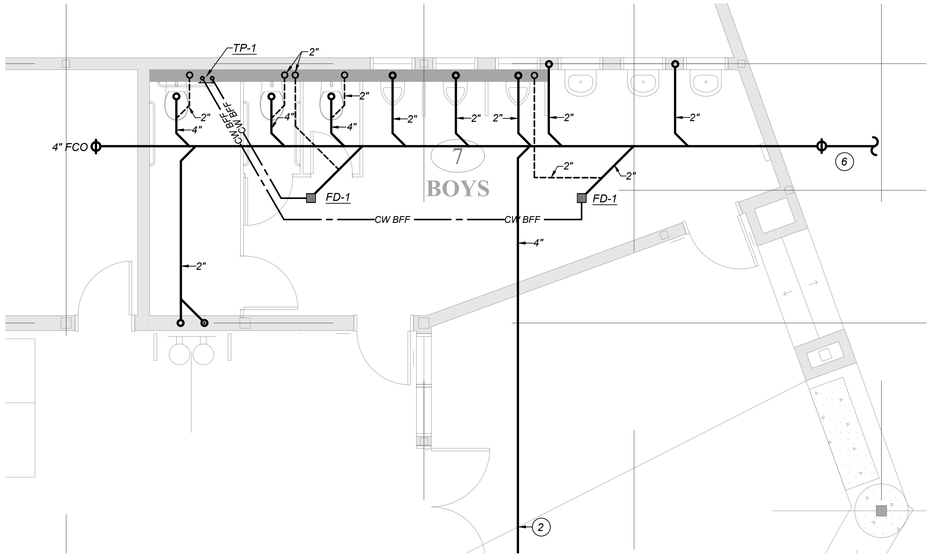
DATE: 8/24/2023

SHEET TITLE:
Plumbing Roof Plan

P2.02

19 March 2024 5:32 PM p:\2023\23123 chowchilla esd fairmead es mpb\4-drawings\5 P\P2.02 - PLBG ROOF PLAN.dwg david s

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2.Working Dwgs Phase\WD_2318_Fairmead Multi-Purpose.pln

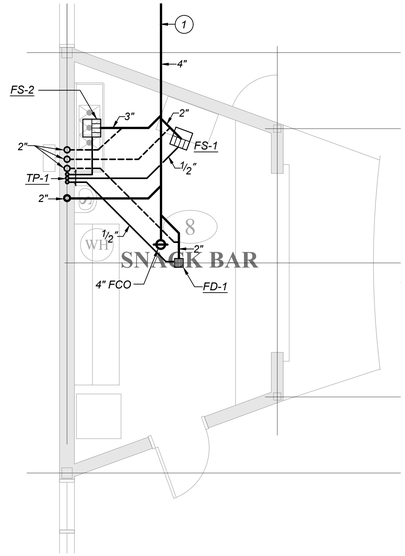


NORTH

ENLARGED PLUMBING PLAN - UNDERGROUND

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

B
P2.03



NORTH

ENLARGED PLUMBING PLAN - UNDERGROUND

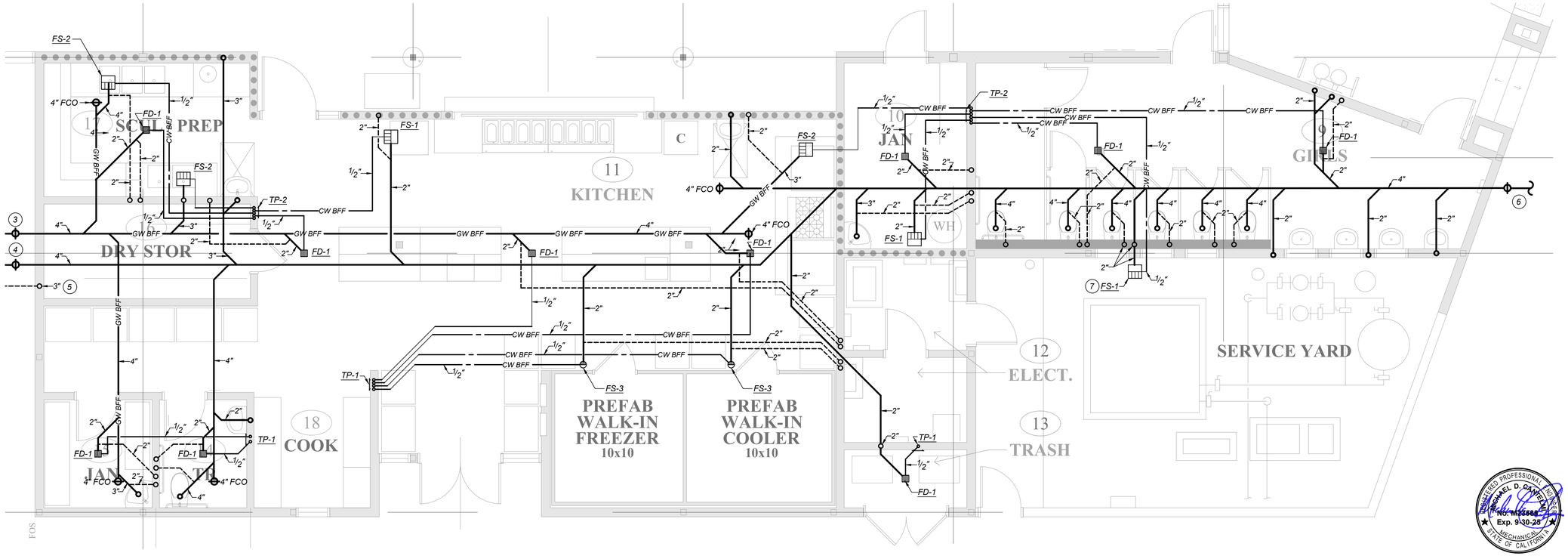
SCALE: 1/4"=1'-0"

A
P2.03

PLUMBING KEYNOTES: (THIS SHEET ONLY)

1. *4" SEWER LINE ROUTE BELOW GRADE TO 4 SEWER MAIN IN BOYS RESTROOM. SEE B/P2.03*
2. *4" SEWER LINE BELOW GRADE FROM SNACK BAR. SEE A/P2.03*
3. *(N) 4" GREASE WASTE LINE BELOW GRADE WITH 2 WAY C.O.T.G. TO GI-1 FROM KITCHEN.*
4. *4" SEWER LINE BELOW GRADE FROM GI-1 GREASE INTERCEPTOR.*
5. *3" VENT LINE FROM GI-1 BELOW GRADE, UP IN WALL AND VENT THRU ROOF.*
6. *(N) 4" SANITARY SEWER , 4" C.O.T.G. TO (E) SEPTIC SYSTEM. REFER TO CLEANOUT DETAIL B/P3.01. SEE SITE PLUMBING SITE PLAN FOR CONT.*
7. *FLOOR SINK TO BE SET 1 INCH ABOVE GRADE TO PREVENT RAIN WATER COLLECTION. (N) (2) 1" DRAINS FROM CHILLER UNIT, 1-1/2" DRAIN FROM RP DEVICE AND TERMINATE INTO FLOOR SINK.*

NOTE: KITCHEN AND MECHANICAL EQUIPMENT THAT REQUIRE PLUMBING DRAINAGE, WATER, GAS, CONDENSATE LINES, INDIRECT WASTE, TO VERIFY AND COORDINATE ALL FINAL LAYOUT LOCATIONS, SPECIFICATIONS, CUTSHEETS , MODEL NUMBERS AND MANUFACTURES INSTALLATION INSTRUCTIONS PRIOR TO PLUMBING INSTALL AND BEFORE FLOOR POUR BACK AND CLOSING OF WALLS.



NORTH

ENLARGED PLUMBING PLAN - UNDERGROUND

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

C
P2.03

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
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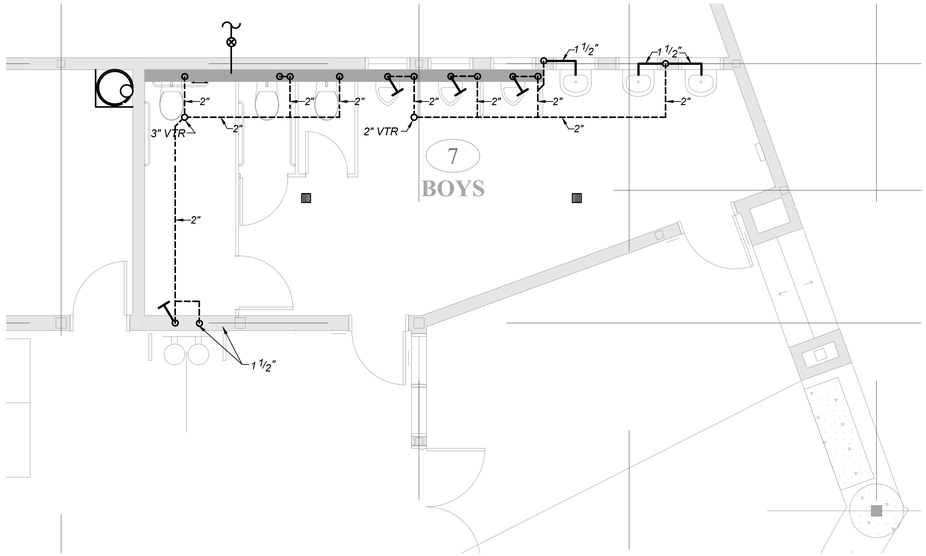
PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
Enlarged Plumbing Plans - Underground

P2.03

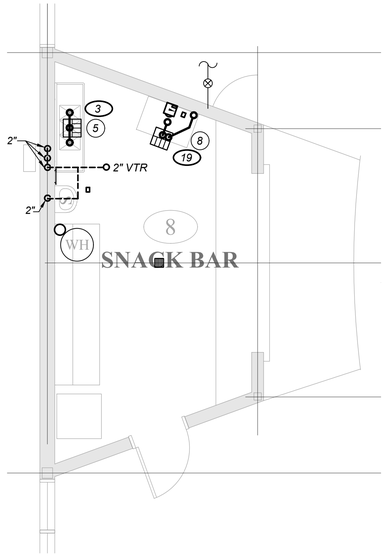


NORTH

ENLARGED PLUMBING PLAN - ABOVEGROUND

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

B
P2.04



NORTH

ENLARGED PLUMBING PLAN - ABOVEGROUND

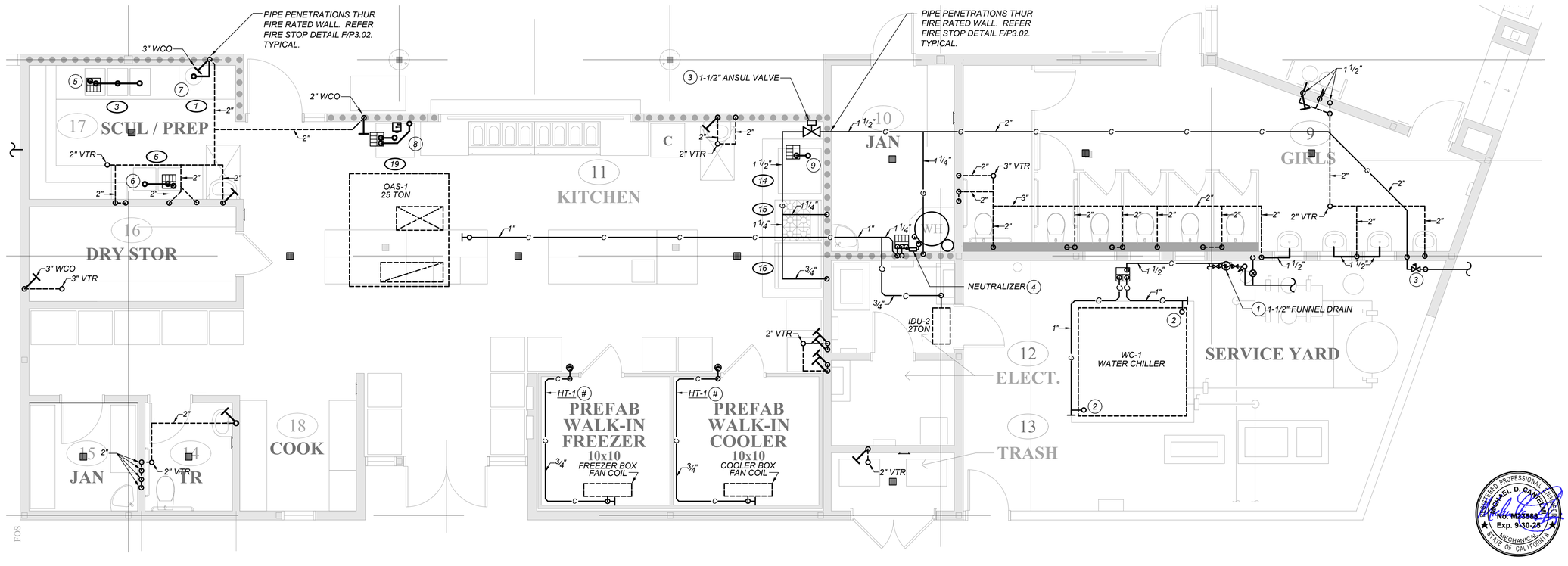
SCALE: 1/4"=1'-0"

A
P2.04

PLUMBING KEYNOTES: (THIS SHEET ONLY)

1. *(N) RP-1 1" RP DEVICE AND MAKE-UP WATER FOR WATER CHILLER UNIT. 1-1/2" DRAIN FUNNEL DRAIN FROM RP DEVICE AND TERMINATE INTO FLOOR SINK.*
2. *(2) 1" DRAINS FROM CHILLER UNIT AND TERMINATE INTO FLOOR SINK*
3. *(N) 2" (5PSI) GAS LINE FROM GAS METER TO 2" S.O.V. AND GPRV-1 . GAS PRESSURE REGULATOR SET 5PSI TO 7-11" W.C. 2" GAS LINE UP IN WALL FROM GPRV-1 AND ROUTE ABOVE CEILING TO WATER HEATER KITCHEN EQUIPMENT AND ANSUL VALVE. ANSUL VALVE SUPPLIED BY OTHERS.*
4. *3/4" DRAIN FROM WH-1 EXHAUST, ROUTE THRU CONDENSATE NEUTRALIZER AND TERMINATE INTO FLOOR SINK.*
5. *2" INDIRECT WASTE FROM 3 COMPARTMENT SINK. TERMINATE INTO FLOOR SINK WITH 1" AIRGAP.*
6. *2" INDIRECT WASTE FROM 2 COMPARTMENT SINK. TERMINATE INTO FLOOR SINK WITH 1" AIRGAP.*
7. *3" P-TRAP CONNECTION TO DISPOSER.*
8. *(2) 3/4" DRAIN LINES FROM ICE MACHINE. TERMINATE INTO FLOOR SINK WITH 1" AIRGAP SEE DETAIL A/P3.02.*
9. *2" DRAIN FROM TILT SKILLET DRAIN DRAWER. TERMINATE INTO FLOOR SINK WITH 1" AIRGAP SEE DETAIL A/P3.02.*

NOTE: KITCHEN AND MECHANICAL EQUIPMENT THAT REQUIRE PLUMBING DRAINAGE, WATER, GAS, CONDENSATE LINES, INDIRECT WASTE, TO VERIFY AND COORDINATE ALL FINAL LAYOUT LOCATIONS, SPECIFICATIONS, CUTSHEETS , MODEL NUMBERS AND MANUFACTURES INSTALLATION INSTRUCTIONS PRIOR TO PLUMBING INSTALL AND BEFORE FLOOR POUR BACK AND CLOSING OF WALLS.



NORTH

ENLARGED PLUMBING PLAN - ABOVEGROUND

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

C
P2.04

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

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MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
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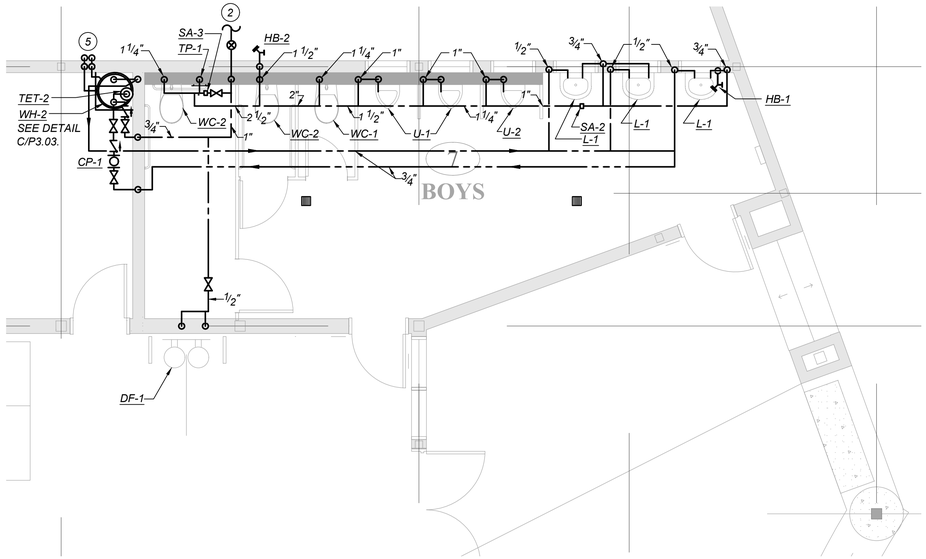
PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
Enlarged Plumbing Plans Waste, Vents, Gas, Cond. Aboveground

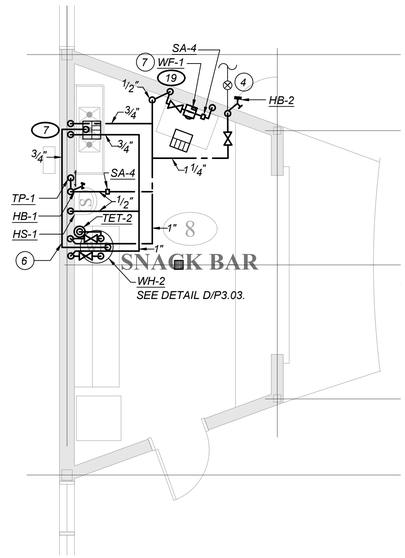
P2.04



NORTH

ENLARGED PLUMBING PLAN - ABOVEGROUND — B / P2.04

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



NORTH

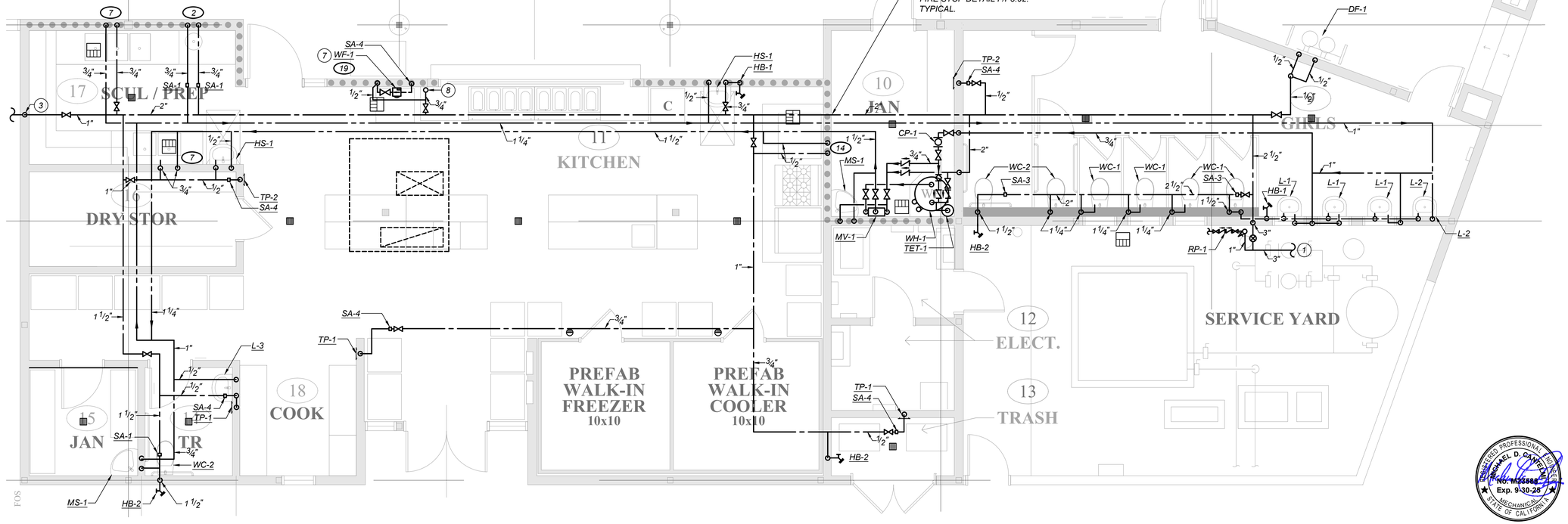
ENLARGED PLUMBING PLAN - ABOVEGROUND — A / P2.04

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

PLUMBING KEYNOTES: (THIS SHEET ONLY)

1. *(N) 3" DOM.CW. WITH S.O.V. BELOW GRADE FROM (E) WELL. 3" CW LINE UP IN WALL TO ABOVE CEILING.*
2. *(N) 2-1/2" DOM. C.W. LINE WITH S.O.V BELOW GRADE. 2-1/2" CW LINE UP IN WALL TO ABOVE CEILING.*
3. *(N) 1" CW LINE DOWN IN WALL FROM ABOVE CEILING. ROUTE BELOW GRADE, UP IN WALL TO SUPPLY WATER TO HOSE BIBS AT PLATFORM AREA.*
4. *(N) 1-1/4" DOM. C.W. LINE WITH S.O.V BELOW GRADE. 1-1/4" CW LINE UP IN WALL TO ABOVE CEILING.*
5. *3/4" PAN DRAIN , 3/4" T&P LINE ROUTE FROM WATER HEATER DOWN IN WALL AND TERMINATE OUTSIDE 6" ABOVE FINISH GRADE.*
6. *3/4" T&P LINE ROUTE THRU WALL , TERMINATE INTO FLOOR SINK WITH 1" AIRGAP..*
7. *1/2" CW DOWN IN WALL TO WF-1 AND SA-4 TO SUPPLY ICE MACHINE. SEE DETAIL A/P3.05.*
8. *3/4"CW UP THRU ROOF TO HB-3. SEE DETAIL C/P3.02.*

NOTE: KITCHEN AND MECHANICAL EQUIPMENT THAT REQUIRE PLUMBING DRAINAGE, WATER, GAS, CONDENSATE LINES, INDIRECT WASTE, TO VERIFY AND COORDINATE ALL FINAL LAYOUT LOCATIONS, SPECIFICATIONS, CUTSHEETS , MODEL NUMBERS AND MANUFACTURES INSTALLATION INSTRUCTIONS PRIOR TO PLUMBING INSTALL AND BEFORE FLOOR POUR BACK AND CLOSING OF WALLS.



NORTH

ENLARGED PLUMBING PLAN - ABOVEGROUND — C / P2.04

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

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

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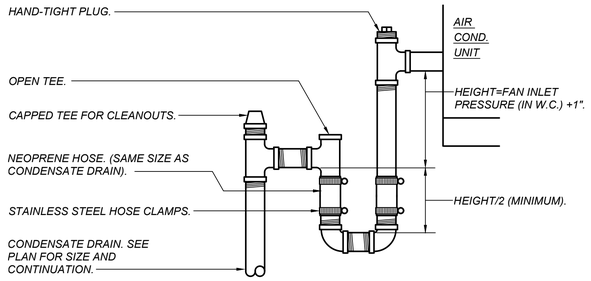
PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
Enlarged Plumbing Plans - Domestic Water Aboveground

P2.05

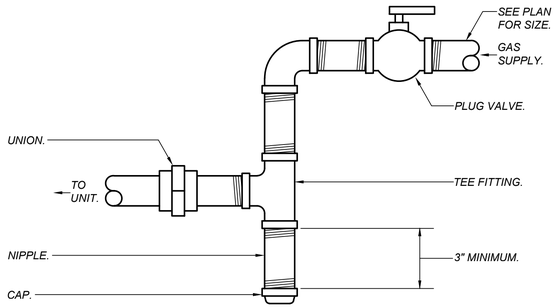


CONDENSATE DRAIN CONNECTION DETAIL

E P3.01

SCALE: NONE

P020

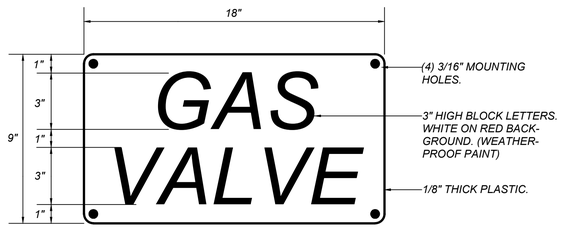


GAS PIPING DIRT LEG DETAIL

F P3.01

SCALE: NONE

P128



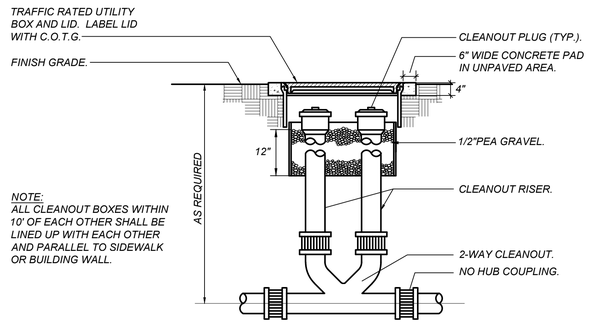
NOTE:
SIGN TO BE CONSPICUOUSLY LOCATED ON EXTERIOR WALL ABOVE BUILDING GAS SHUT-OFF VALVE AS INDICATED ON FLOOR PLAN.

GAS VALVE SIGN DETAIL

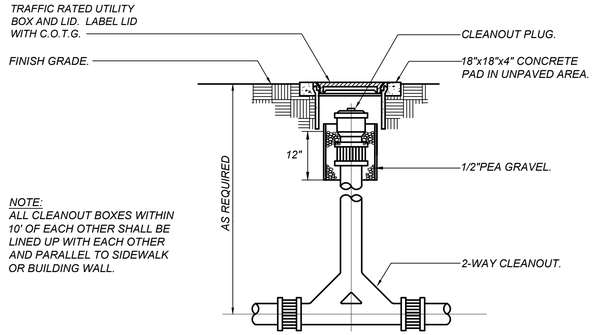
G P3.01

SCALE: NONE

P121



(OPTION 1)



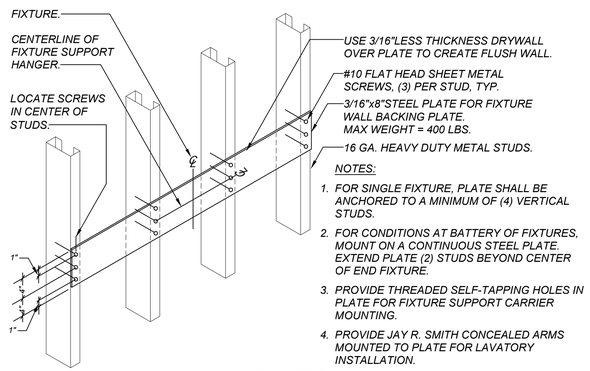
(OPTION 2)

TWO-WAY CLEANOUT TO GRADE DETAILS

C P3.01

SCALE: NONE

P159

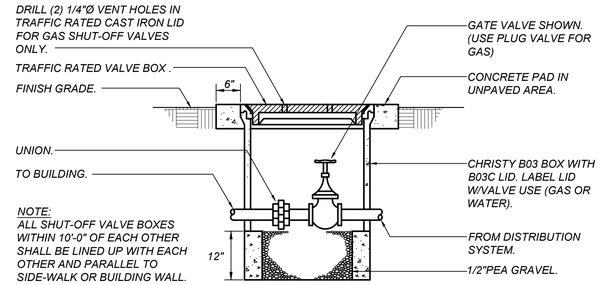


METAL STUD WALL

FIXTURE SUPPORT BACKING PLATE DETAIL

D P3.01

SCALE: NONE

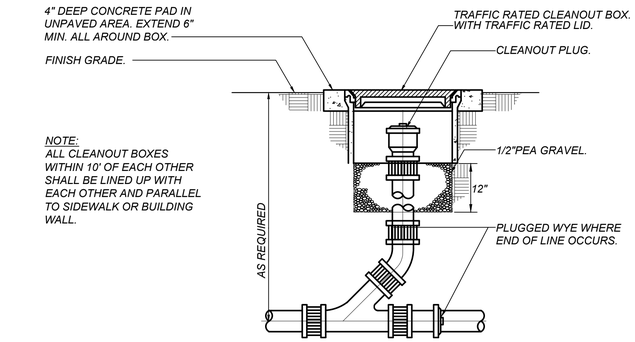


SHUT-OFF VALVE IN BOX DETAIL

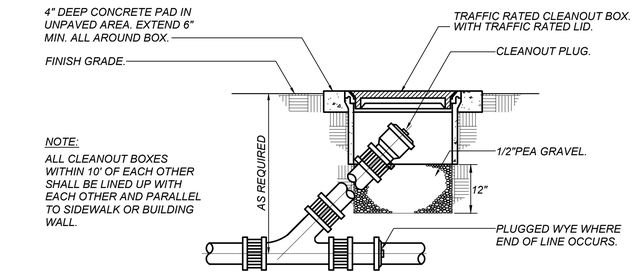
A P3.01

SCALE: NONE

P159



(OPTION 1)



(OPTION 2)

CLEANOUT TO GRADE DETAILS

B P3.01

SCALE: NONE

P111

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE 12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL.: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANEVARI
No. M35580
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101
(559) 431-0101
23123
Fresno, CA 93727
FAX (559) 431-1362

PROJECT NO: 2318

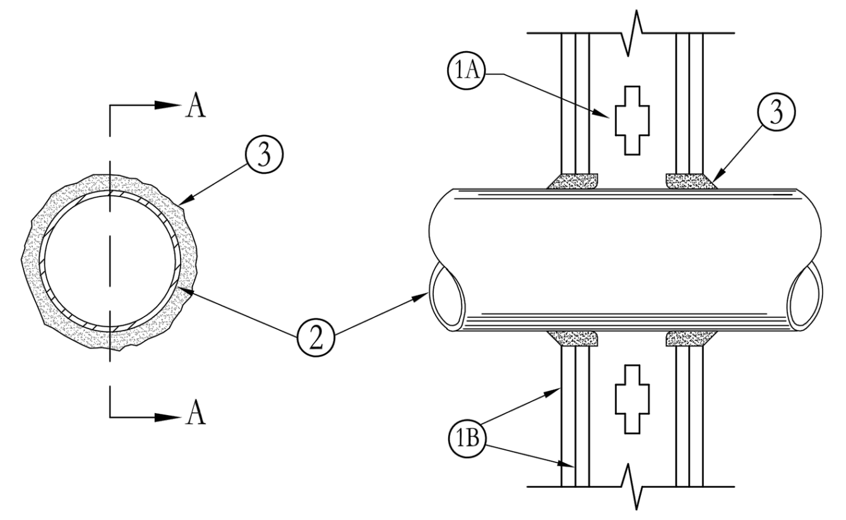
DATE: 8/24/2023

SHEET TITLE:
Plumbing Details

P3.01

System No. W-L-1001

June 15, 2005
F Ratings – 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings – 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient – less than 1 CFM/sq ft
L Rating At 400 F – less than 1 CFM/sq ft



Through Penetrations | Metallic Pipes | 1000 Series | Gypsum | WL

1. **Wall Assembly** – The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   - A. **Studs** – Wall framing may consist of either wood studs (max 2 hr fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
   - B. **Gypsum Board*** – Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. (660 mm).
2. **Through Penetrant** – One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (0 mm) (point contact) to max 2 in. (51 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   - A. **Steel Pipe** – Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   - B. **Iron Pipe** – Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.
   - C. **Conduit** – Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing
   - D. **Copper Tubing** – Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing
   - E. **Copper Pipe** – Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
   - F. **Through Penetrating Product*** – **Flexible Metal Piping** – The following types of steel flexible metal gas piping may be used:
     1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
        OMEGA FLEX INC
     2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
        TITEFLEX CORP
        A BUNDY CO
     3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
        WARD MFG INC

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W-L-1001 • 1 of 2
Product Support Line: 1-800-328-1687
Choose option 4 for FAX ON DEMAND
97

System No. W-L-1001 *continued*

Through Penetrations | Met | L

3. **Fill, Void or Cavity Material*** – **Caulk or Sealant** – Min 5/8. 1-1/4,1-7/8 and 2-1/2 in. (16, 32, 48 and 64 mm) thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam In. (mm)	F Rating Hr	T Rating Hr
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

+When copper pipe is used, T Rating is 0 hr.
3M COMPANY – CP 25WB+ caulk or FB-3000 WT sealant,

*Bearing the UL Classification Marking

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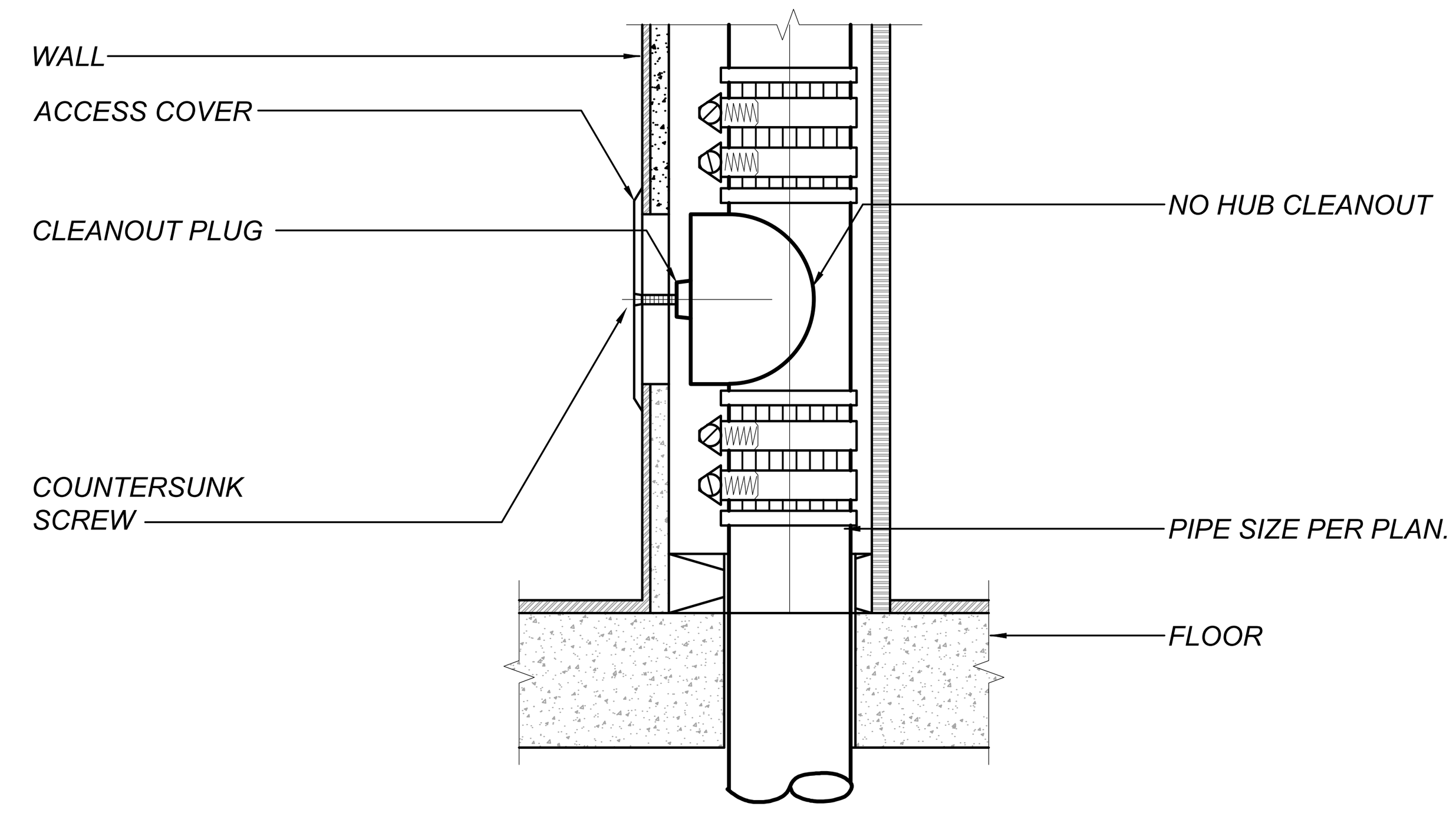
PIPE FIRE STOP DETAIL

F / P3.02

SCALE: NONE



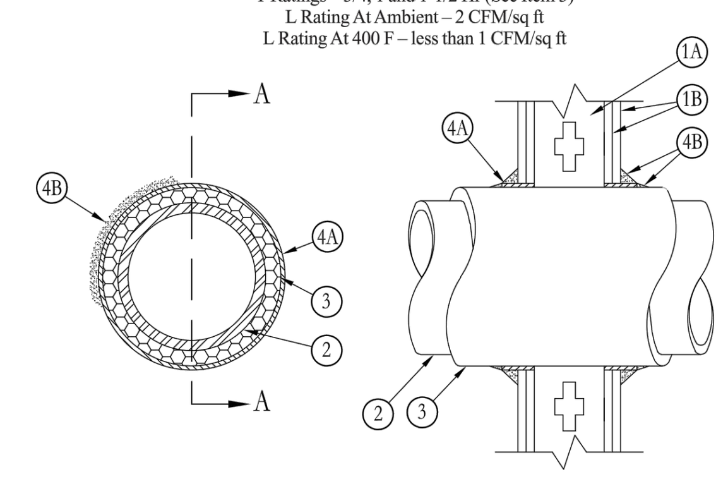
WALL CLEANOUT

D / P3.02

SCALE: NONE

System No. W-L-5001

May 19, 2005
F Ratings – 1 and 2 Hr (See Item 1)
T Ratings – 3/4, 1 and 1-1/2 Hr (See Item 3)
L Rating At Ambient – 2 CFM/sq ft
L Rating At 400 F – less than 1 CFM/sq ft



Through Penetrations | Insulated Pipes | 5000 Series | Gypsum | WL

1. **Wall Assembly** – The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   - A. **Studs** – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 in. by 4 in. (25 mm by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
   - B. **Gypsum Board*** – Nom 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 14-1/2 in (368 mm) for wood stud walls and 18 in. (457 mm) for steel stud walls.

   The hourly F Rating of the firestop system is 1 hr when installed in a 1 hr fire rated wall and 2 hr when installed in a 2 hr fire rated wall.
2. **Through Penetrants** – One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
   - A. **Steel Pipe** – Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   - B. **Copper Tubing** – Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   - C. **Copper Pipe** – Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. **Pipe Covering*** – Nom 1 in. or 2 in. (25 mm or 51 mm) thick hollow cylindrical heavy density glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints sealed with metal fasteners or with butt strip tape supplied with the product. When nom 1 in. (25 mm) thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum board layers on each side of the wall shall be min 1/4 in. to max 3/8 in. (6 mm to max 10 mm). When nom 2 in. (51 mm) thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum board layers on each side of the wall shall be min 1/2 in. to max 3/4 in. (13 mm to max 19 mm).

   See **Pipe and Equipment Covering** – **Materials** (BRGU) category in Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

   The hourly T Rating of the firestop system is 3/4 hr when nom 1 in. (25 mm) thick pipe covering is used. The hourly T Rating of the firestop system is 1 hr and 1-1/2 hr when nom 2 in. (51 mm) thick pipe covering is used with 1 hr and 2 hr fire rated walls, respectively.
4. **Firestop System** – Installed symmetrically on both sides of wall assembly. The details of the firestop system shall be as follows:
   - A. **Fill, Void or Cavity Materials*** – **Wrap Strip** – Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly wrapped around pipe covering (foil side out) with seam butted. Wrap strip layer securely bound with steel wire or aluminum foil tape and slid into annular space approx 1-1/4 in. (32 mm) such that approx 3/4 in. (19 mm) of the wrap strip width protrudes from the wall surface. One layer of wrap strip is required when nom 1 in. (25 mm) thick pipe covering is used. Two layers of wrap strip are required when nom 2 in. (51 mm) thick pipe covering is used.
     3M COMPANY – FS-195+
   - B. **Fill, Void or Cavity Materials*** – **Caulk or Sealant** – Min 1/4 in. (6 mm) diam continuous bead applied to the wrap strip/wall interface and to the exposed edge of the wrap strip layer approx 3/4 in. (19 mm) from the wall surface.
     3M COMPANY – CP 25WB+, IC 15WB+, FireDam 150+ caulk or FB-3000 WT sealant

*Bearing the UL Classification Marking

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Product Support Line: 1-800-328-1687
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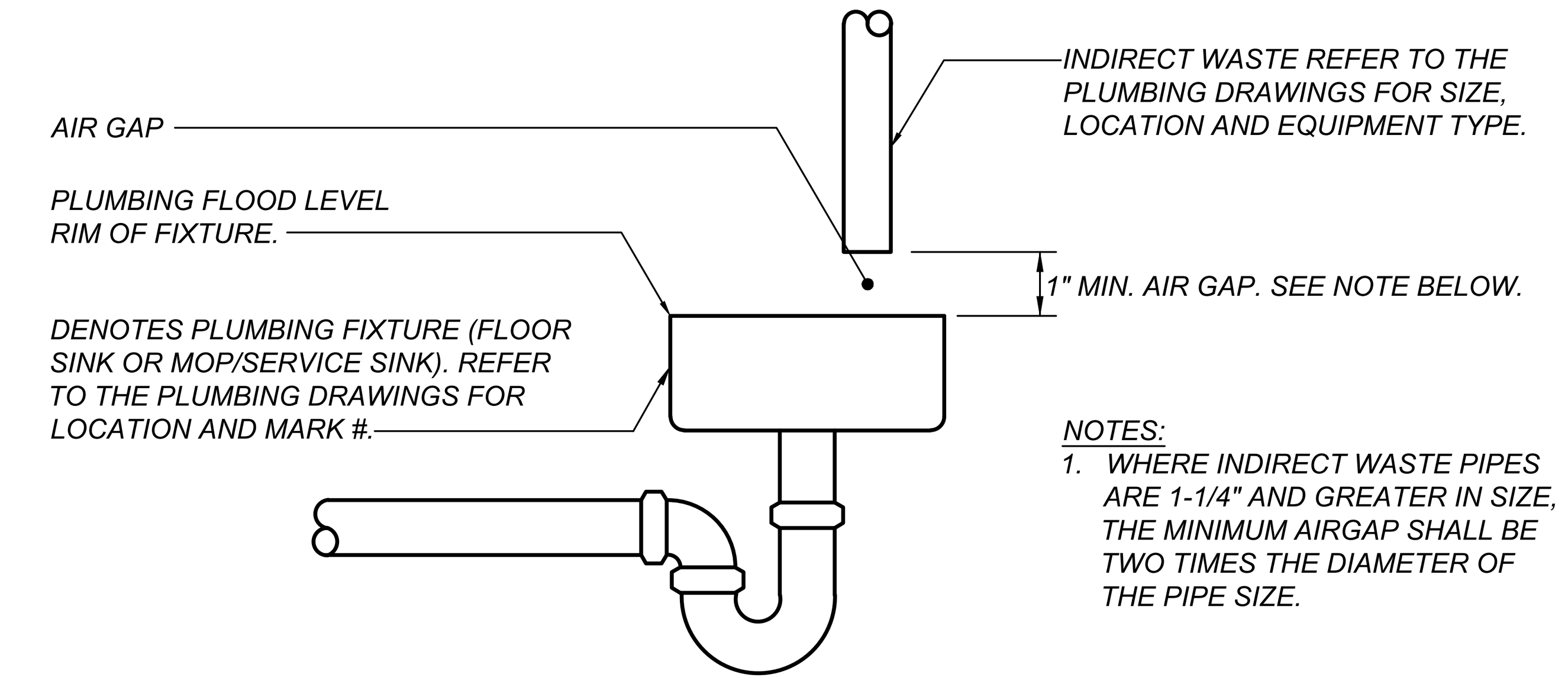
PIPE FIRE STOP DETAIL

E / P3.02

SCALE: NONE

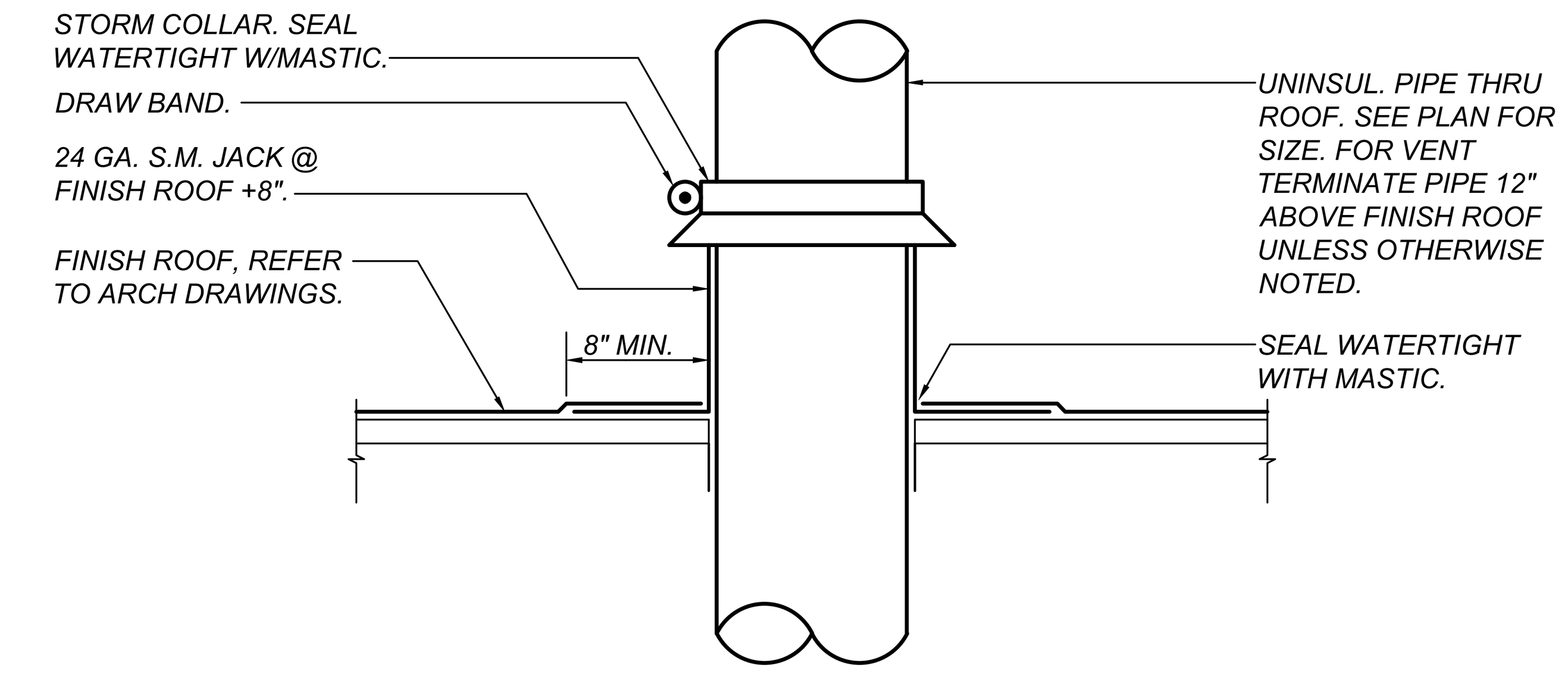


NOTES:
1. WHERE INDIRECT WASTE PIPES ARE 1-1/4" AND GREATER IN SIZE, THE MINIMUM AIRGAP SHALL BE TWO TIMES THE DIAMETER OF THE PIPE SIZE.

INDIRECT WASTE AIR GAP DRAIN DETAIL

A / P3.02

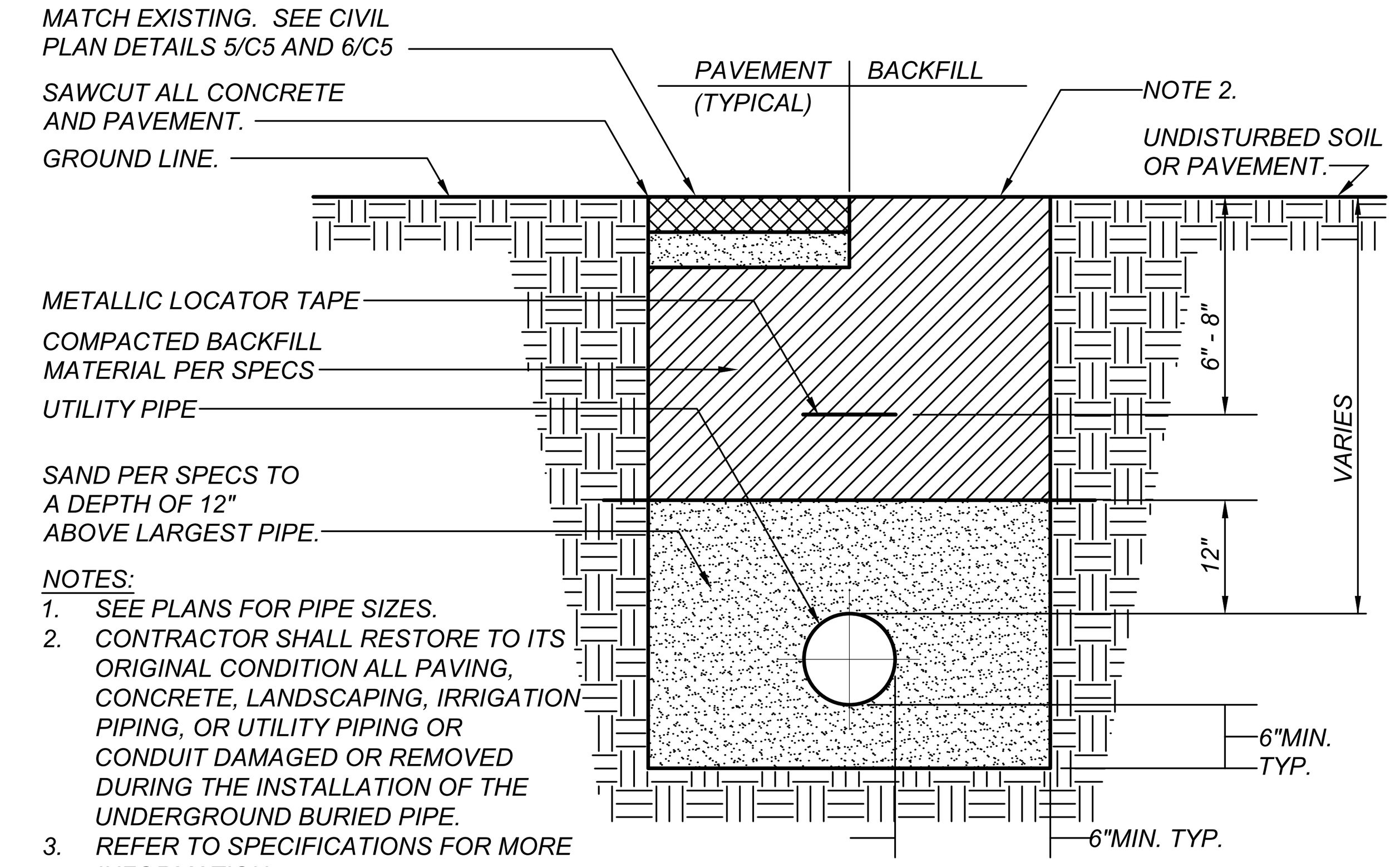
SCALE: NONE



PIPE THRU ROOF DETAIL - UNINSULATED

B / P3.02

SCALE: NONE



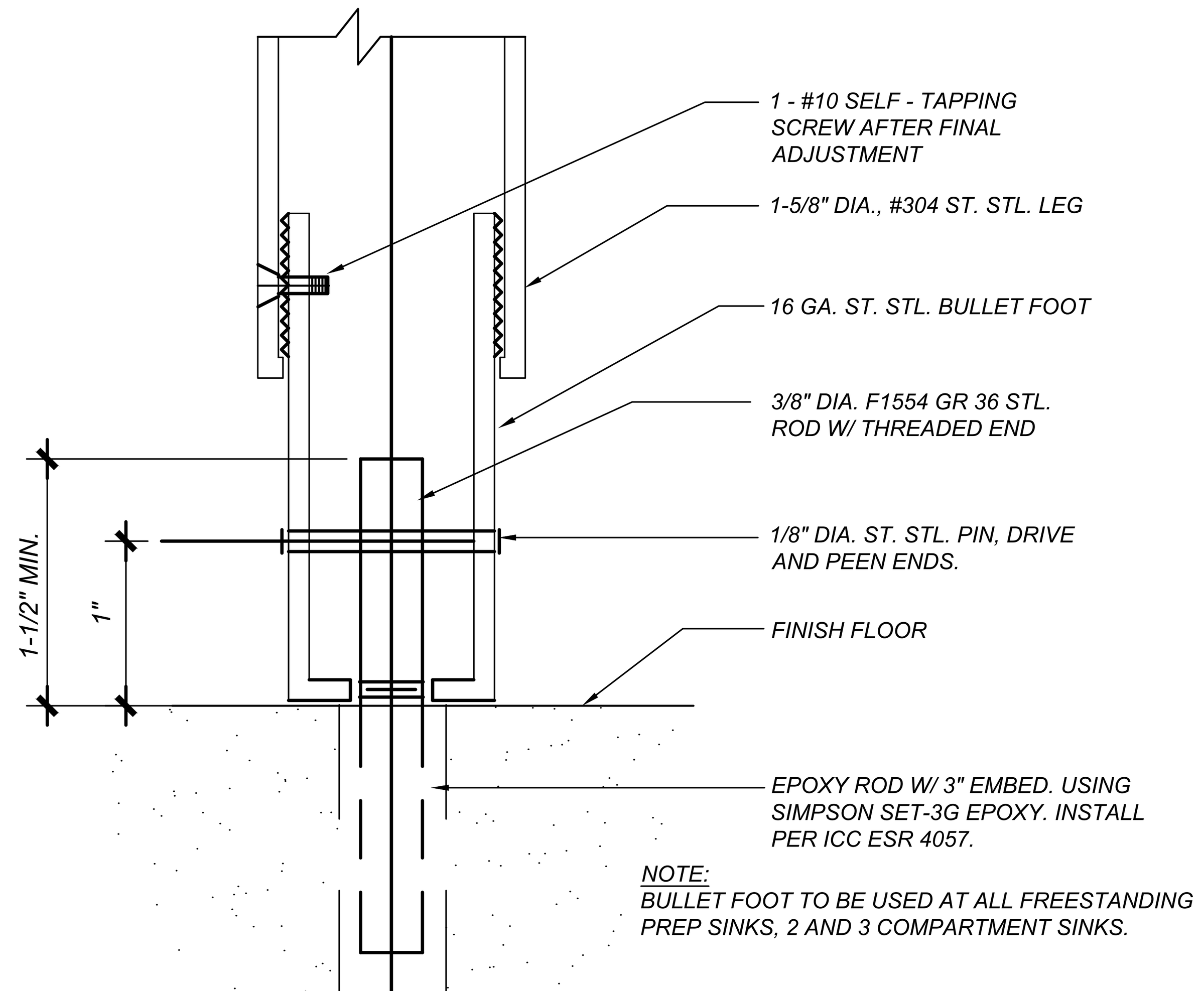
NOTES:
1. SEE PLANS FOR PIPE SIZES.
2. CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION ALL PAVING, CONCRETE, LANDSCAPING, IRRIGATION PIPING, OR UTILITY PIPING OR CONDUIT DAMAGED OR REMOVED DURING THE INSTALLATION OF THE UNDERGROUND BURIED PIPE.
3. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
4. TRENCHING BELOW OR ADJACENT TO FOOTING, REFER TO STRUCTURAL DETAIL 8/S102.

TYPICAL UTILITY TRENCH DETAIL

C / P3.02

SCALE: NONE

P161



NOTE:
BULLET FOOT TO BE USED AT ALL FREESTANDING PREP SINKS, 2 AND 3 COMPARTMENT SINKS.

BULLET FOOT

G / P3.02

SCALE: NONE

REGISTERED PROFESSIONAL ENGINEER
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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
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TEL: 559-497-1542
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ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
Plumbing Details

P3.02

19 March 2024 5:32 PM p:\2023\23123 chowchilla esd fairmead es mpb\4-drawings\5 P\P3.01-3.08 - PLBG DETAILS.dwg david s
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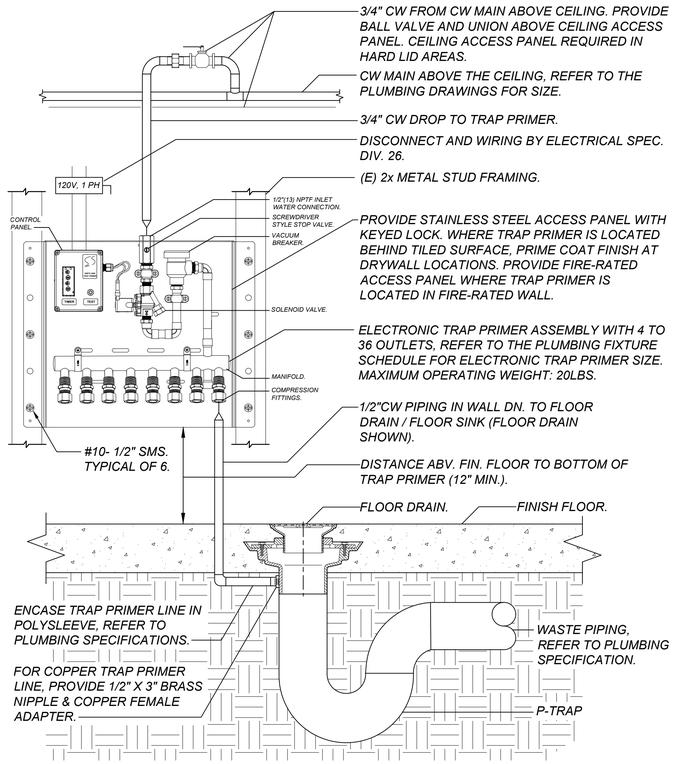


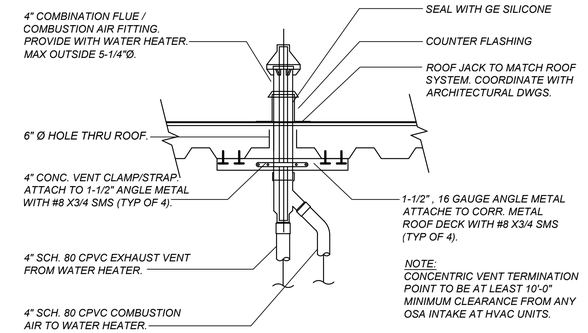
NOTE:
REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS FOR ELEVATION OF TRAP PRIMER VS. LENGTH OF RUN TO DRAINS. TRAP PRIMER ELEVATION TO BE INCREASED IN HEIGHT ABOVE FINISHED FLOOR FOR RUNS OVER 20'-0". REFER TO PLUMBING PLANS FOR SIZING.

ELECTRONIC TRAP PRIMER CONNECTION (TP-1/TP-2)

E P3.03

SCALE: NONE

XXXX

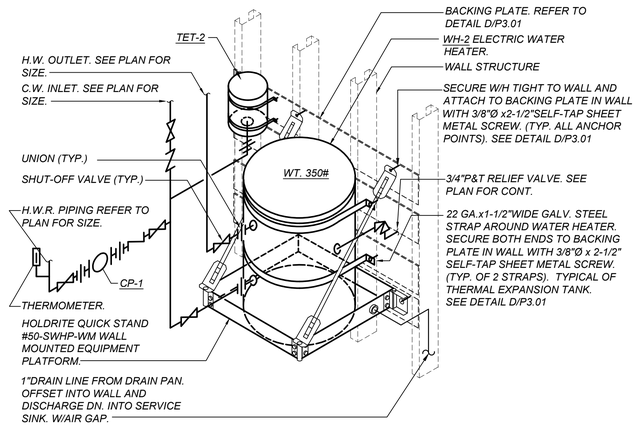


NOTE:
CONCENTRIC VENT TERMINATION POINT TO BE AT LEAST 10'-0" MINIMUM CLEARANCE FROM ANY OSA INTAKE AT HVAC UNITS.

CONCENTRIC VENT THRU ROOF

B P3.03

SCALE: NONE

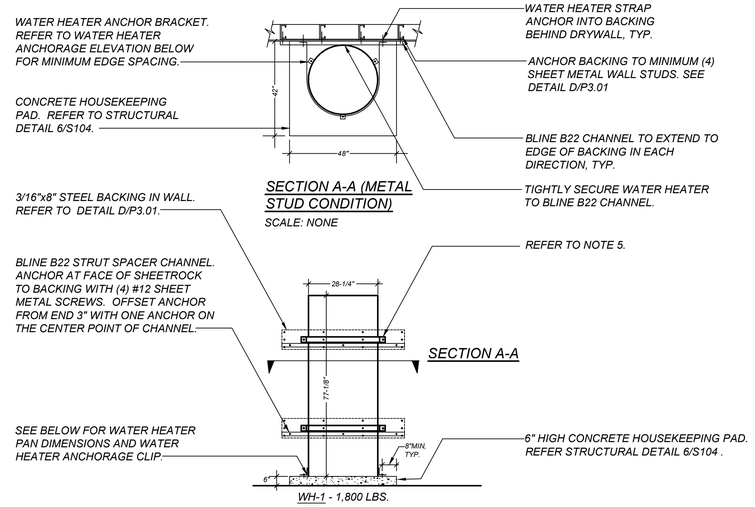


WATER HEATER ON PLATFORM (WH-2) DETAIL

C P3.03

SCALE: NONE

METAL STUD WALL



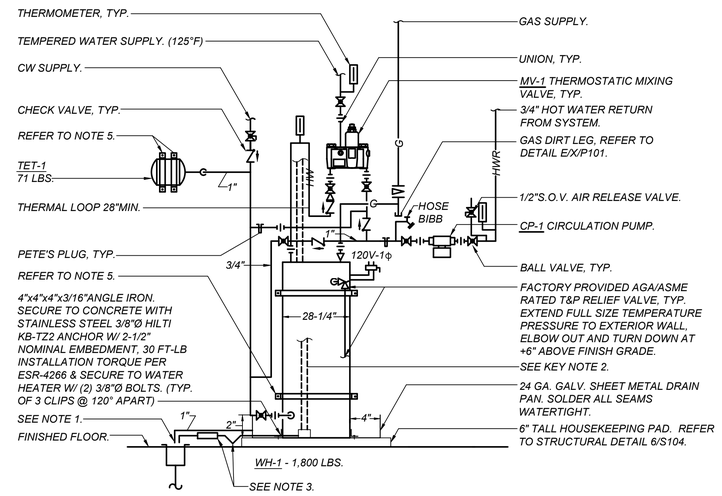
SECTION A-A (METAL STUD CONDITION)

SCALE: NONE

SECTION A-A

WATER HEATER ANCHORAGE ELEV.

SCALE: NONE



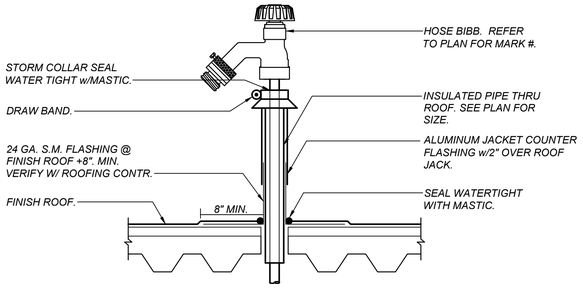
NOTE:

1. DISCHARGE 1" WATER HEATER PAN DRAIN AND CONDENSATE DRAIN TO ADJACENT FLOOR SINK WITH AIR GAP PER DETAIL. SEAL PENETRATION AT PAN WITH G.E. SILICONE.
2. EXTEND 4" SCH. 40 CPVC COMBUSTION AIR INTAKE AND EXHAUST UP THRU ROOF. TERMINATE IN COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION GUIDELINES. IT IS ACCEPTABLE TO USE A COMBINED SCHEDULE 40 CPVC CONCENTRIC THRU THE ROOF KIT.
3. PROVIDE TRAP AND INSTALL MANUFACTURER RECOMMENDED ACID NEUTRALIZATION KIT. DISCHARGE FULL SIZE FLUE CONDENSATE TO FLOOR SINK WITH AIR GAP.
4. MAINTAIN MINIMUM DISTANCE FROM ANCHOR BOLT TO SIDE OF HOUSEKEEPING PAD.
5. 18 GA.X1-1/2"WIDE GALV. STEEL STRAP AROUND WATER HEATER AND/OR EXPANSION TANK. SECURE BOTH ENDS TO METAL PLATE BACKING IN WALL WITH #12-24 TEKS SCREWS, (TYP. OF 2 STRAPS). REFER TO DETAIL D/P3.01 FOR METAL PLATE BACKING IN WALL, TYPICAL. STRAPS SHALL BE LOCATED WITHIN THE UPPER AND LOWER 1/3 OF THE WATER HEATER. STRAPS SHALL BE INSTALLED DIRECTLY ABOVE B22 CHANNEL SPACER. PROVIDE STANDARD CUT WASHER AT STRAP SCREW.

WATER HEATER (WH-1) DETAIL

A P3.03

SCALE: NONE

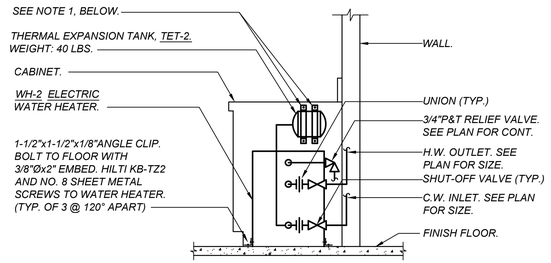


PIPE THRU ROOF DETAIL - INSULATED

F P3.03

SCALE: NONE

P189



NOTE:
SECURE WATER HEATER/EXPANSION TANK TO METAL PLATE BACKING IN WALL WITH 2"x18 GA S/M STRAP AND (2) #12 SELF-TAPPING SHEET METAL SCREW. REFER TO DETAIL D/P3.01, TYP.

UNDER COUNTER WATER HEATER (WH-2) DETAIL

D P3.03

SCALE: NONE

METAL STUD WALL

P100

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE 12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
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FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
Plumbing Details

P3.03

REGISTERED PROFESSIONAL ENGINEER
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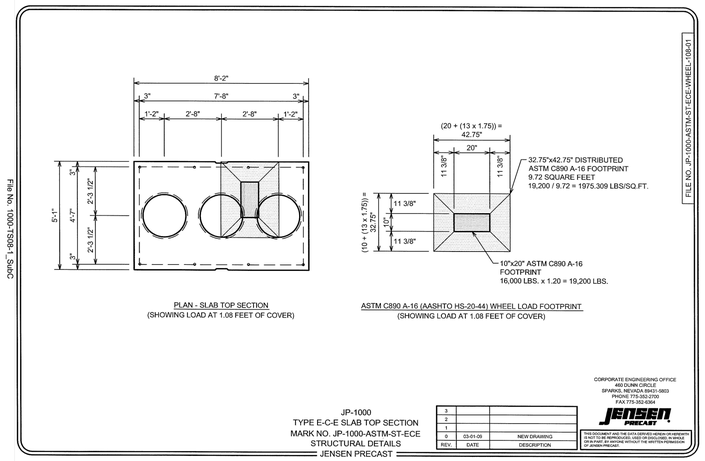


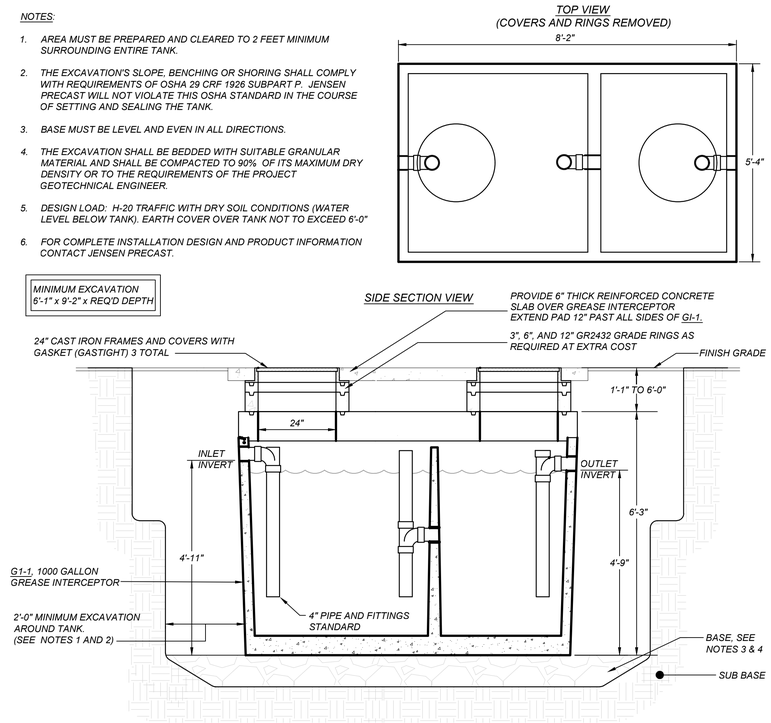
GREASE INTERCEPTOR TOP SLAB DETAIL

SCALE: NONE

C
P3.04

NOTES:

1. AREA MUST BE PREPARED AND CLEARED TO 2 FEET MINIMUM SURROUNDING ENTIRE TANK.
2. THE EXCAVATION'S SLOPE, BENCHING OR SHORING SHALL COMPLY WITH REQUIREMENTS OF OSHA 29 CRF 1926 SUBPART P. JENSEN PRECAST WILL NOT VIOLATE THIS OSHA STANDARD IN THE COURSE OF SETTING AND SEALING THE TANK.
3. BASE MUST BE LEVEL AND EVEN IN ALL DIRECTIONS.
4. THE EXCAVATION SHALL BE BEDDED WITH SUITABLE GRANULAR MATERIAL AND SHALL BE COMPACTED TO 90% OF ITS MAXIMUM DRY DENSITY OR TO THE REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER.
5. DESIGN LOAD: H-20 TRAFFIC WITH DRY SOIL CONDITIONS (WATER LEVEL BELOW TANK). EARTH COVER OVER TANK NOT TO EXCEED 6'-0"
6. FOR COMPLETE INSTALLATION DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.



GREASE INTERCEPTOR DETAIL

SCALE: NONE

A
P3.04

BAR	SIZE	DIMENSIONS	NUMBER	LENGTH FEET
A	#6	59"	6	29.50
B	#4	96"	6	48.00
C	#5	59" / 33 1/2" / 8 1/2" / 33 1/2"	2	13.25
D	#5	66 1/2"	4	22.17

BAR DIMENSIONS ARE OUTSIDE TO OUTSIDE.

ALL CONCRETE TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 5000 psi.

REINFORCING STEEL SHALL COMPLY WITH ASTM A615 GRADE 60 OR ASTM A706 GRADE 60. BAR BENDING AND PLACEMENT SHALL COMPLY WITH THE LATEST ACI STANDARDS.

ASTM A 185 OR A 497 REINFORCING CAGES MAY BE UTILIZED IN LIEU OF GRADE 60 REINFORCING BARS. EQUIVALENT AREAS BASED ON THE WIRE YIELD STRENGTH AT 0.35 PERCENT STRAIN MAY BE UTILIZED.

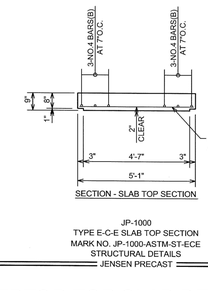
LIFTING INSERTS FOR HANDLING SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

STRUCTURAL DESIGN IS BASED ON ASTM C890 A-16 (AASHTO HS-20-44) LIVE LOAD.

WATER TABLE ASSUMED AT BELOW FLOOR OF TANK.
SOIL WEIGHT DRY - 100 lbs/cu.ft.
EQUIVALENT LATERAL PRESSURE DRY - 30 lbs/cu.ft.

THE SLAB TOP SECTION SECTION DESIGN IS BASED ON THE OUTSIDE OF THE SLAB TOP BETWEEN 1.08 AND 6.00 FEET BELOW GRADE.

REFERANCE STRUCTURAL CALCULATION NO. JP-1000ASTM-ST-ECE



File No. 1000-TS08-1_SdC
FILE NO. JP-1000-ASTM-ST-ECE-02
11/19/21
JP-1000
TYPE E-C-E SLAB TOP SECTION
MARK NO. JP-1000-ASTM-ST-ECE
STRUCTURAL DETAILS
JENSEN PRECAST
CORPORATE ENGINEERING OFFICE
480 DUNN CIRCLE
SPARKS, NEVADA 89431-5803
PHONE 775-352-2700
FAX 775-352-6364

REINFORCING LENGTH FT	#4 BARS 48.00	#5 BARS 35.42	#6 BARS 29.50

REV.	DATE	DESCRIPTION
3		
2		
1	03-01-09	GENERAL REVISION
0	12-24-08	NEW DRAWING

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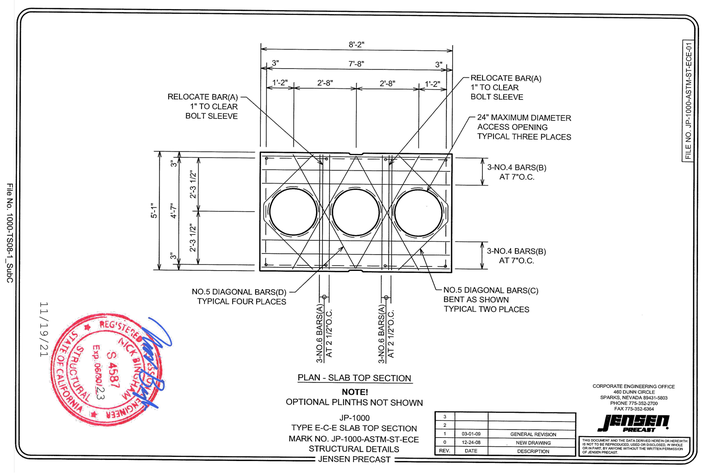
GREASE INTERCEPTOR TOP SLAB DETAIL

SCALE: NONE

D
P3.04



NOTE!
OPTIONAL PLINTHS NOT SHOWN

File No. 1000-TS08-1_SdC
FILE NO. JP-1000-ASTM-ST-ECE-01
11/19/21
JP-1000
TYPE E-C-E SLAB TOP SECTION
MARK NO. JP-1000-ASTM-ST-ECE
STRUCTURAL DETAILS
JENSEN PRECAST
CORPORATE ENGINEERING OFFICE
480 DUNN CIRCLE
SPARKS, NEVADA 89431-5803
PHONE 775-352-2700
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REV.	DATE	DESCRIPTION
3		
2		
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0	12-24-08	NEW DRAWING

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GREASE INTERCEPTOR TOP SLAB DETAIL

SCALE: NONE

B
P3.04

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23123
Fresno, CA 93727
FAX (559) 431-1362

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
Plumbing Details

P3.04

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. CANEVARI
No. M33588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

PIPE SUPPORT SPACING AND ROD DIAMETER

Pressure Pipe:

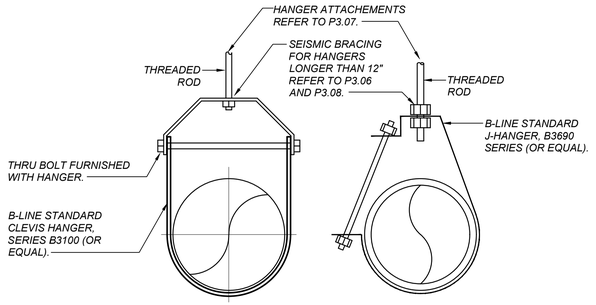
Pipe Size (Inches)	*Threaded Rod Size (Inches)*	*Copper*	*Maximum Spacing* Between Supports (ft.) Sch. 40 steel*
1/2"	*3/8"*	*6*	*6*
3/4"	*3/8"*	*6*	*8*
1"	*3/8"*	*6*	*8*
1-1/4"	*3/8"*	*6*	*10*
1-1/2"	*3/8"*	*6*	*10*
2"	*3/8"*	*10*	*10*
2-1/2"	*1/2"*	*10*	*10*
3"	*1/2"*	*10*	*10*
4"	*5/8"*	*10*	*10*

Notes:
"Based on straight lengths of pipe with couplings only. Provide additional supports for equipment, valves or other fittings. Seismic requirements may reduce maximum spacing.

Gravity Drain Pipe: Piping shall be supported at each length of pipe or fitting, but in no case at greater spacing than indicated above for pressure pipe.

General: Hangers shall be placed to support piping without strain on joints or fittings. Maximum spacing between supports shall be as specified above. Actual spacing requirements will depend on structural system. Vertical piping shall be supported with riser clamp at 20' on center (maximum). Support pipe within 12" of all changes in direction. Support individual pipes with pipe hanger.

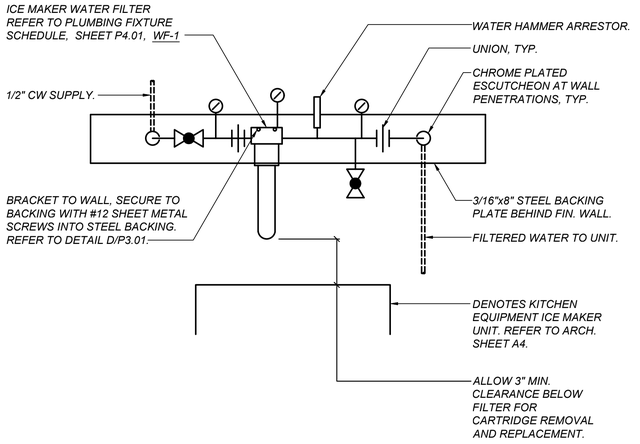
Refer to Specification 22 00 00, Part 2.1, F.1 "Products - Piping Materials - Miscellaneous Piping Items - Pipe Support" and Section 22 00 00, Part 3.1, "Execution - Piping Installation."



PIPE HANGER DETAIL

SCALE: NONE

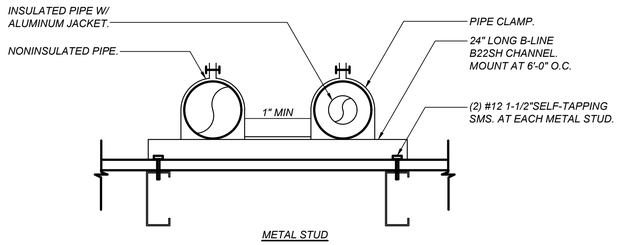
D / P3.05



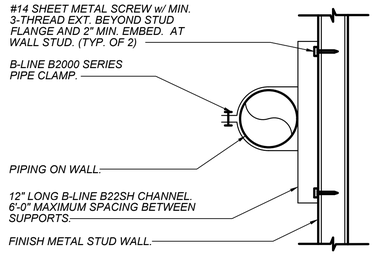
ICE MAKER WATER FILTER SYSTEM DETAIL

SCALE: NONE

A / P3.05



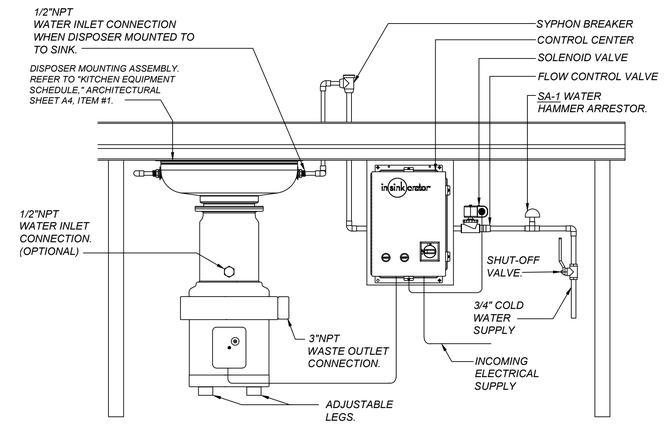
METAL STUD



PIPE SUPPORT ON WALL

SCALE: NONE

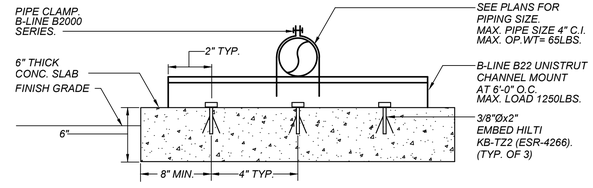
E / P3.05



GARBAGE DISPOSAL DETAIL

SCALE: NONE

B / P3.05



PIPE SUPPORT ON GRADE DETAIL

SCALE: NONE

C / P3.05

MP07

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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE 12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
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FRESNO CALIFORNIA 93711 FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

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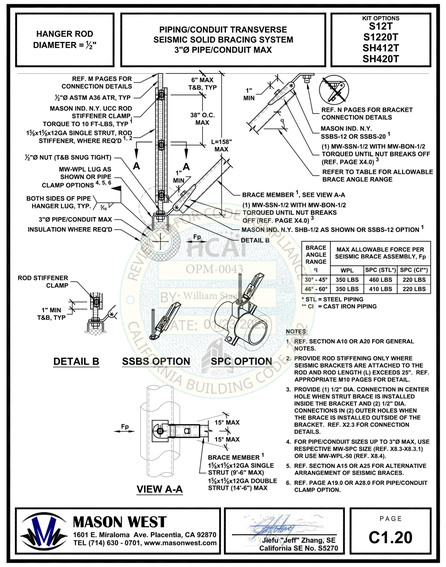
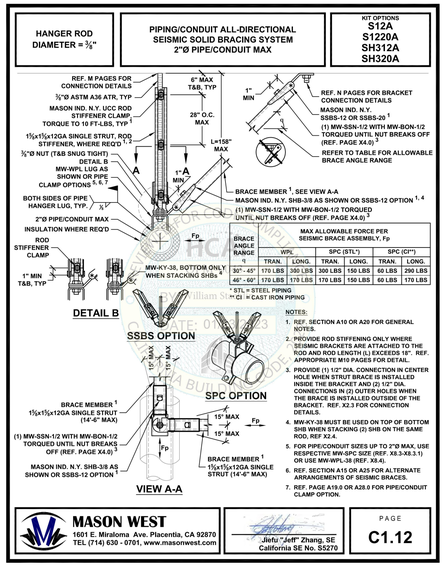
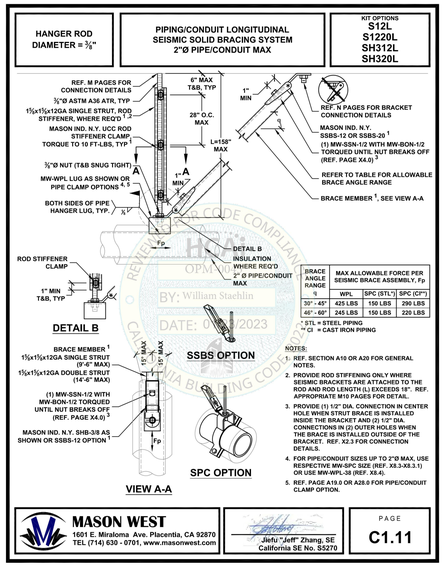
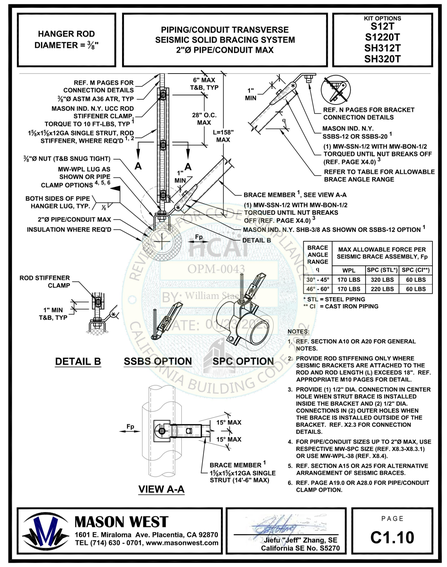
SHEET TITLE:
Plumbing Details

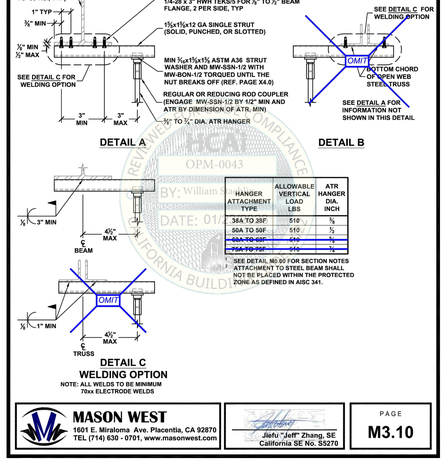
P3.05

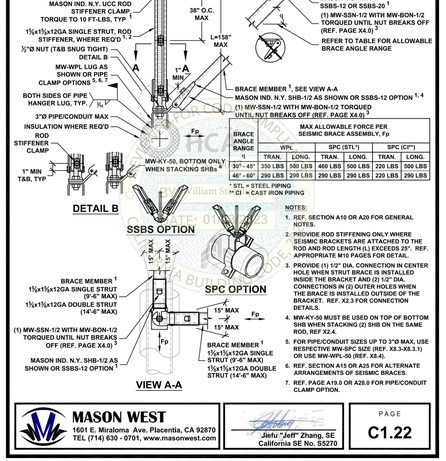


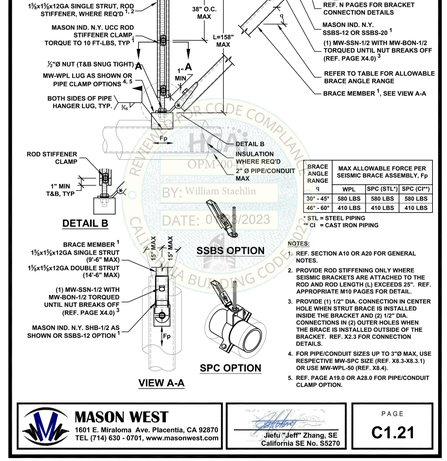












HANGER ROD DIAMETER = ½"

PIPING/CONDUIT TRANSVERSE SEISMIC SOLID BRACING SYSTEM 3"Ø PIPE/CONDUIT MAX

KIT OPTIONS S12T S1220T SH412T SH420T

BRACE ANGLE RANGE q	MAX ALLOWABLE FORCE PER SEISMIC BRACE ASSEMBLY, Fp WPL	SPC (STL*)	SPC (CI**)
30° - 45°	350 LBS	460 LBS	220 LBS
46° - 60°	350 LBS	410 LBS	220 LBS

* STL = STEEL PIPING
** CI = CAST IRON PIPING

NOTES:
1. REF. SECTION A10 OR A20 FOR GENERAL NOTES.
2. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD AND ROD LENGTH (L) EXCEEDS 25". REF. APPROPRIATE M10 PAGES FOR DETAIL.
3. PROVIDE (1) 1/2" DIA. CONNECTION IN CENTER HOLE WHEN STRUT BRACE IS INSTALLED INSIDE THE BRACKET AND (2) 1/2" DIA. CONNECTIONS IN (2) OUTER HOLES WHEN THE BRACE IS INSTALLED OUTSIDE OF THE BRACKET. REF. X2.3 FOR CONNECTION DETAILS.
4. FOR PIPE/CONDUIT SIZES UP TO 3"Ø MAX, USE RESPECTIVE MW-SPC SIZE (REF. X8.3-X8.3.1) OR USE MW-WPL-50 (REF. X8.4).
5. REF. SECTION A15 OR A25 FOR ALTERNATIVE ARRANGEMENT OF SEISMIC BRACES.
6. REF. PAGE A19.0 OR A28.0 FOR PIPE/CONDUIT CLAMP OPTION.

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Jiefu "Jeff" Zhang, SE
California SE No. S5270

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BRACE/BRACKET ATTACHMENT

G / P3.06

SCALE: NONE

HANGER ROD DIAMETER = ⅜"

PIPING/CONDUIT ALL-DIRECTIONAL SEISMIC SOLID BRACING SYSTEM 2"Ø PIPE/CONDUIT MAX

KIT OPTIONS S12A S1220A SH312A SH320A

BRACE ANGLE RANGE q	MAX ALLOWABLE FORCE PER SEISMIC BRACE ASSEMBLY, Fp WPL TRAN.	WPL LONG.	SPC (STL*) TRAN.	SPC (STL*) LONG.	SPC (CI**) TRAN.	SPC (CI**) LONG.
30° - 45°	170 LBS	300 LBS	300 LBS	150 LBS	60 LBS	290 LBS
46° - 60°	170 LBS	170 LBS	170 LBS	150 LBS	60 LBS	170 LBS

* STL = STEEL PIPING
** CI = CAST IRON PIPING

NOTES:
1. REF. SECTION A10 OR A20 FOR GENERAL NOTES.
2. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD AND ROD LENGTH (L) EXCEEDS 18". REF. APPROPRIATE M10 PAGES FOR DETAIL.
3. PROVIDE (1) 1/2" DIA. CONNECTION IN CENTER HOLE WHEN STRUT BRACE IS INSTALLED INSIDE THE BRACKET AND (2) 1/2" DIA. CONNECTIONS IN (2) OUTER HOLES WHEN THE BRACE IS INSTALLED OUTSIDE OF THE BRACKET. REF. X2.3 FOR CONNECTION DETAILS.
4. MW-KY-38 MUST BE USED ON TOP OF BOTTOM SHB WHEN STACKING (2) SHB ON THE SAME ROD, REF X2.4.
5. FOR PIPE/CONDUIT SIZES UP TO 2"Ø MAX, USE RESPECTIVE MW-SPC SIZE (REF. X8.3-X8.3.1) OR USE MW-WPL-38 (REF. X8.4).
6. REF. SECTION A15 OR A25 FOR ALTERNATE ARRANGEMENTS OF SEISMIC BRACES.
7. REF. PAGE A19.0 OR A28.0 FOR PIPE/CONDUIT CLAMP OPTION.

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PAGE C1.12

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BRACE/BRACKET ATTACHMENT

E / P3.06

SCALE: NONE

HANGER ROD DIAMETER = ⅜"

PIPING/CONDUIT LONGITUDINAL SEISMIC SOLID BRACING SYSTEM 2"Ø PIPE/CONDUIT MAX

KIT OPTIONS S12L S1220L SH312L SH320L

BRACE ANGLE RANGE q	MAX ALLOWABLE FORCE PER SEISMIC BRACE ASSEMBLY, Fp WPL	SPC (STL*)	SPC (CI**)
30° - 45°	425 LBS	150 LBS	290 LBS
46° - 60°	245 LBS	150 LBS	220 LBS

* STL = STEEL PIPING
** CI = CAST IRON PIPING

NOTES:
1. REF. SECTION A10 OR A20 FOR GENERAL NOTES.
2. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD AND ROD LENGTH (L) EXCEEDS 18". REF. APPROPRIATE M10 PAGES FOR DETAIL.
3. PROVIDE (1) 1/2" DIA. CONNECTION IN CENTER HOLE WHEN STRUT BRACE IS INSTALLED INSIDE THE BRACKET AND (2) 1/2" DIA. CONNECTIONS IN (2) OUTER HOLES WHEN THE BRACE IS INSTALLED OUTSIDE OF THE BRACKET. REF. X2.3 FOR CONNECTION DETAILS.
4. FOR PIPE/CONDUIT SIZES UP TO 2"Ø MAX, USE RESPECTIVE MW-SPC SIZE (REF. X8.3-X8.3.1) OR USE MW-WPL-38 (REF. X8.4).
5. REF. PAGE A19.0 OR A28.0 FOR PIPE/CONDUIT CLAMP OPTION.

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PAGE C1.11

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BRACE/BRACKET ATTACHMENT

C / P3.06

SCALE: NONE

HANGER ROD DIAMETER = ⅜"

PIPING/CONDUIT TRANSVERSE SEISMIC SOLID BRACING SYSTEM 2"Ø PIPE/CONDUIT MAX

KIT OPTIONS S12T S1220T SH312T SH320T

BRACE ANGLE RANGE q	MAX ALLOWABLE FORCE PER SEISMIC BRACE ASSEMBLY, Fp WPL	SPC (STL*)	SPC (CI**)
30° - 45°	170 LBS	320 LBS	60 LBS
46° - 60°	170 LBS	220 LBS	60 LBS

* STL = STEEL PIPING
** CI = CAST IRON PIPING

NOTES:
1. REF. SECTION A10 OR A20 FOR GENERAL NOTES.
2. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD AND ROD LENGTH (L) EXCEEDS 18". REF. APPROPRIATE M10 PAGES FOR DETAIL.
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4. FOR PIPE/CONDUIT SIZES UP TO 2"Ø MAX, USE RESPECTIVE MW-SPC SIZE (REF. X8.3-X8.3.1) OR USE MW-WPL-38 (REF. X8.4).
5. REF. SECTION A15 OR A25 FOR ALTERNATIVE ARRANGEMENT OF SEISMIC BRACES.
6. REF. PAGE A19.0 OR A28.0 FOR PIPE/CONDUIT CLAMP OPTION.

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PAGE C1.10

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BRACE/BRACKET ATTACHMENT

A / P3.06

SCALE: NONE

HANGER ATTACHMENT TO STEEL BEAM ~~OR OPEN WEB STEEL TRUSS~~ WITH SELF-DRILLING SELF-TAPPING METAL SCREWS

HANGER ATTACHMENT TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA. INCH
38A TO 38F	510	⅜
50A TO 50F	510	½
~~63A TO 63F~~	~~510~~	~~⅝~~
~~75A TO 75F~~	~~510~~	~~¾~~

[1] SEE DETAIL M0.00 FOR SECTION NOTES
[2] ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.

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HANGER ATTACHMENT

H / P3.06

SCALE: NONE

HANGER DESIGNATION, ATTACHMENT AND SECTION NOTES

PIPE OR CONDUIT SIZE	HANGER ROD SIZE DESIGNATION	DIAMETER (INCH)
UP TO 2"	38	⅜
2½" TO 3"	50	½
~~4" TO 5"~~	~~63~~	~~⅝~~
~~6" TO 10"~~	~~75~~	~~¾~~
~~10" TO 12"~~	~~88~~	~~⅞~~
~~14" TO 18"~~	~~100~~	~~1~~
~~20" TO 24"~~	~~125~~	~~1¼~~

LEGEND (HANGER ATTACHMENT TYPE)

X
DENOTES ATR HANGER SIZE
DENOTES VERTICAL LOAD RATING

DISTRIBUTION SYSTEM PIPE/CONDUIT	DUCTWORK	CABLE TRAY	HANGER ROD SIZE DESIGNATION	DIAMETER (INCH)
30 LBS/FT	30 LBS/FT	20 LBS/FT	38	⅜
60 LBS/FT	60 LBS/FT	45 LBS/FT	50	½
~~100 LBS/FT~~	~~100 LBS/FT~~	~~85 LBS/FT~~	~~63~~	~~⅝~~
~~300 LBS/FT~~			~~75~~	~~¾~~
~~500 LBS/FT~~			~~100~~	~~1~~
~~500 LBS/FT~~			~~125~~	~~1¼~~

VERTICAL LOAD RATING DESIGNATION	MAXIMUM ALLOWABLE LOAD (LBS)
A	75
B	125
C	175
D	250
E	350
F	450
G	575
H	700
J	850
K	1000
L	1250
M	1600
N	2000
P	2500
Q	3500
R	5000
S	7500
T	11000

NOTES:

1 - "M" SERIES PAGES ARE COMPRISED OF HANGER ANCHORAGE CAPACITIES FOR VARIOUS TYPES OF ANCHORAGE CONDITIONS AT SEISMIC BRACE LOCATIONS ONLY. EACH HANGER ATTACHMENT TYPE IS DESIGNATED BY A SET OF NUMBERS AND A LETTER. THE NUMBERS REPRESENTS THE HANGER ROD SIZE (FOUND IN THE HANGER ROD SIZE TABLE) AND THE LETTER REPRESENTS THE MAXIMUM ALLOWABLE LOAD (FOUND IN THE VERTICAL LOAD RATING TABLE).

EXAMPLE: 38H REPRESENTS HANGER ROD SIZE OF ⅜"Ø WITH A MAXIMUM ALLOWABLE VERTICAL LOAD RATING OF 700 LBS.

2 - HANGER ANCHORAGE ATTACHMENTS TO STRUCTURE MAY BE USED WITH ANY ONE OF "M" SERIES PAGES, PROVIDED HANGER ATTACHMENT SIZE IS APPROPRIATE FOR THE APPLICATION AND THE ALLOWABLE VERTICAL LOAD CAPACITY IS MET.

3 - STRUCTURAL ENGINEER OF RECORD TO VERIFY ADEQUACY OF THE STRUCTURE FROM LOADING IMPOSED BY VERTICAL HANGER ATTACHMENT.

4 - WHERE ROD STIFFENER IS REQUIRED, SEE M10.12.

5 - NOT USED.

6 - HANGER ROD MAY BE INSTALLED UP TO 6 DEGREES FROM PERPENDICULAR TO CONCRETE SURFACE.

7 - WHEN CONCRETE ANCHORS ARE INSTALLED AT THE BOTTOM OF THE CONCRETE FILLED METAL DECK, MINIMUM END DISTANCE AND SPACING REQUIREMENTS ARE ALONG FLUTE LENGTH ONLY.

8 - SEE X7.0 AND X7.1 FOR STRUT MEMBER DATA. FOR CONDITIONS WHERE HOLES THROUGH STRUT MEMBERS ARE REQ'D, HOLES SHALL BE STD SIZE HOLES, TYP, U.N.O. WHERE PUNCHED STRUT OR HOLES ARE REQ'D, MIN. SPACING, EDGE, AND END DISTANCES SHALL BE MAINTAINED AS REQ'D PER DETAIL.

9 - ALL-THREAD RODS MUST BE MADE OF A36, A307 (GRADE A OR B), OR F1554 GR36 STEEL. ROD COUPLERS MUST CONFORM TO ASTM A563 STEEL WITH A MINIMUM OF 58 KSI TENSILE STRENGTH. MINIMUM ENGAGEMENT INTO ROD COUPLER MUST BE EQUAL TO THE ATR DIAMETER. ATR HANGER IS PERMITTED FOR COMPRESSION AND TENSION LOADING CONDITIONS ONLY; NO SHEAR LOADING.

10 - ALL CONCRETE FLAT SLABS, WALLS, AND BEAMS MUST HAVE A MINIMUM OF #4 BAR OR GREATER BETWEEN THE ANCHOR AND THE EDGE OF CONCRETE.

11 - DESIGN IS CONTROLLED BY SEISMIC FORCES. NON-SEISMIC FORCES SUCH AS GRAVITY ARE OUTSIDE THE SCOPE OF THIS OPM.

12 - POST-INSTALLED ANCHORS MAY BE INSTALLED A MINIMUM OF 3 BOLT DIAMETERS AWAY FROM ABANDONED HOLES, AND A MINIMUM OF 1.5 BOLT DIAMETERS AWAY FROM DRYPACK MORTAR FILLED HOLES. DRYPACK MORTAR SHALL HAVE A COMPRESSIVE STRENGTH EQUAL OR GREATER THAN THE CONCRETE STRENGTH IN WHICH IT IS BEING USED.

13 - THE HANGER ROD AT SEISMIC BRACE LOCATIONS IS SUBJECTED TO GRAVITY LOADS AS WELL AS LATERAL AND VERTICAL SEISMIC LOADS AND HAS BEEN DESIGNED FOR SUCH COMBINED LOADING IN COMPLIANCE WITH THE CALIFORNIA BUILDING CODE, CALIFORNIA OSHPD AND STANDARD STRUCTURAL STEEL PRACTICES AND ARE NOT SUBJECT TO THE HANGER ROD DIAMETERS DESIGNED FOR GRAVITY LOADS ONLY THAT MAY BE OUTLINED IN PROJECT SPECIFICATIONS, CODE DOCUMENTS, TRADE GUIDELINES, ETC. IN ORDER TO ENSURE THE DELIVERY OF SEISMIC BRACE COMPONENTS THAT MATCH FIELD ERECTED HANGERS, ALL HANGER RODS FOR INDIVIDUAL PIPES AND TRAPEZED SYSTEMS AT SEISMIC BRACE LOCATIONS SHOULD ADHERE TO THE TABLES ABOVE.

14 - PER CBC SECTION 1905A.1.9, CONCRETE COMPRESSIVE STRENGTH, f'c, SHALL BE LIMITED TO 8,000 PSI MAX, BUT MAY BE INCREASED SUBJECT TO OSHPD REVIEW AND APPROVAL ON A PROJECT BY PROJECT BASIS.

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PAGE M0.00

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HANGER ATTACHMENT

F / P3.06

SCALE: NONE

HANGER ROD DIAMETER = ½"

PIPING/CONDUIT ALL-DIRECTIONAL SEISMIC SOLID BRACING SYSTEM 3"Ø PIPE/CONDUIT MAX

KIT OPTIONS S12A S1220A SH412A SH420A

BRACE ANGLE RANGE q	MAX ALLOWABLE FORCE PER SEISMIC BRACE ASSEMBLY, Fp WPL TRAN.	WPL LONG.	SPC (STL*) TRAN.	SPC (STL*) LONG.	SPC (CI**) TRAN.	SPC (CI**) LONG.
30° - 45°	350 LBS	500 LBS	460 LBS	500 LBS	220 LBS	500 LBS
46° - 60°	290 LBS	290 LBS	290 LBS	290 LBS	220 LBS	290 LBS

* STL = STEEL PIPING
** CI = CAST IRON PIPING

NOTES:
1. REF. SECTION A10 OR A20 FOR GENERAL NOTES.
2. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD AND ROD LENGTH (L) EXCEEDS 25". REF. APPROPRIATE M10 PAGES FOR DETAIL.
3. PROVIDE (1) 1/2" DIA. CONNECTION IN CENTER HOLE WHEN STRUT BRACE IS INSTALLED INSIDE THE BRACKET AND (2) 1/2" DIA. CONNECTIONS IN (2) OUTER HOLES WHEN THE BRACE IS INSTALLED OUTSIDE OF THE BRACKET. REF. X2.3 FOR CONNECTION DETAILS.
4. MW-KY-50 MUST BE USED ON TOP OF BOTTOM SHB WHEN STACKING (2) SHB ON THE SAME ROD, REF X2.4.
5. FOR PIPE/CONDUIT SIZES UP TO 3"Ø MAX, USE RESPECTIVE MW-SPC SIZE (REF. X8.3-X8.3.1) OR USE MW-WPL-50 (REF. X8.4).
6. REF. SECTION A15 OR A25 FOR ALTERNATE ARRANGEMENTS OF SEISMIC BRACES.
7. REF. PAGE A19.0 OR A28.0 FOR PIPE/CONDUIT CLAMP OPTION.

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1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 232 of 792

BRACE/BRACKET ATTACHMENT

D / P3.06

SCALE: NONE

HANGER ROD DIAMETER = ½"

PIPING/CONDUIT LONGITUDINAL SEISMIC SOLID BRACING SYSTEM 3"Ø PIPE/CONDUIT MAX

KIT OPTIONS S12L S1220L SH412L SH420L

BRACE ANGLE RANGE q	MAX ALLOWABLE FORCE PER SEISMIC BRACE ASSEMBLY, Fp WPL	SPC (STL*)	SPC (CI**)
30° - 45°	580 LBS	580 LBS	580 LBS
46° - 60°	410 LBS	410 LBS	410 LBS

* STL = STEEL PIPING
** CI = CAST IRON PIPING

NOTES:
1. REF. SECTION A10 OR A20 FOR GENERAL NOTES.
2. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD AND ROD LENGTH (L) EXCEEDS 25". REF. APPROPRIATE M10 PAGES FOR DETAIL.
3. PROVIDE (1) 1/2" DIA. CONNECTION IN CENTER HOLE WHEN STRUT BRACE IS INSTALLED INSIDE THE BRACKET AND (2) 1/2" DIA. CONNECTIONS IN (2) OUTER HOLES WHEN THE BRACE IS INSTALLED OUTSIDE OF THE BRACKET. REF. X2.3 FOR CONNECTION DETAILS.
4. FOR PIPE/CONDUIT SIZES UP TO 3"Ø MAX, USE RESPECTIVE MW-SPC SIZE (REF. X8.3-X8.3.1) OR USE MW-WPL-50 (REF. X8.4).
5. REF. PAGE A19.0 OR A28.0 FOR PIPE/CONDUIT CLAMP OPTION.

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1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 231 of 792

BRACE/BRACKET ATTACHMENT

B / P3.06

SCALE: NONE

NOTE:
HANGER SPACING. SEE PIPE HANGER DETAIL D/P3.05 .

No. M23588
Exp. 9-30-25
MICHAEL D. CANTELMI

LAWRENCE
ENGINEERING GROUP
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FILE NO.: 20-10 APPL. NO.: 02-121993

JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 8/24/2023

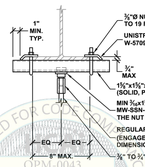
SHEET TITLE:
Plumbing Details

P3.06

19 March 2024 5:32 PM p:\2023\23123 chowchilla esd fairmead es mpb\4-drawings\5 P\P3.01-3.08 -- PLBG DETAILS.dwg david s

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2.Working Dwgs Phase\WD_2318_Fairmead Multi-Purpose.pln

ATR HANGER ATTACHMENT TO STEEL BEAM WITH STEEL BEAM CLAMPS



HANGER CONNECTION TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA. INCH
38A TO 38N	2000	⅜
50A TO 50N	2000	½
~~62A TO 62N~~	~~2000~~	~~½~~
~~75A TO 76N~~	~~2000~~	~~½~~

1 SEE DETAIL M0.00 FOR SECTION NOTES
2 ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.

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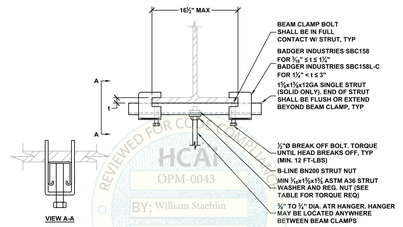
1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 555 of 792

HANGER ATTACHMENT — G P3.07

SCALE: NONE

ATR HANGER ATTACHMENT TO STEEL BEAM WITH (2) BADGER INDUSTRIES SBC158 SERIES STEEL BEAM CLAMPS



FASTENER WITH STRUT NUT	
DIA. INCH	TORQUE REQ'D FT-LBS
½	19
~~⅝~~	~~50~~

GRAVITY ONLY		GRAVITY & SEISMIC		
HANGER CONNECTION TYPE	ALLOWABLE VERTICAL LOAD LBS	HANGER CONNECTION TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA. INCH
38A TO 38H	730	38A TO 38M	1840	⅜
50A TO 50J	920	50A TO 50M	1840	½
~~62A TO 62J~~	~~920~~	~~62A TO 62M~~	~~1840~~	~~½~~
~~75A TO 76J~~	~~920~~	~~75A TO 76M~~	~~1840~~	~~½~~

1 SEE DETAIL M0.00 FOR SECTION NOTES
2 ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.
3 WHEN USED FOR "GRAVITY & SEISMIC" LOADING, THE GRAVITY DEMAND SHALL NOT EXCEED THE "GRAVITY ONLY" ALLOWABLE LOAD.
4 BEAM CLAMPS SHALL NOT BE USED ON SHAPES WITH SLOPED FLANGES.

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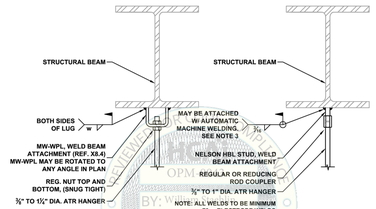
1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 556 of 792

HANGER ATTACHMENT — E P3.07

SCALE: NONE

ATR HANGER ATTACHMENT TO STEEL BEAM WITH WELDED BEAM ATTACHMENT



DETAIL A DETAIL B

HANGER ATTACHMENT TYPE	DETAIL A MW-WPL LUG	DETAIL A w, WELD SIZE INCH	DETAIL B NELSON HBL STUD DIA. INCH	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA. INCH
38A TO 38H	MW-WPL-38	⅜	⅜	720	⅜
50A TO 50L	MW-WPL-50	⅛	½	1320	⅜
~~62A TO 62P~~	~~MW-WPL-62~~	~~¼~~	~~½~~	~~2880~~	~~½~~
~~75A TO 76Q~~	~~MW-WPL-75~~	~~¼~~	~~½~~	~~4800~~	~~½~~
~~76A TO 76S~~	~~MW-WPL-76A~~	~~¼~~	~~N/A~~	~~6000~~	~~½~~
~~85A TO 85R~~	~~MW-WPL-85~~	~~¼~~	~~½~~	~~6000~~	~~½~~
~~100A TO 100S~~	~~MW-WPL-100~~	~~¼~~	~~1~~	~~8660~~	~~¾~~
~~125A TO 125T~~	~~MW-WPL-125~~	~~¼~~	~~N/A~~	~~11400~~	~~¾~~

1 SEE DETAIL M0.00 FOR SECTION NOTES
2 WELDED ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.
3 AUTOMATIC MACHINE WELDING OF NELSON HBL STUD SHALL COMPLY WITH AWS D1.1, SECTION 6: STUD WELDING.
4 NELSON HBL STUD TO BE MINIMUM 61KSI TENSILE STRENGTH MILD STEEL CONFORMING TO ASTM A108.

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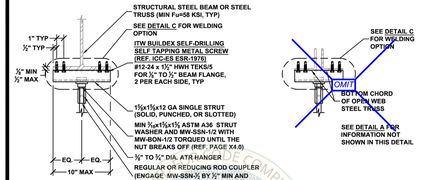
1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 553 of 792

HANGER ATTACHMENT — C P3.07

SCALE: NONE

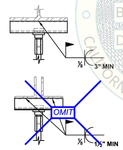
HANGER ATTACHMENT TO STEEL BEAM ~~OR OPEN WEB STEEL TRUSS~~ WITH SELF-DRILLING SELF-TAPPING METAL SCREWS



DETAIL A DETAIL B

HANGER ATTACHMENT TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA. INCH
38A TO 38M	1700	⅜
50A TO 50M	1700	½
~~62A TO 62M~~	~~1700~~	~~½~~
~~75A TO 76M~~	~~1700~~	~~½~~

1 SEE DETAIL M0.00 FOR SECTION NOTES
2 ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.



DETAIL C
WELDING OPTION
NOTE: ALL WELDS TO BE MINIMUM 70xx ELECTRODE WELDS

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1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 552 of 792

HANGER ATTACHMENT — A P3.07

SCALE: NONE

HANGER ATTACHMENT TO NON-CONCRETE FILLED METAL DECK

HANGER ATTACHMENT TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA. INCH
38A TO 38B	170	⅜
50A TO 50B	170	½
~~62A TO 62B~~	~~170~~	~~½~~
~~75A TO 76B~~	~~170~~	~~½~~

1 - SEE DETAIL M0.00 FOR SECTION NOTES
2 - THE DISTANCE FROM THE CENTER OF ANY SHEET METAL SCREW TO ANY STEEL EDGE SHALL BE ½" MIN, INCLUDING PUNCHED AND SLOTTED HOLE EDGES.

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1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 574 of 792

HANGER ATTACHMENT — H P3.07

SCALE: NONE

HANGER ATTACHMENT TO NON-CONCRETE FILLED METAL DECK

HANGER ATTACHMENT TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA. INCH
38A TO 38E	350	⅜
50A TO 50E	350	½
~~62A TO 62E~~	~~350~~	~~½~~
~~75A TO 76E~~	~~350~~	~~½~~

1 - SEE DETAIL M0.00 FOR SECTION NOTES
2 - THE DISTANCE FROM THE CENTER OF ANY SHEET METAL SCREW TO ANY STEEL EDGE SHALL BE ½" MIN, INCLUDING PUNCHED AND SLOTTED HOLE EDGES.

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HANGER ATTACHMENT — F P3.07

SCALE: NONE

ATR HANGER ATTACHMENT TO STEEL BEAM WITH (2) BADGER INDUSTRIES SBC158 SERIES STEEL BEAM CLAMPS

FASTENER WITH STRUT NUT	
DIA. INCH	TORQUE REQ'D FT-LBS
½	19
~~⅝~~	~~50~~

GRAVITY ONLY		GRAVITY & SEISMIC		
HANGER CONNECTION TYPE	ALLOWABLE VERTICAL LOAD LBS	HANGER CONNECTION TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA. INCH
38A TO 38G	680	38A TO 38L	1350	⅜
50A TO 50G	680	50A TO 50L	1350	½
~~62A TO 62G~~	~~680~~	~~62A TO 62L~~	~~1350~~	~~½~~
~~75A TO 76G~~	~~680~~	~~75A TO 76L~~	~~1350~~	~~½~~

1 SEE DETAIL M0.00 FOR SECTION NOTES
2 ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.
3 WHEN USED FOR "GRAVITY & SEISMIC" LOADING, THE GRAVITY DEMAND SHALL NOT EXCEED THE "GRAVITY ONLY" ALLOWABLE LOAD.
4 BEAM CLAMPS SHALL NOT BE USED ON SHAPES WITH SLOPED FLANGES.

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HANGER ATTACHMENT — D P3.07

SCALE: NONE

ATR HANGER ATTACHMENT TO STEEL BEAM WITH (1) BADGER INDUSTRIES SBC158 SERIES STEEL BEAM CLAMP

GRAVITY ONLY		GRAVITY & SEISMIC		
HANGER CONNECTION TYPE	ALLOWABLE VERTICAL LOAD LBS	HANGER CONNECTION TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA. INCH
38A TO 38H	730	38A TO 38M	1940	⅜
50A TO 50J	970	50A TO 50M	1940	½
~~62A TO 62J~~	~~970~~	~~62A TO 62M~~	~~1940~~	~~½~~
~~75A TO 76J~~	~~970~~	~~75A TO 76M~~	~~1940~~	~~½~~

1 SEE DETAIL M0.00 FOR SECTION NOTES
2 ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.
3 WHEN USED FOR "GRAVITY & SEISMIC" LOADING, THE GRAVITY DEMAND SHALL NOT EXCEED THE "GRAVITY ONLY" ALLOWABLE LOAD.
4 BEAM CLAMPS SHALL NOT BE USED ON SHAPES WITH SLOPED FLANGES.

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HANGER ATTACHMENT — B P3.07

SCALE: NONE

NOTE:
HANGER SPACING. SEE PIPE HANGER DETAIL D/P3.05 .

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TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

FILE NO.: 20-10 APPL. NO.: 02-121993

MARK	DATE	DESCRIPTION

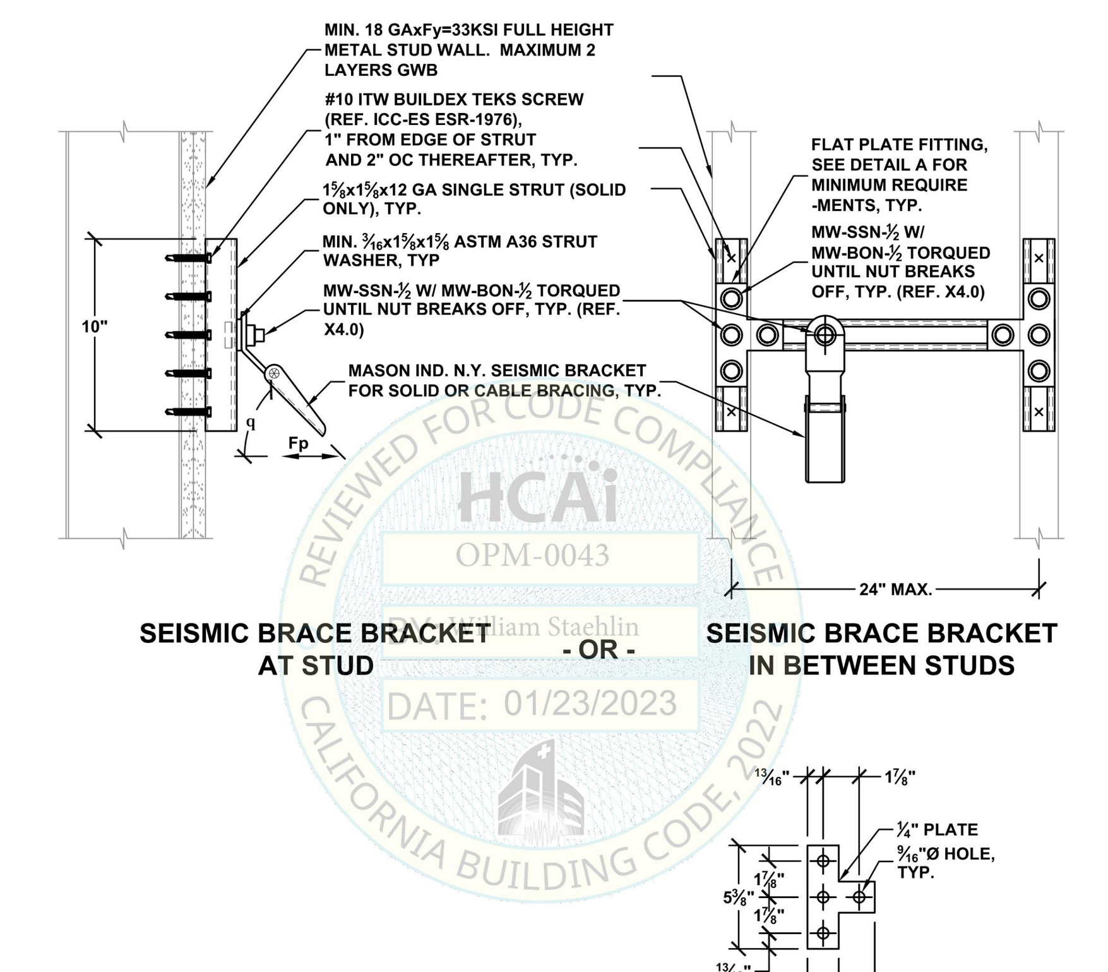
PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
Plumbing Details

P3.07

SEISMIC BRACKET ATTACHMENT TO FULL HEIGHT METAL STUD WALL



BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE q
50A TO 50D	260	30°- 45°
50A TO 50C	190	46°- 60°

SEE DETAIL N0.00 FOR SECTION NOTES

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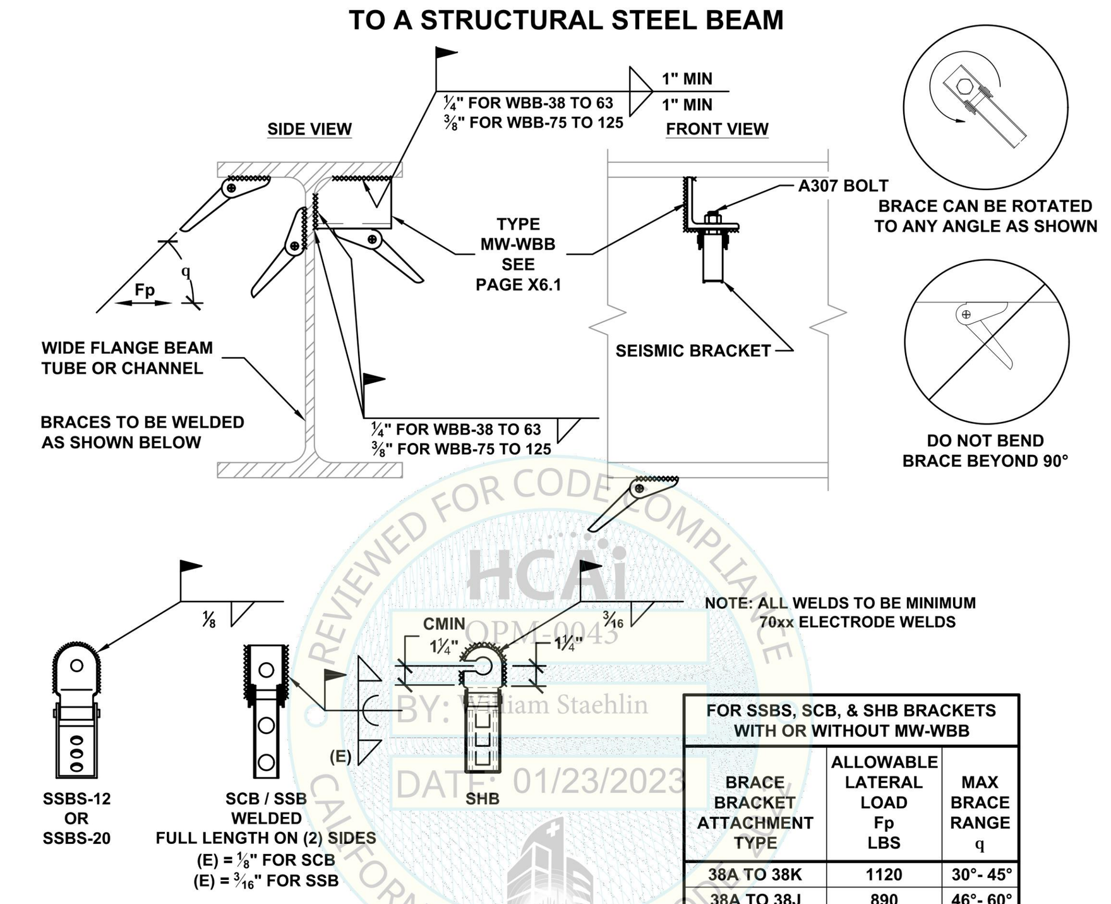
1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 693 of 792

BRACE/BRACKET ATTACHMENT
G P3.08
SCALE: NONE

SEISMIC BRACKET WELDED ATTACHMENT TO A STRUCTURAL STEEL BEAM



FOR SSB BRACKETS 1,2

ALLOWABLE LATERAL LOAD, Fp LBS		ALLOWABLE LATERAL LOAD, Fp LBS		
BRACE BRACKET ATTACHMENT TYPE	WELD TO STEEL	BRACE BRACKET ATTACHMENT TYPE	WITH MW-WBB	MAX BRACE RANGE q
75A TO 75Q	4440	75A TO 75Q	3800	30°- 45°
75A TO 75P	3360	75A TO 75N	2190	46°- 60°
100A TO 100R	6410	100A TO 100Q	3800	30°- 45°
100A TO 100Q	4280	100A TO 100N	2190	46°- 60°
125A TO 125R	6410	125A TO 125Q	3800	30°- 45°
125A TO 125Q	4280	125A TO 125N	2190	46°- 60°

FOR SSBS, SCB, & SHB BRACKETS WITH OR WITHOUT MW-WBB

BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE q
38A TO 38K	1120	30°- 45°
38A TO 38J	890	46°- 60°
50A TO 50N	2000	30°- 45°
50A TO 50L	1240	46°- 60°
63A TO 63N	2150	30°- 45°
63A TO 63M	1240	46°- 60°
75A TO 75N	2320	30°- 45°
75A TO 75M	1700	46°- 60°

1 SEE DETAIL N0.00 FOR SECTION NOTES
2 WELDED ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.

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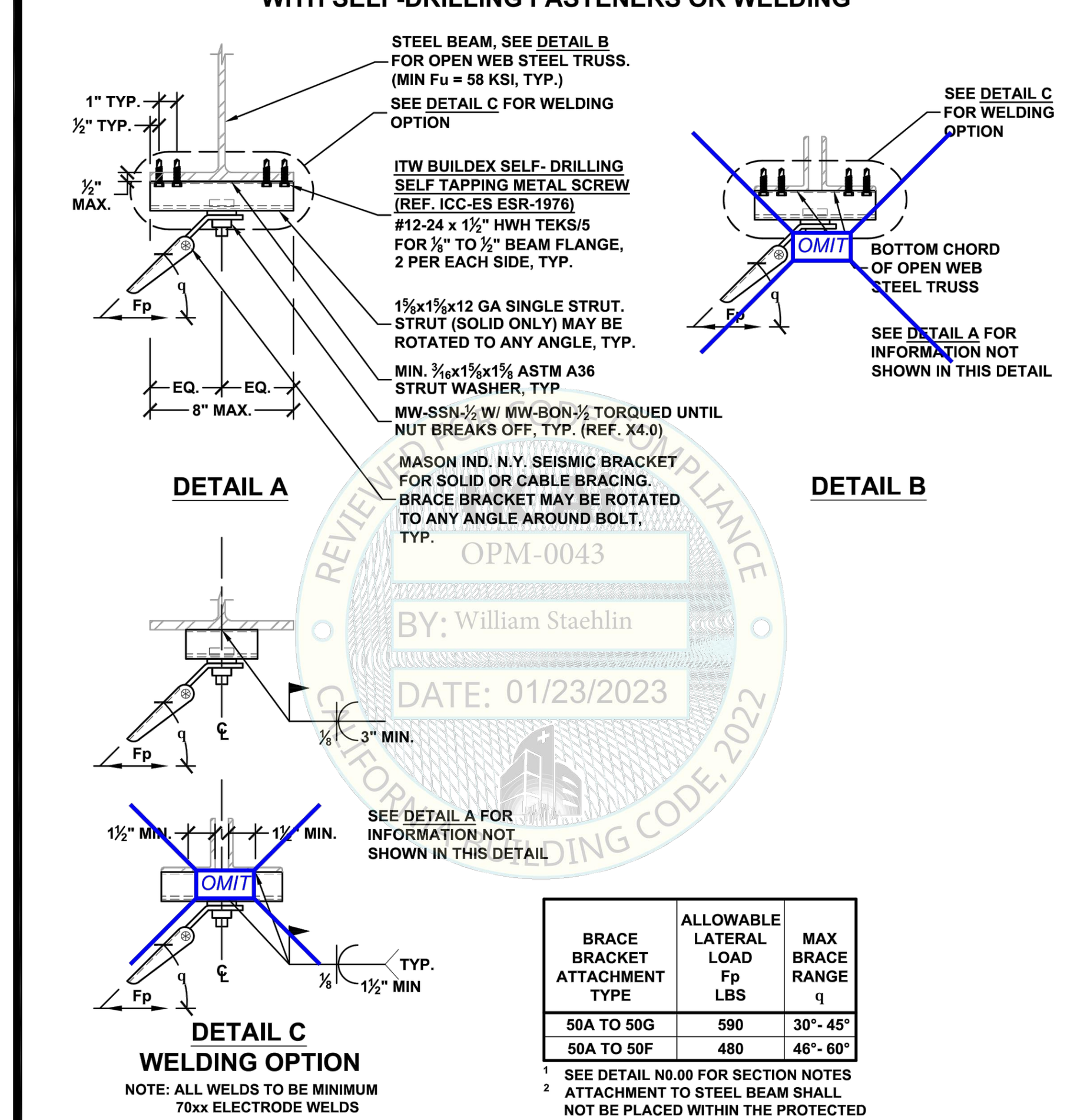
1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 681 of 792

BRACE/BRACKET ATTACHMENT
E P3.08
SCALE: NONE

SEISMIC BRACKET ATTACHMENT TO STEEL BEAM ~~OR OPEN WEB STEEL TRUSS~~ WITH SELF-DRILLING FASTENERS OR WELDING



BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE q
50A TO 50G	590	30°- 45°
50A TO 50F	480	46°- 60°

1 SEE DETAIL N0.00 FOR SECTION NOTES
2 ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.

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1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 679 of 792

BRACE/BRACKET ATTACHMENT
C P3.08
SCALE: NONE

BRACE BRACKET DESIGNATION, ATTACHMENT AND SECTION NOTES

BRACE ANCHOR SIZE	
DESIGNATION	DIAMETER (INCH)
38	⅜
50	½
~~63~~	~~⅝~~
~~75~~	~~¾~~
~~88~~	~~⅞~~
~~100~~	~~1~~
~~125~~	~~1¼~~

HORIZONTAL LOAD RATING	
DESIGNATION	MAXIMUM ALLOWABLE LOAD (LBS)
A	75
B	125
C	175
D	250
E	350
F	450
G	575
H	700
J	850
K	1000
L	1250
M	1600
N	2000
P	2500
Q	3500
R	5000
S	7500
T	11000

NOTES:

1 - "N" SERIES PAGES ARE COMPRISED OF SEISMIC BRACE BRACKET ANCHORAGE CAPACITIES FOR VARIOUS TYPES OF ANCHORAGE CONDITIONS. EACH BRACE BRACKET ATTACHMENT TYPE IS DESIGNATED BY A SET OF NUMBERS AND A LETTER. THE NUMBERS REPRESENTS THE BRACE BRACKET ATTACHMENT SIZE (FOUND IN THE BRACE ANCHOR SIZE TABLE) AND THE LETTER REPRESENTS THE MAXIMUM ALLOWABLE HORIZONTAL LOAD CAPACITY (FOUND IN THE HORIZONTAL LOAD RATING TABLE).

LEGEND (HANGER ATTACHMENT TYPE)

X — DENOTES BRACKET ANCHOR SIZE / DENOTES HORIZONTAL LOAD RATING

EXAMPLE: 63L REPRESENTS BRACE BRACKET ANCHOR SIZE OF ⅝"Ø WITH A MAXIMUM HORIZONTAL LOAD RATING OF 1,250 LBS.

2 - BRACE BRACKET ANCHORAGE ATTACHMENTS TO STRUCTURE MAY BE USED WITH ANY ONE OF "N" SERIES PAGES, PROVIDED BRACE BRACKET ATTACHMENT SIZE IS APPROPRIATE FOR THE APPLICATION AND THE ALLOWABLE HORIZONTAL LOAD CAPACITY IS MET.

3 - STRUCTURAL ENGINEER OF RECORD TO VERIFY ADEQUACY OF THE STRUCTURE FOR THE TABULATED LOADS.

4 - NOT USED.

5 - WHEN CONCRETE ANCHORS ARE INSTALLED AT THE BOTTOM OF THE CONCRETE FILLED METAL DECK, MINIMUM END DISTANCE AND SPACING REQUIREMENTS ARE ALONG FLUTE LENGTH ONLY.

6 - SEE X7.0 AND X7.1 FOR STRUT MEMBER DATA.

7 - ALL CONCRETE FLAT SLABS, WALLS, AND BEAMS MUST HAVE A MINIMUM OF #4 BAR OR GREATER BETWEEN THE ANCHOR AND THE EDGE OF CONCRETE.

8 - ON PAGES N1.XX AND N2.XX, THE DESIGN PROFESSIONAL SHALL USE THE ALLOWABLE LATERAL LOADS UNDER OVERSTRENGTH FACTOR Ω_0 =2.0 UNLESS THE LATERAL SUPPORT COMPLIES WITH ONE OF THE CONDITIONS LISTED IN ACI 318-14 CHAPTER 17, SECTION 17.2.3.4.3.

9 - POST-INSTALLED ANCHORS MAY BE INSTALLED A MINIMUM OF 3 BOLT DIAMETERS AWAY FROM ABANDONED HOLES, AND A MINIMUM OF 1.5 BOLT DIAMETERS FROM DRYPACK MORTAR FILLED HOLES. DRYPACK MORTAR SHALL HAVE A COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE CONCRETE STRENGTH IN WHICH IT IS BEING USED.

10 - ALL-THREAD RODS MUST BE MADE OF A36, A307 (GRADE A OR B), OF F1554 GR36 STEEL. ROD COUPLERS MUST CONFORM TO ASTM A563 STEEL WITH A MINIMUM OF 58 KSI TENSILE STRENGTH. MINIMUM ENGAGEMENT IN ROD COUPLER MUST BE EQUAL TO THE ATR DIAMETER.

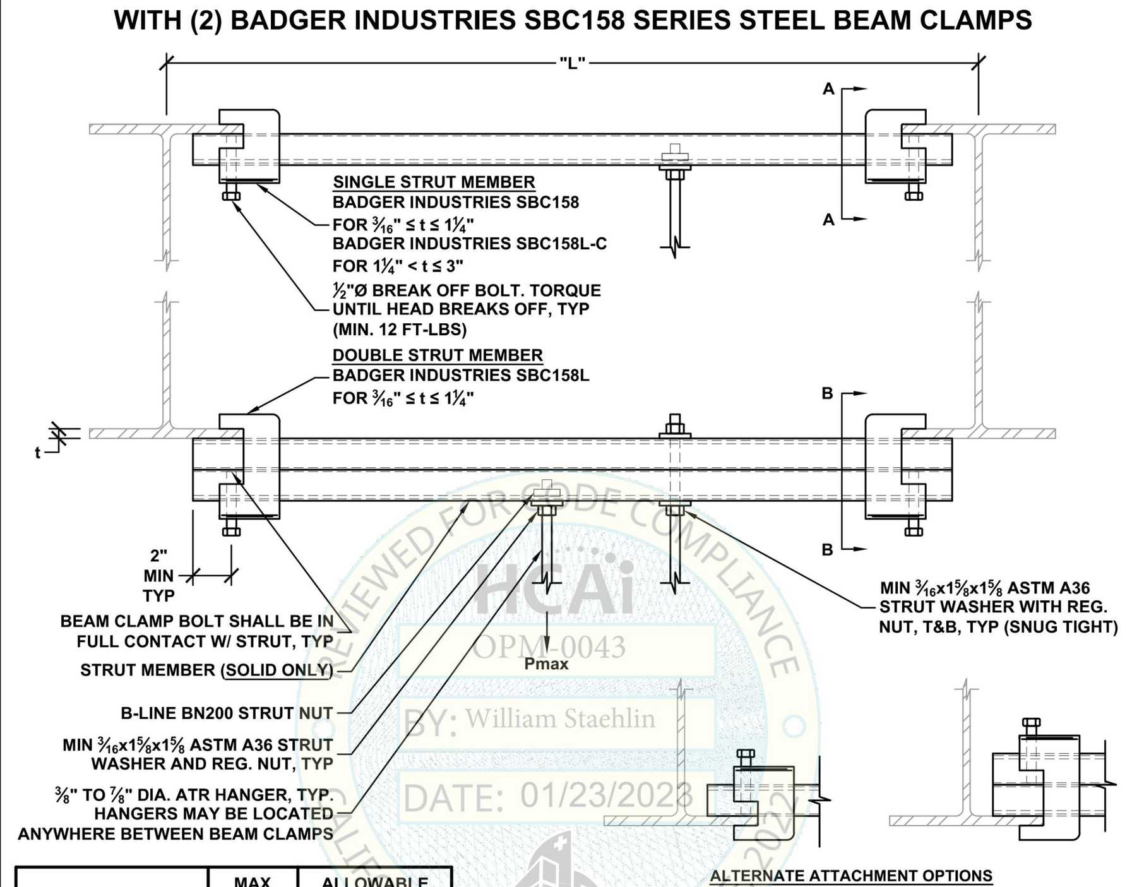
11 - PER CBC SECTION 1905A.1.9, CONCRETE COMPRESSIVE STRENGTH, f'c, SHALL BE LIMITED TO 8,000 PSI MAX, BUT MAY BE INCREASED SUBJECT TO OSHPD REVIEW AND APPROVAL ON A PROJECT BY PROJECT BASIS.

MASON WEST 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com — Jiefu "Jeff" Zhang, SE California SE No. S5270 — PAGE N0.00

1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 589 of 792

BRACE/BRACKET ATTACHMENT
A P3.08
SCALE: NONE

SUPPLEMENTAL STEEL DETAIL WITH (2) BADGER INDUSTRIES SBC158 SERIES STEEL BEAM CLAMPS



SUPPLEMENTAL STEEL MEMBER	MAX BEAM LENGTH "L" FT	ALLOWABLE VERTICAL LOAD Pmax LBS
1⅝"x1⅝"x12GA SINGLE CHANNEL STRUT	4	350
	6	200
	8	110
	10	70
1⅝"x1⅝"x12GA DOUBLE CHANNEL STRUT	4	1010
	6	620
	8	500
	10	360

FASTENER WITH STRUT NUT	
DIA. INCH	TORQUE REQ'D FT-LBS
⅜	19
½ - ¾	50

NOTES:
1. ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.
2. MULTIPLE HANGER RODS MAY BE ATTACHED TO STRUT MEMBER PROVIDED THE MAX ALLOWABLE LOAD (Pmax) IS NOT EXCEEDED.

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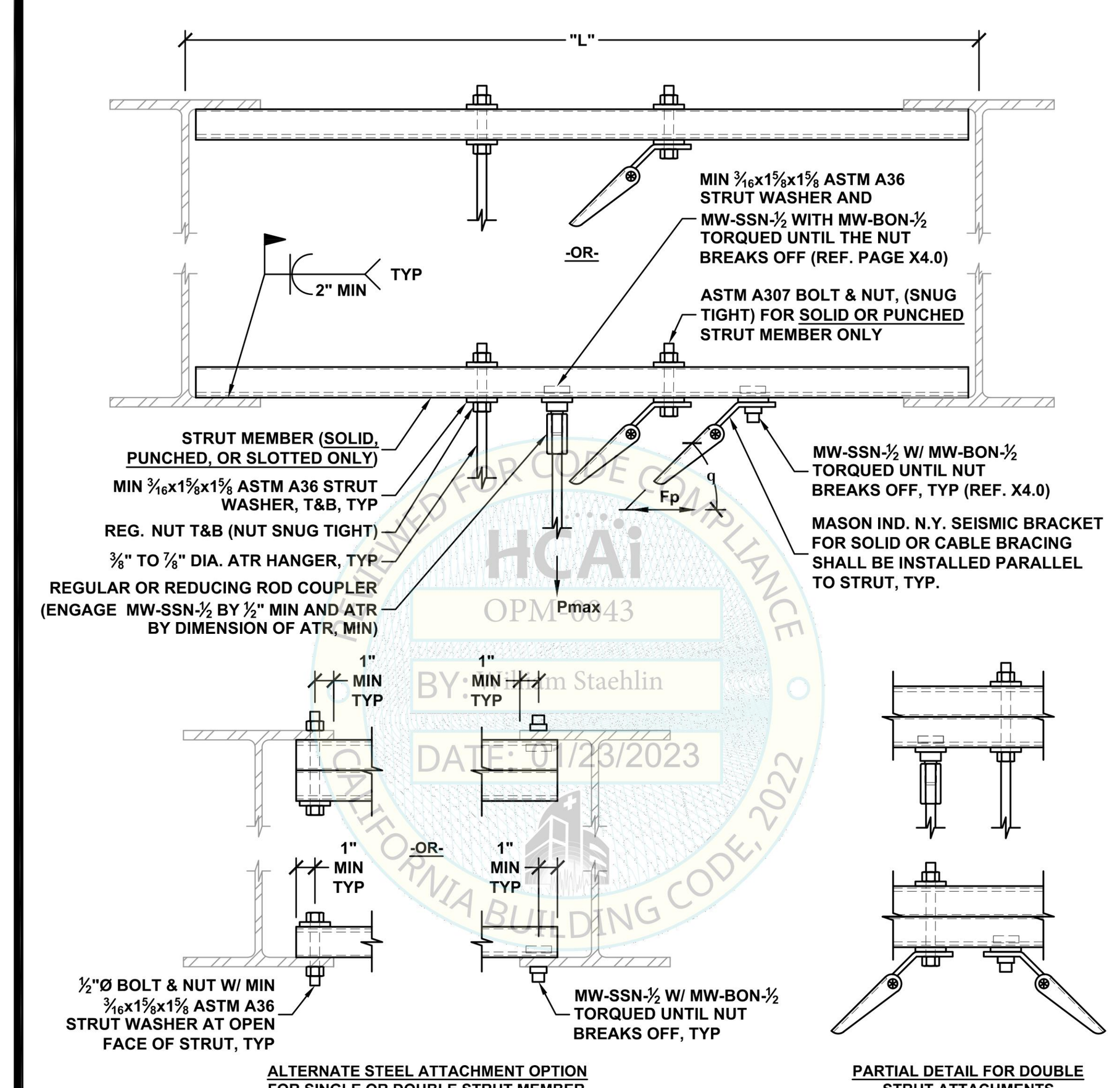
1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 700 of 792

SUPPLEMENTAL STEEL DETAIL
H P3.08
SCALE: NONE

SUPPLEMENTAL STEEL DETAIL



NOTES:
1. ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.
2. SEE PAGE P1.10.1 FOR MEMBER SIZE AND ALLOWABLE LOADS. MULTIPLE HANGER RODS AND BRACE BRACKETS MAY BE ATTACHED TO STRUT MEMBER PROVIDED THAT THE MAX COMBINED ALLOWABLE LOAD (Pmax + Fp) IS NOT EXCEEDED.
3. FOR BEAM CLAMP ATTACHMENT OPTION FOR SINGLE STRUT, SEE PAGE M3.14.
4. DESIGN IS CONTROLLED BY SEISMIC FORCES. NON-SEISMIC FORCES SUCH AS GRAVITY ARE OUTSIDE THE SCOPE OF THIS OPM.

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1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 696 of 792

SUPPLEMENTAL STEEL DETAIL
F P3.08
SCALE: NONE

SUPPLEMENTAL STEEL DETAIL

SUPPLEMENTAL STEEL MEMBER	MAX BRACE RANGE q	MAX BEAM LENGTH "L" FT	COMBINED ALLOWABLE LOAD Pmax + Fp LBS
1⅝"x1⅝"x12GA SINGLE CHANNEL STRUT	30°- 45°	4	300
		6	180
		8	110
		10	70
	46°- 60°	4	180
		6	100
		8	70
		10	50
1⅝"x1⅝"x12GA DOUBLE CHANNEL STRUT	30°- 45°	4	1010
		6	630
		8	430
		10	310
	46°- 60°	4	580
		6	360
		8	250
		10	180

1 ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.
2 MULTIPLE HANGER RODS AND BRACE BRACKETS MAY BE ATTACHED TO STRUT MEMBER PROVIDED THAT THE MAX COMBINED ALLOWABLE LOAD (Pmax + Fp) IS NOT EXCEEDED.
3 FOR BEAM CLAMP ATTACHMENT OPTION FOR SINGLE STRUT, SEE PAGE M3.14.
4 DESIGN IS CONTROLLED BY SEISMIC FORCES. NON-SEISMIC FORCES SUCH AS GRAVITY ARE OUTSIDE THE SCOPE OF THIS OPM.

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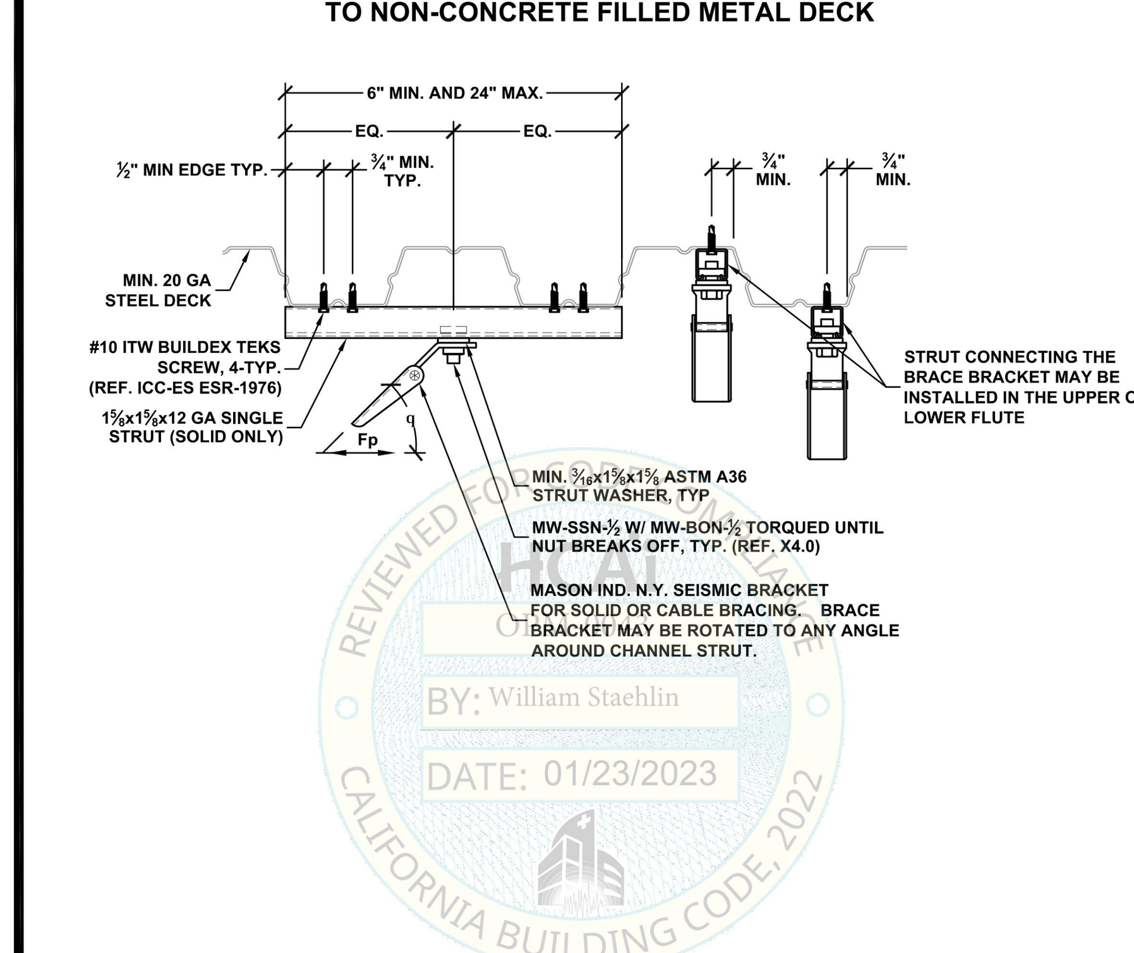
1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 697 of 792

SUPPLEMENTAL STEEL DETAIL
D P3.08
SCALE: NONE

SEISMIC BRACKET ATTACHMENT TO NON-CONCRETE FILLED METAL DECK



BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE q
50A TO 50E	350	30°- 45°
50A TO 50C	200	46°- 60°

SEE DETAIL N0.00 FOR SECTION NOTES

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1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 695 of 792

BRACE/BRACKET ATTACHMENT
B P3.08
SCALE: NONE

NOTE:
HANGER SPACING, SEE PIPE HANGER DETAIL D/P3.05 .

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 (559) 431-0101 — Fresno, CA 93727 FAX (559) 431-1362
23123

MICHAEL D. CANFIELD No. M23888 Exp. 9-30-25 MECHANICAL STATE OF CALIFORNIA

FILE NO.: 20-10 APPL. NO.: 02-121993

JUAN M. GONZALEZ No. C-12865 RENEWAL DATE 12/31/2025 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 FRESNO CALIFORNIA 93711
TEL: 559-497-1542 FAX: 559-497-1549
ARCHITECTURE PLANNING JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE: Plumbing Details

P3.08

19 March 2024 5:33 PM p:\2023\23123 chowchilla esd fairmead es mpb\4-drawings\5 P\P3.01-3.08 - PLBG DETAILS.dwg david s
\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2 Working Dwgs Phase\WD_2318_Fairmead Multi-Purpose.pln

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MARK	FIXTURE	CONNECTION SIZES				DESCRIPTION
		S or W	V	CW	HW	
HS-1	HAND SINK	2"	2"	1/2"	1/2"	**ELKAY #ELV2219-CS3**. WALL MOUNT , 4" CENTER SET 3 HOLE , 22" X 19" X 5-1/2" DEEP, 18 GAUGE 304 STAINLESS STEEL, REAR CENTER DRAIN. **CHICAGO FAUCET #895-317 ABCP**, 4" FIXED CENTERS, 3-1/2" GOOSENECK SPOUT, 1.5GPM, VANDLE PROOF 4" MAWRISTBLADE HANDLES. **LEONARD #170A-LF-BP-STSTL-REC** THERMOSTATIC MIXING VALVE WITH COLD WATER BYPASS MOUNTED BEHIND LOCKING WALL ACCESS PANEL BELOW LAVATORY. **DEARBORN BRASS #3784** DUO BASKET STRAINER. (2) LOOSE KEY COMPRESSION ANGLE STOPS WITH SUPPLIES, 17 GA. C.P. P-TRAP/TAILPIECE WITH ESCUTCHEON (WRPA CW, HW AND TRAPTAILPIECE PERSPECIFICATIONS). REFER TO ARCHITECTURAL DRAWINGS FOR CBC ACCESS COMPLIANT MOUNTING HEIGHT.
HB-1	HOSE BIBB (INTERIOR)	-	-	3/4"	-	**WOODFORD #24P-PC** (OR MIFAB EQUAL) POLISHED CHROME WALL HOSE VALVE WITH LOCKSHIELD, NON-REMOVABLE VACUUM BREAKER, AND LOOSE TEE KEY HANDLE . 3/4" INLET REQUIRED AT ALL HOSE BIBBS.
HB-2	HOSE BIBB (EXTERIOR)	-	-	3/4"	-	**WOODFORD #24P-BR** ROUGH BRASS WALL HOSE VALVE WITH LOCKSHIELD, NON-REMOVABLE VACUUM BREAKER, & LOOSE TEE KEY HANDLE WITH **WOODFORD NIDEL #34HD** ROUGH BRASS VACUUM BREAKER. 3/4" INLET REQUIRED AT ALL HOSE BIBBS.
HB-3	HOSE BIBB (ROOF)	-	-	3/4"	-	**WOODFORD #Y24-BR** ROUGH BRASS VERTICAL HOSE VALVE WITH LOCKSHIELD, NON-REMOVABLE VACUUM BREAKER, & LOOSE TEE KEY HANDLE WITH **WOODFORD NIDEL #34HD** ROUGH BRASS VACUUM BREAKER. REFER TO DETAIL F/P3.03 . 3/4" INLET REQUIRED AT ALL HOSE BIBS.
SA-1	SHOCK ABSORBER	-	-	3/4"	-	**JAY R. SMITH #5005**, (OR MIFAB EQUAL) STAINLESS STEEL CONSTRUCTION, P.D.I. SYMBOL "A" FOR UP TO 11 FIXTURE UNITS. INSTALL IN UPWARD POSITION.
SA-2	SHOCK ABSORBER	-	-	1"	-	**JAY R. SMITH #5010**, (OR MIFAB EQUAL) STAINLESS STEEL CONSTRUCTION, P.D.I. SYMBOL "B" FOR UP TO 32 FIXTURE UNITS. INSTALL IN UPWARD POSITION.
SA-3	SHOCK ABSORBER	-	-	1"	-	**JAY R. SMITH #5020**, (OR MIFAB EQUAL) STAINLESS STEEL CONSTRUCTION, P.D.I. SYMBOL "C" FOR UP TO 60 FIXTURE UNITS. INSTALL IN UPWARD POSITION.
SA-4	SHOCK ABSORBER	-	-	3/4"	-	**JAY R. SMITH #5210**, (OR MIFAB EQUAL) SPUN COPPER CASING, P.D.I. SYMBOL "B" FOR UP TO 32 FIXTURE UNITS. INSTALL IN UPWARD POSITION. CERTIFIED TO ASSE 1010.
WF-1	WATER FILTER	-	-	1/2"	-	**MANITOWOC ARCTIC PURE PLUS #AR-40000-P.** WATER FILTER FOR ICE MACHINE. CHLORINE REDUCTION. SLOW PHOS SCALE INHIBITOR. 0.5 MICRONS FILTRATION, 40,000 GALLON CAPACITY. PROVIDE 2 ADDITIONAL REPLACEMENT CARTRIDGES. REFER TO DETAIL A/P3.05.
RP-1	REDUCE PRESSURE PRINCIPLE ASSEMBLY	-	-	1"	-	WILKINS #975XL2 (OR FEBCO EQUAL) REDUCED PRESSURE PRINCIPLE ASSEMBLY WITH I.P.S. FULL PORT BALL VALVE CONNECTIONS. ASSE 1013.
RP-2	REDUCE PRESSURE PRINCIPLE ASSEMBLY	-	-	3"	-	ZURN MODEL #375 (OR FEBCO EQUAL) REDUCED PRESSURE PRINCIPLE ASSEMBLY WITH 3" OSY GATE VALVES. 3" FLANGED CONNECTION. ASSE 1013.

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MARK	FIXTURE	CONNECTION SIZES				DESCRIPTION
		S or W	V	CW	HW	
L-1	LAVATORY (MANUAL)	2"	2"	1/2"	1/2"	**KOHLER WALL-MOUNT "KINGSTON" #K-2005**, CBC ACCESS COMPLIANT, 21-1/4"x18-1/8", VIT. CHINA WITH 4" CENTER FAUCET HOLES. **CHICAGO FAUCETS #3600-E2805AB** SELF CLOSING METERING FAUCET WITH ADJUSTABLE TEMPERATURE MIXER, 0.5 GPM VANDAL RESISTANT OUTLET, 4" FIXED CENTERS. **McGUIRE #155A** GRID DRAIN. FOR TEMPERED WATER SUPPLY TO (1) ONE LAV, PROVIDE (1) ONE: **LEONARD #170A-LF-BP-STSTL-REC** THERMOSTATIC MIXING VALVE WITH COLD WATER BYPASS MOUNTED BEHIND LOCKING WALL ACCESS PANEL BELOW LAVATORY. FOR TEMPERED WATER SUPPLY TO (2) TWO LAVS, PROVIDE (1) ONE: **LEONARD #270-LF-BP-STSTL-REC** THERMOSTATIC MIXING VALVE WITH COLD WATER BYPASS MOUNTED BEHIND LOCKING WALL ACCESS PANEL BELOW LAVATORY. PIPING FROM THE ANGLE STOPS TO THE THERMOSTATIC MIXING VALVE SHALL BE RIGID TUBING. SET TEMPERATURE AT 105°F. ADJUST FAUCET TO STAY OPEN FOR 10-15 SECONDS. **JAY R. SMITH #0723** CONCEALED ARMS, AND A STEEL SUPPORT PLATE FOR MOUNTING FIXTURE PER DETAIL D/P3.01. (2) LOOSE KEY COMPRESSION ANGLED WALL STOPS WITH SUPPLIES, 17 GA. C.P. P-TRAP/TAILPIECE WITH ESCUTCHEON, (WRAP CW, HW, AND TRAP/TAILPIECE PER SPECIFICATIONS) REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
L-2	LAVATORY (MANUAL)	2"	2"	1/2"	1/2"	**SAME AS L-1 EXCEPT:** REFER TO ARCHITECTURAL DRAWINGS FOR CBC ACCESS COMPLIANT MOUNTING HEIGHT.
L-3	LAVATORY (STAFF) (MANUAL)	2"	2"	1/2"	1/2"	**SAME AS L-1 EXCEPT:** **KOHLER WALL-MOUNT "KINGSTON" #K-2005.** SINGLE FAUCET HOLE. **CHICAGO #2200-E2805ABCP.** NON- AERATING LAMINAR SPRAY 0.5 GPM, 2.3/4" LEVER HANDLE , CERAMIC OPERATING CARTRIDGE. REFER TO ARCHITECTURAL DRAWINGS FOR CBC ACCESS COMPLIANT MOUNTING HEIGHT.
MS-1	MOP SINK	3"	2"	3/4"	3/4"	**KOHLER "WHITBY" #K-6710,** 28" x 28" CORNER STYLE ENAMELED CAST IRON MOP SINK. **KOHLER #K-8940** RIM GUARD. **KOHLER #K-9146** SERVICE SINK STRAINER. **CHICAGO #897-CCP** (OR T&S BRASS EQUAL) WALL MOUNT POLISHED CHROME FAUCET WITH VACUUM BREAKER, INTEGRAL CHECK VALVES, STOPS, & WALL BRACE. **FLORESTONE #MR-370** 60" HOSE WITH WALL BRACKET. **FLORESTONE #MR-372** MOP HANGER.

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MARK	FIXTURE	CONNECTION SIZES				DESCRIPTION
		S or W	V	CW	HW	
WC-1	WATER CLOSET	4"	2"	1"	-	**KOHLER "WELLCOMME ULTRA" #K-96053-SS** ELONGATED FLOOR MOUNT, STANDARD HEIGHT BOWL, 1.28 GPF, ANTI-MICROBIAL FINISH. **SLOAN "ROYAL" #111-1.28** (OR TOTO EQUAL) MANUAL FLUSHOMETER VALVE, 1.28 GPF, POLISHED CHROME FINISH, TOP SPUD CONNECTION. **BEMIS #1655SSCT** COMMERCIAL EXTRA HEAVY-DUTY PLASTIC WHITE TOILET SEAT, OPEN-FRONT LESS COVER, SELF-SUSTAINING CHECK HINGES, WITH STA-TITE FASTENING SYSTEM.
WC-2	WATER CLOSET (MANUAL)	4"	2"	1"	-	**KOHLER #K-96057-SS "HIGHCLIFF ULTRA"**, ELONGATED FLOOR MOUNT, 1.28 GPF, ANTI-MICROBIAL FINISH, CBC ACCESS COMPLIANT. **SLOAN "ROYAL" #111-1.28 GPF** POLISHED CHROME FINISH, FIXTURE CONNECTION TOP SPUD, SINGLE FLUSH, EXPOSED MANUAL WATER CLOSET FLUSHOMETER. **BEMIS #1655SSCT** (OR CHURCH EQUAL) COMMERCIAL EXTRA HEAVY-DUTY PLASTIC WHITE TOILET SEAT, OPEN-FRONT LESS COVER, SELF-SUSTAINING CHECK HINGES, WITH STA-TITE FASTENING SYSTEM. MOUNT FLUSH VALVE WITH HANDLE POINTED TOWARDS WIDE SIDE OF STALL OR ROOM.
U-1	URINAL (MANUAL)	2"	2"	3/4"	-	**KOHLER "BARDON" #K-4991-ET**, WALL MOUNT 0.125 GPF, WITH STAINLESS STEEL SECURED STRAINER. **SLOAN "ROYAL" #186-0.125-DBP-SG,** 0.125 GPF (OR TOTO EQUAL), EXPOSED URINAL FLUSHOMETER, POLISHED CHROME FINISH, DIAPHRAGM VALVE, TOP SPUD CONNECTION, DUAL-FILTERED BYPASS, SANIGARD HANDLE. **JAY R. SMITH #0637** SUPPORT CARRIER WITH BOTTOM PLATE FOR FLOOR AND WALL ATTACHMENT. OPTIONAL: PROVIDE STEEL SUPPORT PLATE FOR MOUNTING FIXTURE PER DETAIL D/P3.01. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. PROVIDE 2" WCO ABOVE FLOOD RIM LEVEL OF FIXTURE.
U-2	URINAL (MANUAL)	2"	2"	3/4"	-	**SAME AS U-1, EXCEPT:** REFER TO ARCHITECTURAL DRAWINGS FOR CBC ACCESS COMPLIANT MOUNTING HEIGHT.
DF-1	DRINKING FOUNTAIN	2"	1-1/2"	1/2"	-	**HAWS MODEL 1119,** BI-LEVEL 18GA. 304 STAINLESS STEEL VANDAL RESISTANT, WALL MOUNT, 1-1/4" INTEGRATED BRASS CHROME .45GPM BUBBLERS, PUSH-BUTTON ACTIVATION. **HAWS MODEL 1920,** BOTTLE FILLER 14GA. 304 STAINLESS STEEL, WALL MOUNT, LAMINAR FLOW 1GPM PUSH-BUTTON ACTIVATION. **HAWS MODEL 6469,** STRAINER 1920 DRIP TRAY 304 STAINLESS STEEL. **HAWS MODEL BP32,** DECORATIVE STAINLESS STEEL BACK PANEL BEHIND BOTTLE FILLER. **HAWS MODEL 6700.4** IN-WALL MOUNTING PLATE, 3/16" HEAVY -DUTY STEEL PRE-DRILLED AND THREADED WITH ALL-THREAD STUDS AND HARDWARE. REFER TO ARCHITECTURAL DRAWINGS FOR CBC ACCESS COMPLIANT MOUNTING HEIGHT.

NOTE:
ALL PLUMBING FIXTURES SHALL MEET 2022 CAL GREEN MANDATORY MEASURES. MAXIMUM FLOW RATE AT 20 PERCENT REDUCTION PER A5.303.2.3.2 AND TABLE A5.303.2.2.

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 (559) 431-0101 — 23123 — Fresno, CA 93727 FAX (559) 431-1362

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-12865 RENEWAL DATE 12/31/2025 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
Plumbing Schedules

P4.01

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MARK	FIXTURE	CONNECTION SIZES				DESCRIPTION
		S or W	V	CW	HW	
WH-1	GAS WATER HEATER **ELECTRICAL REQUIRED**	-	4"/4"	1-1/2"	1-1/2"	BRADFORD WHITE "eF SERIES" ULTRA HIGH EFFICIENCY GAS WATER HEATER **MODEL #EF-100T-199E-3NA.** 100 GALLON STORAGE CAPACITY, 199,999 BTU/Hr. INPUT, ASME CONSTRUCTION, VITRAGLAS LINING WITH MICROBAN, RECOVERY OF 294 GPH AT 80°F TEMPERATURE RISE, FULL SIZE T&P RELIEF VALVE, AND A THERMAL EFFICIENCY RATING OF 97%. 28-1/4" DIAMETER, 77-5/8" TALL WITH SIDE CONNECTIONS. SET SUPPLY TEMP. TO MASTER MIXING VALVE AT 140°F. PROVIDE SEISMIC STRAP, AND 4" CPVC AIR INTAKE AND FLUE EXHAUST THRU THE ROOF. IT IS ACCEPTABLE TO USE A COMBINED CPVC CONCENTRIC THRU THE ROOF KIT. **BRADFORD WHITE #A2123601** CONDENSATE NEUTRALIZATION KIT (OR EQUAL), SIZED PER EQUIPMENT CAPACITY. FOR ANCHORAGE AND WATER HEATER ASSEMBLY, REFER TO DETAIL A/P3.03. GAS: 199,999 BTU/Hr. INPUT, 7.0"W.C. MIN. RUNNING, 14.0"W.C. MAX. STATIC. **ELECT: 120VAC, 60Hz, 15A** WEIGHT: 1,800 LBS.
CP-1	DOMESTIC HOT WATER CIRCULATING PUMP **ELECTRICAL REQUIRED**	-	-	-	3/4"	B&G/XYLEM LEAD-FREE WET ROTOR CIRCULATOR #NBF-25, LEAD FREE BRONZE OR STAINLESS STEEL, (OR GRUNDFOS OR TACO EQUAL) THREE SPEED IN-LINE CENTRIFUGAL PUMP WITH B&G/XYLEM FLANGED IPS CONNECTIONS WITH INTEGRAL BALL AND CHECK VALVES. 3/4" FLANGE, SPEED 2, 19.0 GPM, 14 FT HEAD. PROVIDE WITH AQUASTAT, WITH MINIMUM TEMP AT 120°. REFER TO DETAIL A/P3.03. WEIGHT = 11 LBS. ELECTRICAL: 115V, SINGLE PHASE 125 WATTS, 2,950 RPM, 1.1 FLA.

TET-1	THERMAL EXPANSION TANK	-	-	3/4"	-	**AMTROL "THERM-X-TROL" #ST-12C**, 6.4 GALLON TANK VOLUME, 3.2 GALLON MAX ACCEPT VOLUME, ASME RATED EXPANSION TANK WITH INLINE CONNECTIONS, FOR POTABLE WATER USE. 12" DIA. X 14"H. FOR ANCHORAGE REFER TO DETAIL A/P3.03.
						WT. = 80 LBS.

MV-1	THERMOSTATIC MIXING VALVE (WATER HEATER)	-	-	1"	1"/ 1-1/4"	**BRADLEY #S59-3080-HL80-R-H-B-P** (OR LEONARD EQUAL) THERMOSTATIC HIGH-LOW MIXING VALVE WITH 1" CW/HW INLETS AND 1-1/4" TEMPERED OUTLET, 26 GPM @ 5 PSI PD, PIPED ASSEMBLY WITH INLET AND OUTLET SHUT-OFF VALVES AND WALL BRACKET. SET OUTLET TEMP @ 125°F.
WH-2	ELECTRIC WATER HEATER **ELECTRICAL REQUIRED**	-	-	3/4"	3/4"	A.O. SMITH "PROLINE SPECIALTY" COMMERCIAL LOWBOY ELECTRIC WATER HEATER **MODEL #ENJB-30.** 26 GALLON STORAGE CAPACITY TANK VITRAGLAS LINING WITH MICROBAN, FIRST HOUR RATING 47 GAL., RECOVERY OF 23 GPH AT 80°F TEMPERATURE RISE, FULL SIZE T&P RELIEF VALVE, AND A THERMAL EFFICIENCY RATING OF 90%. FOR ANCHORAGE AND WATER HEATER ASSEMBLY, REFER TO DETAIL C/P3.03, D/P3.03 NON-SIMULTANEOUS DUAL 4500W ELEMENTS. **ELECT: 240VAC, 6000W MAX. ,3 PHASE** WEIGHT: 350 LBS.

TET-2	THERMAL EXPANSION TANK	-	-	3/4"	-	**AMTROL "THERM-X-TROL" #ST-5C**, 2.1 GALLON TANK VOLUME, 0.9 GALLON MAX ACCEPT VOLUME, ASME RATED EXPANSION TANK WITH INLINE CONNECTIONS, FOR POTABLE WATER USE. 10" DIA. X 10"H. FOR ANCHORAGE REFER TO DETAIL C/P3.03, D/P3.03.
						WT. = 40 LBS.

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MARK	FIXTURE	CONNECTION SIZES				DESCRIPTION
		S or W	V	CW	HW	
RD-1	ROOF DRAIN AND OVERFLOW DRAIN	-	-	-	-	ROOF DRAIN: **JAY R. SMITH #1310Y-E-C-R-G-CIDG**, 12" DIAMETER GALVANIZED CAST IRON BODY WITH GALVANIZED CAST IRON DOME, UNDERDECK CLAMP, SUMP RECEIVER AND EXTENSION AS REQUIRED. PROVIDE 4 LB. LEAD FLASHING ON TOP OF ROOF DECK PEENED IN AND CLAMPED TO ROOF DRAIN. SEE DWGS FOR OUTLET SIZE. OVERFLOW DRAIN: **JAY R. SMITH #1310Y-E-C-R-WD04-G-CIDG**, 12" DIAMETER GALVANIZED CAST IRON BODY WITH GALVANIZED CAST IRON DOME, UNDERDECK CLAMP, SUMP RECEIVER, EXTENSIONS AS REQUIRED, AND **WD04 - 4"** HIGH CAST IRON WATER DAM. INSTALL SAME AS ROOF DRAIN. REFER TO DRAWINGS FOR OUTLET SIZE. CONFIRM WITH ARCHITECTURAL DETAIL PRIOR TO ORDERING. PROVIDE THE ABOVE ROOF AND OVERFLOW DRAINS WITH SIDE OUTLETS WHERE STRUCTURAL OR CONSTRUCTABILITY CONDITIONS PROHIBIT INSTALLATION OF THE STANDARD ROOF DRAIN BODY. NOTE: POSSIBLE LONG LEAD TIME FOR EXTENSIONS, ORDER ROOF AND OVERFLOW DRAIN ASSEMBLY EARLY. NO JOBSITE FABRICATED EXTENSIONS ALLOWED.
TP-1	TRAP PRIMER	-	-	1/2"	-	**J.R. SMITH #2694** "TRAP-DEFENDER" PRESSURE DROP ACTIVATED TRAP SEAL PRIMER (OR MIFAB EQUAL). OPERATES AT PRESSURES FROM 20-80 PSI WITH A MINIMUM DROP OF 3 PSI. **DISTRIBUTION UNIT #2694DA** AS REQUIRED FOR UP TO 4 DRAINS. INSTALL WITH SHUT-OFF VALVE FOR SERVICING ON THE INLET SIDE. LOCATE BEHIND STAINLESS STEEL ACCESS DOOR WITH SCREWDRIVER CAM LATCH (NO KEYS)
TP-2	TRAP PRIMER **ELECTRICAL REQUIRED**	-	-	3/4"	-	**PRECISION PLUMBING PRODUCTS MODEL #MPB-500-115V-DU** FOR 1 TO 4 TRAPS WITH DISTRIBUTION UNIT. PROVIDE A LOCKING FIRE-RATED ACCESS DOOR WHERE REQUIRED. **PT-6, PT-8, PT-10, PT-12** (OR MIFAB EQUAL) FOR MORE THAN FOUR TRAPS TO BE PRIMED. RECESSED MOUNT CABINET WITH ACCESS DOOR AND CYLINDER LOCK. PROVIDE STAINLESS STEEL DOOR IN AREAS WITH CERAMIC TILE WALL FINISH. TRAP PRIMER IS FACTORY ASSEMBLED AND PRE-PIPED WITH COPPER MANIFOLD. INLET BALL VALVE, ELECTRIC SOLENOID VALVE, TIMER, AND VACUUM BREAKER. PROVIDE SHUT-OFF VALVE FOR SERVICING AND SHOCK ABSORBER SA-1 IMMEDIATELY UPSTREAM ON INLET SIDE OF TRAP PRIMER. REFER TO DRAWINGS FOR NUMBER OF DRAINS SERVED TO SELECT MODEL ABOVE. **ELECTRICAL: 120 VOLT/1Ø.**
HT-1	HEAT TRACE **ELECTRICAL REQUIRED**	-	-	-	-	**RAYCHEM SELF-REGULATING HEATING CABLE #5XLE1-CR**, 5W/FT FOR PIPE FREEZE PROTECTION AND FLOW MAINTENANCE. **RACHEM #RAYCLIC-PC** POWER CONNECTION AND END SEAL. **RAYCHEM #ECW-GF** WALL MOUNTED DIGITAL ELEC. CONTROLLER W/25' TEMP SENSOR. **RAYCHEM #GT66** GLASS TAPE ROLL. (5) FIVE **RAYCHEM #ETL** ELECTRIC TRACED LABELS. MAINTAIN TEMP. AT 40°F. AND PROVIDE 1" MIN. THICK FIBERGLASS PIPE INSULATION. **ELECT: 120V, 15 AMP BREAKER.** INQUIRIES/CONTACT: PPG - PLUMBING PRODUCTS GROUP. PH#: 408-513-5531

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MARK	FIXTURE	CONNECTION SIZES				DESCRIPTION
		S or W	V	CW	HW	
FD-1	FLOOR DRAIN	-	2"	1/2"	-	**MIFAB F1100-C-S5-3-HP** (OR JR SMITH EQUAL) LAQUERED CAST IRON BODY WITH 5" SQUARE STAINLESS STEEL HEEL PROOF STRAINER. PROVIDE TRAP PRIMER CONNECTION P-TRAP WITH 1/2" PRIMER TAP. REFER TO DRAWINGS FOR OUTLET SIZE.
FS-1	FLOOR SINK	-	-	1/2"	-	**MIFAB FS1730-FL-C-3-150** (OR JR SMITH EQUAL) 12"x12"x8" DEEP WITH ANCHOR FLANGE, DOME BOTTOM STRAINER & STAINLESS STEEL RIM WITH 1/2 GRATE. INSTALL FLUSH WITH FINISH FLOOR. PROVIDE TRAP PRIMER CONNECTION P-TRAP WITH 1/2" PRIMER TAP. REFER TO DRAWINGS FOR OUTLET SIZE. REFER TO DETAIL A/P3.02, FOR INDIRECT WASTE AIR GAP DRAIN DETAIL.
FS-2	FLOOR SINK	-	-	1/2"	-	**MIFAB FS1770-FL-C-3-150** (OR JR SMITH EQUAL) 16"x16"x9" DEEP WITH ANCHOR FLANGE, FLASHING CLAMP, DOME BOTTOM STRAINER & STAINLESS STEEL RIM WITH 1/2 GRATE. INSTALL FLUSH WITH FINISH FLOOR. PROVIDE TRAP PRIMER CONNECTION P-TRAP WITH 1/2" PRIMER TAP. REFER TO DRAWINGS FOR OUTLET SIZE. REFER TO DETAIL A/P3.02, FOR INDIRECT WASTE AIR GAP DRAIN DETAIL.
FS-3	FLOOR SINK	-	-	1/2"	-	**MIFAB FS1750-FL-C-3-150** (OR JR SMITH EQUAL) 8" ROUND x 6" DEEP WITH ANCHOR FLANGE, DOME BOTTOM STRAINER & STAINLESS STEEL RIM WITH 1/2 GRATE. INSTALL FLUSH WITH FINISH FLOOR. PROVIDE TRAP PRIMER CONNECTION P-TRAP WITH 1/2" PRIMER TAP. REFER TO DRAWINGS FOR OUTLET SIZE. REFER TO DETAIL A/P3.02, FOR INDIRECT WASTE AIR GAP DRAIN DETAIL.
GI-1	GREASE INTERCEPTOR	4"	3"	-	-	**JENSEN #JP-1000-EE-G**. 1000 GALLON TANK 4" LAYOUT GRAVITY GREASE INTERCEPTOR 24"E, 24" E SINGLE BAFFLE ADMIXUTRE-BIOCONCRETE. (2) 24" DIA. CAST IRON GAS-TIGHT LIDS, H-20 TRAFFIC RATED. REFER TO DETAIL A/P3.04.
DC-1	DOWNSPOUT COVER	-	-	-	-	**JAY R. SMITH #1775-PB** (OR MIFAB OR WATTS EQUAL), POLISHED BRASS WALL OUTLET DOWNSPOUT WITH HINGED PERFORATED COVER. REFER TO DRAWINGS FOR OUTLET SIZE.
GPRV-1	GAS PRESSURE REGULATOR VALVE	-	-	-	-	AMERICAN GAS METER SERIES 1800 GAS PRESSURE REGULATOR, SCFH GAS-0.60 SPECIFIC GRAVITY, SPRING 71424P017, 1/2" ORIFICE SIZE 3/8", 2,800 MAX. SCFH NATURAL GAS CAPACITY AT 5 PSIG INLET PRESSURE AND 8.5"-14" W.C. SET: 14" W.C. OUTLET PRESSURE. 2" W.C. DROOP.

NOTE:
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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2025
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
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FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANNELLA
No. M35588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
Plumbing Schedules

P4.02

KITCHEN EQUIPMENT PLUMBING SCHEDULE

ITEM	QTY.	DESCRIPTION	WATER CONN. SIZE C.W.	WATER CONN. SIZE H.W.	WASTE CONN. SIZE DIR.	WASTE CONN. SIZE INDIR.	NATURAL GAS CONN. SIZE	NATURAL GAS BTU/HR	PLUMBING REMARKS AND INTERCONNECTIONS
1	1	DISPOSER	1/2"	-	3"W 2"V	-	-	-	3/4"CW DOWN IN WALL. PROVIDE P-TRAP, 2"VENT, 3"WASTE, AND WCO. REFER TO DETAIL B/P3.05. INSTALL IN COMPLIANCE WITH MFG. INSTALLATION GUIDELINES.
2	1	PRE-RINSE REEL WITH RECESSED REEL RINSE CONTROL UNIT	1/2"	1/2"	-	-	-	-	1/2" HW, 1/2"CW DOWN IN WALL TO RECESSED HOSE REEL CONTROL UNIT. 1/2" WATER LINE UP IN WALL TO WALL MOUNTED HOSE REEL. INSTALL IN COMPLIANCE WITH MFG. INSTALLATION GUIDELINES. ATTACH TO (2) BACKING PLATES UPPER AND LOWER ANCHORING ATTACHMENT. SEE BACKING PLATE DETAIL D/P3.01.
3	2	THREE COMPARTMENT SINK & 3 DRAINS	-	-	-	2" 2" 2"	-	-	EXTEND FULL SIZE DRAIN FROM EACH COMPARTMENT ROTARY WASTE VALVE DRAIN TO FLOOR SINK AND DISCHARGE THERETO WITH AIR GAP PER DETAIL A/P3.02. REFER TO BULLET FOOT DETAIL G/P3.02.
4	2	SWING SPOUT	1/2"	1/2"	-	-	-	-	3/4" CW AND 3/4" HW DOWN IN WALL, ELBOW OUT AND CONNECT TO FAUCET.
6	1	FOOD PREP SINK	-	-	-	2"	-	-	EXTEND FULL SIZE DRAIN FROM ROTARY WASTE VALVE DRAIN TO FLOOR SINK AND DISCHARGE THERETO WITH AIR GAP PER DETAIL A/P3.02. REFER TO BULLET FOOT DETAIL G/P3.02.
14	1	TILT SKILLET	1/2"	1/2"	-	2"	-	-	3/4"CW AND 3/4" HW DOWN IN WALL, CONNECT 1/2"CW AND 1/2"HW TO WATER FILL FAUCET. EXTEND FULL SIZE DRAIN FROM DRAIN DRAWER TO FLOOR SINK AND DISCHARGE THERETO WITH AIR GAP PER DETAIL A/P3.02. INSTALL IN COMPLIANCE WITH MFG. INSTALLATION GUIDELINES.
15	1	GAS RANGE & OVEN	-	-	-	-	1-1/4" ~29-1/2" AFF	215,000	1-1/4" NPT FRONT MANIFOLD WITH 1/2" UNION ON EACH END. PROVIDE GAS APPLIANCE PRESSURE REGULATOR REQUIRED PER MANUFACTURER. INCOMING NATURAL GAS LINE PRESSURE INTO REGULATOR SHALL BE 8" TO 14" W.C. INSTALL IN COMPLIANCE WITH MFG. INSTALLATION GUIDELINES AND/OR NATIONAL FUEL GAS CODE, ANSI Z223.1. PROVIDE GAS PIPING DIRT LEG PER DETAIL F/P3.01 AND CONNECT TO EQUIP.
16	1	STACKED DOUBLE OVENS	-	-	-	-	3/4" NPT ~14" AFF	230,000	100,000 BTU/HR COMBINED. (1) 3/4" NPT GAS CONNECTIONS AT RIGHT-REAR. (1) 3/4" NPT GAS PRESSURE REGULATORS FURNISHED LOOSE WITH EQUIPMENT AND INSTALLED BY PLUMBING. 5.0" W.C. NATURAL GAS DELIVERY. INCOMING NATURAL GAS LINE PRESSURE INTO REGULATOR SHALL BE 8" TO 14" W.C. INSTALL IN COMPLIANCE WITH MFG. INSTALLATION GUIDELINES AND/OR NATIONAL FUEL GAS CODE, ANSI Z223.1. PROVIDE GAS PIPING DIRT LEG PER DETAIL F/P3.01 AND CONNECT TO EQUIP.
19	2	ICE MAKER ICE BIN	3/8"FPT ~ -	-	-	3/4"FPT ~ 3/4"FPT ~	-	-	1/2"CW DN. IN WALL. ELBOW OUT TO S.O.V. AND CONNECT TO FILTRATION UNIT MOUNTED ON WALL ABOVE ICE MAKER. PROVIDE STEEL SUPPORT WALL BACKING PLATE FOR MOUNTING PER D/P3.01. ALLOW 3" MIN. CLEARANCE BELOW FILTER FOR CARTRIDGE REMOVAL AND REPLACEMENT. PROVIDE PRESSURE GAUGE ON INLET AND OUTLET OF FILTER ASSEMBLY. PROVIDE ESCUTCHEON AND UNION AT WALL PENETRATIONS, TYPICAL. EXTEND FILTERED WATER TO ICE MAKER AND CONNECT. CONNECT FULL SIZE DRAIN PIPING TO REAR SIDE OF ICE BIN AND ICE MAKING WATER DRAIN. EXTEND EACH DRAIN TO FLOOR SINK AND DISCHARGE THERETO WITH AIR GAP PER DETAIL A/P3.02. INSULATE DRAIN PIPING. REFER TO DETAIL C/P3.05 FOR WATER FILTER ASSEMBLY.

NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR MANUFACTURER, MODEL #, AND ADDITIONAL INFORMATION.
2. INSTALL IN COMPLIANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS, TYPICAL.
3. REFER TO "TYPICAL KITCHEN EQUIPMENT PLUMBING NOTES", SHEET P1.01, TYPICAL.

SYMBOL DENOTES KITCHEN EQUIPMENT ITEM #. REFER TO SHEET P1.01 FOR ADDITIONAL INFORMATION
NO PLUMBING REQUIRED ON ANY KITCHEN EQUIPMENT ITEM NUMBERS NOT LISTED HERE .

NOTE:
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23123

FILE NO.: 20-10 APPL. NO.: 02-121993

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

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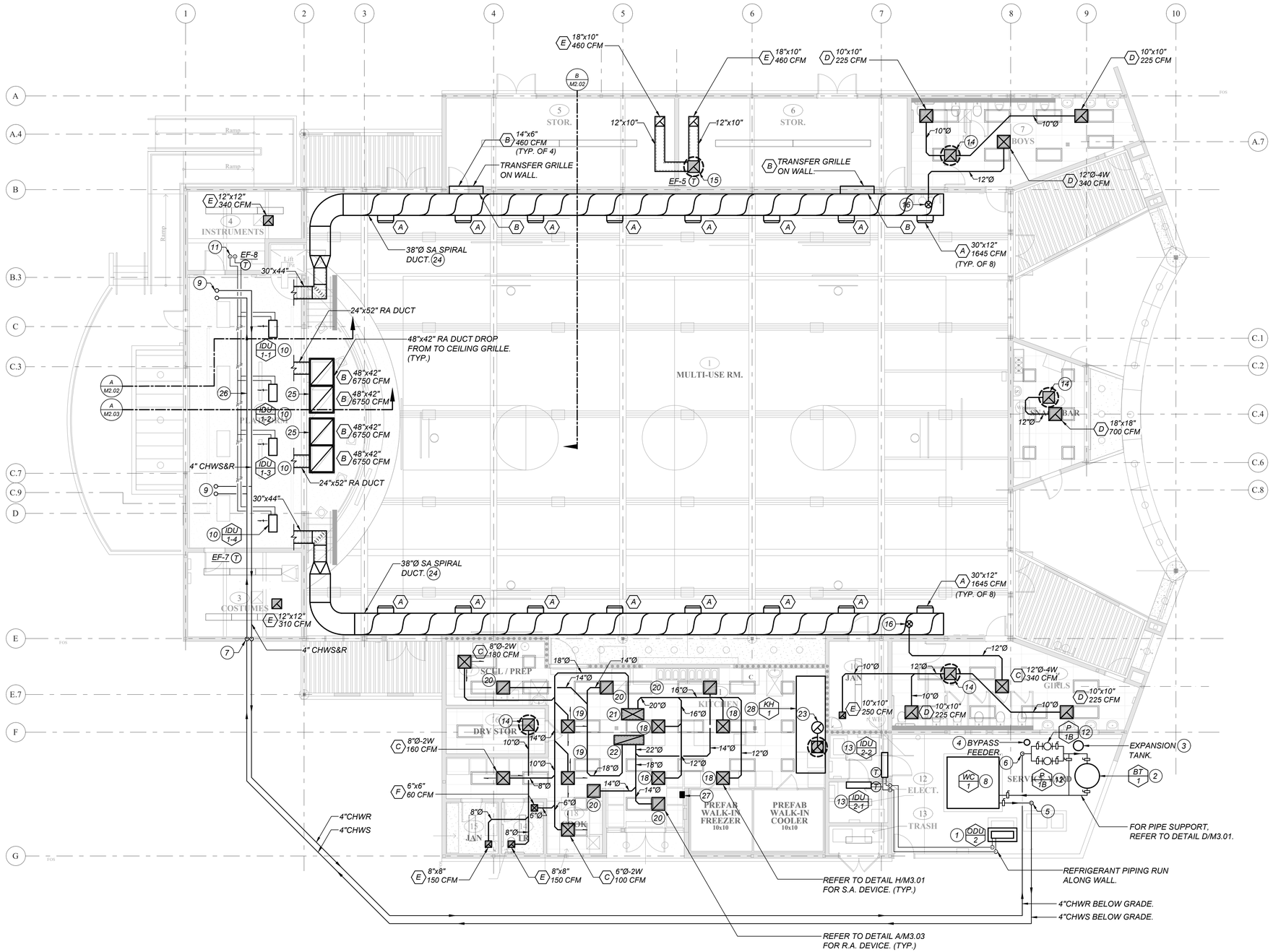
JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
Plumbing Schedules

P4.03



NORTH

MECHANICAL PLAN

SCALE: 1/8" = 1 -0"

KEYNOTES: (THIS SHEET ONLY)

1. OUTDOOR UNIT MOUNTED ON CONCRETE PAD. REFER TO DETAIL B/M3.02.
2. 500 GALLON BUFFER TANK. REFER TO DETAIL E/M3.01.
3. WESSELS #NLAP-60 ASME REMOVABLE BLADDER EXPANSION TANK. 15 GALLON TANK VOLUME. REFER TO DETAIL B/M3.01.
4. BYPASS FEEDER GRISWOLD WATER SYSTEMS #FB5-SB-CS-Z-175F. REFER TO DETAIL C/M3.01.
5. 4"CHWS DOWN TO BELOW GRADE.
6. 4"CHWR UP FROM BELOW GRADE.
7. 4"CHWS & R UP IN WALL TO OVERHEAD.
8. HEAT PUMP WATER CHILLER MOUNTED ON CONCRETE PAD. REFER TO DETAIL E/M3.02.
9. 3"CHWS & R UP THRU ROOF.
10. IDU RECESS MOUNTED IN CEILING. REFER TO DETAIL F/M3.02.
11. REFRIGERANT SUCTION & LIQUID LINES DOWN FROM ROOF.
12. INLINE PUMP MOUNTED ON BASE. REFER TO DETAIL A/M3.01.
13. HIGH WALL MOUNTED INDOOR UNIT. REFER TO DETAIL D/M3.02.
14. 12"x12" DUCT UP THRU ROOF TO EXHAUST FAN.
15. 14"x14" DUCT UP THRU ROOF TO EXHAUST FAN.
16. 12"Ø SA BRANCH OFF BOTTOM OF 38"Ø SA DUCT.
17. REFER TO DETAIL F/M3.01 FOR DUCT SUPPORT ON WALL.
18. C 12"Ø 600 CFM - 4W
19. C 12"Ø 600 CFM - 3W
20. D 18"x18" 820 CFM
21. 26"x20" SA DUCT DROP THRU ROOF.
22. 40"x14" RA DUCT DROP THRU ROOF
23. CONNECT 16"Ø GREASE DUCT TO KITCHEN HOOD. REFER CAPTIVE AIR DETAILS ON SHEETS M4.01 THRU M4.04.
24. FOR DUCT ON WALL SUPPORT, REFER TO DETAIL F/M3.01.
25. FOR RETURN AIR DUCT SUPPORT, REFER TO DETAIL A/M2.03.
26. SUSPEND CHWS & CHWR 12" MAX. BETWEEN TOP OF PIPE TO STRUCTURE ABOVE.
27. HOOD SUPPRESSION MANUAL ACTIVATION DEVICE ON WALL 42" TO 48" ABV. FLR. TO CENTER OF PUSH BUTTON. REFER TO A/M4.13.
28. REFER TO DETAIL L/M3.01 AND SHEETS M4.01, M4.02, M4.03, AND M4.04.

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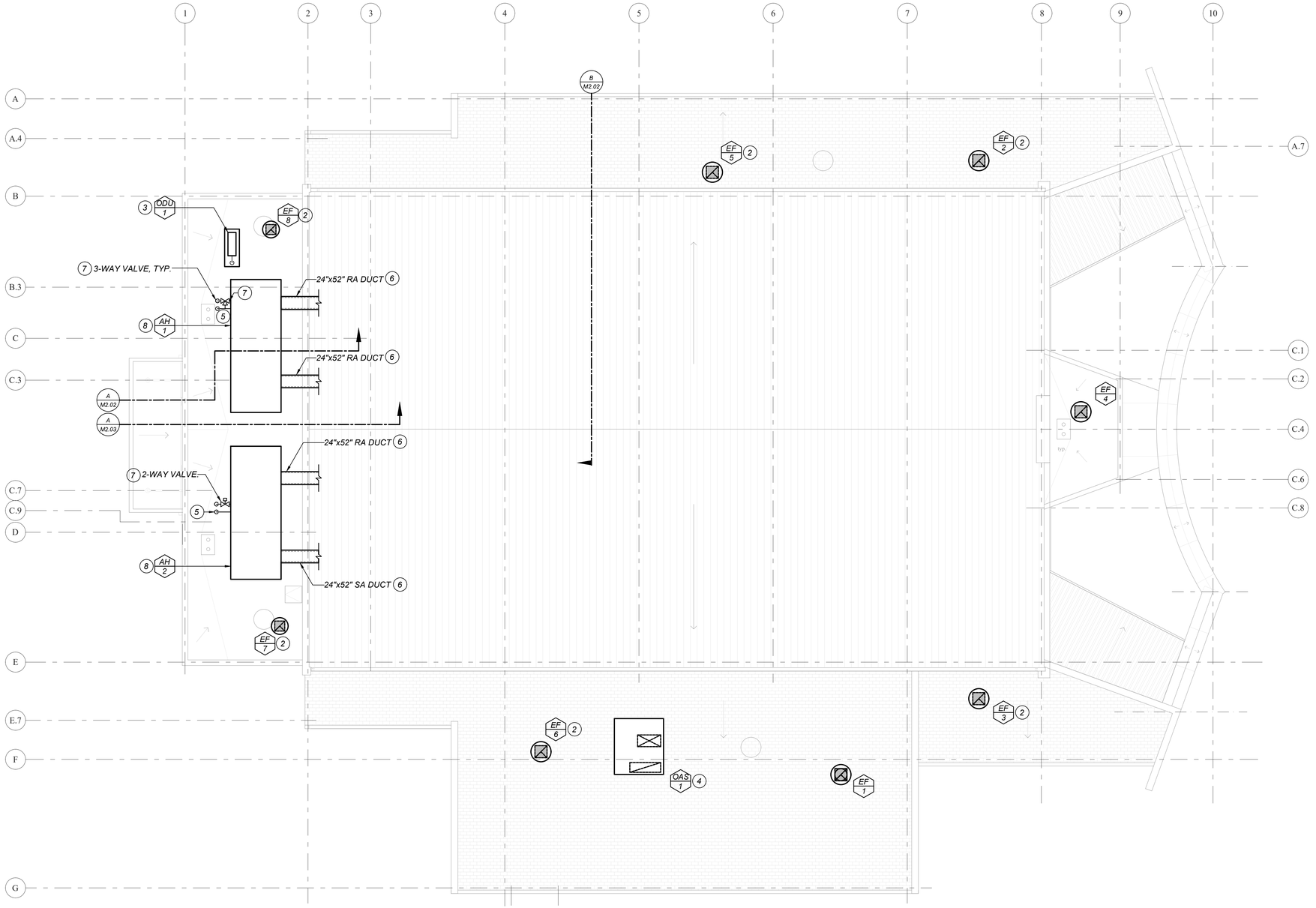
PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
MECHANICAL PLAN

M1.01



NORTH

MECHANICAL ROOF PLAN

SCALE: 1/8" = 1 -0"

KEYNOTES: (THIS SHEET ONLY)

1. *EXHAUST FAN MOUNTED ON ROOF. REFER TO DETAIL K/M3.02.*
2. *EXHAUST FAN MOUNTED ON ROOF. REFER TO DETAIL K/M3.02.*
3. *OUTDOOR UNIT MOUNTED ON ROOF PLATFORM. REFER TO DETAIL H/M3.02. REFER TO DETAIL C/M3.02 FOR INSULATED PIPE THRU SHEET METAL HOUSING.*
4. *OUTSIDE AIR UNIT ON ROOF. REFER TO DETAIL L/M3.02 AND CAPTIVE AIR DETAILS ON SHEETS M4.07 THRU M4.09. FOR MOUNTING REFER TO M3.02*
5. *3"CHWS AND 3"CHWR UP THRU ROOF.*
6. *FOR DUCT THRU WALL, REFER TO DETAIL J/M3.01.*
7. *FOR COIL VALVING, REFER TO DETAIL G/M3.02.*
8. *AIR HANDLER UNIT. REFER TO DETAIL K/M3.02 FOR MOUNTING.*

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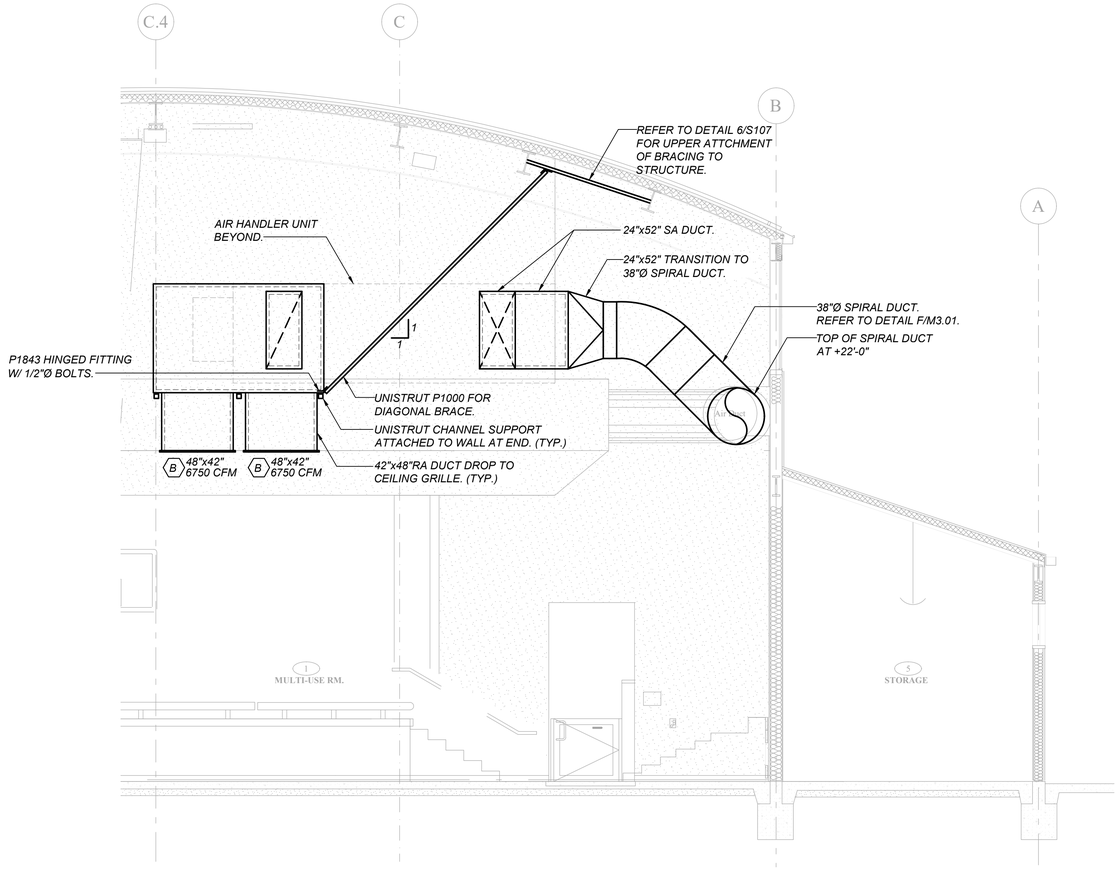
PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
MECHANICAL ROOF PLAN

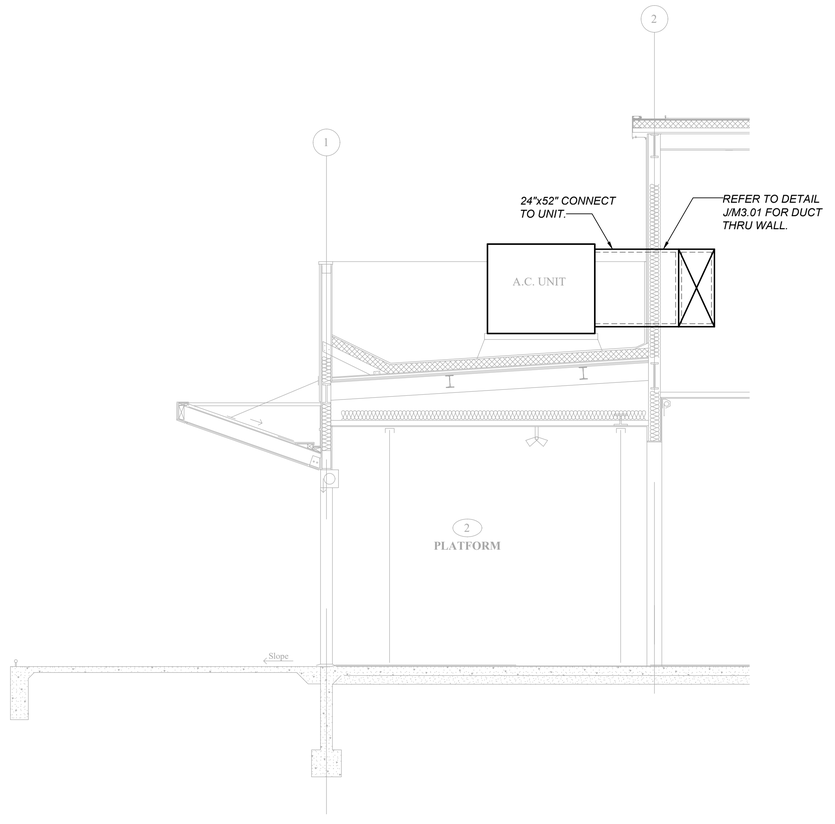
M2.01



MECHANICAL SECTION

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

B M2.02



MECHANICAL SECTION

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

A M2.02

FILE NO.: 20-10 APPL. NO.: 02-121993

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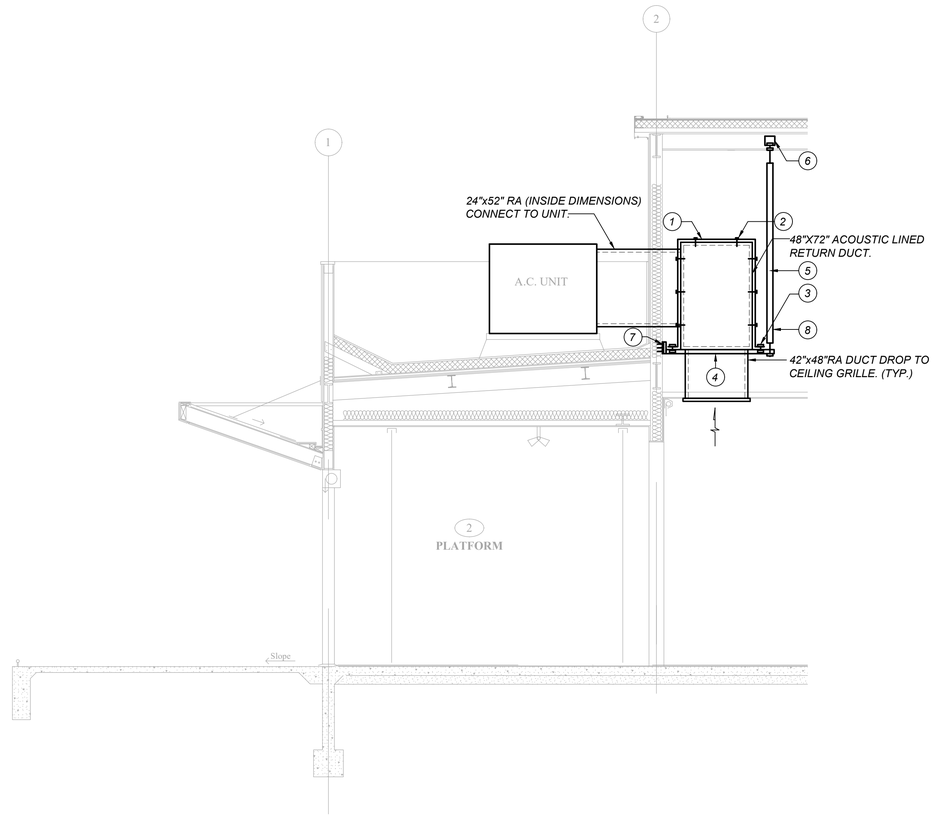
SHEET TITLE:
MECHANICAL SECTIONS

M2.02



MECHANICAL SECTION

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

A
M2.03

KEYNOTES: (THIS SHEET ONLY)

1. 1-1/2"X20 GA. SHEET METAL STRAP. (TYP.)
2. #10 S.M. SCREW @ 24" O.C. SEAL WATERTIGHT W/ MASTIC.
3. SECURE STRAP TO CHANNEL W/ 3/8" MACHINE BOLT & SPRING NUT. (TYP. EACH END)
4. UNISTRUT P1000 CHANNEL.
5. 3/8"Ø THREADED ROD W/ STIFFENER.
6. FOR UPPER ROD ATTACHMENT, REFER TO STRUCTURAL DETAIL 6/S107.
7. SECURE UNISTRUT P1000 CHANNEL TO BACKING IN WALL WITH 3 MIN. #10 SMS. REFER TO DETAIL 12/S109 FOR BACKING.
8. UNISTRUT P1000 DIAGONAL BRACE ATTACHED TO THIS END OF DUCT SUPPORT. FOR DIAGONAL BRACING IN THE PLANE DIRECTION, REFER TO DETAIL B/M2.02.

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
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Exp. 9-30-25
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STATE OF CALIFORNIA

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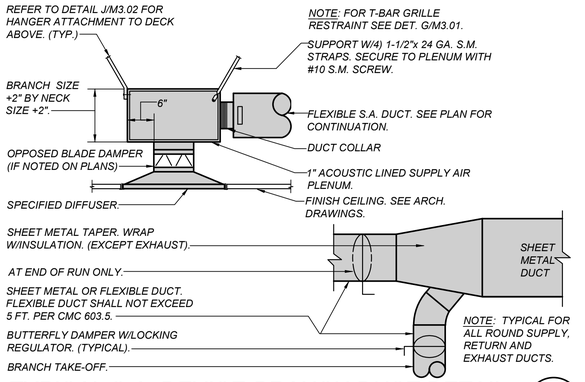
4910 E. Clinton Way, Suite 101
(559) 431-0101
23123
Fresno, CA 93727
FAX (559) 431-1362

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
MECHANICAL SECTIONS

M2.03

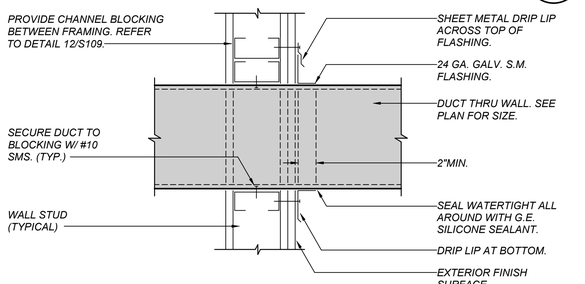


TYPICAL S.A. DEVICE-BRANCH DUCT DETAIL

H M3.01

SCALE: NONE

MD002

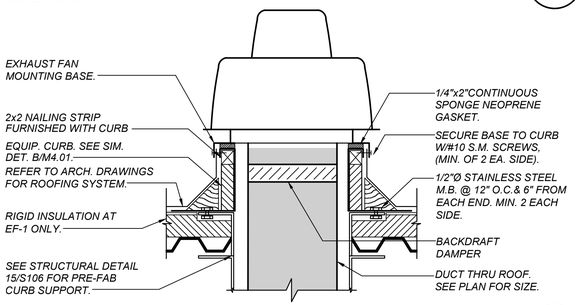


DUCT THRU METAL STUD WALL DETAIL

J M3.01

SCALE: NONE

MD085

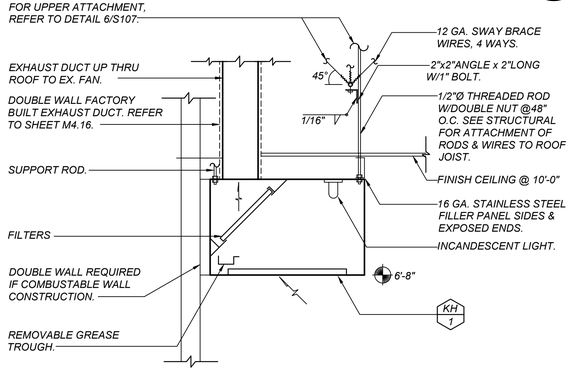


MECHANICAL EQUIPMENT ON METAL CURB

K M3.01

SCALE: NONE

MM029

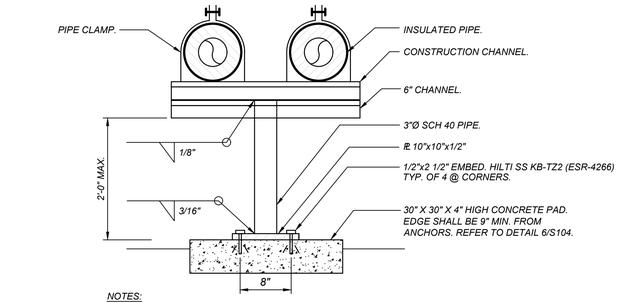


KITCHEN HOOD MOUNTING DETAIL

L M3.01

SCALE: NONE

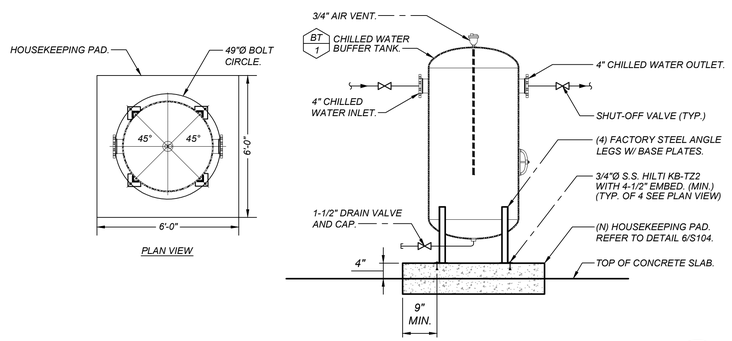
MM052



PIPE SUPPORT

D M3.01

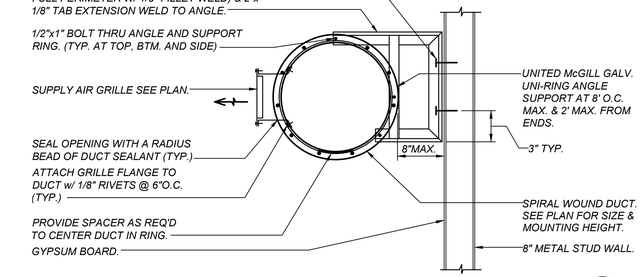
SCALE: NONE



BUFFER TANK MOUNTING

E M3.01

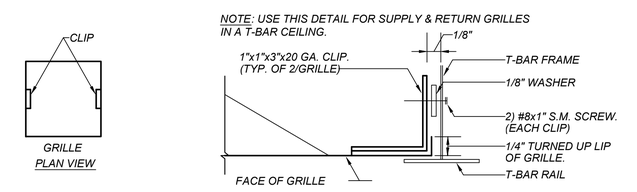
SCALE: NONE



EXPOSED DUCT MOUNTING

F M3.01

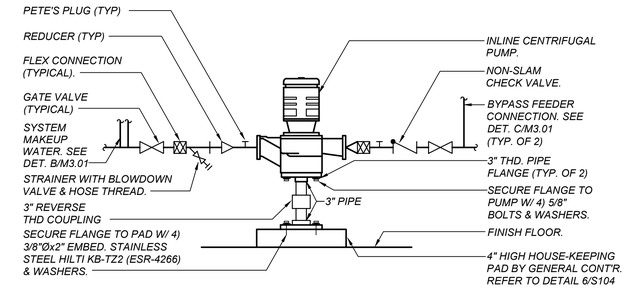
SCALE: NONE



GRILLE RESTRAINT DETAIL

G M3.01

SCALE: NONE

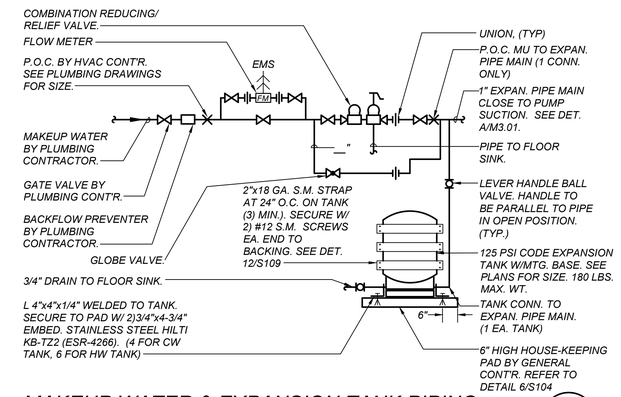


INLINE PUMP ON BASE PIPING DETAIL

A M3.01

SCALE: NONE

MP037

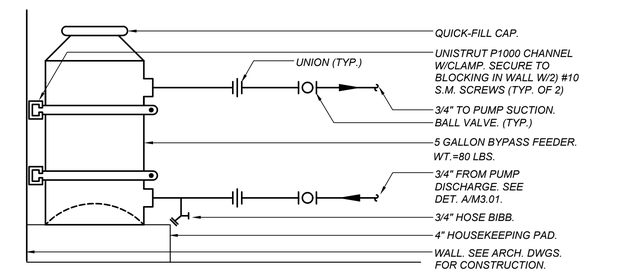


MAKEUP WATER & EXPANSION TANK PIPING

B M3.01

SCALE: NONE

MP062



CLOSED SYSTEM BYPASS FEEDER DETAIL

C M3.01

SCALE: NONE

MP016

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
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PROJECT NO: 2318

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SHEET TITLE:
MECHANICAL DETAILS

M3.01

REGISTERED PROFESSIONAL ENGINEER
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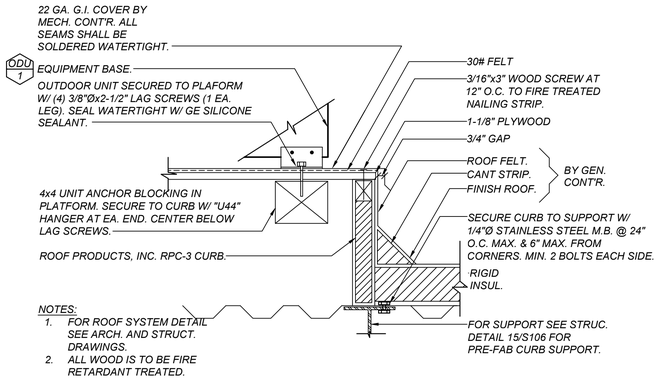
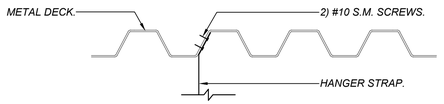


ROOF PLATFORM DETAIL (ODU-1)

H M3.02

SCALE: NONE

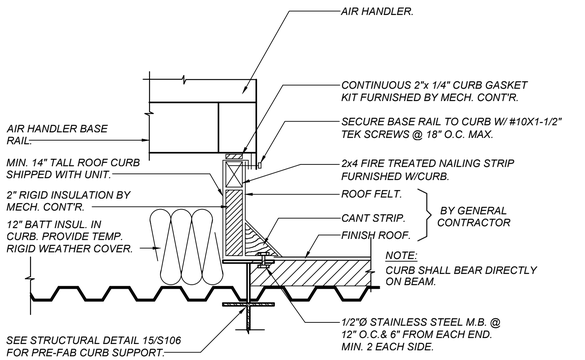
MM169



HANGER STRAP CONNECTION TO METAL DECK DETAIL

J M3.02

SCALE: NONE

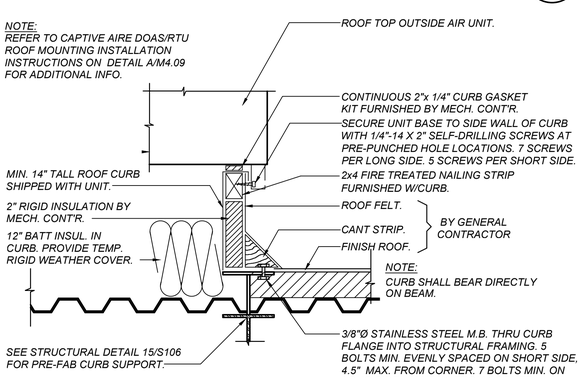


AIR HANDLER UNIT MOUNTING (AH-1 & 2)

K M3.02

SCALE: NONE

MM126

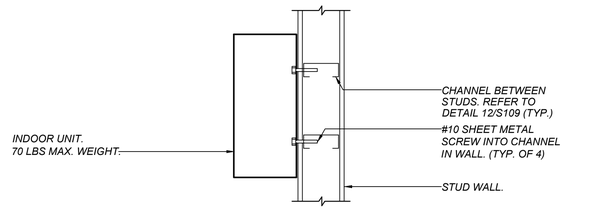


OAS-1 UNIT MOUNTING

L M3.02

SCALE: NONE

MM126

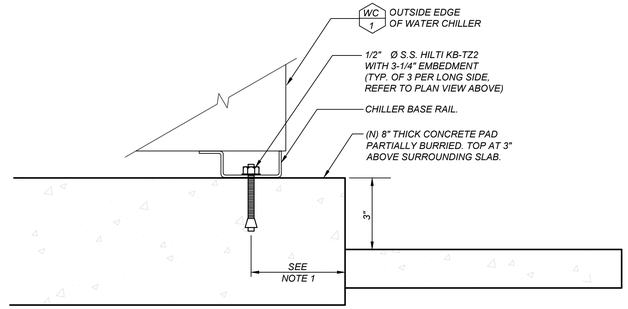


INDOOR UNIT MOUNTING DETAIL

D M3.02

SCALE: NONE

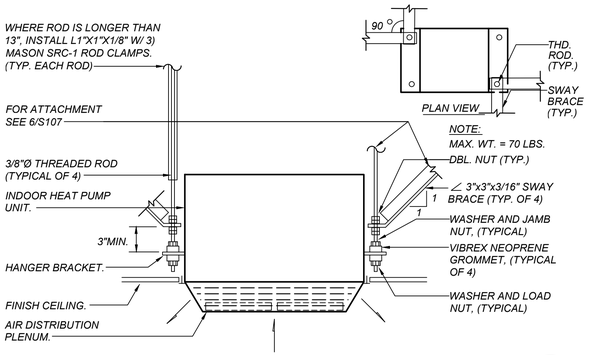
MM131



WATER CHILLER MOUNTING

E M3.02

SCALE: NONE

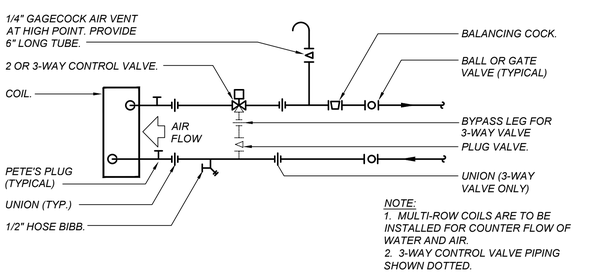


INDOOR UNIT MOUNTING DETAIL

F M3.02

SCALE: NONE

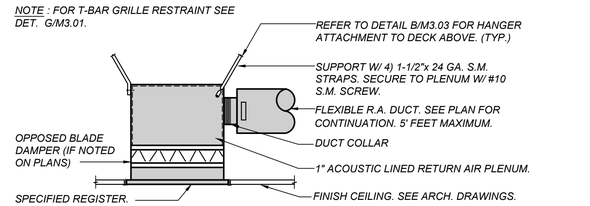
MM176

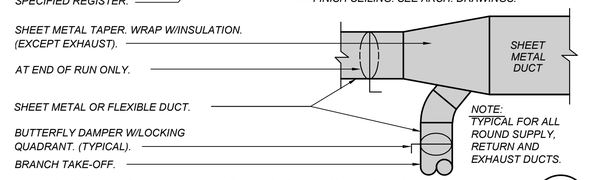


2 OR 3 WAY COIL PIPING DETAIL

G M3.02

SCALE: NONE



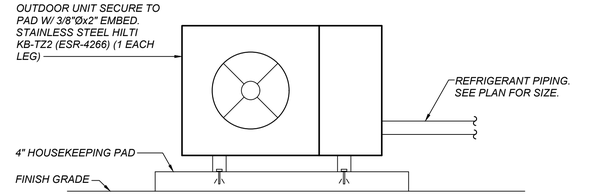


TYPICAL R.A. DEVICE-BRANCH DUCT DETAIL

A M3.02

SCALE: NONE

MD073

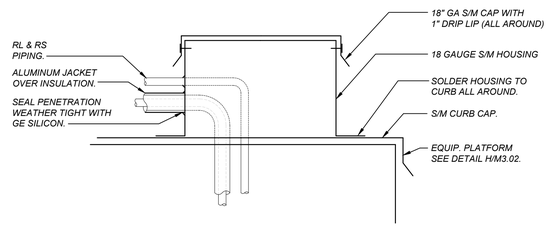


OUTDOOR UNIT MOUNTING DETAIL

B M3.02

SCALE: NONE

MM083



INSULATED PIPE ROOF PENETRATION

C M3.02

SCALE: NONE

MD066

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
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PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
MECHANICAL DETAILS

M3.02

15 April 2024 8:34 AM p:\2023\23123 chowchilla esd fairmead es mpb\4-drawings\4 M\M3.01 - MECH Details.dwg dovid s

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2 Working Dwgs Phase\WD_2318_Fairmead Multi-Purpose.pln

FOR QUESTIONS, CALL THE
Central Valley CA
REGION 147
PHONE: (559) 549 - 3566
EMAIL: reg147@captiveaire.com

PATENT NUMBERS

EXHAUST HOODS ND-2/BD-2/SND-2 (CANADA) - CA PATENT 2520435 C.

KH 1

HOOD INFORMATION - JOB#6264635

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1		5430 ND-2	CAPTIVEAIRE	14' 0"	600 DEG	I	HEAVY	200	2800			4"	16"	2800	2005	-1.026"	430 SS WHERE EXPOSED	ALONE	ALONE

KH 1

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	LOCATION	SIZE	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1		CAPTRATE SOLO FILTER	10	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO	LEFT	12"x54"x30"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	1221 LBS

KH 1

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		FIELD WRAPPER 10.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 120.00" HIGH X 216.00" LONG 430 SS VERTICAL.
		RIGHT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS.
		INSULATION FOR TOP OF HOOD.
		STRUCTURAL FRONT PANEL.
		SENSOR-CV.
		LEFT WIDE VERTICAL END PANEL 42" TOP WIDTH, 36" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.

7

GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12". DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

HVAC DISTRIBUTION NOTE

HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

VERIFY CEILING HEIGHT

___' - ___"

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

CUSTOMER APPROVAL TO MANUFACTURE:

APPROVED AS NOTED ☐
APPROVED WITH NO EXCEPTION TAKEN ☐
REVISE AND RESUBMIT ☐
SIGNATURE _____
YOUR TITLE _____ DATE _____ _____

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

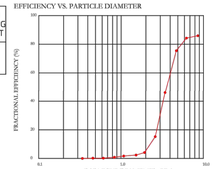
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

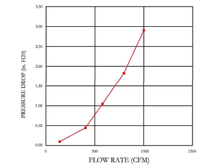
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

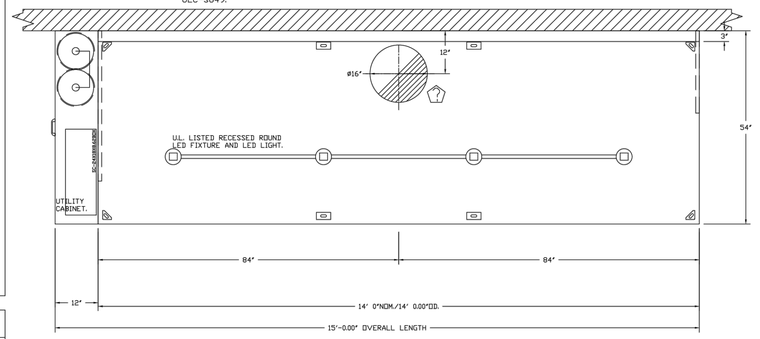
EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE:

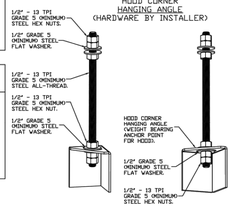


CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH.
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.



PLAN VIEW - HOOD #1
14' 0.00" LONG 5430ND-2
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.

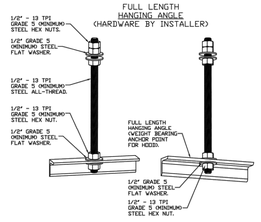
HOOD CORNER HANGING ANGLE (HARDWARE BY INSTALLER)



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

FULL LENGTH HANGING ANGLE (HARDWARE BY INSTALLER)



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CAPTIVEAIRE DETAIL

SCALE: NONE

A M4.01

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELMI
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REVISIONS

	DESCRIPTION	DATE
1		
2		
3		
4		

CAPTIVEAIRE
Central Valley CA
PO Box 25427, Fresno, CA, 93729 PHONE: (559) 549 - 3566 FAX: 5592686060 EMAIL: reg147@captiveaire.com
www.captiveaire.com

Chowchilla ES - Chowchilla, CA
CHOWCHILLA, CA, 93610

DATE: 10/6/2023
DWG.#: 6264635
DRAWN BY: GB
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 1

FILE NO.: 20-10 APPL. NO.: 02-121993

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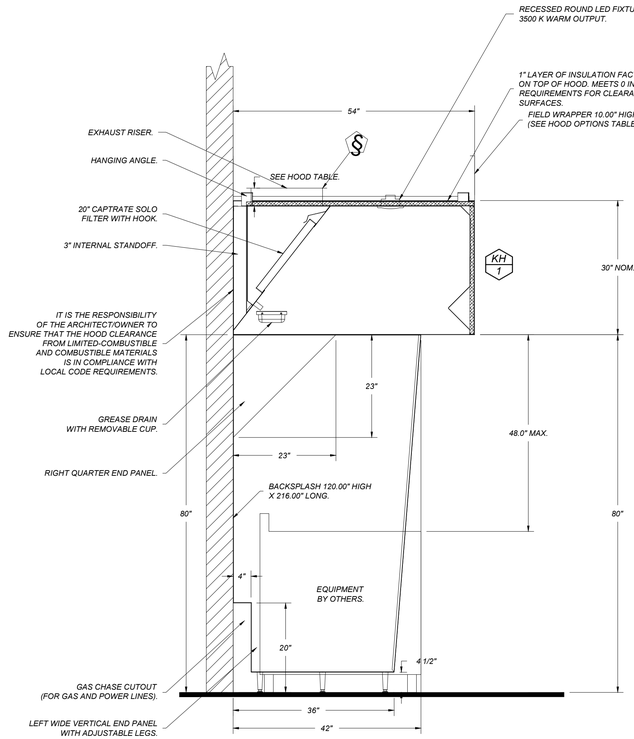
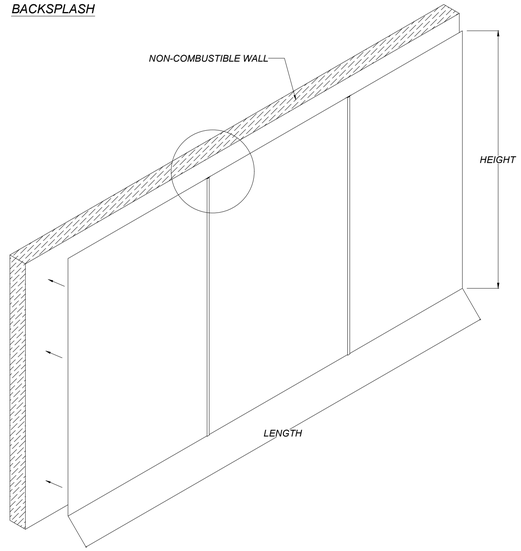
MECHANICAL DETAILS

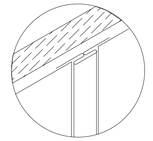
M4.01



SECTION VIEW – MODEL 5430ND-2
HOOD – #1

BACKSPLASH





BACKSPLASH PANELS SLIDE INTO DIVIDER BAR

- BACKSPLASH IS NOT INSULATED AND IS UNSUITABLE FOR INSTALL AGAINST COMBUSTIBLE WALLS

CAPTIVEAIRE DETAIL

SCALE: 3/4" = 1'-0"

A
M4.02

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
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FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELM
No. M23588
Exp. 9-30-25
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Fresno, CA 93727
FAX (559) 431-1362

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
MECHANICAL DETAILS

M4.02

KH 1

FIRE SYSTEM INFORMATION – JOB#6264635

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	40	22	FIRE CABINET LEFT	LEFT, HOOD 1

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-OT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F.	1	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	2	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5" BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	5	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	4	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	1	0
		0 - 0 - BI145 3/8" BLACK IRON 90 ELL.	3	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	5	0
		16 - 16 - OL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	5	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	5	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	1	0

CAPTIVEAIRE DETAIL

SCALE: NONE

A M4.03

LAWRENCE ENGINEERING GROUP
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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
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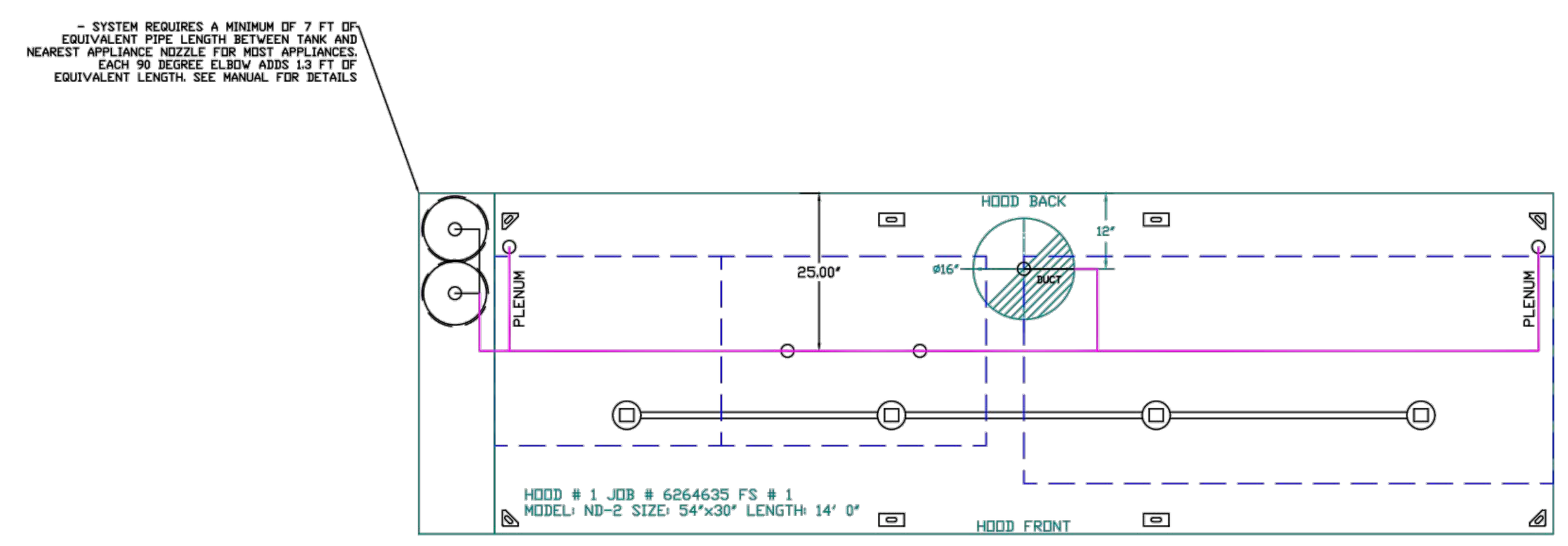
REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELMI
No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

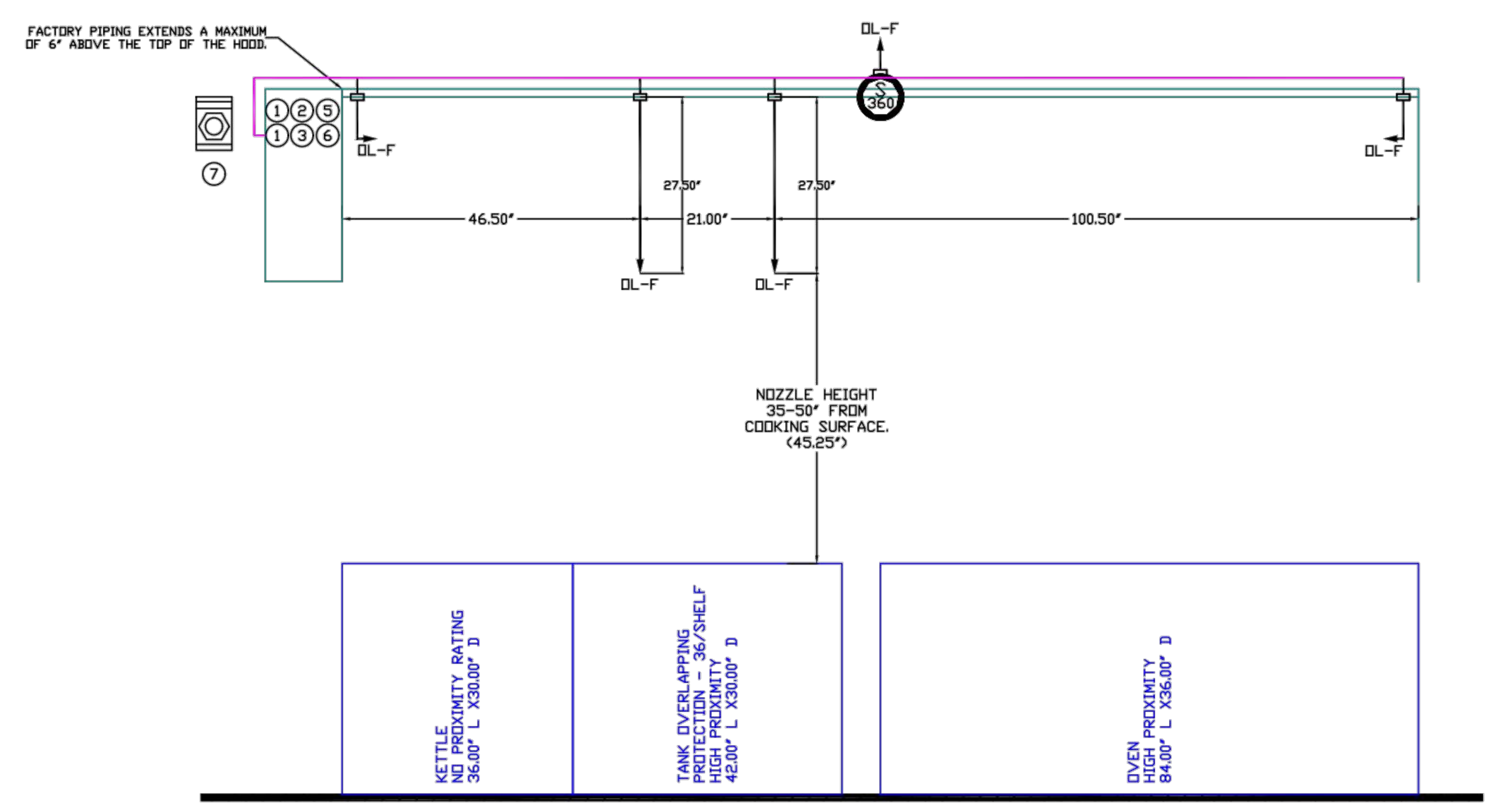
PROJECT NO: 2318

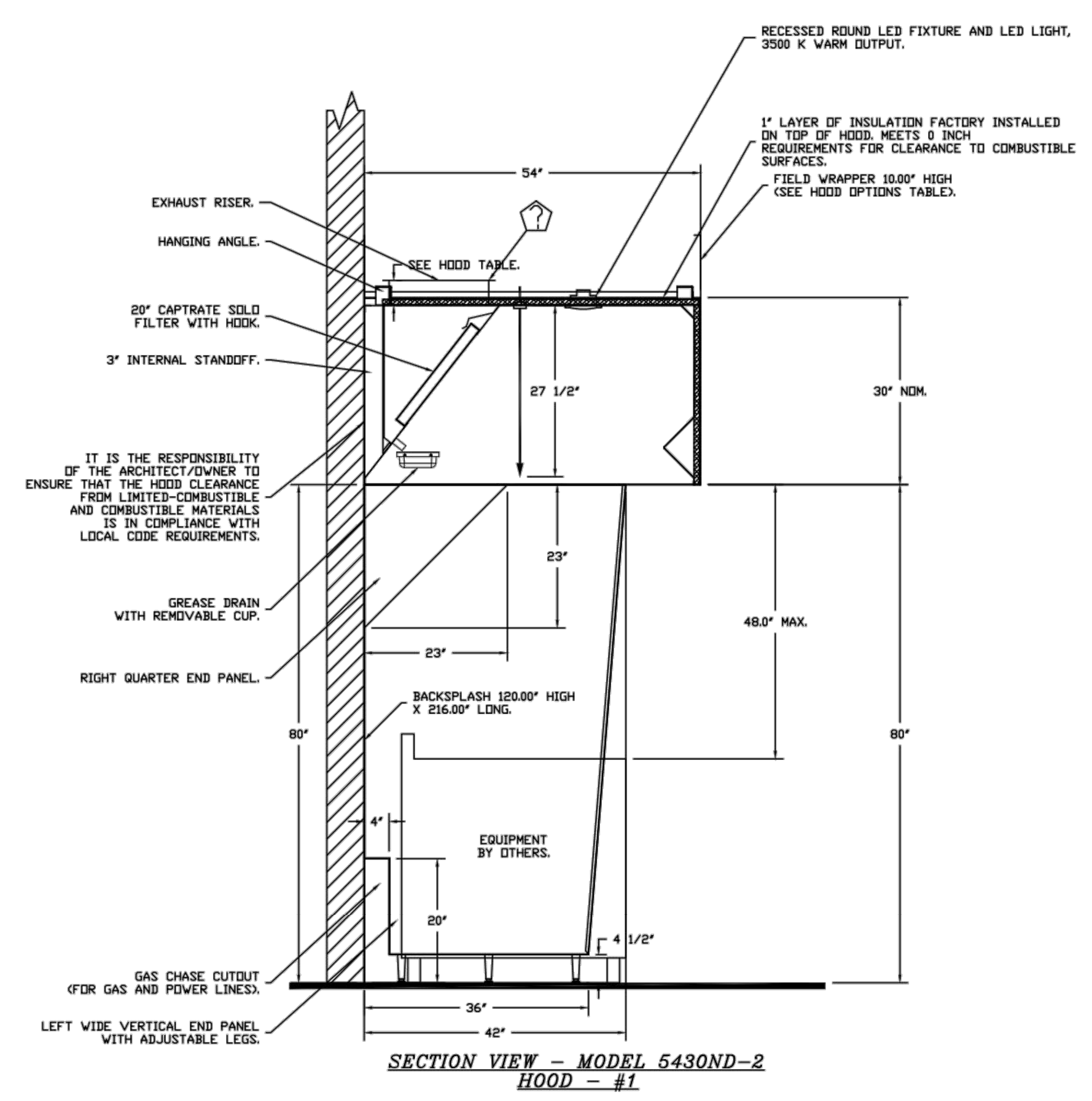
DATE: 8/24/2023

SHEET TITLE:
MECHANICAL DETAILS

M4.03







NOTES
- FIELD PIPE DROPS AS SHOWN
  PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 6264635.
JOB NAME: CHOWCHILLA ES - CHOWCHILLA, CA.

SYSTEM SIZE: TANK-SP-2 DESIGN FP: 22. MAXIMUM FP: 40.
HOOD # 1 14' 0.00" LONG x 54" WIDE x 30" HIGH.
RISER # 1 SIZE: 16" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

LEGEND - FIRE CABINET TANK SYSTEM

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.

GAS VALVES AND STRAINERS

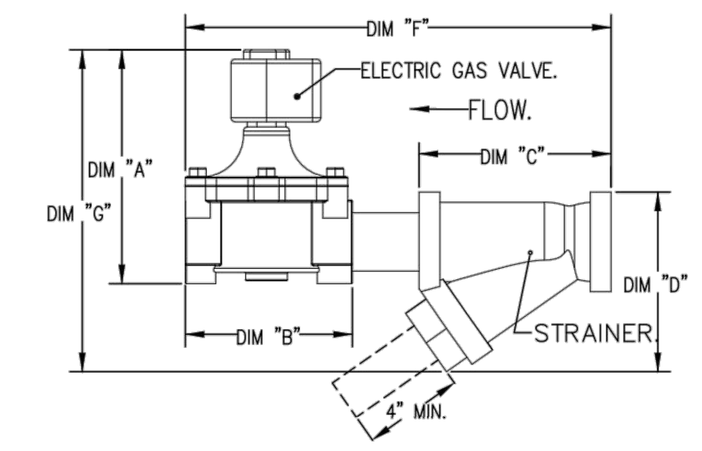
	GAS VALVE SIZING							GAS VALVE DIMENSIONS						INSTALLATION	PART NUMBERS		
	TYPE	SIZE	VOLTAGE	MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "F"	DIM "G"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT
GAS VALVE FOR FS#1→	ELECTRICAL	2"	120 VAC	0 PSI (0 IN.W.C.)	5 PSI (138 IN.W.C.)	2,940,500 BTU/HR	1,908,048 BTU/HR	7-5/8"	6-3/8"	7-1/4"	7-13-16"	15-5/8"	13-15/16"	HORIZONTAL/ VERTICAL	8214280	4417K68	(SC)EGVA2

ALL GAS VALVES/STRAINERS

PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

CALCULATIONS

TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP
NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) X NEW PRESSURE DROP$^{0.5}$
TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY
NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)$^{0.5}$.



REVISIONS

DESCRIPTION	DATE:

CAPTIVEAIRE
Central Valley CA

PO Box 25427, Fresno, CA. 93729 PHONE: (559) 549 - 5566 FAX: 5592686050 EMAIL: mg147@captiveaire.com
www.captiveaire.com

Chowchilla ES - Chowchilla, CA
CHOWCHILLA, CA, 93610

DATE: 10/6/2023
DWG.#: 6264635
DRAWN BY: GB
SCALE: 1/2" = 1'-0"
MASTER DRAWING
SHEET NO. 4

CAPTIVEAIRE DETAIL

SCALE: NONE

A
M4.04

REGISTERED PROFESSIONAL ENGINEER MICHAEL D. CANTELMI No. M23588 Exp. 9-30-25 MECHANICAL STATE OF CALIFORNIA

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23123

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-12865 RENEWAL DATE 12/31/2023 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

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CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
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GONZALEZ ARCHITECTS
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JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
MECHANICAL DETAILS

M4.04

KH 1

EXHAUST FAN INFORMATION – JOB#6264635

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1		1	DU180HFA	CAPTIVEAIRE	2800	1.250	1174	ODP,PREMIUM	1.500	1.2610	3	460	3.0	647 FPM	182	14.3

CAPTIVEAIRE DETAIL

SCALE: NONE

A
M4.05

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELM
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Exp. 9-30-25
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SHEET TITLE:
MECHANICAL DETAILS

M4.05

DOAS/RTU FAN SCHEDULE – JOB#6264635

OAS 1

FAN INFORMATION											ELECTRICAL INFORMATION					COOLING INFORMATION											REHEAT INFORMATION					ELECTRIC HEAT INFORMATION					HEAT PUMP INFORMATION				NOTES
FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	MCA	MOCP	OUTSIDE AIR DB	OUTSIDE AIR WB	MIXED AIR DB	MIXED AIR WB	LEAVING AIR DB	LEAVING AIR WB	LEAVING AIR DP	CAPACITY TOTAL	CAPACITY SENS.	IEER	ISMRE	DISCHARGE DB	DISCHARGE WB	CAPACITY DESIRED	CAPACITY MAX	MOISTURE REMOVAL RATE	DSGN. KW'S	MAX. KW'S	VOLTS	AMPS	TEMP RISE	ENTERING TEMP	MAX TEMP RISE	DISCHARGE TEMP	COP	
2		1	CASRTU3-E.604-18-15T	CAPTIVEAIRE	18P-3	1312	2788	4100	2494	1.000	5.00	3	460	81.3A	90A	105.0°F	72.0°F	95.4°F	69.0°F	55.6°F	54.4°F	53.6°F	177.5 MBH	168.6 MBH	18.8	5.7	70.0°F	60.2°F	65.6 MBH	129.6 MBH	8.1 LBS/HR	52	60	480	72.2	42 °F	51.2°F	23.0°F	74.0°F	3.5	1,2,3,4,5,6,7,8,9,10,11,12,13,14

NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
12. FULLY MODULATING HOT GAS REHEAT
13. RTU ECONOMIZER WITH DIFFERENTIAL DRY BULB CONTROL
14. SIDE DISCHARGE/SIDE RETURN

FAN OPTIONS

EF 1

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL – INSTALLED AT PLANT – FOR GREASE DUCTS
		1	LOAD REACTOR MOUNTED IN FAN
		1	2 YEAR PARTS WARRANTY
2		1	RTU TOTAL CFM MONITORING
		1	CASLINK BUILDING MONITORING SYSTEM – INTERNET OR CELLULAR CONNECTION REQUIRED
		1	2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
		1	OVERHEAT STAT
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR
		1	RTU3 CURB DUCT HANGER
		1	RTU3 SIDE RETURN
		1	RTU INTAKE/RETURN DAMPER – OA PERCENTAGE CONTROL
		1	VAV PACKAGE W/ MANUAL/DDC CONTROL (571 VFD INCLUDED)
		1	OCCUPIED SCHEDULING
		1	DDC IP BACNET REMOTE UNIT MONITORING – ALLOWS FOR REMOTE DDC OCCUPIED OVERRIDE AND SETPOINT CHANGES
		1	BLOWER CONTROL – CO2 MIN/MAX OVERRIDE SETPOINT
		1	RTU ECONOMIZER – DIFFERENTIAL DRY BULB CONTROL
		1	SINGLE POINT CONNECTION – ELECTRIC HEATER RTU. BLOWER & HEATER MUST BE THE SAME VOLTAGE & PHASE. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	LOAD REACTOR MOUNTED IN FAN
		1	HIGH AMBIENT – 15 TON MODULATING COOLING OPTION WITH HEAT PUMP, 460/480V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS. USED FOR SUMMER CONDITIONS ABOVE 110F DEGREES
		1	15 TON MODULATING REHEAT OPTION WITH HEAT PUMP – SPACE DEWPOINT CONTROL
		1	RTU3 SIDE DISCHARGE ELECTRIC HEAT, 15-60KW
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT

FAN ACCESSORIES

EF 1

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1		YES						

CURB ASSEMBLIES

EF 1

OAS 1

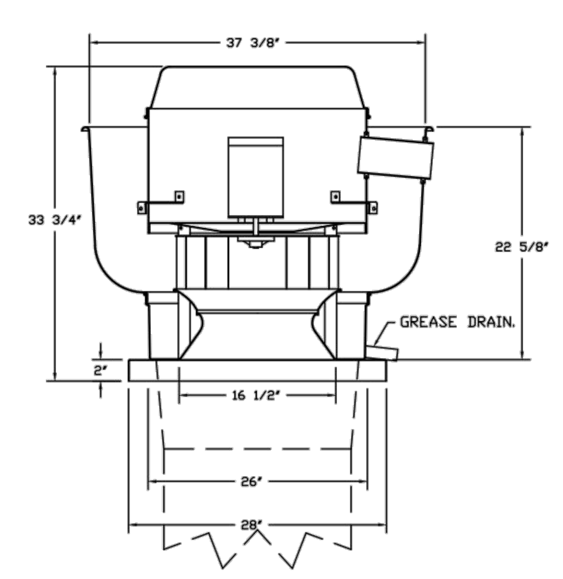
NO	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	41 LBS	CURB	26.500"W X 26.500"L X 20.000"H 3.000:12.000 PITCH ALONG LENGTH, RIGHT VENTED HINGED.
2	# 2	104 LBS	CURB	59.500"W X 91.000"L X 14.000"H INSULATED.

CONTROLS DESIGN SERVICE

BIANNUAL ANALYSIS OF EQUIPMENT PERFORMANCE REQUIRED BY THE MANUFACTURER TO OPTIMIZE SYSTEM POST INSTALL. DETAILED PERFORMANCE REPORT TO BE PRESENTED TO OWNERSHIP ON QUARTERLY BASIS FOR THE FIRST YEAR.

EF 1

FAN #1 DU180HFA – EXHAUST FAN



FEATURES:

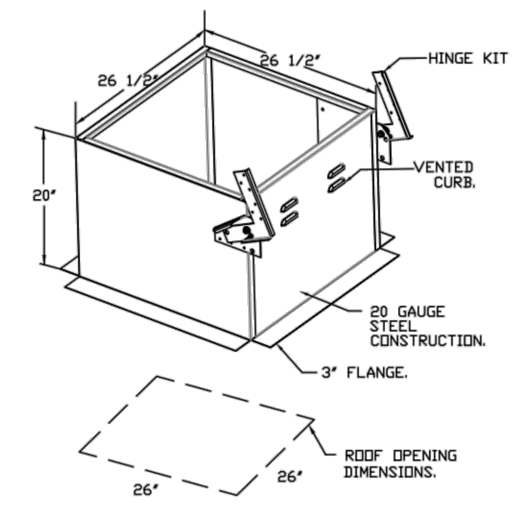
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

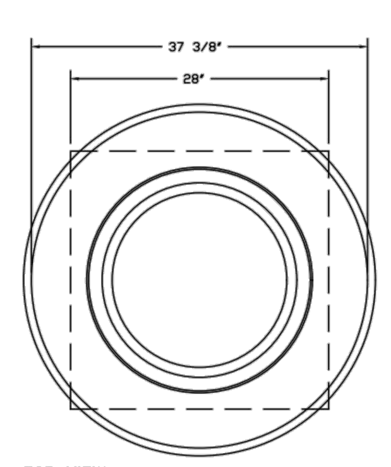
OPTIONS

- GREASE BOX.
- FAN BASE CERAMIC SEAL – INSTALLED AT PLANT – FOR GREASE DUCTS.
- LOAD REACTOR MOUNTED IN FAN.
- 2 YEAR PARTS WARRANTY.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE.



TOP VIEW

REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

CAPTIVEAIRE
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Chowchilla ES - Chowchilla, CA
CHOWCHILLA, CA, 93610

DATE: 10/6/2023
DWG.#: 6264635
DRAWN BY: GB
SCALE: 1/2" = 1'-0"
MASTER DRAWING
SHEET NO. 6

CAPTIVEAIRE DETAIL

SCALE: NONE

A M4.06

REGISTERED PROFESSIONAL ENGINEER MICHAEL D. CANTELMI No. M23588 Exp. 9-30-25 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 (559) 431-0101 23123 Fresno, CA 93727 FAX (559) 431-1362

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-12865 RENEWAL DATE 12/31/2023 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 FRESNO CALIFORNIA 93711
TEL: 559-497-1542 FAX: 559-497-1549
ARCHITECTURE PLANNING JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE: MECHANICAL DETAILS

M4.06

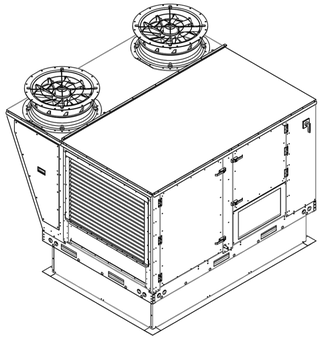
15 April 2024 8:34 AM p:\2023\23123 chowchilla esd fairmead es mpb\4--drawings\4 M\M4.05 -- M4.08 -- MECH Details.dwg david s
\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2.Working Dwgs Phase\WD_2318_Fairmead Multi-Purpose.pln

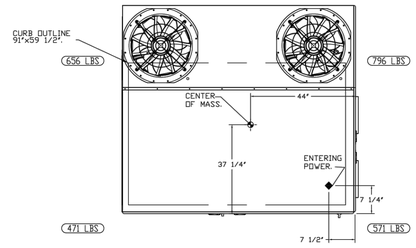
OAS 1 FAN #2 CASRTU3-E,604-18-15T - HEATER

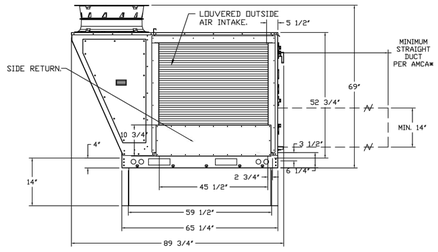
NOTES:

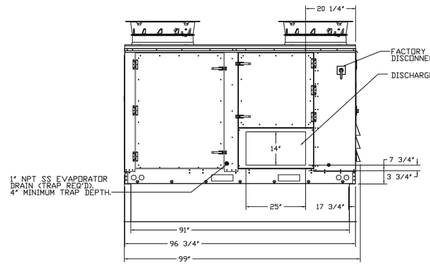
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. ( ) DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.

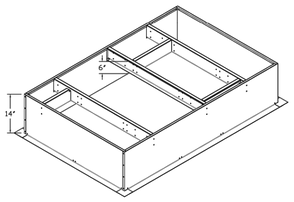
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED STRAIGHT DUCT SIZE IS 25" x 14".

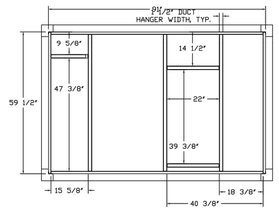












CAPTIVEAIRE DETAIL

SCALE: NONE

A
M4.07

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

CAPTIVEAIRE
Central Valley CA
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www.captiveaire.com

Chowchilla ES - Chowchilla, CA

CHOWCHILLA, CA, 93610

DATE: 10/6/2023

DWG.#: 6264635

DRAWN BY: GB

SCALE: 1/2" = 1'-0"

MASTER DRAWING

SHEET NO. 7

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELMI
No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
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23123
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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
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MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
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TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE: MECHANICAL DETAILS

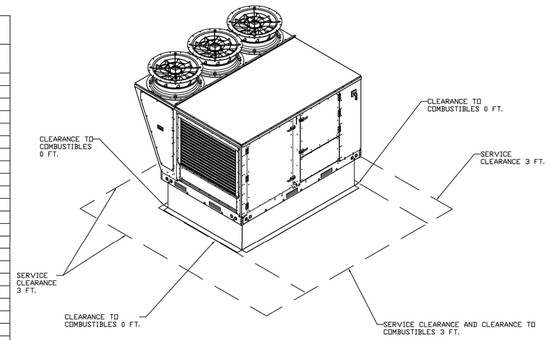
M4.07

OAS 1

DOAS/RTU BACNet Points List – JOB#6264635

BACNET POINTS AVAILABLE FOR FAN #2				
BACNet Object	BACNet Type	BACNet ID	LON SNVT Name	Function
DDCHeatCommand	BV	1	nviDDCHeat	Control/Monitor
DDCCoolCommand	BV	2	nviDDCCool	Control/Monitor
DDCBlowerCommand	BV	3	nviDDCBlow	Control/Monitor
DDCModulation	AV	4	nviDDCModHeat	Control/Monitor
DDCOccupiedOverride	BV	5	nviDDCOccOvrrd	Control/Monitor
MinDischargeHeatOccSP	AV	10	nviMinDHeatOccSP	Control/Monitor
MinDischargeHeatUnoccSP	AV	11	nviMinDHeatUnoSP	Control/Monitor
MaxDischargeHeatOccSP	AV	14	nviMaxDHeatOccSP	Control/Monitor
MaxDischargeHeatUnoccSP	AV	15	nviMaxDHeatUnoSP	Control/Monitor
MinDischargeCoolOccSP	AV	20	nviMinDCoolOccSP	Control/Monitor
MinDischargeCoolUnoccSP	AV	21	nviMinDCoolUnoSP	Control/Monitor
MaxDischargeCoolOccSP	AV	24	nviMaxDCoolOccSP	Control/Monitor
MaxDischargeCoolUnoccSP	AV	25	nviMaxDCoolUnoSP	Control/Monitor
ScheduleSundayAStart	AV	46	nviSundayAStart	Control/Monitor
ScheduleSundayAEnd	AV	47	nviSundayAEnd	Control/Monitor
ScheduleSundayBStart	AV	48	nviSundayBStart	Control/Monitor
ScheduleSundayBEnd	AV	49	nviSundayBEnd	Control/Monitor
ScheduleSundayCStart	AV	50	nviSundayCStart	Control/Monitor
ScheduleSundayCEnd	AV	51	nviSundayCEnd	Control/Monitor
ScheduleMondayAStart	AV	52	nviMondayAStart	Control/Monitor
ScheduleMondayAEnd	AV	53	nviMondayAEnd	Control/Monitor
ScheduleMondayBStart	AV	54	nviMondayBStart	Control/Monitor
ScheduleMondayBEnd	AV	55	nviMondayBEnd	Control/Monitor
ScheduleMondayCStart	AV	56	nviMondayCStart	Control/Monitor
ScheduleMondayCEnd	AV	57	nviMondayCEnd	Control/Monitor
ScheduleTuesdayAStart	AV	58	nviTuesdayAStart	Control/Monitor
ScheduleTuesdayAEnd	AV	59	nviTuesdayAEnd	Control/Monitor
ScheduleTuesdayBStart	AV	60	nviTuesdayBStart	Control/Monitor
ScheduleTuesdayBEnd	AV	61	nviTuesdayBEnd	Control/Monitor
ScheduleTuesdayCStart	AV	62	nviTuesdayCStart	Control/Monitor
ScheduleTuesdayCEnd	AV	63	nviTuesdayCEnd	Control/Monitor
ScheduleWednesdayAStart	AV	64	nviWedAStart	Control/Monitor
ScheduleWednesdayAEnd	AV	65	nviWedAEnd	Control/Monitor
ScheduleWednesdayBStart	AV	66	nviWedBStart	Control/Monitor
ScheduleWednesdayBEnd	AV	67	nviWedBEnd	Control/Monitor
ScheduleWednesdayCStart	AV	68	nviWedCStart	Control/Monitor
ScheduleWednesdayCEnd	AV	69	nviWedCEnd	Control/Monitor
ScheduleThursdayAStart	AV	70	nviThursAStart	Control/Monitor
ScheduleThursdayAEnd	AV	71	nviThursAEnd	Control/Monitor
ScheduleThursdayBStart	AV	72	nviThursBStart	Control/Monitor
ScheduleThursdayBEnd	AV	73	nviThursBEnd	Control/Monitor
ScheduleThursdayCStart	AV	74	nviThursCStart	Control/Monitor
ScheduleThursdayCEnd	AV	75	nviThursCEnd	Control/Monitor
ScheduleFridayAStart	AV	76	nviFridayAStart	Control/Monitor
ScheduleFridayAEnd	AV	77	nviFridayAEnd	Control/Monitor
ScheduleFridayBStart	AV	78	nviFridayBStart	Control/Monitor
ScheduleFridayBEnd	AV	79	nviFridayBEnd	Control/Monitor
ScheduleFridayCStart	AV	80	nviFridayCStart	Control/Monitor
ScheduleFridayCEnd	AV	81	nviFridayCEnd	Control/Monitor
ScheduleSaturdayAStart	AV	82	nviSatAStart	Control/Monitor
ScheduleSaturdayAEnd	AV	83	nviSatAEnd	Control/Monitor
ScheduleSaturdayBStart	AV	84	nviSatBStart	Control/Monitor
ScheduleSaturdayBEnd	AV	85	nviSatBEnd	Control/Monitor
ScheduleSaturdayCStart	AV	86	nviSatCStart	Control/Monitor
ScheduleSaturdayCEnd	AV	87	nviSatCEnd	Control/Monitor
BlowerManualFreqOcc	AV	88	nviBlowManFreqOc	Control/Monitor
BlowerManualFreqUnocc	AV	89	nviBlowManFreqUn	Control/Monitor
MixingBoxManualDAOcc	AV	92	nviMixBoxManDAOc	Control/Monitor
MixingBoxManualDAUnocc	AV	93	nviMixBoxManDAUn	Control/Monitor
EconomizerTempSPOcc	AV	94	nviEcoTempSPOcc	Control/Monitor
EconomizerTempSPUnocc	AV	95	nviEcoTemSPUnocc	Control/Monitor
EconomizerTempBandOcc	AV	96	nviEcoTemBandOcc	Control/Monitor
EconomizerTempBandUnocc	AV	97	nviEcoTempBUnocc	Control/Monitor
EconomizerTotalBandOcc	AV	98	nviEcoTotBandOcc	Control/Monitor
EconomizerTotalBandUnocc	AV	99	nviEcoTotBUnocc	Control/Monitor
EconomizerRhSPOcc	AV	100	nviEcoRhSPOcc	Control/Monitor
EconomizerRhSPUnocc	AV	101	nviEcoRhSPUnocc	Control/Monitor
CO2SensorPpmMin	AV	116	nviCo2PpmMin	Control/Monitor
CO2SensorPpmMax	AV	117	nviCo2PpmMax	Control/Monitor
DynamicSpDiff	AV	120	nviDynSpDiff	Control/Monitor
DynamicSpOffset	AV	121	nviDynSpOffset	Control/Monitor
DynamicSpHeatDa	AV	122	nviDynSpHeatDa	Control/Monitor
DynamicSpCoolDa	AV	123	nviDynSpCoolDa	Control/Monitor
CO2OverrideHighLimitOcc	AV	131	nviCO2OrHighOcc	Control/Monitor
CO2OverrideLowLimitOcc	AV	132	nviCO2OrLowOcc	Control/Monitor
CO2OverrideHighLimitUnocc	AV	133	nviCO2OrHighUn	Control/Monitor
CO2OverrideLowLimitUnocc	AV	134	nviCO2OrLowUn	Control/Monitor
UnitStatus	AI	139	nvoCurrentState	Monitor Only
CurrentOccupiedStatus	AI	140	nvoOccStatus	Monitor Only
AverageSpaceTemp	AI	141	nvoAvgSpaceTemp	Monitor Only
BlowerFrequency	AI	142	nvoBlowVFDFreq	Monitor Only
BlowerCurrent	AI	143	nvoBlowVFDAmps	Monitor Only
BlowerPower	AI	144	nvoBlowVFDPower	Monitor Only
AverageRH	AI	145	nvoAvgRh	Monitor Only
OutdoorTemp	AI	146	nvoOutdoorTemp	Monitor Only
ReturnTemp	AI	147	nvoReturnTemp	Monitor Only
DischargeTemp	AI	148	nvoDischargeTemp	Monitor Only
IntakeTemp	AI	149	nvoIntakeTemp	Monitor Only
SpaceTemp	AI	150	nvoSpaceTemp	Monitor Only

BACNET POINTS AVAILABLE FOR FAN #2				
BACNet Object	BACNet Type	BACNet ID	LON SNVT Name	Function
HMIITemp	AI	151	nvoHmiOTemp	Monitor Only
SuctionLineTemp	AI	156	nvoSucLineTemp	Monitor Only
LiquidLineTemp	AI	157	nvoLiqLineTemp	Monitor Only
EvapIndoorCoilTemp	AI	158	nvoEvapCoilTemp	Monitor Only
CondOutdoorCoilTemp	AI	159	nvoOutCoilTemp	Monitor Only
CompressorDischargeTemp	AI	160	nvoCompDisTemp	Monitor Only
IntakeRh	AI	161	nvoIntakeRh	Monitor Only
SpaceRh	AI	162	nvoSpaceRh	Monitor Only
OutdoorRh	AI	163	nvoOutdoorRh	Monitor Only
DischargeRh	AI	164	nvoDischargeRh	Monitor Only
ReturnRh	AI	165	nvoReturnRh	Monitor Only
SuctionLinePs	AI	166	nvoSucLinePs	Monitor Only
DischargeLinePs	AI	167	nvoDisLinePs	Monitor Only
LiquidLinePs	AI	168	nvoLiqLinePs	Monitor Only
HMIIRh	AI	169	nvoHmiORh	Monitor Only
CondFan1PwmRate	AI	176	nvoCond1PwmRate	Monitor Only
CondFan2PwmRate	AI	177	nvoCond2PwmRate	Monitor Only
AdjustableDamperOutput	AI	180	nvoDampOutput	Monitor Only
ElectricHeaterOutput	AI	181	nvoElecHeatOut	Monitor Only
DlBoostActiveFlag	BI	182	nvoDlBoostDN	Monitor Only
ReheatActiveFlag	BI	183	nvoReheatDN	Monitor Only
DefrostActiveFlag	BI	184	nvoDefrostDN	Monitor Only
PumpdownDFFActiveFlag	BI	185	nvoPumpDFFDn	Monitor Only
PumpdownDnActiveFlag	BI	186	nvoPumpDNDn	Monitor Only
ReheatValvePosition	AI	187	nvoReheatPos	Monitor Only
EevValvePosition	AI	188	nvoEevValvePos	Monitor Only
IntakeDpActual	AI	189	nvoInDpActual	Monitor Only
SpaceDpActual	AI	190	nvoSpDpActual	Monitor Only
CompressorPower	AI	191	nvoCompPower	Monitor Only
CompressorFrequency	AI	192	nvoCompFreq	Monitor Only
CompressorCurrent	AI	193	nvoCompAmps	Monitor Only
Subcool	AI	208	nvoSubcool	Monitor Only
Superheat	AI	209	nvoSuperheat	Monitor Only
ActiveFault1	AI	210	nvoActiveFault1	Monitor Only
ActiveFault2	AI	211	nvoActiveFault2	Monitor Only
ActiveFault3	AI	212	nvoActiveFault3	Monitor Only
ActiveFault4	AI	213	nvoActiveFault4	Monitor Only
ActiveFault5	AI	214	nvoActiveFault5	Monitor Only
ActiveFault6	AI	215	nvoActiveFault6	Monitor Only
SchedulingEnableFlag	BV	216	nvoSchedEnabled	Control/Monitor
HeatTemperModeOcc	AV	217	nvoHeatModeOcc	Control/Monitor
HeatTemperModeUnocc	AV	218	nvoHeatModeUnocc	Control/Monitor
CoolTemperModeOcc	AV	219	nvoCoolModeOcc	Control/Monitor
CoolTemperModeUnocc	AV	220	nvoCoolModeUnocc	Control/Monitor
ActivateInOcc	AV	221	nvoActivateOcc	Control/Monitor
ActivateInUnocc	AV	222	nvoActivateUnocc	Control/Monitor
BlowerModeOcc	AV	223	nvoBlowModeOcc	Control/Monitor
BlowerModeUnocc	AV	224	nvoBlowModeUnocc	Control/Monitor
MixingBoxMode	AV	225	nvoMBMode	Control/Monitor
Reheat DP Adj Occ	AV	226	nvoDPAdjOcc	Control/Monitor
Reheat DP Adj Unocc	AV	227	nvaDPAdjUnocc	Control/Monitor
BlowerVFdMinFreqOcc	AV	228	nvoVFDMinFreqOcc	Control/Monitor
BlowerVFdMinFreqUnocc	AV	229	nvoVFDMinFUnocc	Control/Monitor
BlowerVFdMaxFreqOcc	AV	230	nvoVFDMaxFreqOcc	Control/Monitor
BlowerVFdMaxFreqUnocc	AV	231	nvoVFDMaxFUnocc	Control/Monitor
MixingBoxMinDAPercentOcc	AV	236	nvoMBMinDAPerOcc	Control/Monitor
MixingBoxMinDAPercentUnocc	AV	237	nvaMBMinDAPerUn	Control/Monitor
MixingBoxMaxDAPercentOcc	AV	238	nvoMBMaxDAPerOcc	Control/Monitor
MixingBoxMaxDAPercentUnocc	AV	239	nvoMBMaxDAPerUn	Control/Monitor
MixingBoxMinVoltsOcc	AV	240	nvoMBMinVoltsOcc	Control/Monitor
MixingBoxMinVoltsUnocc	AV	241	nvoMBMinVoltsUn	Control/Monitor
MixingBoxMaxVoltsOcc	AV	242	nvoMBMaxVoltsOcc	Control/Monitor
MixingBoxMaxVoltsUnocc	AV	243	nvoMBMaxVoltsUn	Control/Monitor
CFMReading	AI	244	nvoCFMReading	Read Only
StaticPressure	AI	245	nvoStaticPress	Read Only



CAPTIVEAIRE DETAIL

SCALE: NONE

A M4.08

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

CAPTIVEAIRE

Central Valley CA

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www.captiveaire.com

Chowchilla ES - Chowchilla, CA

CHOWCHILLA, CA, 93610

DATE: 10/6/2023

DWG.#: 6264635

DRAWN BY: GB

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 8

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

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FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

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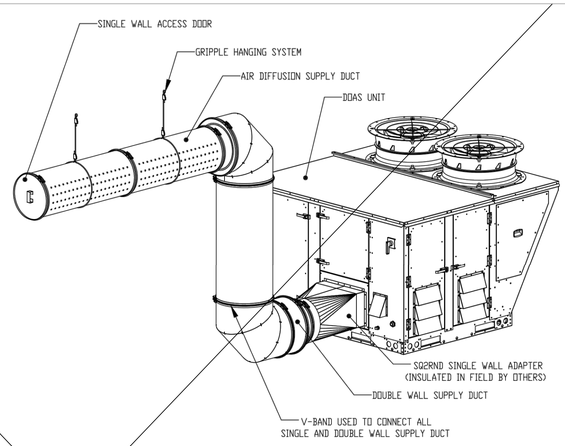
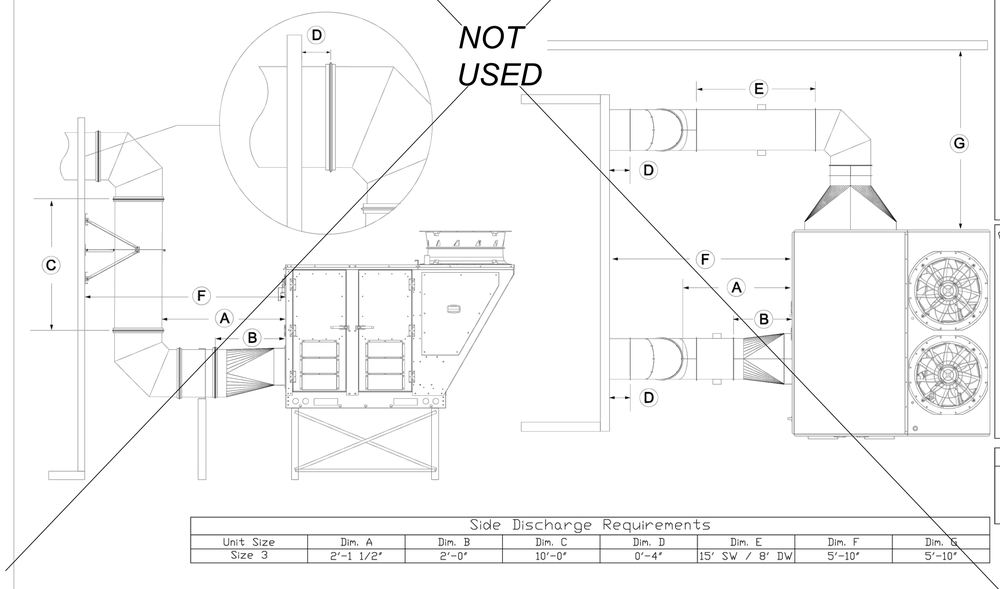
M4.08



NOT USED



Side Discharge Requirements							
Unit Size	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E	Dim. F	Dim. G
Size 3	2'-1 1/2"	2'-0"	10'-0"	0'-4"	15' SW / 8' DW	5'-10"	5'-10"

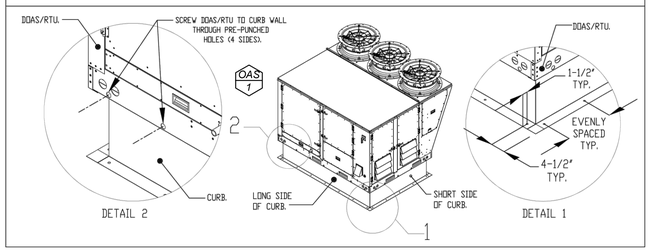
AIR DIFFUSION SUPPLY DUCT SPECIFICATIONS:
PROVIDE AIR DIFFUSION SUPPLY DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL DW-S0(HC), DW-S90(HC), & DW-S180(HC).
THREE DISTINCT HOLE PATTERN OPTIONS TO COVER A VARIETY OF CEILING HEIGHTS.
NO ADDITIONAL DIFFUSERS REQUIRED, AS THE DUCT ITSELF PROVIDES AIR DIFFUSION.
MADE OF HIGH QUALITY STAINLESS STEEL DESIGNED TO LAST 20+ YEARS.
HIGH INDUCTION SUPPLY DUCT IS CONSTRUCTED USING 24 GAUGE, 430 SS - 5' THRU 24".
HIGH INDUCTION SUPPLY DUCT IS CONSTRUCTED USING 20 GAUGE, 430 SS - 26' THRU 36'.
QUICK ONSITE ASSEMBLY USING EPDM GASKETS & UNIVERSAL V-BANDS.
DOUBLE WALL SUPPLY DUCT AVAILABLE FOR INTERIOR AND EXTERIOR SPACES, EITHER CONDITIONED OR UNCONDITIONED.
DOUBLE WALL SUPPLY DUCT AVAILABLE IN DW-1S, DW-2S, & DW-3S TO MEET SPECIFIC REGIONAL 'R' VALUE REQUIREMENTS.

Insulation R-Value Recommendations		
Supply Duct Type	Minimum R-value	Space Type
Single Wall - S & -HC	N/A	Conditioned Space Only
Double Wall - 1S	R-4	Unconditioned Interior Space Only
Double Wall - 2S	R-8	Unconditioned Space Climate Zones 1-4
Double Wall - 3S	R-12	Unconditioned Space Climate Zones 5-8

DOUBLE WALL SUPPLY DUCT IS INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.
AIR DIFFUSION SUPPLY DUCT COMPLIES WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTORS) BEST PRACTICES.
POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTION TO DISCHARGE, SEE NFPA 13, TABLE 8.12.5.1.1.

TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

1. SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW. USING 3/8" X 2" ZINC PLATED STEEL LAG BOLTS, AND ZINC PLATED WASHERS, SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (5) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.
2. SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.



GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL 'DW'
ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL 'DW'
IS LISTED TO UL-1978 AND IS INSTALLED USING 'V' CLAMP LOCKING
CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL 'DW'
DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER
THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER.
PER MANUFACTURES LISTING MODEL 'DW' HORIZONTAL RUNS LESS THAN 75 FT. CAN BE
SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".
DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE
ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE
UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY
EQUAL TO CAPTIVEAIRE SYSTEMS MODEL 'DW- 2R, 2R TYPE HT, 3R, OR 3Z' ROUND 20 GAUGE
430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CUSTOMER APPROVAL TO MANUFACTURE:

APPROVED AS NOTED ☐
APPROVED WITH NO EXCEPTION TAKEN ☐
REVISE AND RESUBMIT ☐
SIGNATURE _____
YOUR TITLE _____ DATE _____

CAPTIVEAIRE DETAIL

SCALE: NONE

A
M4.09

REVISIONS

DESCRIPTION	DATE

CAPTIVEAIRE
Central Valley CA
PO Box 25427, Fresno, CA, 93729 PHONE: (559) 549 - 5566 FAX: 5592686060 EMAIL: reg1476@captiveaire.com
www.captiveaire.com

Chowchilla ES - Chowchilla, CA
CHOWCHILLA, CA, 93610

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DWG.#: 6264635
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LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
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TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELM
No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
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Fresno, CA 93727
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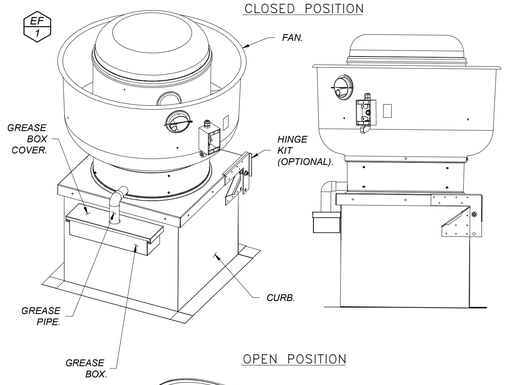
PROJECT NO: 2318
DATE: 8/24/2023
SHEET TITLE: MECHANICAL DETAILS

M4.09

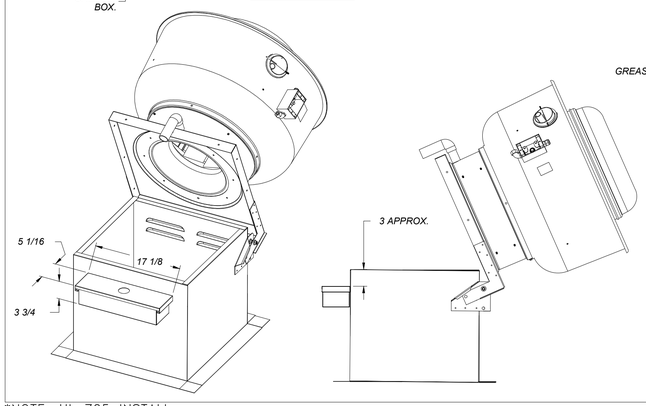
GREASEBOX
REV:#2 05/19/02

GREASE BOX INSTALLATION

CLOSED POSITION



OPEN POSITION



PARTS INCLUDED

GREASE BOX.
GREASE BOX COVER.
GREASE PIPE.

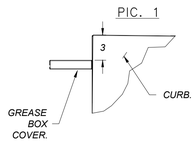
SHEET METAL SCREWS 3 - LONG (3/4" LG.).

GREASE BOX FIELD INSTALLATION

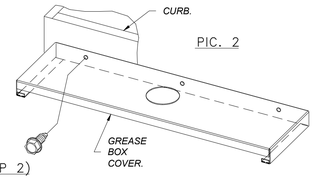
STEP 1)

ATTACH GREASE BOX COVER TO THE CURB, HOLD 3" DIMENSION AS SHOWN ON PIC. 1. SCREW GREASE BOX COVER TO CURB USING (3) LONG (3/4" LG.) SCREWS AS SHOWN ON PIC. 2.

PIC. 1



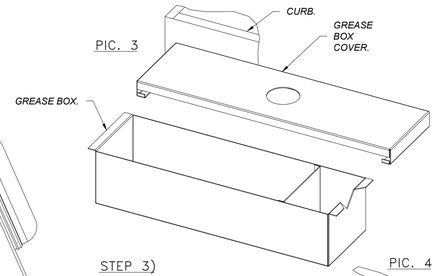
PIC. 2



STEP 2)

ATTACH GREASE BOX TO GREASE BOX COVER, SLIDE AND DROP. AS SHOWN ON PIC. 3.

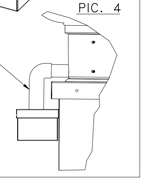
PIC. 3



STEP 3)

INSTALL GREASE PIPE AS SHOWN ON PIC. 4.

PIC. 4



*NOTE: UL 705 INSTALL.

CAPTIVEAIRE DETAIL

SCALE: NONE

A
M4.10

FILE NO.: 20-10 APPL. NO.: 02-121993

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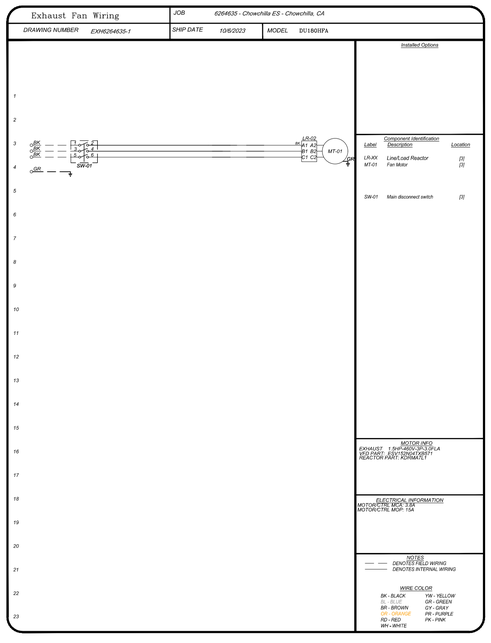
M4.10



CAPTIVEAIRE DETAIL

SCALE: 3/4" = 1'-0"

A
M4.11

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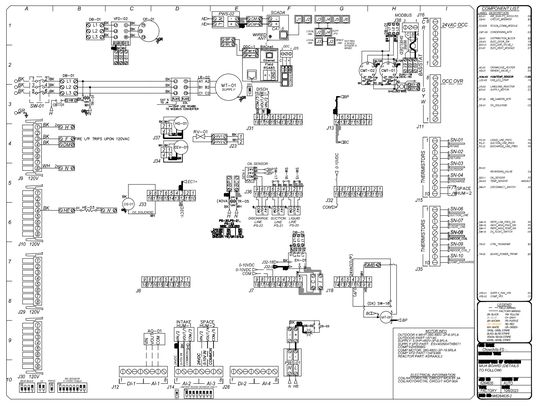

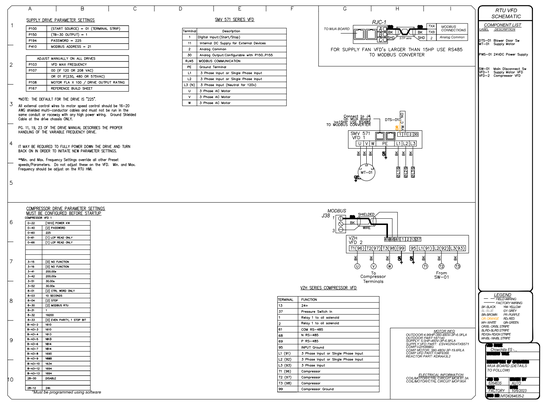

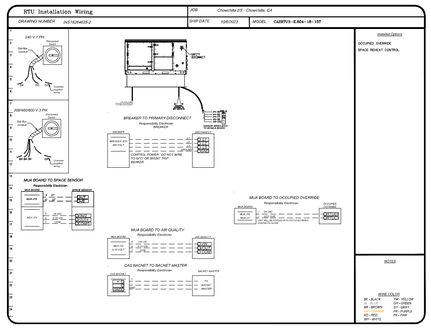

CAPTIVEAIRE DETAIL

SCALE: 1/2" = 1'-0"

A
M4.12

REGISTERED PROFESSIONAL ENGINEER
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PROJECT NO: 2318

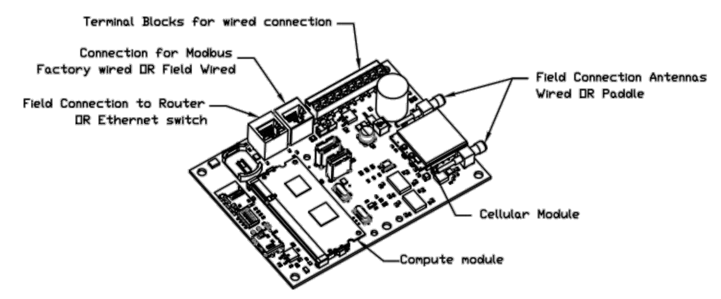
DATE: 8/24/2023

SHEET TITLE:
MECHANICAL DETAILS

M4.12

ELECTRICAL PACKAGE – JOB#6264635

NO	TAG	PACKAGE #	LOCATION	SWITCHES LOCATION	SWITCHES QUANTITY	OPTION	FANS CONTROLLED TYPE	φ	HP	VOLT	FLA
1		DCV-1111	UTILITY CABINET LEFT	SHIP LOOSE W/ PREWIRE	1 LIGHT 1 FAN	SMART CONTROLS DCV	EXHAUST	3	1.500	460	3.0



CASlink Monitor and Control

- Hood control panel to support communications to cloud-based Building Management System.
- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
- Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

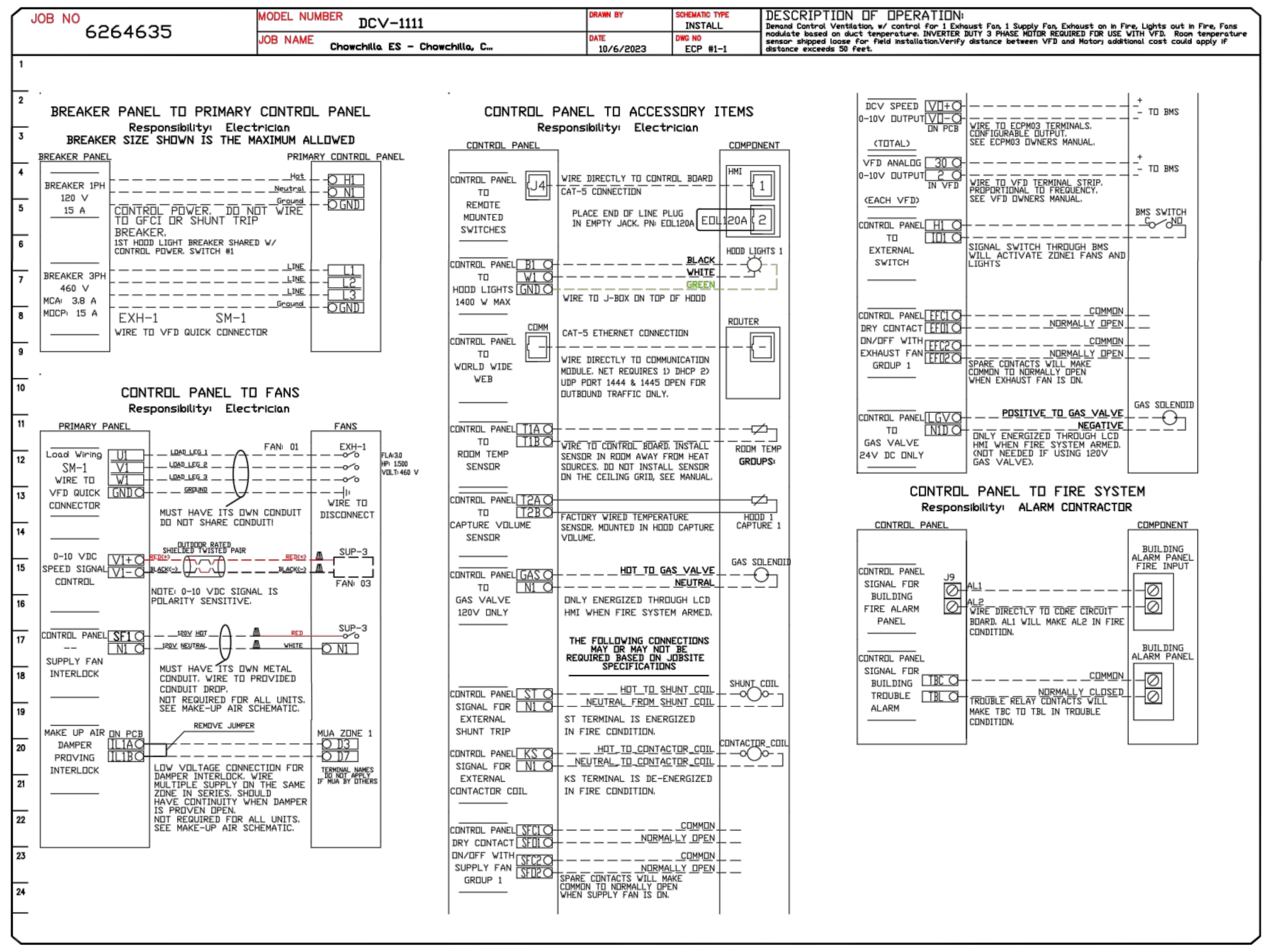
MONITORING AND CONTROL POINTS LIST

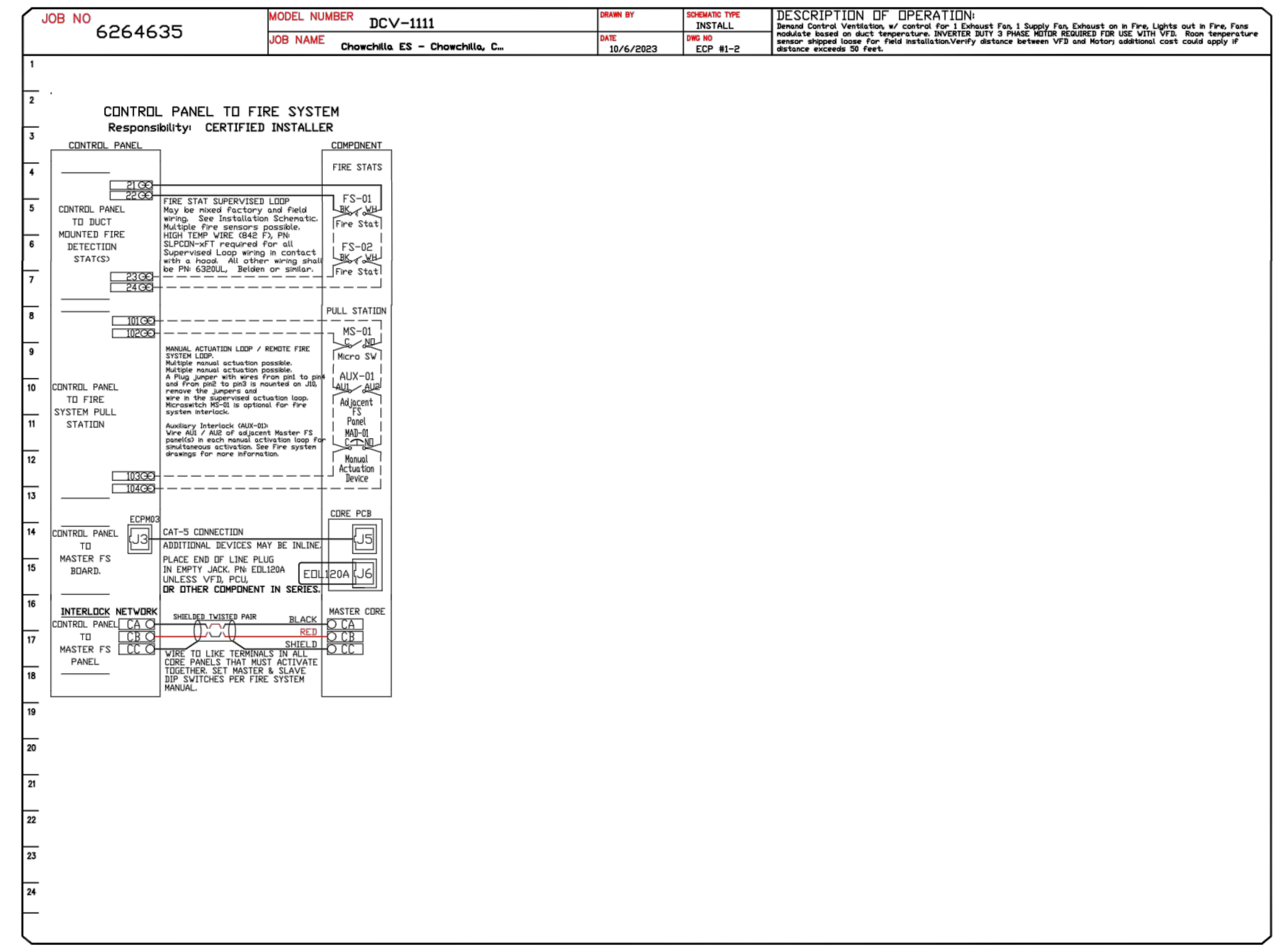
DCV Packages	Function
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Amperage	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Prep Time Button	MONITOR & CONTROL
Fans Button	MONITOR & CONTROL
Lights Button	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

SC Packages	Function
Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR
MUA DIscharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Fans Button(s)	MONITOR & CONTROL
Lights Button(s)	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

CONTROLS DESIGN SERVICE

BIANNUAL ANALYSIS OF EQUIPMENT PERFORMANCE REQUIRED BY THE MANUFACTURER TO OPTIMIZE SYSTEM POST INSTALL. DETAILED PERFORMANCE REPORT TO BE PRESENTED TO OWNERSHIP ON QUARTERLY BASIS FOR THE FIRST YEAR.





TANK PROTECTION ELECTRICAL DETAIL

JOB NO 6264635 | MODEL NUMBER DCV-1111 | JOB NAME Chowchilla ES - Chowchilla, C... | DATE 10/6/2023 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-3

DESCRIPTION OF OPERATION: Fire System #1 TANK FS - 4.0/4.0.

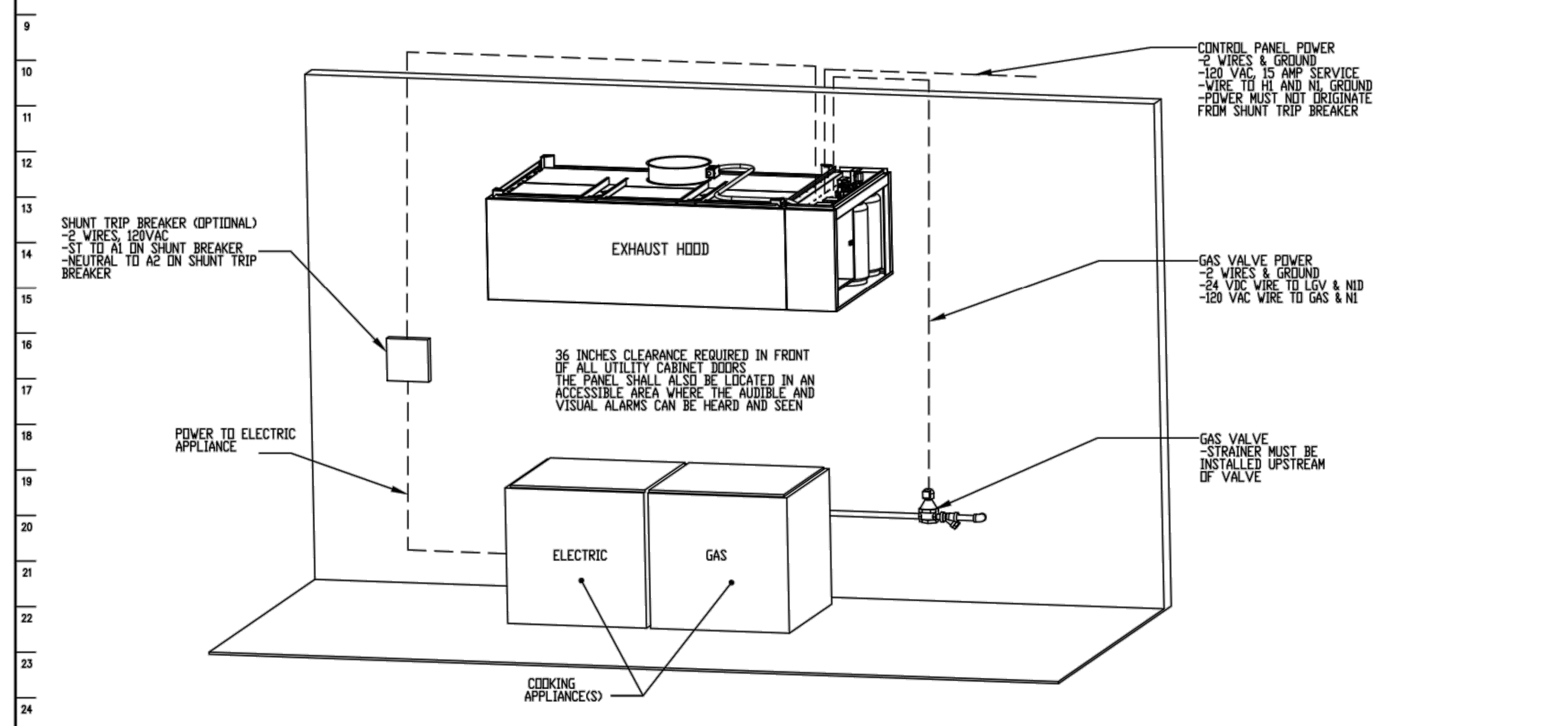
02/10/2021 Rev. 2

FS-1: MASTER

ELECTRICIAN:
1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE UDS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

ELECTRICAL CONTRACTOR REQUIREMENT

ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL (A1 & A2)	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	H1 & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AU1, AU2	SOLENOID	120 VAC	< 6 AMPS	120V TO AU1, AU2 TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & N1D (IF 24 VDC) GAS & N1 (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VDC - 2 WIRES & GROUND, N1D TO RED, LGV TO RED, AND GREEN TO GROUND IF 120 VAC - 2 WIRES & GROUND GAS TO RED, N1 TO RED, AND GREEN TO GROUND



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

TANK PROTECTION LOW-VOLTAGE DETAIL

JOB NO 6264635 | MODEL NUMBER DCV-1111 | JOB NAME Chowchilla ES - Chowchilla, C... | DATE 10/6/2023 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-4

DESCRIPTION OF OPERATION: Fire System #1 TANK FS - 4.0/4.0.

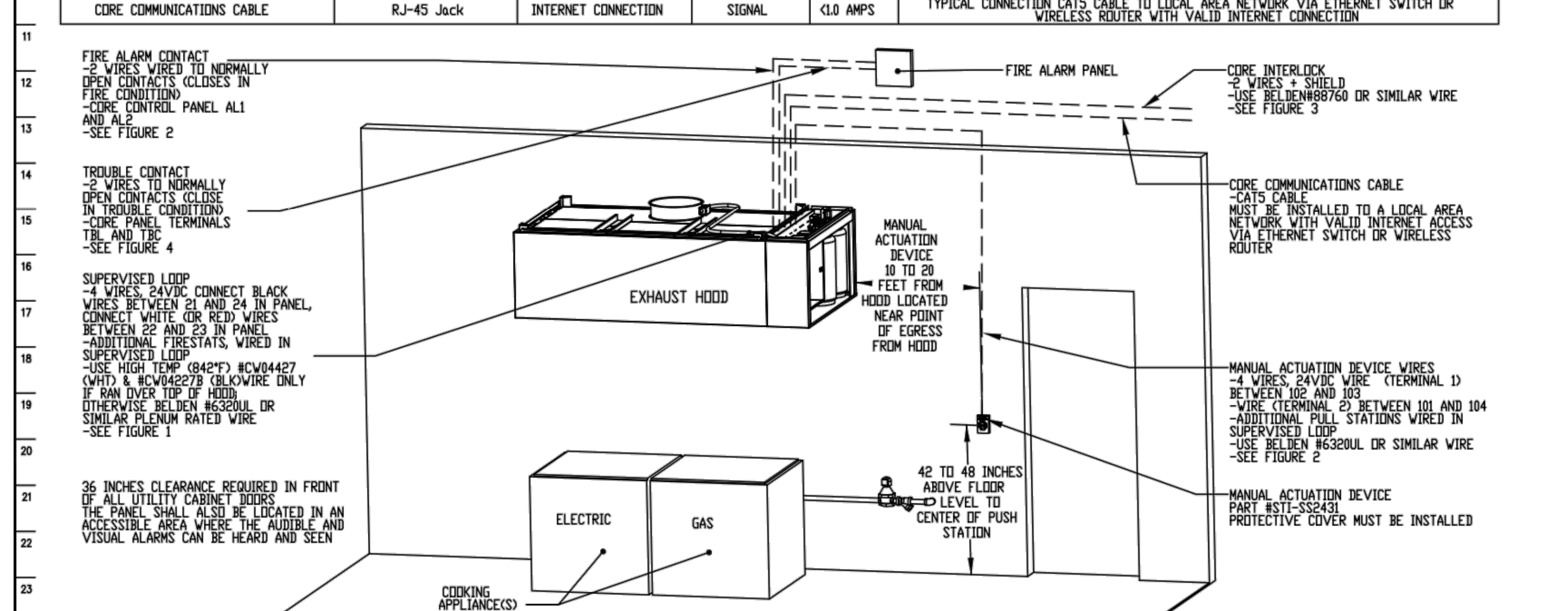
02/10/2021 Rev. 2

FS-1: MASTER

ALARM CONTRACTOR:
1. WIRE MANUAL ACTUATION DEVICE(S), REMOTE FIRESTAT(S), CORE INTERLOCK(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. COMPLETE FINAL HOOKUP OF SYSTEM
3. VERIFY FINAL FIRE SYSTEM TEST

ALARM CONTRACTOR REQUIREMENT

ITEM	CONNECTION IN PANEL	CONNECTION ON DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTUATION DEVICE(S)	101 AND 104 102 AND 103	1 & 2	24 VDC	< 1.0 AMPS	WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103 WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104 JUMPER 101 TO 104 AND 102 TO 103 IF NO MANUAL ACTUATION DEVICE IS INSTALLED
MANUAL ACTUATION DEVICE COVER	N/A	N/A	N/A	N/A	MANUAL ACTUATION DEVICE COVER MUST BE INSTALLED IF SURFACE MOUNTED, USE COVER EXTENSION STI-6531B
REMOTE FIRESTAT SENSOR(S)	21 AND 24 22 AND 23	BLACK AND WHITE	24 VDC	< 1.0 AMPS	WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 22 AND 23 WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 21 AND 24 HIGH TEMP (842°F) #CW04427 (WHT) & #CW04427B (BLK)WIRE OR SIMILAR ONLY IF RAN OVER TOP OF HOOD; OTHERWISE BELDEN #6320UL OR SIMILAR PLENUM RATED WIRE; SEE FIGURE 1
FIRE ALARM CONTACT	AL1, AL2	VARIES	50V MAX (AC/DC)	UP TO 1 AMP	FIRE ALARM RELAY CONTACTS FOR BUILDING FIRE ALARM LOCATED IN THE CORE ELECTRICAL CONTROL PANEL
CORE INTERLOCK(S)	ILA, ILB, ILC	ILA, ILB, ILC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) ILA, TO CORE SYSTEM (2) ILA, CORE SYSTEM (1) ILB, TO CORE SYSTEM (2) ILB, CORE SYSTEM (1) ILC, TO CORE SYSTEM (2) ILC. USE BELDEN# 88760 OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBL, TOK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	<1.0 AMPS	TYPICAL CONNECTION CAT5 CABLE TO LOCAL AREA NETWORK VIA ETHERNET SWITCH OR WIRELESS ROUTER WITH VALID INTERNET CONNECTION



ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

REVISIONS

DESCRIPTION	DATE

CAPTIVEAIRE Central Valley CA
PO Box 25427, Fresno, CA 93729 PHONE: (559) 549 - 5566 FAX: 5592686000 EMAIL: rsg147@captiveaire.com
www.captiveaire.com

Chowchilla ES - Chowchilla, CA
CHOWCHILLA, CA, 93610

DATE: 10/6/2023
DWG.#: 6264635
DRAWN BY: GB
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 13

CAPTIVEAIRE DETAIL

SCALE: NONE

A / M4.13

No. M23588 Exp. 9-30-25 — MICHAEL D. CANTELMI — REGISTERED PROFESSIONAL ENGINEER — MECHANICAL — STATE OF CALIFORNIA

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PROJECT NO: 2318
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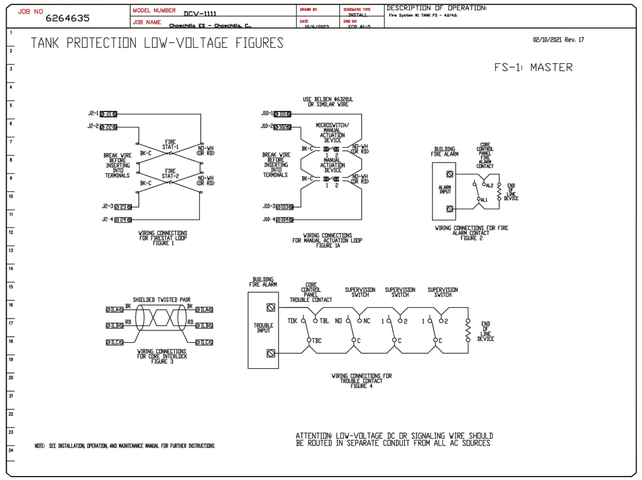
SHEET TITLE: MECHANICAL DETAILS

M4.13

15 April 2024 8:34 AM p:\2023\23123 chowchilla esd fairmead es mpb\4--drawings\4 M\M4.13 - M4.16 - MECH Details.dwg david s
\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2 Working Dwgs Phase\WD_2318_Fairmead Multi-Purpose.pln



REVISIONS

DESCRIPTION	DATE:
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www.captiveaire.com

Central Valley CA

PO Box 25427, Fresno, CA, 93729 PHONE: (559) 549 - 5566 FAX: 5592686060 EMAIL: reg147@captiveaire.com

Chowchilla ES - Chowchilla, CA
CHOWCHILLA, CA, 93610

DATE: 10/6/2023

DWG.#: 6264635

DRAWN BY: GB

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 14

CAPTIVEAIRE DETAIL

SCALE: NONE

A
M4.14

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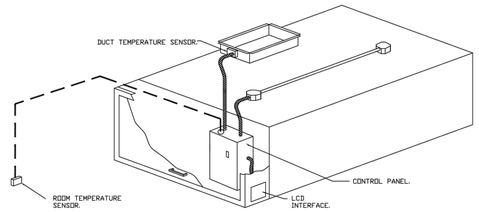
M4.14

15 April 2024 8:34 AM p:\2023\23123 chowchilla esd fairmead es mpb\4-drawings\4 M\M4.13 - M4.16 - MECH Details.dwg david s

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Muli-Purpose Bldg\2.Working Dwgs Phase\WD_2318_Fairmead Multi-Purpose.pln

DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
  A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
  B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
  C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
  G. AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDS.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS:

THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:

- AUTOMATIC: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR VFD DRIVEN MOTORS) MODULATE WITH TEMPERATURE. IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS "DYNAMIC", THESE WILL MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS "STATIC", FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- MANUAL: THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
- SCHEDULE: A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA OFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
- OTHER: THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
- FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

CAPTIVEAIRE DETAIL

SCALE: NONE

A
M4.15

REVISIONS

	DESCRIPTION	DATE
1		
2		
3		
4		

CAPTIVEAIRE

Central Valley CA

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Chowchilla ES - Chowchilla, CA

CHOWCHILLA, CA, 93610

DATE: 10/6/2023

DWG.#: 6264635

DRAWN BY: GB

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 15

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELM
No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP

4910 E. Clinton Way, Suite 101 (559) 431-0101 23123 Fresno, CA 93727 FAX (559) 431-1362

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 TEL: 559-497-1542 JUAN M. GONZALEZ, A.I.A. FAX: 559-497-1549

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
MECHANICAL DETAILS

M4.15

DUCTWORK #1 PARTS – JOB#6264635 DOUBLE WALL

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1645DWASY-2R-S	2800				-0.0665	22.06	2005.35	1	DOUBLE WALL DUCT - 16" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL.
P2	DW1645DWASY-2R-S	2800				-0.095	22.06	2005.35	1	DOUBLE WALL DUCT - 16" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL.
P3	DW1647DWAJD-2R-S	2800				-0.014	103.34	2005.35	1	DOUBLE WALL ADJUSTABLE DUCT - 16" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11" / MAX LENGTH = 48.5" / ADJUSTMENT = 30.5" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P4 ASSEMBLED W/P5	DW164550DWLTTP-2R-S	2800				-0.024	68.55	2005.35	1	DOUBLE WALL DUCT - 16" INNER DUCT, 45.5" LONG - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATE.
P5 ASSEMBLED W/P4 O=B	DW2616TPDBEX	2800					9.00	2005.35	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 26 1/2" CURB TO 16" DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE OD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
SYSTEM AT P5						-1.2255	0.00			
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW16DWCLASY-2R-S						7.96		1	DUCT - 16" DUCT - 20" DOUBLE "V" CLAMP - 2R INSULATION & SINGLE "V" CLAMP INCLUDED - REDUCED CLEARANCE.
TOTAL WEIGHT							234.57			

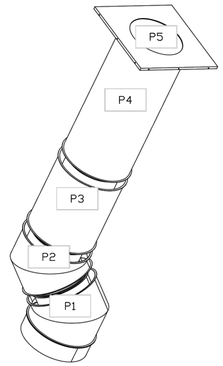
DOUBLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

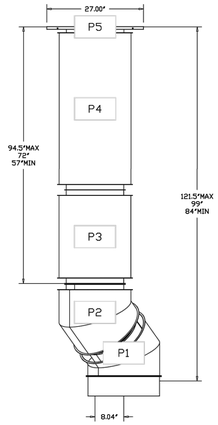
HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5'-16')	20'	24'	24'
2R (18')	18'	24'	24'
3R & 3Z (5'-24')	10'	24'	24'
3Z (26' -36')	10'	20'	20'

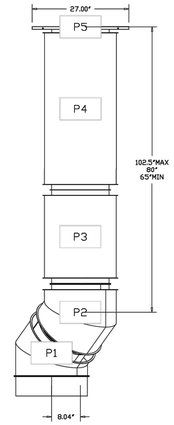
DUCTWORK #1 SE VIEW



DUCTWORK #1 FRONT VIEW

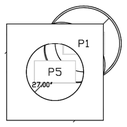


DUCTWORK #1 SIDE VIEW



DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

DUCTWORK #1 TOP VIEW



CAPTIVEAIRE DETAIL

SCALE: NONE

A
M4.16

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

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Chowchilla ES - Chowchilla, CA

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TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE: MECHANICAL DETAILS

M4.16

EXHAUST FAN SCHEDULE

DESIGNATION	EF 1	EF 2	EF 3	EF 4	EF 5	EF 6	EF 7	EF 8
CFM	2800	450	700	700	920	300	310	340
EXT. S.P. (IN. WC)	1.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5
HP / BHP	1.5 / 1.261	0.167 / 0.07	0.167 / 0.14	0.167 / 0.14	0.25 / 0.12	0.167 / 0.07	0.167 / 0.07	0.167 / 0.06
VOLTS / PHASE	460 / 3	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1
MCA / MOP (AMPS)	- / -	1.9 / 15	1.9 / 15	1.9 / 15	2.6 / 15	1.9 /15	1.9 /15	1.9 /15
FLA (AMPS)	3.0	1.5	1.5	1.5	2.1	1.5	1.5	1.5
RPM	1174	1521	1623	1623	1019	1664	1682	1416
TIP SPEED/ SONES	- / 14.3	- / 7.2	- / 9.6	- / 9.6	- / 7.3	- / 8.2	- / 8.4	- / 6.5
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
MOUNTING	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF
MANUFACTURER	CAPTIVEAIRE	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK
TYPE	UPBLAST	DOWNBLAST	DOWNBLAST	DOWNBLAST	DOWNBLAST	DOWNBLAST	DOWNBLAST	DOWNBLAST
MODEL NUMBER	DU180HFA	G-090-VG	G-095-VG	G-095-VG	G-130-VG	G-080-VG	G-080-VG	G-090-VG
CONTROL	I.L. W / OSA - 1	I.L. W / LIGHT	I.L. W / LIGHT	I.L. W / LIGHT	T-STAT	I.L. W / LIGHT	T-STAT	T-STAT
LOCATION	KITCHEN	BOYS	GIRLS	SNACK BAR	STOR. ROOMS	JAN. AND T.R.	COSTUMES	INSTRUMENTS
OPER. WT. (LBS)	300	70	70	70	90	65	65	70
ACCESSORIES	1, 2	3, 4	3, 4	3, 4	3, 4, 5	3, 4	3, 4, 5	3, 4, 5

1. MANUFACTURER PROVIDED HINGED ROOF CURB, SLOPED TO MATCH ROOF
2. GREASE BOX
3. MANUFACTURER PROVIDED FACTORY ROOF CURB, SLOPED TO MATCH ROOF
4. BACKDRAFT DAMPER, BIRD SCREEN, UNIT MOUNTED SPEED CONTROLLER FOR BALANCING
5. FACTORY VARI - GREEN INDOOR AIR QUALITY - TEMPATURE/HUMIDITY CONTROL. LINE VOLTAGE THERMOSTAT. SET TO BE 85°F (ADJ) TO ENABLE FAN.

HEAT PUMP WATER CHILLER SCHEDULE

	DESIGNATION	WC 1
GENERAL	NOMINAL CAPACITY (TONS)	60
	AMBIENT (°F)	105
	SOUND POWER AT 30FT. (dBA)	-
	VOLTS/PHASE	460/3
	FLA	130.6
	MCA / MOP (AMPS)	138 / 175
COOLING	CAPACITY (TONS)	55.34
	EWT / LWT (°F)	54 / 44
	FLOW RATE	132.1
	PRESSURE DROP (FT H2O)	7.58
	EER	8.46
	DESIGN AMBIENT (°F)	105
HEATING	CAPACITY (MBH)	752.68
	EWT / LWT (°F)	100 / 120
	FLOW RATE	77.18
	PRESSURE DROP (FT H2O)	3.8
	COP	2.96
	DESIGN AMBIENT (°F)	47
COMPRESSOR	QUANTITY	4
	REFRIGERANT	R-454B
	REFRIGERANT VOLUME (LBS.)	80
MANUFACTURER		TRANE
TYPE		AIR COOLED
MODEL NUMBER		AXM030
LOCATION		SEE PLAN
OPER. WT (LBS)		6000
ACCESSORIES		1, 2

PACKAGE AIR CONDITIONING UNIT SCHEDULE

	DESIGNATION	AH 1	AH 2
	FLA	28	28
	MCA	32	32
	MAX FUSE	45	45
	VOLTS/PHASE	460 / 3	460 / 3
	EER/SEER A ARI		
BLOWER	CFM	13,500	13,500
	TOTAL SP (IN WC)	4	4
	MIN. OSA (CFM)		
	HP/SPEED	10 / 1800	10 / 1800
	DRIVE	DIRECT	DIRECT
COOLING	SENSIBLE (MBH)	372.0	372.0
	TOTAL (MBH)	506.8	506.8
	EADB/EAWB (°F)	80 / 67	80 / 67
	EWT/LWT (°F)	44 / 62	44 / 62
	GPM	56.14	56.14
HEATING	INPUT (MBH)		
	OUTPUT (MBH)		
	FUEL		
FILTERS	QUANTITY/SIZE	3 / 12"x24"x2"	3 / 12"x24"x2"
		2 / 16"x20"x2"	2 / 16"x20"x2"
		6 / 20"x24"x2"	6 / 20"x24"x2"
	TYPE	MERV 13	MERV 13
	PD (IN WC)	1.0	1.0
MANUFACTURER		TRANE	TRANE
TYPE		OUTDOOR	OUTDOOR
MODEL NUMBER			
LOCATION		ROOF	ROOF
OPER. WT (LBS)		6,854	6,854
ACCESSORIES		1	1

CHILLED WATER BUFFER TANK

DESIGNATION	BT 1
TANK VOLUME (GAL)	500
DIAMETER (IN.)	42
INLET / OUTLET (IN.)	4
MANHOLE SIZE (IN. x IN.)	12 X 16
MANUFACTURER	CEMLINE
TYPE	CHILLED WATER
MODEL NUMBER	V500CWB-F-SL-20-O
LOCATION	EQUIP. YARD
OPER. WT. (LBS)	6,000
ACCESSORIES	1, 2, 3

1. PROVIDE WITH SEISMIC SUPPORT LEGS FOR VERTICAL INSTALLATION.
2. WHITE AND WEATHER RESISTANT EXTERIOR COATING FOR OUTDOOR LOCATION.
3. 2" THICK INSULATION.

KITCHEN HOOD SCHEDULE

DESIGNATION	KH 1
SIZE (L X W) (IN.)	168 X 54
CFM	2800
DUCT CONN. NO./SIZE	1 / 16"
STATIC DROP (IN. WC)	1.026
MATERIAL	430 SS
FILTER-QTY/SIZE	10 / 20X16
MANUFACTURER	CAPTIVEAIR
TYPE	TYPE 1
MODEL NUMBER	5430 ND-2
LOCATION	KITCHEN
OPER. WT. (LBS)	1221
ACCESSORIES	-

INDOOR UNIT SCHEDULE

	DESIGNATION	IDU 1-1	IDU 1-2	IDU 1-3	IDU 1-4	IDU 2-1	IDU 2-2
BLOWER	SUPPLY AIR (CFM)	378	378	378	378	918	918
	EXT. S P (IN. WC)	-	-	-	-	-	-
	MIN. O.S.A. (CFM)	-	-	-	-	-	-
	MOCP	15	15	15	15	15	15
	MCA (AMPS)	0.33	0.33	0.33	0.33	0.63	0.63
	VOLTS/PHASE	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1
COOLING	TOTAL (MBH)	13.6	13.6	13.6	13.6	22.2	22.2
	SENSIBLE (MBH)	8.9	8.9	8.9	8.9	18.9	18.9
	EADB/EAWB (°F)	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67
	REFRIGERANT	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
HEATING	CAPACITY (MBH)	12.8	12.8	12.8	12.8	19.7	19.7
	KW	-	-	-	-	-	-
	STAGES	-	-	-	-	-	-
FILTER	QUANTITY/SIZE	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY
	TYPE	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY
	P D (IN. WC)	N/A	N/A	N/A	N/A	N/A	N/A
MANUFACTURER		TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
TYPE		CEILING CASSETTE	CEILING CASSETTE	CEILING CASSETTE	CEILING CASSETTE	WALL MOUNT	WALL MOUNT
MODEL NUMBER		TPMFYP015BM140F	TPMFYP015BM140F	TPMFYP015BM140F	TPMFYP015BM140F	TPKFYP024KM142A	TPKFYP024KM142A
CONDENSING UNIT		ODU-1	ODU-1	ODU-1	ODU-1	ODU-2	ODU-2
LOCATION		PLATFORM	PLATFORM	PLATFORM	PLATFORM	ELECTRICAL	ELECTRICAL
OPER. WT (LBS)		50	50	50	50	60	60
ACCESSORIES						1,2	1,2

1 . CONDENSATE PUMP
2 . WIRED WALL CONTROLLER.

DEDICATED OUTSIDE AIR UNIT SCHEDULE

	DESIGNATION	OAS 1
	VOLTS/PHASE	460 / 3
	F.L.A.	-
	MCA/MOCP (AMPS)	81.3 / 90
	IEER	18.8
BLOWER	SUPPLY AIR (CFM)	4100
	EXT. SP (IN. WC)	1
	MIN. O.S.A. (CFM)	2788
	HP	5
	RPM	-
	DRIVE	DIRECT
COOLING	SENSIBLE (MBH)	168.6
	TOTAL (MBH)	177.5
	EADB/EAWB (°F)	105.0 / 72.0
	AMBIENT AIR (°F)	-
	LADB/LAWB (°F)	55.6 / 54.4
	REFRIGERANT TYPE	R410A
	REFRIG. CLASSIFICATION	1A
	TONS OF REFRIGERATION	15
HEATING	MAX. KW	60
	OUTPUT CAPACITY (MBH)	129.6
	FUEL	ELEC.
	COP	3.5
FILTERS	QUANTITY/SIZE	4
	TYPE	MERV 13
	P D (IN WC)	0.3
MANUFACTURER		CAPTIVE AIRE
TYPE		DOAS
MODEL NUMBER		CASRTU3-E.604-18-15T
LOCATION		SEE PLAN
OPER. WT (LBS)		3500
ACCESSORIES		

OUTDOOR UNIT SCHEDULE

DESIGNATION	ODU 1	ODU 2
COOLING CAPACITY (MBH)	54.1	44.5
HEATING CAPACITY (MBH)	51.5	39.3
NOMINAL TONS	5	2
VOLTS/PHASE	208-230 / 1	208-230 / 1
FLA	-	-
MCA / MOCP	36 / 45	29 / 40
SEER / EER (AT ARI)	- / 11.9	- / 11.8
AMBIENT (°F)	105	105
REFRIG. LINE SIZE		
LIQUID (IN.OD)	3/8	3/8
SUCTION (IN. OD)	3/4	5/8
REFRIG. TYPE	R-410A	R-410A
HEATING COP @47°F / HSPF	3.74 / -	3.6 / -
MANUFACTURER	TRANE	TRANE
TYPE	HEAT PUMP	HEAT PUMP
MODEL NUMBER	NTXMSM60A182BA	NTXMSM48A182BA
SERVICE	PLATFORM	ELECTRICAL
OPER. WT (LBS)	390	300
ACCESSORIES	SEE IDU	SEE IDU

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23123
Fresno, CA 93727 FAX (559) 431-1362

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 — ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 — JUAN M. GONZALEZ, A.I.A.
TEL: 559-497-1542
FAX: 559-497-1549

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MICHAEL D. CANTELMI — No. M23588 Exp. 9-30-25 — MECHANICAL — STATE OF CALIFORNIA

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
MECHANICAL SCHEDULES

M5.01

GENERAL NOTES:

1. THE INTENT OF THE DRAWING AND SPECIFICATIONS IS TO CONSTRUCT THE BUILDING IN ACCORDANCE WITH THE 2022 EDITION OF TITLE 24, CALIFORNIA CODE OF REGULATIONS. CHANGES TO THE STRUCTURAL, ACCESSIBILITY OR FIRE AND LIFE-SAFETY PORTIONS OF THE APPROVED PLANS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR CONSTRUCTION CHANGE DOCUMENT AS REQUIRED IN SECTION 4-338, PART 1, TITLE 24, CCR, AND SHALL BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO COMMENCEMENT OF THE WORK. DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO DSA IN COMPLIANCE WITH DSA INTERPRETATION OF REGULATION IR A-6.

2. LAYOUT OF MATERIALS, EQUIPMENT AND SYSTEMS IS GENERALLY DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED. SOME WORK MAY BE SHOWN OFFSET FOR CLARITY. THE HVAC BUILDING PLANS HAVE BEEN PREPARED TO MATCH THE ARCHITECTURAL PLANS. IF DIFFERENCES OCCUR, THE ARCHITECTURAL PLANS ARE TO TAKE PRECEDENCE. THE ACTUAL LOCATIONS OF ALL MATERIALS, PIPING, DUCTWORK, FIXTURES, EQUIPMENT, SUPPORTS, ETC. SHALL BE CAREFULLY PLANNED, PRIOR TO INSTALLATION OF ANY WORK, TO AVOID ALL INTERFERENCE WITH EACH OTHER, OR WITH STRUCTURAL, ELECTRICAL, ARCHITECTURAL, OR OTHER ELEMENTS. ALL DUCT AND PIPE OFFSET ELBOWS FOR COORDINATION BETWEEN TRADES ARE NOT SHOWN. CONTRACTOR SHALL INCLUDE SUFFICIENT FUNDS FOR THE COORDINATION OFFSETS IN THE BID. VERIFY THE PROPER VOLTAGE AND PHASE OF ALL EQUIPMENT WITH THE ELECTRICAL PLANS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER PRIOR TO THE INSTALLATION OF ANY WORK OR THE ORDERING OF ANY EQUIPMENT.

3. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER-DRIVEN PINS IN EXISTING NON-PRESTRESSED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE- OR POST-TENSIONED), LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.

4. MEP COMPONENT ANCHORAGE NOTE:

   ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.

   1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
   2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
   3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

   THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

   A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
   B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

   THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

5. PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

   PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

   THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI (OSHPD) OPM FOR 2022 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

   MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS(E):

   MP☒ MD☒ PP☐ E☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

   MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE HCAI (OSHPD) PRE-APPROVAL (OPM#) # 0043-13 .

6. PENETRATIONS THROUGH FIRE RATED WALLS, FLOOR/CEILING, AND ROOF/CEILING ASSEMBLIES SHALL BE SEALED USING AN APPROVED SYSTEM CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES WHEN SUBJECTED TO THE REQUIREMENTS OF THE TEST STANDARD SPECIFIC TO FIRE STOPS PER 2022 CBC SECTION 714. THIS INCLUDES EXISTING PIPE AND CONDUIT THROUGH NEW ASSEMBLIES. CUSTOM DESIGNED SYSTEMS WHICH COMBINE COMPONENTS FROM DIFFERENT APPROVED SYSTEMS BUT HAVE NOT BEEN TESTED AS A COMPLETE ASSEMBLY WILL NOT BE ACCEPTABLE. FOR FIRE STOPS FOR PIPE PENETRATIONS SEE SPECIFICATIONS.

7. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. WHERE ACOUSTIC LINING IS SHOWN, INCREASE EACH SHEET METAL DIMENSION TO ACCOMMODATE LINING & MAINTAIN CLEAR INSIDE DUCT DIMENSIONS SHOWN.

8. SA DUCTWORK SHALL BE 1" PRESSURE CLASS, AND RA & EA DUCTWORK SHALL 1" PRESSURE CLASS UNLESS OTHERWISE NOTED.

9. A DSA CERTIFIED PROJECT INSPECTOR (CLASS 2) EMPLOYED BY THE DISTRICT & APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-338, PART 1, TITLE 24, CCR.

10. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

AIR CONDITIONING LEGEND

SYMBOL	ITEM	ABBR
	ROUND DUCT	Ø
	FLAT OVAL DUCT	
	SHEET METAL DUCT	—
	ACOUSTIC LINING FOR DUCT OR GRILLES	(L)
	DUCT W/EXT INSULATION & GALV. SM SUNSHIELD	—
	SUPPLY AIR DUCT DROP	—
	RETURN AIR DUCT DROP	—
	EXHAUST DUCT AIR DROP	—
	SUPPLY AIR DUCT RISE	—
	RETURN AIR DUCT RISE	—
	EXHAUST AIR DUCT RISE	—
	TURNING VANES	TV
	EXTRACTOR	—
	VOLUME CONTROL DAMPER W/LOCKING QUADRANT	VCD
	OPPOSED BLADE DAMPER	OBD
	BACKDRAFT DAMPER	BDD
	VOLUME CONTROL DAMPER W/ REMOTE REGULATOR	VCR
& ■	FIRE/SMOKE DAMPER WITH ACCESS PANEL	F/SD
& ▲	FIRE DAMPER WITH ACCESS PANEL	FD
& ◆	SMOKE DAMPER WITH ACCESS PANEL	SD
CFM	CUBIC FEET OF AIR PER MINUTE	CFM
M	EMS MOTORIZED DUCT DAMPER/ PIPE VALVE ACTUATOR	—
T	THERMOSTAT @ +4'-0" TOP OF BOX	T'STAT
H	HUMIDISTAT @ +4'-0" TOP OF BOX	H'STAT
C	CO_2 SENSOR @ +4'-0" TOP OF BOX	CO_2
T	EMS TEMPERATURE SENSOR @ +4'-0" TOP OF BOX	—
H	EMS HUMIDITY SENSOR @ +4'-0" TOP OF BOX	—
C	EMS CO_2 SENSOR @ +4'-0" TOP OF BOX	CO_2
SP	EMS STATIC PRESSURE SENSOR	SP
DP	EMS DIFFERENTIAL PRESSURE SENSOR	DP
CS	EMS CURRENT SENSOR	CS
	DIRECTION OF FLOW	—
	SUPPLY AIR	SA
	RETURN AIR	RA
	EXHAUST AIR	EA
—	OUTSIDE AIR	OSA
	PIPE/DUCT TURN DOWN	—
	PIPE/DUCT TURN UP	—
	POINT OF CONNECTION	POC
	EXISTING (DESIGNATED)	(E)
	NEW (DESIGNATED)	(N)
SD	DUCT SMOKE DETECTOR	SD
A/V	AUDIBLE/VISUAL ALARM	A/VA
	BYPASS TIMER	BPT
—EMS—	ENERGY MANAGEMENT SYSTEM CABLE IN CONDUIT	EMS

TITLE 24 ACCEPTANCE TESTING TABLE

DESIGNATION		AH 1	AH 2	IDU 1-1	IDU 1-2	IDU 1-3	IDU 1-4	IDU 2-1	IDU 2-2	OSA 1	WC 1	P 1A	P 1B
FORM / TITLE	NRCA-MCH-02-A OUTDOOR AIR.	X	X							X			
	NRCA-MCH-03-A CONSTANT VOLUME SINGLE ZONE HVAC.	X	X	X	X	X	X	X	X	X			
	NRCA-MCH-04-A AIR DISTRIBUTION DUCT LEAKAGE.												
	NRCA-MCH-05-A AIR ECONOMIZER CONTROLS.	X	X							X			
	NRCA-MCH-06-A DEMAND CONTROL VENTILATION SYSTEMS.	X	X										
	NRCA-MCH-07-A SUPPLY FAN VARIABLE FLOW CONTROLS.												
	NRCA-MCH-08-A VALVE LEAKAGE TEST.											X	X
	NRCA-MCH-09-A SUPPLY WATER TEMPERATURE RESET CONTROLS.										X		
	NRCA-MCH-10-A HYDRONIC SYSTEM VARIABLE FLOW CONTROLS.											X	X
	NRCA-MCH-11-A AUTOMATIC DEMAND SHED CONTROLS.												
	NRCA-MCH-12-A FDD FOR PACKAGED DIRECT EXPANSION UNITS.									X			
	NRCA-MCH-13-A AUTOMATIC FDD FOR AIR HANDLING UNITS AND ZONE TERMINAL UNITS.	X	X										
	NRCA-MCH-14-A DISTRIBUTED ENERGY STORAGE DX AC SYSTEMS.												
	NRCA-MCH-15-A THERMAL ENERGY STORAGE (TES) SYSTEM.												
	NRCA-MCH-16-A SUPPLY AIR TEMPERATURE RESET CONTROLS.												
	NRCA-MCH-17-A CONDENSER WATER TEMPERATURE RESET CONTROLS.												
	NRCA-MCH-18-A ENERGY MANAGEMENT CONTROL SYSTEMS.												
	NRCA-MCH-19-A OCCUPANCY SENSOR CONTROLS.												
	NRCA-MCH-20 MULTI-FAMILY VENTILATION.												
	NRCA-MCH-21 MULTI-FAMILY ENVENLOPE LEAKAGE.												
	NRCA-MCH-22-A MF DUCT LEAKAGE.												
	NRCA-MCH-23-A MF HRV/ERV VERIFICATION.												

1. REFER TO TITLE-24 DOCUMENTS FOR ADDITIONAL INFORMATION.
2. NRCA MUST BE SUMBITTED AND COMPLETED BY A CERTIFIED ACCEPTANCE TEST TECHNICIAN TO COMPLY WITH CALIFORNIA ENERGY CODE.
3. SUBMIT ACCEPTANCE FORMS TO PROJECT INSPECTOR & MEOR FOR REVIEW.

GRILLE SCHEDULE

MARK	DUTY	DESCRIPTION
A	DUCT SUPPLY	TITUS S-DL DRUM LOUVER FOR SPIRAL DUCT MOUNTING, VERTICALLY ROTATING DRUM WITH BLADES FOR HORIZONTAL ADJUSTMENT, WITH O.B.D., AND NO. 26 OFF-WHITE FINISH.
B	WALL RETURN, EXHAUST, OR TRANSFER (HEAVY DUTY)	TITUS 33R HEAVY DUTY GRILLE WITH NO. 26 WHITE FINISH. BLADES PARALLEL TO FLOOR.OMIT OBD AT TRANSFER GRILLES.
C	CEILING SUPPLY	TITUS TDC (TYPE 3) LOUVER FACE SQUARE OR RECTANGULAR NECK DIFFUSER FOR STD. LAY-IN CEILING, AND NO. 26 OFF-WHITE FINISH. (18"X18" NECK ADAPTER SIZE SHOWN).
D	CEILING RETURN OR EXHAUST	TITUS CORE 50F (TYPE 3) ALUMINUM EGG CRATE REGISTER WITH 1/2" x 1/2" GRID, FOR LAY-IN CEILING, AND NO. 26 OFF-WHITE FINISH.
E	CEILING RETURN OR EXHAUST	TITUS CORE 50F (TYPE 1) ALUMINUM EGG CRATE REGISTER WITH 1/2" x 1/2" GRID, FOR SURFACE MOUNTING WITH NO. 26 OFF-WHITE FINISH.
F	CEILING SUPPLY	TITUS TDC (TYPE 1) LOUVER FACE SQUARE OR RECTANGULAR NECK DIFFUSER FOR SURFACE MOUNTING, AND NO. 26 OFF-WHITE FINISH.

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELMI
No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE 12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

ARCHITECTS
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.
GONZALEZ
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MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
MECHANICAL SCHEDULES, LEGEND & NOTES

M5.02

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 1 of 20)

Project Name:	Fairmead ES MPB	**Date Prepared:**	2023-12-20

A. General Information

1	Project Name	Fairmead ES MPB		
2	Run Title	Title 24 Analysis		
3	Project Location	19421 Ave 22 3/4		
4	City	Chowchilla	5 Standards Version	Compliance 2022
6	Zip code	93610	7 Compliance Software (version)	EnergyPro 9.1
8	Climate Zone	13	9 Building Orientation (deg)	180
10	Building Type(s)	• Nonresidential	11 Weather File	MADERA_STYP20.epw
12	Project Scope	• New envelope and mechanical	13 Number of Dwelling Units	0
14	Total Conditioned Floor Area in Scope (ft²)	12180	15 Total # of hotel/motel rooms	0
16	Total Unconditioned Floor Area (ft²)	203	17 Fuel Type	Natural gas
18	Nonresidential Conditioned Floor Area	12180	19 Total # of Stories (Habitable Above Grade)	1
20	Residential Conditioned Floor Area	0		

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 2 of 20)

B. PROJECT SUMMARY

Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within the permit application.

Building Components Complying via Performance						**Building Components Complying Prescriptively**	
Envelope (See Table G)	Nonres	Performance	Solar Thermal Water Heating (See Table I3)	☐	Performance	The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).	
	MultiFam	Not Included		☒	Not Included		
Mechanical (See Table H)	Nonres	Performance	Covered Process: Commercial Kitchens (see Table J)	☒	Performance	Indoor Lighting (Unconditioned) 140.6 & 170.2(e)	NRCC-LTI-E is required
	MultiFam	Not Included		☐	Not Included	Outdoor Lighting 140.7 & 170.2(e)	NRCC-LTO-E is required
Domestic Hot Water (See Table I)	Nonres	Performance	Covered Process: Laboratory Exhaust (see Table J)	☐	Performance	Sign Lighting 140.8 & 170.2(e)	NRCC-LTS-E is required
	MultiFam	Not Included		☒	Not Included	**Building Components Complying with Mandatory Measures**	
Lighting (Indoor Conditioned, see Table K)	Nonres	Not Included	Photovoltaics (see Table F)	☒	Performance	Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should be documented on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)	
	MultiFam	Not Included		☐	Not Included	Electrical Power Distribution 110.11	NRCC-ELC-E is required
			Battery (see Table F)	☒	Performance	Commissioning 120.8	NRCC-CXR-E is required
				☐	Not Included	Solar and Battery 110.10	NRCC-SAB-E is required

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 3 of 20)

C1. COMPLIANCE SUMMARY

COMPLIES[3]

	Time Dependent Valuaton (TDV)		Source Energy Use
	Efficiency[1] (kBtu/ft² - yr)	**Total[2] (kBtu/ft² - yr)**	**Total[2] (kBtu/ft² - yr)**
Standard Design	575.33	561.53	46.28
Proposed Design	572.97	553.37	46.13
Compliance Margins	**2.36**	**8.16**	**0.15**
	Pass	**Pass**	**Pass**

[1] Efficiency measures include improvements like a better building envelope and more efficient equipment
[2] Compliance Totals include efficiency, photovoltaics and batteries
[3] Building complies when efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 4 of 20)

C2. TDV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft² - yr)

COMPLIES[2]

Energy Component	**Standard Design (TDV)**	**Proposed Design (TDV)**	**Compliance Margin (TDV)[1]**
Space Heating	2.69	2.15	0.54
Space Cooling	353.08	315.98	37.1
Indoor Fans	122.39	157.96	-35.57
Heat Rejection	0	0	0
Pumps & Misc.	0	2.87	-2.87
Domestic Hot Water	42.74	39.58	3.16
Indoor Lighting	54.43	54.43	0
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	**575.33**	**572.97**	**2.36 (0.4%)**
Photovoltaics	-13.8	-19.6	5.8
Batteries	---	---	---
TOTAL COMPLIANCE	**561.53**	**553.37**	**8.16 (1.5%)**

[1] Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 5 of 20)

C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]

Non-Regulated Energy Component	**Standard Design (TDV)**	**Proposed Design (TDV)**	**Compliance Margin (TDV)[1]**
Receptacle	108.92	108.92	---
Process	837.14	837.14	---
Other Ltg	7.22	7.22	---
Process Motors	---	---	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	**1514.81**	**1506.65**	**8.16 (0.5%)**

[1] Notes: This table is not used for Energy Code Compliance.

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 6 of 20)

C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual SOURCE Energy Use, kBtu/ft² /yr)

COMPLIES[2]

Energy Component	**Standard Design (SOURCE)**	**Proposed Design (SOURCE)**	**Compliance Margin (SOURCE)[1]**
Space Heating	0.35	0.29	0.06
Space Cooling	16.66	13.91	2.75
Indoor Fans	9.88	13.84	-3.96
Heat Rejection	0	0	0
Pumps & Misc.	0	0.1	-0.1
Domestic Hot Water	15.57	14.36	1.21
Indoor Lighting	4.29	4.29	0
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	**46.75**	**46.79**	**-0.04 (-0.1%)**
Photovoltaics	-0.47	-0.66	0.19
Batteries	---	---	---
TOTAL COMPLIANCE	**46.28**	**46.13**	**0.15 (0.3%)**

[1] Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 7 of 20)

C5. SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]

Non-Regulated Energy Component	**Standard Design (SOURCE)**	**Proposed Design (SOURCE)**	**Compliance Margin (SOURCE)[1]**
Receptacle	21.35	21.35	---
Process	63.41	63.41	---
Other Ltg	0.53	0.53	---
Process Motors	---	---	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	**131.57**	**131.42**	**0.15 (0.1%)**

[1] Notes: This table is not used for Energy Code Compliance.

C6. 'ABOVE CODE' QUALIFICATIONS

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 8 of 20)

C7. ENERGY USE SUMMARY

Energy Component	**Standard Design Site (MWh)**	**Proposed Design Site (MWh)**	**Margin (MWh)**	**Standard Design Site (MBtu)**	**Proposed Design Site (MBtu)**	**Margin (MBtu)**
Space Heating	0.9	0.7	0.2	0	---	---
Space Cooling	137.3	113.1	24.2	---	---	---
Indoor Fans	52.8	69.2	-16.4	---	---	---
Heat Rejection	---	---	---	---	---	---
Pumps & Misc.	---	1.1	---	---	---	---
Domestic Hot Water	0.1	0.2	-0.1	203.4	187	16.4
Indoor Lighting	25	25	0	---	---	---
Flexibility	---	---	---	---	---	---
EFFICIENCY TOTAL	**216.1**	**209.3**	**6.8**	**203.4**	**187**	**16.4**
Photovoltaics	-8.5	-11.9	3.4	---	---	---
Batteries	---	---	---	---	---	---
ENERGY USE SUBTOTAL	**207.6**	**197.4**	**10.2**	**203.4**	**187**	**16.4**
Receptacle	29.7	29.7	0	210.6	210.6	0
Process	394.3	394.3	0	---	---	---
Other Ltg	3.4	3.4	0	---	---	---
Process Motors	---	---	---	---	---	---
ENERGY USE TOTAL	**635**	**624.8**	**10.2**	**414**	**397.6**	**16.4**

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 9 of 20)

C8. ENERGY USE INTENSITY (EUI)

	Standard Design (kBtu/ft² / yr)	**Proposed Design (kBtu/ft² / yr)**	**Margin (kBtu/ft² / yr)**	**Margin Percentage**
GROSS EUI[1]	210.74	207.54	3.2	1.52
NET EUI[1]	208.4	204.27	4.13	1.98

[1] Notes: Gross EUI is Energy Use Total (not including PV)/Total Building Area. Net EUI is Energy Use Total (including PV)/Total Building Area.

D1. EXCEPTIONAL CONDITIONS

• The aged solar reflectance and aged thermal emittance must be listed in the Cool Roof Rating Council database of certified products. For projects where initial reflectance is used, the initial reflectance must be listed, and the aged reflectance is calculated by the software program and used in the compliance model.
• The project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary Daylit Control requirements are met. PRESCRIPTIVE COMPLIANCE documentation (form NRCC-LTI-02-E) for the requirements of section 140.6(d) Automatic Daylighting Controls in Secondary Daylit Zones is required.
• PV/Battery Building Type has been modified from software defaults for one or more spaces. Review project's PV/Battery Building Type(s) with documentation author. Refer to Energy Code section 140.10 for Nonresidential or 170.2(g) for more information.

F1. REQUIRED PV SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	**Exception[1]**	**Module Type**	**Array Type**	**Power Electronics**	**CFI**	**Azimuth (deg)**	**Tilt Input**	**Array Angle (deg)**	**Tilt: (x in 12)**	**Inverter Eff. (%)**	**Annual Solar Access (%)**
7.2	n/a	Standard (14-17%)	Fixed	none	false	180	Degrees	22	4.85	96	100

[1]See Table D1 for any PV exceptions used.

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 JUAN M. GONZALEZ, A.I.A.
TEL.: 559-497-1542
FAX: 559-497-1549

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELMI
No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 (559) 431-0101
23123
Fresno, CA 93727 FAX (559) 431-1362

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
TITLE 24 DOCUMENTS

M6.01

G5. OPAQUE SURFACE ASSEMBLY SUMMARY

01	02	03	04	05	06		07	08	09	10
Surface Name	Construction Type	Area (ft²)	Framing Type	Cavity R-Value	Continuous R-Value Interior	Continuous R-Value Exterior	Units	Value	Description of Assembly Layers	Status[1]
23123 R-19 Wall Metal Stu11	Exterior Wall	13,338	Metal	19	N/A	10	U-factor	0.0613	Mortar - Cement - 1 in. Extruded Polystyrene - XPS - 2 in. R10.00 Plywood - 5/8 in. Composite-1 Gypsum Board - 5/8 in.	N
Slab On Grade18	Underground Floor	12,383	N/A	0	N/A	N/A	F-factor	0.73	Slab Type =Unheated slab on grade Insulation Orientation =None Insulation R-Value =none	N
23123 R-30 Roof Attic20	Roof	4,628	N/A	0	N/A	29.34	U-factor	0.0302	AsphaltShingled_25In Plywood - 1/2 in. Cellular polyisocyanurate (unfaced) - 5 in. R29 Metal Deck - 1/16 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Acoustic Tile - 3/8 in.	N
23123 R-30 Roof No Attic53	Roof	7,755	N/A	0	N/A	29.34	U-factor	0.0325	Metal Standing Seam - 1/16 in. Plywood - 1/2 in. Cellular polyisocyanurate (unfaced) - 5 in. R29 Metal Deck - 1/16 in.	N

[1] *Status: N - New, A - Altered, E - Existing*

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

01	02	03	04
Opaque Surfaces & Orientation	Total Gross Surface Area (ft²)	Total Fenestration Area (ft²)	Window to Wall Ratio (%)
North-Facing[1]	4005	180.66	4.51
East-Facing[2]	2530	0	0
South-Facing[3]	4533	175.25	3.87
West-Facing[4]	1788	307.96	17.22
Total	**12856**	**663.87**	**5.16**
Roof	12180	0	0

Notes
[1] *North-Facing is oriented to within 45 degrees of true north, including 45 00'00" east of north (NE), but excluding 45 00'00" west of north (NW),*
[2] *East-Facing is oriented to within 45 degrees of true east, including 45 00'00" south of east (SE), but excluding 45 00'00" north of east (NE),*
[3] *South-Facing is oriented to within 45 degrees of true south, including 45 00'00" west of south (SW), but excluding 45 00'00" east of south (SE),*
[4] *West-Facing is oriented to within 45 degrees of true west, including 45 00'00" north of west (NW), but excluding 45 00'00" south of west (SW),*

G2A. ROOFING PRODUCT SUMMARY (NONRESIDENTIAL)

01	02	03	04	05	06
Assembly Name	Roof Pitch	Roof Rise (x in 12)	Aged Solar Reflectance	Thermal Emittance	SRI
23123 R-30 Roof Attic20	LowSlope	N/A	0.63	0.75	N/A
23123 R-30 Roof No Attic53	LowSlope	N/A	0.63	0.85	N/A

G4. NONRESIDENTIAL AIR BARRIER

01	02
Building Story Name	Air Barrier
Com-Floor 1	No air barrier

F1B. PV BATTERY BUILDING TYPE(S)

01	02	03
Building Occupancy Type* (From Table 140.10-A/B and 170.2-U/V)	Conditioned Floor Area (ft²)	Unconditioned Floor Area (ft²)
Grocery	0	0
High-Rise Multifamily	0	0
Office, Financial Institutions, Unleased Tenant Space	0	0
Retail	0	0
School	0	0
Warehouse	12180	203
Auditorium, Convention Center, Hotel/Motel, Library, Medical Office Building/Clinic, Restaurant, Theater	0	0
None	0	0

* *Building Occupancy Types are defined in Section 100.1 of the Energy Code*

F2. BATTERY SYSTEMS[1]

01	02	03	04	05	06	07
Control	Capacity (kWh)	Charging Efficiency	Charging Rate (kW)	Discharging Efficiency	Discharging Rate (kW)	Round Trip Efficiency
Basic	9	N/A	5	N/A	5	0.9

[1] *See Table D1 for any Battery exceptions used.*

H5. GENERAL EXHAUST FAN SUMMARY

01	02	03	04	05	06	07	08
System ID	Zone Name	Qty	CFM	Power	Power Units	Continuous Operation?	Status[1]
Zone 2 MEN/Women restroomS	1-Zone 2 MEN/Women restroom	1	1350	0.05	BHP	No	N
Zone 7 kitchen80	3-Zone 7 kitchen	1	2800	0.05	BHP	No	N
Zone 5 platform92	4-Zone 5 platform	1	960	0.05	BHP	No	N

[1] *Status: N - New, A - Altered, E - Existing*

H6. WET SYSTEM EQUIPMENT (boilers, chillers, cooling towers, etc.)

01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Equipment Type	Parent Fluid System Name	Qty	Vol (gal)	Rated Capacity	Capacity Unit	Rating	Rating Unit	Status[1]
50 Gallon Heat Pump2-0	Hot Water	WH-1 Bradford White EF-101 - HotWater	1	N/A	15.21	kBtu/Hr	0.98	TE	N
60 TON Heat Pump Chiller-1-1-1	Scroll	WH-1 Bradford White EF-101 - ChillSys	1	N/A	720	kBtu/Hr	10.17	EER	N

[1] *Status: N - New, A - Altered, E - Existing*

H7. PUMPS

01	02	03	04	05	06	07	08
Name or Item Tag	Parent Equipment	Qty	Power	Power Units	GPM	VSD	Status[1]
Pump 1	50 Gallon Heat Pump2-0	1	1	BHP	66	☒	N

[1] *Status: N - New, A - Altered, E - Existing*

H1. DRY SYSTEM EQUIPMENT (FURNACES, AIR HANDLING UNITS, HEAT PUMPS, VRF, ECONOMIZERS ETC.)

01	02	03	04	05	06	07	08	09	10	11	12
			Heating				Cooling				
Equipment Name	Equipment Type	Qty	Total Heating Output (kBtu/h)	Supp Heat Output (kBtu/h)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit	Efficiency	Economizer Type (if present)	Status[1]
AH-1 / AH-2 AXM030	Single Zone Air Conditioner (SZAC) Air System	2	939.87	0	N/A	NA - See Boiler	506.77	N/A	NA - See Chiller	Differential DB	N
OSA - 1: CASRTU3-E.604-18	Single Zone Heat Pump (SZHP) Air System	1	134.98	177.48	COP	3.5	170.42	EER	11	Differential DB	N
ODU - IDU 1-1 to 1-4 TPMF	Variable Refrigerant Flow	1	51.5	N/A	HSPF	10.5	54.1	N/A		N/A	N
ODU 2 NTXMSM48A1828A	Variable Refrigerant Flow	1	39.3	N/A	HSPF	10.4	44.5	N/A		N/A	N

[1] *Status: N - New, A - Altered, E - Existing*

H3. NONRESIDENTIAL / COMMON USE AREA FAN SYSTEMS SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12	13
			Supply Fan				Return / Relief Fan					
Name or Item Tag	Qty	Design OA CFM	CFM	Power	Power Units	Control	Fan Type	CFM	Power	Power Units	Control	Status[1]
AH-1 / AH-2 AXM030	2	1981.9	13,500	6	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
OSA - 1: CASRTU3-E.604-18	1	205.65	4,100	2.2	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
5-Zone 5 platform-VRF	4	69.75	378	0.02	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
7-Zone 9-VRF	2	8.92	918	0.09	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N

[1] *Status: N - New, A - Altered, E - Existing*

G6A. OPAQUE DOOR SUMMARY (NONRESIDENTIAL)

01	02	03	04
Assembly Name	Area (ft²)	Overall U-factor	Status[1]
Metal Door13	459.98	0.7	N

[1] *Status: N - New, A - Altered, E - Existing*

G7A. FENESTRATION ASSEMBLY SUMMARY (NONRESIDENTIAL)

01	02	03	04	05	06	07	08	09
Fenestration Assembly Name	Fenestration Type/ Product Type / Frame Type	Certification Method[1]	Assembly Method	Area (ft²)	Overall U-factor	Overall SHGC	Overall VT	Status[2]
23123 Glass	Vertical fenestration Fixed window N/A	NFRC	Site built	599.85	0.34	0.22	0.42	N
23123 Door Glass	Vertical fenestration Glazed door N/A	NFRC	Manufactured	64.02	0.45	0.23	0.17	N

[1] *Notes: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*
[2] *Status: N - New, A - Altered, E - Existing*

I1. WATER HEATER EQUIPMENT SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input	Rated Input Unit	Efficiency	Efficiency Unit	Tank Insulation R-value Int/Ext	Standby Loss Fraction	1st Hr. Rating or Flow Rate (gal)	Heat Pump Type	Tank Location or Ambient Condition
WH-1 Bradford White EF-103	Natural Gas	Storage	1	100	200	kBtu/Hr	0.97	TE	N/A	0.04	N/A	N/A	N/A
30 Gallon Electric4	Electricity	Storage	2	26	6	kW	0.92	UEF	N/A	N/A	N/A	N/A	N/A

J2. COMMERCIAL KITCHENS

01	02	03	04	05
Space Name	Exhaust Hood Style	Exhaust Hood Duty	Exhaust Length	Exhaust Flow Rate (cfm)
S-5-Zone 7 kitchen	Wall-mounted Canopy	Heavy Duty	14	2,800

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections made by Documentation Author indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Envelope	NRCI-ENV-E - Envelope (for all buildings)
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-E - For all buildings with Mechanical Systems
Plumbing	NRCI-PLB-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-E - For all buildings with Plumbing Systems
Covered Process	NRCI-PRC-01-E - Must be submitted for all Covered Processes

H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION

01	02	03	04	05	06	07
	Mechanical Ventilation					
Zone Name	Ventilation Function	# of People	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	DCV or Occupant Sensor Controls, or Both
1-Zone 2 MEN/Women restroom	Exhaust - Toilets, public Education - Multiuse assembly Misc - All others	555.27	3963.8	1350	9468	DCV
3-Zone 7 kitchen	Food Service - Kitchen (cooking)	3.43	205.65	2800	1371	N/A
4-Zone 5 platform	Education - Media center	18.6	279	960	744	N/A
5-Zone 6 instr./costumes	Misc - All others	0.48	0	0	478	N/A
6-Zone 9	Misc - All others	0.18	17.85	0	119	N/A

H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12
			Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
System ID	System Type	Qty	Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	VSD
1-Zone 2 MEN/Women restroom-Trm	Uncontrolled	2	N/A	N/A	27,000	N/A	0	N/A	N/A	N/A	☐
3-Zone 7 kitchen-Trm	Uncontrolled	1	N/A	N/A	4,100	N/A	0	N/A	N/A	N/A	☐
5-Zone 5 platform-VRF	Variable Refrigerant Flow	4	12.8	13.6	378	N/A	N/A	0.02	BHP	Continuous	☐
7-Zone 9-VRF	Variable Refrigerant Flow	2	19.7	22.2	918	N/A	N/A	0.09	BHP	Continuous	☐

H7. PUMPS

01	02	03	04	05	06	07	08
Name or Item Tag	Parent Equipment	Qty	Power	Power Units	GPM	VSD	Status[1]
Pump 2	60 TON Heat Pump Chiller-1-1-1	1	1	BHP	132	☒	N

[1] *Status: N - New, A - Altered, E - Existing*

H8. SYSTEM SPECIAL FEATURES

01	02	03	04
System Name	Equipment Type	Interlocks per 140.4(n)[1]	Other Special Features and Controls
AH-1 / AH-2 AXM030	Single Zone Air Conditioner (SZAC) Air System	N/A	DDC Controls Zone(s) With CO2 Sensor Vent. Control Optimum Start Differential DB
OSA - 1: CASRTU3-E.604-18	Single Zone Heat Pump (SZHP) Air System	N/A	Differential DB
WH-1 Bradford White EF-101 - HotWater	Hot Water System	N/A	DDC Controls Fixed Temperature Control
WH-1 Bradford White EF-101 - SHW	Service Hot Water	N/A	Fixed Temperature Control
WH-1 Bradford White EF-101 - ChillSys	Chilled Water System	N/A	DDC Controls Fixed Temperature Control

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.
[1] *Yes = interlocks are provided, No = interlocks are not provided, NA means no operable openings.*

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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
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TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELMI
No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
TITLE 24 DOCUMENTS

M6.02

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
This document is used to demonstrate compliance for nonresidential occupancies with requirements in 110.1, 110.3, 120.3, and 140.5, and with requirements in 141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in 110.1, 110.3, 160.4 and 170.2(d), and with requirements 180.1 for additions and 180.2 for alterations.			
Project Name:	Chowchilla ESD Fairmead ES MPB	**Report Page:**	**(Page 1 of 8)**
Project Address:	19421 Ave 22 3/4	**Date Prepared:**	12/20/2023

A. GENERAL INFORMATION

01	Project Location (city)	Chowchilla	02	Climate Zone	13
03	Occupancy Types Within Project (select all that apply):				

● Classroom ● Gymnasium ● Support Areas ● Warehouse ● All Other Occupancies

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in 140./170.2(d) and 141.0(e)/ 180.1, or 141.0(b)2N / 180.2 for additions or alterations. Solar water heating systems are documented on the NRCC-SAB compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03		
My project consists of (check all that apply):	System Type[1,2]	System Components		
☒ New system (DHW system being installed for the first time)	Individual System (serving nonresidential spaces)	☒ Equipment	☒ Distribution	☒ Controls
☒ New system (DHW system being installed for the first time)	Individual System (serving nonresidential spaces)	☒ Equipment	☒ Distribution	☒ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment	☐ Distribution	☐ Controls

[1]*FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*
[2] *Dwelling units refers to hotel/motel guest rooms and units in a multifamily residential occupancy.*
[3] *DHW systems serving 2 or more dwelling units are considered "Central Systems" for multifamily occupancies*

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. or the table indicated as not compliant for guidance.

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	**Compliance Results**
Table F	Table G	Table H	
Yes	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 20 of 20)**

Documentation Author's Declaration Statement

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Brent Yang	Documentation Author Signature: *Brent Yang*
Company: Lawrence Engineering Group	Signature Date: 2023-12-20
Address: 4910 E Clinton Way	CEA/HERS Certification Identification (if applicable):
City/State/Zip: Fresno, CA 93727	Phone: 5594310101

Responsible Person's Declaration statement

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: Juan M Gonzalez	Responsible Designer Signature:	
Company: Gonzalez Architects Inc		
Address: 7545 N Del Mar Ave #203	Date Signed:	
City/State/Zip: Fresno, CA 93711	License #: C-12865	
Phone: 559-497-1542	Title:	Scope:
Responsible Designer Name: Michael D Cantelmi	Responsible Designer Signature:	
Company: Lawrence Engineering Group		
Address: 4910 E Clinton Way	Date Signed: 2023-12-20	
City/State/Zip: Fresno, CA 93727	License #: M23588	
Phone: 559-431-0101	Title:	Scope:

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 19 of 20)**

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections made by Documentation Author indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP).

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Covered Process	NRCA-PRC-02-F Kitchen Exhaust
Mechanical	NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap
Mechanical	NRCA-MCH-03-A - Constant Volume Single Zone HVAC
Mechanical	NRCA-MCH-05-A - Air Economizer Controls
Mechanical	NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.
Mechanical	NRCA-MCH-08-A Valve Leakage Test
Mechanical	NRCA-MCH-09-A Supply Water Temperature Reset Controls
Mechanical	NRCA-MCH-10-A Hydronic System Variable Flow Controls
Mechanical	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units
Mechanical	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance

N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Selections made by Documentation Author indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online

There are no Certificates of Verification applicable to this project

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	Chowchilla ESD Fairmead ES MPB	**Report Page:**	**(Page 4 of 8)**
		Date Prepared:	12/20/2023

F. DOMESTIC HOT WATER EQUIPMENT

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-3.5. Label required per 110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per 110.3(c)5
20	☐	☐	☒	Isolation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per 110.3(c)6
21	☐	☐	☒	School buildings < 25,000 ft^2 and < 4 stories must install a heat pump water heating system per 140.5(a)1. Water heating systems serving an individual bathroom space may be an instantaneous electric water heater.

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	Chowchilla ESD Fairmead ES MPB	**Report Page:**	**(Page 3 of 8)**
		Date Prepared:	12/20/2023

F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in 110.1 and 110.3. Compliance with prescriptive requirements in 140.5(c) / 170.2(d) must also be demonstrated and with 141.0 / 180.1/ 180.2 for addition and alteration scopes.

Equipment Schedule: Water Heating Efficiency and Standby Loss

03	04		05	06		
System Name	WH-1 Bradford White EF-100T-199E-3NA	Exception to 140.5(c)/ 170.2(d)3	☐	Gas Service Water Heating System >= 1MMBtu/h[1]	Capacity-weighted Average Efficiency %	

07	08	09	10		11	12	13	14	15
Name or Item Tag	Equipment Type	Volume (gal)	Rated Input Capacity (Btu/h)	Max GPM/ First Hour Rating (FHR)	Rated Efficiency	Minimum Efficiency Required	Efficiency Unit	Designed Standby Loss	Maximum Standby Loss
WH-1 Bradford White EF-100T-199E-3NA	Commercial Package Gas Hot Water Supply Boilers (300k - <1MMBtu/h)	100	199,999	FHR >=75	0.97	0.57	UEF		

03	04		05	06		
System Name	30 Gallon Electric	Exception to 140.5(c)/ 170.2(d)3	☐	Gas Service Water Heating System >= 1MMBtu/h[1]	Capacity-weighted Average Efficiency %	

07	08	09	10		11	12	13	14	15
Name or Item Tag	Equipment Type	Volume (gal)	Rated Input Capacity (Btu/h)	Max GPM/ First Hour Rating (FHR)	Rated Efficiency	Minimum Efficiency Required	Efficiency Unit	Designed Standby Loss	Maximum Standby Loss
30 Gallon Electric	Consumer Rated Electric Storage	26	20,473	18 <= FHR <51	0.92	0.93	UEF		

[1]*FOOTNOTE: In systems >= 1MMBtu/h with multiple units, gas water heaters with input capacity > 100,000 Btu/h may meet 90% Et requirements via an input capacity-weighted average.*

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	Chowchilla ESD Fairmead ES MPB	**Report Page:**	**(Page 2 of 8)**
		Date Prepared:	12/20/2023

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	Chowchilla ESD Fairmead ES MPB	**Report Page:**	**(Page 7 of 8)**
		Date Prepared:	12/20/2023

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-PLB-E - Must be submitted for all buildings

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	Chowchilla ESD Fairmead ES MPB	**Report Page:**	**(Page 6 of 8)**
		Date Prepared:	12/20/2023

H. DOMESTIC HOT WATER CONTROLS

This table is used to demonstrate compliance with control requirements in 110.3 for all occupancies. For multifamily residential and hotel/motel occupancies, compliance is also demonstrated with requirements in 160.4(e) / 170.2(d).

	Yes	No	Not Applicable	Requirement
01	☒	☐	☐	Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per 110.3(a).
02	☒	☐	☐	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per 110.3(c)1 unless covered by California Plumbing Code 613.0.
03	☐	☐	☒	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	☐	☐	☒	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per 170.2(d) or 180.1(b)3 for additions.
05	☐	☐	☒	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per 170.2(d).
06	☐	☐	☒	Combustion air positive shut-off shall be provided per 160.4(3).on all newly installed commercial boilers as follows: • Boilers with input capacity >= 2.5 MMBtu/h, in which the boiler is designed to operate with a nonpositive vent static pressure • Boilers where one stack serves two or more boilers with a total combined input capacity per stack of 2.5 MMBtu/h.
07	☐	☐	☒	Boiler combustion air fans with motor >= 10 hp shall meet one of the following • The fan motor shall be driven by a variable speed drive OR • The fan motor shall include controls that limit the fan motor demand to <=30% of the total design wattage at 50% of the design air volume.
08	☐	☐	☒	Newly installed boilers with an input capacity (d:gte/] 5MMBtu/h and a steady state full-load combustion efficiency < 90% shall maintain excess (stack-gas) oxygen concentrations <= 5% by volume on a dry basis over firing rates of 20-100%. Combustion air volume shall be controlled with respect to firing rate or flue gas oxygen concentration. Use of a common gas and combustion air control linkage or jack shaft is prohibited.

STATE OF CALIFORNIA
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CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	Chowchilla ESD Fairmead ES MPB	**Report Page:**	**(Page 5 of 8)**
		Date Prepared:	12/20/2023

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in 120.3 and 140.5. For multifamily and hotel/motel occupancies, compliance is demonstrated with requirements 110.3(c), 160.4, 170.2(d).

Mandatory Pipe Insulation All Occupancies

13	☐	For systems serving dwelling units, pipe insulation must meet the minimum insulation requirements in Table 160.4-A (see blow) except: • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall abut securely against all framing members • Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with Quality Insulation Installation (QII) as specified in the Reference Residential Appendix RA3.5. • Piping surrounded with a minimum of 1 inch of wall insulation, 2 inches of crawlspace insulation, or 4 inches of attic insulation, shall not be required to have pipe insulation.
14	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per 120.3: • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
15	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per 120.3(b) / 160.4(f). Pipe insulation buried below grade must be installed in a water proof and non-crushable casing or sleeve.

TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft^2 per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)			
			< 1	1 to < 1.5	1.5 to < 4	1.5 to < 4 Multifamily & Hotel/Motel
			Minimum Insulation Required			
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11	2.0 in or R-16

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 JUAN M. GONZALEZ, A.I.A.
TEL: 559-497-1542
FAX: 559-497-1549

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELMI
No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101
(559) 431-0101
23123
Fresno, CA 93727
FAX (559) 431-1362

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
TITLE 24 DOCUMENTS

M6.03

STATE OF CALIFORNIA
Process Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PRC-E
Project Name: Chowchilla ESD Fairmead ES MPB	Report Page:	(Page 2 of 6)
	Date Prepared:	12/20/2023

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through R. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Refrigerated Warehouse / Space 120.6(a) (See Table F)	Commercial Refrigeration 120.6(b) (See Table G)	Parking Garage Exhaust 120.6(c) (See Table H)	Process Boilers 120.6(d) (See Table I)	Compressed Air Systems 120.6(e) (See Table J)	Elevators 120.6(f) / 160.7 (See Table K)	Escalators & Moving Walkways 120.6(g) (See Table L)	Computer Rooms 140.9(a) (See Table M)	Commercial Kitchens 140.9(b) (See Table N)	Laboratory/ Factory Exhaust 140.9(c) (See Table O)	Controlled Environment Horticulture 120.6(h) (See Table P)	Steam Traps 120.6(i) (See Table Q)	Multifamily Pool/Spa 160.7 (See Table R)	**Compliance Results**
								Yes					COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. REFRIGERATED WAREHOUSES/SPACES

This section does not apply to this project.

G. COMMERCIAL REFRIGERATION

This section does not apply to this project.

H. ENCLOSED PARKING GARAGE EXHAUST

This section does not apply to this project.

STATE OF CALIFORNIA
Process Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PRC-E
Project Name: Chowchilla ESD Fairmead ES MPB	Report Page:	(Page 5 of 6)
	Date Prepared:	12/20/2023

S. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title
NRCI-PRC-01-E - Covered Process

T. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

STATE OF CALIFORNIA
Process Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PRC-E
Project Name: Chowchilla ESD Fairmead ES MPB	Report Page:	(Page 1 of 6)
Project Address: 19421 Ave 22 3/4	Date Prepared:	12/20/2023

A. GENERAL INFORMATION

01	Project Location (city)	Chowchilla	04	Total Conditioned Floor Area	12180
02	Climate Zone	13	05	Total Unconditioned Floor Area	203
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

● Gymnasium ● Support Areas ● Warehouse ● All Other Occupancies

B. PROJECT SCOPE

This table includes process systems that are within the scope of the permit application and are demonstrating compliance with mandatory requirements in 120.6 / 160.7 or prescriptive requirements in 140.9.

My project consists of: (check all that apply):

01		02	
☐	Refrigerated Spaces <3,000 ft² Total (no Title 24, Pt6 requirements)	☐	Escalator & Moving Walkway Speed Controls (mandatory 120.6(g))
☐	Refrigerated Spaces >=3,000 ft² Total (mandatory 120.6(a))	☐	Computer Rooms (mandatory 120.6(j) and prescriptive 140.9(a))[1]
☐	Food /Beverage Stores >8,000 ft² cfa (mandatory 120.6(b))	☒	Commercial Kitchen Ventilation/Exhaust (prescriptive 140.9(b))[1]
☐	Enclosed Parking Garage Exhaust >=10,000 cfm (mandatory 120.6(c))	☐	Laboratory Exhaust/Factory Exhaust & Fume Hood (prescriptive 140.9(c))[1]
☐	Newly Installed Process Boilers (mandatory 120.6(d))	☐	Pool/Spa (mandatory 110..4 / 160.7)
☐	Compressed Air Systems Combined HP >= 25 (mandatory 120.6(e))	☐	Controlled Environment Horticulture (mandatory 120.6(h))
☐	Elevator Lighting & Ventilation Controls (mandatory 120.6(f) / 160.7)	☐	New Steam Traps (mandatory 120.6(i))

[1] FOOTNOTES: These building features can comply using the performance method. If using the performance method for these features, compliance should be demonstrated on the NRCC-PRF-E.

STATE OF CALIFORNIA
Process Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PRC-E
Project Name: Chowchilla ESD Fairmead ES MPB	Report Page:	(Page 4 of 6)
	Date Prepared:	12/20/2023

N. COMMERCIAL KITCHEN EXHAUST AND VENTILATION

05	The kitchen/ dining facility has a total Type I and Type II kitchen hood exhaust airflow > 5000 cfm and is designed to have one of the following per 140.9(b)2B: Demand ventilation system(s) on at least 75% of the exhaust air per 140.9(b)2Bii

Kitchen Exhaust: Airflow Rate 140.9(b)1B

01	Kitchen Name or Item Tag	Kitchen	Compliance Method per 140.9(b)1B		Type1 hood design exhaust rates do not exceed the maximum allowed per §140.9(b)1 as documented below	
02	03	04	05	06	07	08
Name or Item Tag	Hood Type[1]	Hood Style	Hood Length (ft)	Equipment Duty	Design Hood Exhaust Rate CFM	Max Hood Exhaust Rate Allowed CFM
KH-1	Type I	Wall-mounted Canopy	14	Heavy Duty	2800	3920

[1] FOOTNOTES: Type II hoods do not have a max hood exhaust air rate per 140.9(b)1B

O. LABORATORY AND FACTORY EXHAUST AND FUME HOODS

This section does not apply to this project.

P. CONTROLLED ENVIRONMENT HORTICULTURE

This section does not apply to this project.

Q. STEAM TRAPS IN INDUSTRIAL FACILITIES

This section does not apply to this project.

R. Pool & SPAs

This section does not apply to this project.

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CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: Chowchilla ESD Fairmead ES MPB	Report Page:	(Page 8 of 8)
Project Address: 19421 Ave 22 3/4	Date Prepared:	12/20/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Brent Yang	Documentation Author Signature: Brent Yang
Company: Lawrence Engineering Group	Signature Date: 2023-12-20
Address: 4910 E Clinton Way	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Fresno CA 93727	Phone: 5594310101

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Michael D Cantelmi	Responsible Designer Signature:
Company: Lawrence Engineering Group	Date Signed: 2023-12-20
Address: 4910 E Clinton Way	License: M23588
City/State/Zip: Fresno CA 93727	Phone: 559-431-0101

STATE OF CALIFORNIA
Process Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PRC-E
Project Name: Chowchilla ESD Fairmead ES MPB	Report Page:	(Page 3 of 6)
	Date Prepared:	12/20/2023

I. PROCESS BOILER

This section does not apply to this project.

J. COMPRESSED AIR SYSTEMS

This section does not apply to this project.

K. ELEVATOR LIGHTING AND VENTILATION

This section does not apply to this project.

L. ESCALATORS AND MOVING WALKWAYS SPEED CONTROLS

This section does not apply to this project.

M. COMPUTER ROOM SYSTEM SUMMARY

This section does not apply to this project.

N. COMMERCIAL KITCHEN EXHAUST AND VENTILATION

This table contains all new and replacement hoods being installed within the scope of the permit application. Table N is used to demonstrate compliance with prescriptive requirements found in 140.9(b).

Kitchen Ventilation 140.9(b)2

01	☐	Existing kitchen hoods not being replaced as part of an addition or alteration (do not need to meet requirements)
	Requirements	
02	Replacement Air to Hood Compliance Method 140.9(b)1A	
	Not providing replacement air directly to the hood(s)	
03	Mechanically cooled or heated makeup air delivered to any space with a kitchen hood is designed per 140.9(b)2A to not exceed the greater of:	
	The supply flow required to meet the space heating and cooling load	
04	Location that is supplying transfer air:	

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE		NRCC-PRC-E
Project Name: Chowchilla ESD Fairmead ES MPB	Report Page:	(Page 6 of 6)
Project Address: 19421 Ave 22 3/4	Date Prepared:	12/20/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Brent Yang	Documentation Author Signature: Brent Yang
Company: Lawrence Engineering Group	Signature Date: 2023-12-20
Address: 4910 E Clinton Way	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Fresno CA 93727	Phone: 5594310101

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
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4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Michael D Cantelmi	Responsible Designer Signature:
Company: Lawrence Engineering Group	Date Signed: 2023-12-20
Address: 4910 E Clinton Way	License: M23588
City/State/Zip: Fresno CA 93727	Phone: 559-431-0101

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELMI
No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 (559) 431-0101 23123 Fresno, CA 93727 FAX (559) 431-1362

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 TEL: 559-497-1542 JUAN M. GONZALEZ, A.I.A.
FAX: 559-497-1549

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE:
TITLE 24 DOCUMENTS

M6.04

ELECTRICAL GENERAL NOTES

1. ALL WORK SHALL MEET THE LATEST ADOPTED ADDITIONS OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 24 AND ALL OTHER APPLICABLE REGULATIONS, WHICH INCLUDE:

CALIFORNIA BUILDING CODE	2022
CALIFORNIA ELECTRICAL CODE	2022
NON RESIDENTIAL CEC ENERGY STANDARDS	2022

   NOTHING IN THE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

2. IT IS THE INTENTION OF THESE PLANS AND SPECIFICATIONS TO COVER EVERYTHING REQUIRED TO PROVIDE FOR COMPLETE AND OPERATIVE SYSTEMS. THE CONTRACTOR IS TO FURNISH LABOR, MATERIAL, TRANSPORTATION, EQUIPMENT, MISCELLANEOUS SERVICES, ETC. REQUIRED TO ACCOMPLISH THIS RESULT. ANYTHING WHICH MAY BE REASONABLY CONSTRUED AS A NECESSARY PART OF THE INSTALLATION IS TO BE INCLUDED, WHETHER OR NOT SPECIFICALLY SHOWN OR MENTIONED.

3. THE CONTRACTOR SHALL EXAMINE THE SITE AND EXISTING CONDITIONS AND MAKE ALLOWANCES IN THE BID FOR ANY CONDITIONS NOT SHOWN ON THE ELECTRICAL DOCUMENTS.

4. THE PLANS AND SPECIFICATIONS ARE INTENDED TO BE USED AS CONSTRUCTION GUIDELINES AND ARE NOT THE TOTAL INSTRUMENT OF CONTRACT DOCUMENTS. IT IS NOT THE INTENTION OF ANY CONSTRUCTION PLANS TO DIVIDE WORK AMONG DIFFERENT TRADES. VERIFY THE SCOPE OF WORK WITH THE ARCHITECT AND THE GENERAL CONTRACTOR.

5. ELECTRICAL ROUTING IS DIAGRAMMATIC ONLY. ACTUAL ROUTING & PHYSICAL CONDITIONS MAY VARY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL ROUTING, CONNECTIONS, & PROVISION OF ALL APPURTENANCES NECESSARY FOR A COMPLETE & OPERATING SYSTEM.

6. ELECTRICAL EQUIPMENT SHALL HAVE AN APPROVED TESTING LABORATORY LABEL ATTACHED (UL, CSA ETC.) PER CEC 110.2.

7. PROVIDE LABELING AND DIRECTORIES FOR ALL SWITCHBOARDS AND PANELBOARDS PER CEC 408.4.

8. ELECTRICAL EQUIPMENT SHALL HAVE A SHORT CIRCUIT CURRENT RATING CAPABLE OF WITHSTANDING THE AVAILABLE SHORT CIRCUIT CURRENT PER CEC 110.9.

9. PROVIDE MINIMUM 30" WIDE x 78" HIGH x 36" DEEP WORK CLEARANCES IN FRONT OF PANELS, SERVICE OR EQUIPMENT RATED AT 120/208V 3Ø 4W PER CEC 110.26.

10. PROVIDE MINIMUM 30" WIDE x 78" HIGH x 42" DEEP WORK CLEARANCES IN FRONT OF PANELS, SERVICE OR EQUIPMENT RATED AT 277/480V 3Ø 4W PER CEC 110.26.

11. ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUIT OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE MOUNTED BETWEEN 15" AFF AND 48" AFF AND SHALL COMPLY WITH CBC SECTION 11B-308. THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX. IF THE REACH IS OBSTRUCTED (E.G. BY CASEWORK, COUNTERS, ETC.), RECEPTACLES SHALL BE LOCATED WITHIN THE REACH RANGES SPECIFIED IN CBC 11B-308.2.2 AND 11B-308.3.2.

12. CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES, OR COOLING, HEATING AND VENTILATING EQUIPMENT SHALL BE MOUNTED BETWEEN 15" AFF AND 48" AFF AND SHALL COMPLY WITH CBC SECTION 11B-308. THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX. IF THE REACH IS OBSTRUCTED (E.G. BY CASEWORK, COUNTERS, ETC.), SWITCHES AND CONTROLS SHALL BE LOCATED WITHIN THE REACH RANGES SPECIFIED IN CBC 11B-308.2.2 AND 11B-308.3.2.

13. ALL WALL AND SURFACE MOUNTED FIXTURES PROTRUDING IN THE PATH OF TRAVEL (POT) OR COMMON PEDESTRIAN WAYS SHALL COMPLY WITH CBC 11B-307.2, OR SHALL BE MOUNTED LESS THAN 27" AFF OR GREATER THAN 80" AFF, OR SHALL BE PROVIDED WITH A BARRIER CONFORMING TO CBC 11B-307.4.

14. EMERGENCY EGRESS LIGHTING SHALL PROVIDE A MINIMUM LUMINANCE OF 1 FOOTCANDLE AT THE WALKING SURFACE FOR A MINIMUM OF 90 MINUTES.

15. FIRE ALARM EQUIPMENT SHALL BE SERVED BY DEDICATED FIRE ALARM BRANCH CIRCUITS PER NFPA 72 10.6.5.1.2. THE CIRCUIT NUMBER SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM EQUIPMENT PER NFPA 10.6.5.2.1. THE CIRCUIT BREAKER SHALL BE EQUIPPED WITH RED HANDLE AND LOCK-ON DEVICE, AND PERMANENTLY IDENTIFIED AS "FIRE ALARM CIRCUIT" PER NFPA 72 10.6.5.2.2, 10.6.5.2.3, 10.6.5.2.4, AND 10.6.5.4.

16. WIRING FOR 120/208V AND 277/480V SYSTEMS SHALL BE MIN. #12 AWG THHN/THWN-2 COPPER.

17. FEEDERS SIZE #4 AND LARGER SHALL BE MEGGER TESTED. TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER.

18. COLORS/FINISHES/MATERIALS FOR ALL ELECTRICAL DEVICES, PLATES, LIGHT FIXTURES, ETC. SHALL BE CHOSEN BY THE ARCHITECT.

19. PROVIDE PERMANENT LOCK-OPEN DEVICES ON CIRCUIT BREAKERS SERVING ELECTRIC WATER HEATERS TO MEET THE REQUIREMENTS OF CEC 422.31.

20. CONTRACTOR SHALL EXTEND ALL SIGNAL AND FIRE ALARM SYSTEMS AS REQUIRED. MODIFY HEAD-IN EQUIPMENT TO ACCOMMODATE NEW DEVICES AS REQUIRED. VERIFY THE CONDITION AND EXPANDABILITY OF ALL HEAD-IN EQUIPMENT PRIOR TO BID AND MODIFY ACCORDINGLY.

21. EXISTING EQUIPMENT TO BE REMOVED AND/OR REPLACED SHALL BE DELIVERED TO THE DISTRICT MAINTENANCE DEPARTMENT OR DISPOSED OF, AT THE DISCRETION OF THE DISTRICT.

22. CALL USA UNDERGROUND ALERT AND VERIFY WITH DISTRICT THE DESIRED ROUTING AND LOCATIONS OF UNDERGROUND CONDUITS AND STRUCTURES PRIOR TO TRENCHING

23. ALL UNDERGROUND CONDUITS SHALL HAVE MINIMUM 24" COVER. TRENCH PER DETAIL 1/E1.5. INSTALL GALVANIZED RIGID STEEL RISERS & ELBOWS WHERE RISERS OCCUR. WRAP GRS BELOW GRADE OR PROVIDE PVC COATED GRS. EXPOSED CONDUIT SHALL BE GRS TO 8'-0", THEN EMT ABOVE AS APPROPRIATE. UNDER NO CIRCUMSTANCE SHALL PVC CONDUIT BE INSTALLED ABOVE GRADE.

24. CONDUIT INSTALLED ABOVE GRADE SHALL BE MIN. 3/4" TRADE SIZE. CONDUIT BELOW GRADE SHALL BE MIN. 1" TRADE SIZE.

25. PROVIDE (4) 1" CONDUIT STUBS FROM NEW ELECTRICAL PANEL TO ACCESSIBLE ATTIC SPACE FOR FUTURE USE.

26. HOLES ARE NOT ALLOWED THROUGH TOP PLATES OF BEARING WALLS AND SHEAR WALLS.

27. INCLUDE FIRE STOP SYSTEMS REQUIRED FOR ALL WORK AFFECTED BY FIRE RATED ASSEMBLIES.

28. INCLUDE ALL WORK REQUIRED TO INVESTIGATE, DEMOLISH, & RECONNECT EXISTING ITEMS.

29. ALL LOW VOLTAGE EQUIPMENT SHALL BE DEENERGIZED PRIOR TO DEMO WORK. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO LIVE EQUIPMENT.

ELECTRICAL SYMBOLS

INTRUSION / SURVEILLANCE

SYMBOL	DESCRIPTION	NOTES
	INTRUSION DOOR/WINDOW CONTACT	PROVIDE 1/2"C TO ACCESSIBLE ATTIC SPACE
M	INTRUSION PIR MOTION SENSOR AT CEILING	ROUGH IN WITH 1G BOX & 1/2"C. TO ACCESSIBLE ATTIC SPACE
M	INTRUSION MOTION SENSOR AT WALL	ROUGH IN WITH 1G BOX & 1/2"C. TO ACCESSIBLE ATTIC SPACE
G	INTRUSION GLASS BREAK SENSOR AT CEILING	ROUGH IN WITH 1G BOX & 1/2"C. TO ACCESSIBLE ATTIC SPACE
P	INTRUSION STAFF PANIC BUTTON	ROUGH IN WITH 1G BOX & 1/2"C. TO ACCESSIBLE ATTIC SPACE
K	INTRUSION KEY PAD AT +48" AFF TO TOP OF BOX	ROUGH IN WITH 1G BOX & 1/2"C. TO ACCESSIBLE ATTIC SPACE
Z	INTRUSION 4-ZONE ADDRESSABLE MODULE IN ACCESSIBLE ATTIC SPACE	
C	SURVEILLANCE (CCTV) CAMERA EXACT LOCATIONS DETERMINED IN FIELD PER OWNER C=CEILING MOUNTED	JUNCTION BOX WITH 1"C. TO ACCESSIBLE ATTIC SPACE. PROVIDE (2) CAT6 CABLES TO EACH CAMERA. VERIFY REQUIREMENTS AND LOCATIONS PRIOR TO ROUGH-IN.
DVR	SURVEILLANCE (CCTV) DVR	
SEC	"INTRUSION SYSTEM MAIN PANEL"	
INT	"INTRUSION SYSTEM TERMINAL BLOCK"	

LIGHTING

SYMBOL	DESCRIPTION	NOTES
	POLE WITH POST TOP AREA LUMINAIRE	
	POLE WITH SINGLE AREA LUMINAIRE	
	POLE WITH DOUBLE AREA LUMINAIRES	
	LAY-IN LIGHT FIXTURE	
	SURFACE CEILING LIGHT	
	RECESSED DOWN LIGHT	
	WALL LIGHT	
	EXIT SIGN, CEILING	ARROWS INDICATE CHEVRON DIRECTIONS
	EXIT SIGN, WALL	ARROWS INDICATE CHEVRON DIRECTIONS
(A)	FIXTURE TYPE "A"	REFER TO FIXTURE SCHEDULE
	FIXTURE W/ BATTERY BACKUP	PROVIDE UNSWITCHED HOT TO BATTERY PACK
$	SWITCH AT +48" AFF TO TOP OF BOX	20A 277V QUIET TOGGLE
Φ	WALL MOUNTED DUAL TECH OCCUPANCY SENSOR SWITCH, 0-10V DIMMING, AT +48" AFF TO TOP OF BOX	ROUGH IN WITH 1G BOX PER SWITCH W/ RING, 1"C. TO ACCESSIBLE ATTIC SPACE
ΦEF	WALL MOUNTED ULTRASONIC OCCUPANCY SENSOR SWITCH, W/ SEPARATE EXHAUST FAN RELAY, AT +48" AFF TO TOP OF BOX	ROUGH IN WITH 1G BOX PER SWITCH W/ RING, 1"C. TO ACCESSIBLE ATTIC SPACE
$	DIGITAL WIRELESS ON/OFF SWITCH, AT +48" AFF TO TOP OF BOX. nLIGHT AIR SYSTEM.	ROUGH IN WITH 1G BOX & RING, 1"C. TO ACCESSIBLE ATTIC. CONSTANT 120-277V LIGHTING CIRCUIT
D	DIGITAL WIRELESS DIMMER SWITCH, AT +48" AFF TO TOP OF BOX. nLIGHT AIR SYSTEM.	ROUGH IN WITH 1G BOX & RING, 1"C. TO ACCESSIBLE ATTIC. CONSTANT 120-277V LIGHTING CIRCUIT
D OS	DIGITAL WIRELESS DIMMER SWITCH W/ INTEGRAL OCCUPANCY SENSOR AND PHOTOSENSOR, AT +48" AFF TO TOP OF BOX. nLIGHT AIR SYSTEM.	ROUGH IN WITH 1G BOX & RING, 1"C. TO ACCESSIBLE ATTIC. CONSTANT 120-277V LIGHTING CIRCUIT
OS	DIGITAL WIRELESS OCCUPANCY SENSOR W/ PHOTOSENSOR, CEILING MOUNTED. nLIGHT AIR SYSTEM.	REQUIRES 24VDC PACK.
hOS	DIGITAL WIRELESS OCCUPANCY SENSOR W/ PHOTOSENSOR, WALL MOUNTED. nLIGHT AIR SYSTEM.	ROUGH IN WITH 1G BOX & RING, 1"C. TO ACCESSIBLE ATTIC. REQUIRES 24VDC PACK.
GW	DIGITAL GATEWAY nLIGHT AIR SYSTEM.	PROVIDE (1) GATEWAY AT EACH BUILDING AND CONNECT TO LAN. PROVIDE BOX/OUTLET AT GATEWAY LOCATION FOR GATEWAY POWER SUPPLY.
PP	DIGITAL WIRELESS DIMMING POWER PACK, VERIFY 0-10V, 2- OR 3-WIRE, MLV, OR ELV BY FIXTURE. nLIGHT AIR SYSTEM.	MOUNT PACK TO J-BOX IN ACCESSIBLE ATTIC SPACE OR INCONSPICUOUS, HIGH ON WALL, WHEN NO CEILING.
PPE	DIGITAL WIRELESS DIMMING POWER PACK, W/ EMERGENCY CONTROL RELAY. nLIGHT AIR SYSTEM.	MOUNT PACK TO J-BOX IN ACCESSIBLE ATTIC SPACE OR INCONSPICUOUS, HIGH ON WALL, WHEN NO CEILING.
PR	DIGITAL WIRELESS RECEPTACLE CONTROL RELAY CONTROLLED BY OCCUPANCY SENSOR. nLIGHT AIR SYSTEM.	MOUNT PACK TO J-BOX IN ACCESSIBLE ATTIC SPACE OR INCONSPICUOUS, HIGH ON WALL, WHEN NO CEILING. (1) RELAY PER CIRCUIT IN EACH CONTROLLED AREA.
	PRIMARY DAYLIGHT ZONE BOUNDARY	
	SECONDARY DAYLIGHT ZONE BOUNDARY	

DATACOM

SYMBOL	DESCRIPTION	NOTES
	TERMINAL CABINET	
	DATA OUTLET (RJ-45 CAT6) WITH (2) JACKS AT +18" AFF, U.O.N. QTY. OF JACKS NOTED WHEN NOT (2)	4-11/16 SQ. BOX, 1G RING, MODULAR PLATE, & 1"C. TO ACCESSIBLE ATTIC SPACE. PULL CABLING TO RESPECTIVE PATCH PANEL AND TERMINATE JACKS AT EACH END. REFER TO SPECIFICATIONS.
	(1) WAP DATA JACK (RJ-45 CAT6A) MOUNTED IN ATTIC SPACE.	SEE DETAIL 1/E1.9
	WALL MOUNT VoIP OUTLET (RJ-45 CAT6) AT +45" AFF, U.O.N.	4-11/16 SQ. BOX, 1G RING, MODULAR PLATE, & 3/4"C. TO ACCESSIBLE ATTIC SPACE. PULL CABLING TO RESPECTIVE PATCH PANEL AND TERMINATE JACKS AT EACH END. REFER TO SPECIFICATIONS.
TEL	"TEL. SYSTEM HEAD END"	
TF	"TEL. SYSTEM TERMINAL BLOCK"	
MDF/MC	"MAIN DISTRIBUTION FRAME"/"MAIN CROSS-CONNECT"	
IDF/HC	"INTERMEDIATE DISTRIBUTION FRAME"/ "HORIZONTAL CROSS-CONNECT"	

PA/CLK

SYMBOL	DESCRIPTION	NOTES
S	PUBLIC ADDRESS SPEAKER, CEILING	HOMERUN SPEAKER CABLE TO PA TRM. BLK.
S	PUBLIC ADDRESS SPEAKER, WALL	HOMERUN SPEAKER CABLE TO PA TRM. BLK.
SWP	WP OUTDOOR PUBLIC ADDRESS SPEAKER	HOMERUN SPEAKER CABLE TO PA TRM. BLK.
SC	PUBLIC ADDRESS SPEAKER & CLOCK COMBINATON, WALL MOUNTED	HOMERUN SPEAKER CABLE TO PA TRM. BLK.
C	WALL CLOCK	REFER TO SPECIFICATIONS
PA	"P.A. SYSTEM HEAD END"	
PT	"P.A. SYSTEM TERMINAL BLOCK"	

MISC.

SYMBOL	DESCRIPTION	NOTES
	FIRE/SMOKE DAMPER	PROVIDE 120V F.A. CIRCUIT TO DAMPER VIA DEDICATED F.A. RELAY
B	SPRINKLER RISER BELL	PROVIDE 120V F.A. CIRCUIT
	WIREMOLD 5400 SURFACE WIREWAY	RISERS WHERE INDICATED ON DRAWINGS

POWER

SYMBOL	DESCRIPTION	NOTES
	SWITCHBOARD	REFER TO POWER SINGLE LINE DIAGRAM
	POWER PANEL	REFER TO PANEL SCHEDULE
J	JUNCTION BOX	4-11/16" SQUARE BOX & COVER PLATE MIN.
	DISCONNECT SWITCH, FUSIBLE	REFER TO MECH. PLANS & SPECS.
	COMBINATION STARTER/DISCONNECT SWITCH	REFER TO MECH. PLANS & SPECS.
M	MOTOR	REFER TO MECH. PLANS & SPECS.
	DUPLEX CONVENIENCE OUTLET AT +15" AFF TO BOTTOM OF BOX, U.O.N.	20A SPEC. GRADE, NEMA GROUNDED TAMPER RESISTANT, LEVITON #TDR20-W
	QUADPLEX CONVENIENCE OUTLET AT +15" AFF TO BOTTOM OF BOX, U.O.N.	20A SPEC. GRADE, NEMA GROUNDED TAMPER RESISTANT, LEVITON #TDR20-W
	GFI DUPLEX OUTLET AT +15" AFF TO BOTTOM OF BOX, U.O.N.	20A SPEC. GRADE, NEMA GROUNDED TAMPER RESISTANT, LEVITON #X7899-W OR GFI CIRCUIT BREAKER WITH #TDR20-W RECEPTACLE. SEE PANEL SCHEDULE.
	WEATHERPROOF, GFI DUPLEX OUTLET AT +15" AFF TO BOTTOM OF BOX, U.O.N. W/ WEATHERPROOF IN-USE TYPE COVER	20A SPEC. GRADE, NEMA GROUNDED TAMPER RESISTANT, LEVITON #X7899-W
	DUPLEX CONVENIENCE OUTLET AT +15" AFF TO BOTTOM OF BOX, U.O.N. SPLIT-WIRED WITH UNSWITCHED AND SWITCHED BY OCCUPANCY SENSOR	20A SPEC. GRADE, NEMA GROUNDED TAMPER RESISTANT, LEVITON #TDR20-S1W CODE COMPLIANT MARKING REQUIRED
	QUADPLEX CONVENIENCE OUTLET, CONTROLLED AT +15" AFF TO BOTTOM OF BOX, U.O.N. ONE UNSWITCHED AND ONE SWITCHED BY OCCUPANCY SENSOR	20A SPEC. GRADE, NEMA GROUNDED TAMPER RESISTANT, LEVITON #TDR20-W AND LEVITON #TDR20-S2W CODE COMPLIANT MARKING REQUIRED
	SPECIAL EQUIPMENT OUTLET AT +15" AFF TO BOTTOM OF BOX, U.O.N.	VERIFY REQ'TS W/ EQUIPMENT VENDOR TAMPER RESISTANT
EC	CORD REEL WITH QUAD GFI OUTLET IN RECESSED CEILING ENCLOSURE (VERIFY LOCATION PRIOR TO INSTALL)	HUBBELL #HBLI25124 SERIES W/ 25 FEET CORD RATED FOR 20A AT 120V 1Ø W/ NEMA 5-20R OUTLET. SEE DETAIL 5/E1.5. HUBBELL #HBLIPROBX ENCLOSURE. (MAX OPERATING WEIGHT 80 LBS)
	COPPER GROUND BUS BAR	3/4"C. WITH #6 GREEN GROUND WIRE TO G.E.C.

AUDIO/VIDEO

SYMBOL	DESCRIPTION	NOTES
PR	CEILING PROJECTOR LOCATION (1) DATA JACK, (1) HDMI JACK, (1) AUDIO JACK (VERIFY LOCATION PRIOR TO ROUGH-IN)	INSTALL 2-GANG BOX W/ (2) 1 1/4"C. TO ACCESSIBLE ATTIC SPACE. PULL HDMI & 1/8" TRS AUDIO TO A/V CABINET. PULL DATA TO IDF.
AV	AUDIO/VIDEO INPUT PLATE (1) HDMI JACK, (1) AUDIO JACK (VERIFY LOCATION PRIOR TO ROUGH-IN)	INSTALL 1-GANG BOX W/ (1) 1 1/4"C. TO ACCESSIBLE ATTIC SPACE. PULL HDMI & 1/8" TRS AUDIO TO A/V CABINET.
C	AUDIO/VIDEO CONTROLLER TOUCHSCREEN & AUDIO/VIDEO INPUTS (VERIFY LOCATION PRIOR TO ROUGH-IN)	INSTALL DEVICES INSIDE LOCK BOX.
M	MICROPHONE (2) INPUTS (VERIFY LOCATION PRIOR TO ROUGH-IN)	REFER TO SPECIFICATIONS
SP	AUDIO/VIDEO SPAEKER (VERIFY LOCATION PRIOR TO ROUGH-IN)	REFER TO SPECIFICATIONS
ALS	ASSISTIVE LISTENING SYSTEM ANTENNA	REFER TO SPECIFICATIONS.
MIC	WIRELESS MICROPHONE ANTENNA	REFER TO SPECIFICATIONS.

GENERAL

SYMBOL	DESCRIPTION	NOTES
	EXISTING DEVICES	
	EXISTING CONDUIT/WIRING	
	WIRING IN CONDUIT, BELOW GRADE	1" CONDUIT MIN.; PVC SCH 40
	WIRING IN CONDUIT, IN WALL OR CEILING	3/4" CONDUIT MIN.; EMT CONCEALED AND ABV. 96" EXPOSED; GRS BELOW 96" EXPOSED
	INDICATES INVERTER CIRCUIT WIRING	EMERGENCY CIRCUIT AND NORMAL CIRCUIT WIRING SHALL NOT BE RUN IN THE SAME RACEWAY
LV	LOW VOLTAGE WIRING IN ATTIC SPACE	TYPE PER EQUIPMENT MANUFACTURER
	CONDUIT RISER	3/4" CONDUIT MIN.
	FLEXIBLE CONDUIT	3/4" CONDUIT MIN.
	CONDUIT STUB AND CAP	3/4" CONDUIT MIN.
	CROSS HATCHES INDICATE NUMBER OF #12 AWG. CONDUCTORS IN CONDUIT, WHEN MORE THAN TWO. WIRE SIZE INDICATED ON PLANS WHEN OTHER THAN #12 AWG. PROVIDE GROUND PER CEC 250. PROVIDE DEDICATED NEUTRAL FOR EACH CIRCUIT.	3/4" CONDUIT MIN.
	CURVED CROSS HATCHES INDICATE #14 AWG PURPLE & GRAY CONDUCTORS FOR DIMMING CONTROL.	3/4" CONDUIT MIN.
A-15	HOME RUN (TO PANEL "A", CIRCUIT "15")	3/4" CONDUIT MIN.
(E)	"EXISTING"	
(N)	"NEW"	
U.O.N.	"UNLESS OTHERWISE NOTED"	
WP	"WEATHERPROOF" / NEMA 3R	
GFI	"GROUND FAULT INTERRUPTER"	

ELECTRICAL COMPONENT ANCHORAGE NOTES

ALL ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16, CHAPTERS 13, 26 AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING ELECTRICAL UTILITY SERVICE. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRAVERSE AND LONGITUDINAL DIRECTIONS.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTES

THE ELECTRICAL DISTRIBUTION SYSTEM SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16, SECTION 13.3 AS DEFINED IN ASCE 7-16, SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2022 CBC, SECTIONS 1617A.1.24, 1617A1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

THE ELECTRICAL DISTRIBUTION SYSTEM IS DETAILED ON THE APPROVED DRAWINGS WITH SPECIFIC NOTES AND DETAILS (OPTION 1)

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL.: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
ELECTRICAL SYMBOLS AND NOTES

E1.1

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

Hardin-Davidson Engineering
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Suite 200
Clovis, CA 93612
559.323.4995 tel
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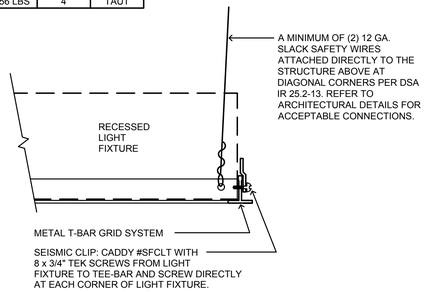
HEAVY DUTY GRID SYSTEM			
LIGHT FIXTURE DIMENSION	WEIGHT	NO. OF HANGER WIRES	TYPE
< 24" x 48"	< 56 LBS	2	SLACK
> 24" x 48"	> 56 LBS	4	TAUT



LIGHT FIXTURE GRID MOUNTING DETAIL

NO SCALE — 1

NOTE:
BOTTOM OF FIXTURE TO BE MIN. OF 80" AFF IF IT PROTRUDES MORE THAN 4" FROM FACE OF WALL (CBC 11B-307.2)

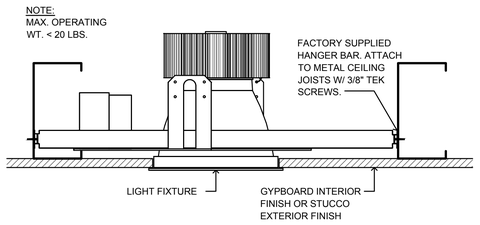
WALL FIXTURE SURFACE MOUNTING DETAIL

NO SCALE — 2

SURFACE FIXTURE MOUNTING DETAIL

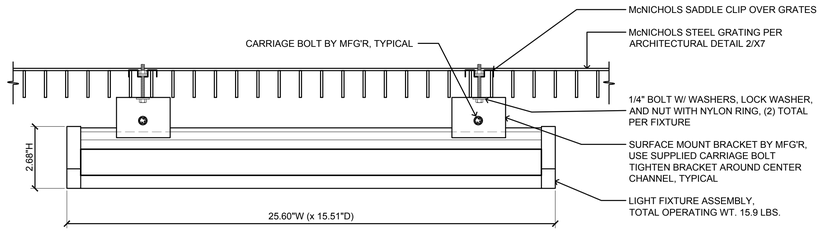
NO SCALE — 3

NOTE:
MAX. OPERATING WT. < 20 LBS.



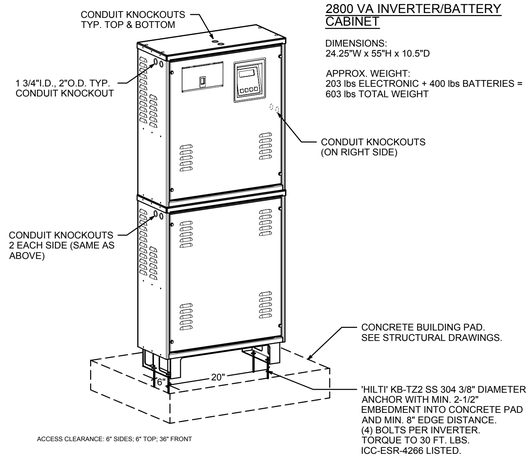
DOWNLIGHT MOUNTING DETAIL

NO SCALE — 4



TYPE "H" FIXTURE SURFACE MOUNTING DETAIL

NO SCALE — 5



2800 VA INVERTER/BATTERY CABINET

DIMENSIONS:
24.25"W x 55"H x 10.5"D

APPROX. WEIGHT:
203 lbs ELECTRONIC + 400 lbs BATTERIES = 603 lbs TOTAL WEIGHT

EMERGENCY LIGHTING INVERTER FLOOR MOUNTING DETAIL

NO SCALE — 6

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
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TEL: 559-497-1542
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PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
LIGHTING DETAILS

E1.2

REGISTERED PROFESSIONAL ENGINEER — C. SCOTT DAVIDSON — E17850 — ELECTRICAL — STATE OF CALIFORNIA

Hardin-Davidson Engineering
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Clovis, CA 93612
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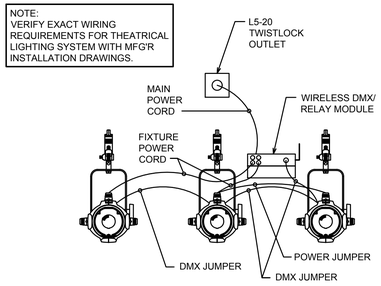
559.323.4928 fax

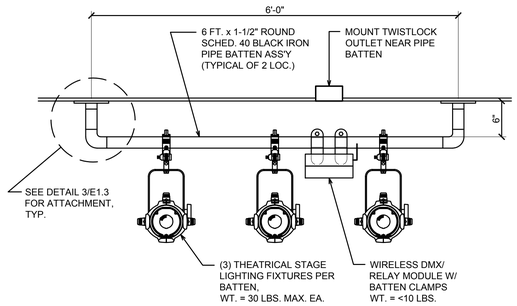
PLOTTED: 4/12/2024 6:21:50 PM
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backsheet 2.dwg



THEATRICAL FIXTURE WIRING DETAIL

1

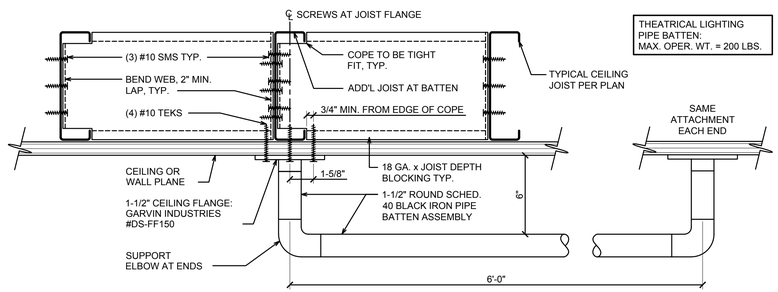
NO SCALE



THEATRICAL LIGHTING PIPE BATTEN ELEVATION

2

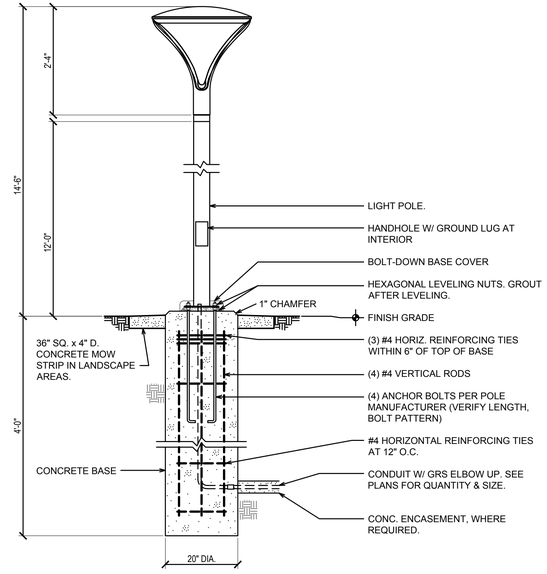
NO SCALE



THEATRICAL LIGHTING PIPE BATTEN ATTACHMENT

3

NO SCALE



(NOT PART OF THIS APPROVAL PER IR A-22 SECTION 2)

PEDESTRIAN AREA POLE LIGHT CONCRETE BASE DETAIL

4

NO SCALE

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE 12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
LIGHTING DETAILS

E1.3

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
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STATE OF CALIFORNIA

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559.323.4995 tel
559.323.4928 fax

LIGHTING GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM OF LIGHT FIXTURES AND CONTROLS THAT COMPLY WITH THE REQUIREMENTS OF CALIFORNIA ENERGY COMMISSION TITLE 24.
2. PROVIDE A COMPLETE AND OPERATIONAL CONTROLS PACKAGE IN LIGHTING AREAS. PROVIDE WALL SWITCHES, SENSORS, POWER PACKS, MISCELLANEOUS APPURTENANCES, FACTORY CABLING, AND FACTORY COMMISSIONING.
3. AN EQUAL SUBSTITUTE PACKAGE BY ANOTHER MANUFACTURER MAY BE ACCEPTABLE. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL REQUIRED COMPONENTS, ADDITIONAL WIRING FOR DIMMING OPERATION OF LIGHT FIXTURES, AND ANYTHING ELSE NEEDED FOR A COMPLETE AND OPERATIONAL SYSTEM. SUBMIT SUBSTITUTE PACKAGE, INCLUDING SHOP DRAWINGS, TO ENGINEER FOR REVIEW AND APPROVAL. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN REJECTION OF SUBSTITUTE COMPONENTS.
4. THE PLANS GENERALLY SHOW THE LOCATION OF SWITCHES, SENSORS, CONTROL MODULES ETC. ACTUAL LOCATIONS AND INSTALLATION REQUIREMENTS SHALL BE DETERMINED BY THE MANUFACTURER. SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL.
5. PROVIDE FACTORY COMMISSIONING, TO INCLUDE COMPLETE CONTROL WIRING/ CALIBRATION/ PROGRAMMING OF LIGHTING CONTROL COMPONENTS. SEE 1/E1.4.
6. LIGHTING SYSTEM ACCEPTANCE TESTING IS REQUIRED AS PER TITLE 24. THE CONTRACTOR SHALL INCLUDE ACCEPTANCE TESTING COSTS IN BID. THE CONTRACTOR IS RESPONSIBLE TO MAKE ANY ADJUSTMENTS NECESSARY TO ACHIEVE ACCEPTANCE.
7. LIGHTING FIXTURE COLORS, WHEN NOT SPECIFIED, SHALL BE SELECTED BY THE ARCHITECT'S OFFICE. DO NOT SUBMIT COLORS THAT HAVE NOT BEEN APPROVED BY THE ARCHITECT.

TYPE OF SPACE	MANUAL ON/OFF/OVERRIDE	DIMMING SWITCH	AUTOMATIC DAYLIGHT DIMMING WHEN AVAILABLE	OCCUPANCY SENSOR ON	OCCUPANCY SENSOR ON TO 70%	OCCUPANCY SENSOR REFER TO 60% AFTER 10 MIN	OCCUPANCY SENSOR OFF AFTER 20 MIN	GATEWAY OPEN HOURS SCHEDULE ON	GATEWAY CLOSED & HOLIDAY HOURS SCHEDULE OFF	GATEWAY SHADOWS SWITCHES DURING OPEN HOURS	COLOR TOUCHSCREEN WITH AT LEAST 4 SCENES	REMOTE ON/OFF CONTROL OR KEY SWITCH	CONTROLLED POWER RECEPTACLES	DEMAND RESPONSE CAPABLE	ASTRONOMIC TIMECLOCK ON/OFF	ASTRONOMIC TIMECLOCK DIMMING	ASTRONOMIC TIMECLOCK A/B RELAYS
ENTRY / LOBBY	X	X	X	X		X		X	X	X	X		X				
CORRIDOR	X			X	X		X		X	X							
OFFICE	X	X	X			X		X					X				
CLASSROOM	X	X	X			X		X									
CONFERENCE ROOM	X	X	X			X		X					X				
MULTI-PURPOSE	X	X	X			X		X				X					
GYMNASIUM	X	X	X			X		X				X					
CAFETERIA	X	X	X			X		X				X					
KITCHEN	X	X	X			X		X									
KITCHENETTES IN OFFICES	X	X	X			X		X									
COPY ROOMS	X	X	X			X		X					X				
LARGE RESTROOM				X		X		X				X					
STAIRWELLS				X	X		X		X								
STORAGE <100 S.F.	X							X									
ELECTRICAL ROOM	X																
OTHER	X	X	X			X		X									
BUILDING >10,000 S.F.														X			
BUILDING EXTERIOR															X	X	
PEDESTRIAN WALKS															X		
PARKING LOT															X		X

LIGHTING CONTROL MATRIX

NO SCALE

1

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	SOURCE	WATTS	VOLTAGE	MOUNTING	DETAIL	REMARK
A	LITHONIA	ENVX 2x4 HRG 48LM 90CRI 35K MIN10 EZT MVOLT NLTAIR2 RIO	LED	45.0	120-277	REC GRID	1/E1.2	NLTAIR2
AE	LITHONIA	ENVX 2x4 HRG 48LM 90CRI 35K MIN10 EZT MVOLT EMG NLTAIR2 RIO	LED	45.0	120-277	REC GRID	1/E1.2	NLTAIR2 / EMERGENCY
AS	LITHONIA	ENVX 2x4 HRG 48LM 90CRI 35K MIN10 EZT MVOLT NLTAIR2 RES7	LED	45.0	120-277	REC GRID	1/E1.2	NLTAIR2 / INTEGRAL OCC/DL SENSOR
B	LITHONIA	ENVX 2x2 HRG 33LM 90CRI 35K MIN10 EZT MVOLT NLTAIR2 RIO	LED	30.0	120-277	REC GRID	1/E1.2	NLTAIR2
BS	LITHONIA	ENVX 2x2 HRG 33LM 90CRI 35K MIN10 EZT MVOLT NLTAIR2 RES7	LED	30.0	120-277	REC GRID	1/E1.2	NLTAIR2 / INTEGRAL OCC/DL SENSOR
C	LITHONIA	EPANL 2x4 7200LM 80CRI 35K MIN10 EZT MVOLT NLTAIR2 RIO 2X4SMKSH	LED	66.0	120-277	SURF CLG	3/E1.2	NLTAIR2
CSE	LITHONIA	EPANL 2x4 7200LM 80CRI 35K MIN10 EZT MVOLT EMG NLTAIR2 RES7 2X4SMKSH	LED	66.0	120-277	SURF CLG	3/E1.2	NLTAIR2 / INTEGRAL OCC/DL SENSOR / EMERGENCY
D	LUMINAIRE	VPF8 4FT MIN10 25W 35K MVOLT OP [COLOR]	LED	26.6	120-277	SURF CLG	3/E1.2	
DN	LUMINAIRE	VPF8 4FT MIN10 25W 35K MVOLT NLTAIR2 RIO OP [COLOR]	LED	26.6	120-277	SURF CLG	3/E1.2	NLTAIR2
F4	LITHONIA	Z1LD L48 5000LM FST MVOLT 35K 80CRI WH HC36 M12	LED	41.0	120-277	CHAIN	N/A	<20 LBS.
F4E	LITHONIA	Z1LD L48 5000LM FST MVOLT 35K 80CRI WH HC36 M12	LED	41.0	120-277	CHAIN	N/A	<20 LBS. / EMERGENCY
F8	LITHONIA	Z1LD L96 10000LM FST MVOLT 35K 80CRI WH HC36 M12	LED	81.0	120-277	CHAIN	N/A	<5 LBS./LF
G4	LITHONIA	Z1LD L48 7000LM FST MVOLT 35K 80CRI NLTAIR2 RIO WH HC36 M12	LED	59.0	120-277	CHAIN	N/A	<20 LBS. / NLTAIR2
G4S	LITHONIA	Z1LD L48 7000LM FST MVOLT 35K 80CRI NLTAIR2 RLSXR10 WH HC36 M12	LED	59.0	120-277	CHAIN	N/A	<20 LBS. / NLTAIR2 / INTEGRAL OCC/DL SENSOR
H	LITHONIA	IBG 30000LM HEF AFL GND MVOLT GZ10 35K 90CRI NLTAIR2 RIO [COLOR] (2)THUN	LED	170.0	120-277	SURFACE	5/E1.2	NLTAIR2
HSE	LITHONIA	IBG 30000LM HEF AFL GND MVOLT GZ10 35K 90CRI EMG NLTAIR2 RLSXR6 [COLOR] (2)THUN	LED	170.0	120-277	SURFACE	5/E1.2	NLTAIR2 / INTEGRAL OCC/DL SENSOR / EMERGENCY
J4	GOTHAM	EVO4 35/15 AR MD LSS MVOLT EZ1 90CRI	LED	13.7	120-277	RECESSED	4/E1.2	<20 LBS.
J6	GOTHAM	EVO6 35/35 AR MD LSS MVOLT EZ1 90CRI	LED	38.4	120-277	RECESSED	4/E1.2	<20 LBS.
K	LITHONIA	EPANL 2X4 6800LMHE 80CRI 35K MIN10 EZT MVOLT NLTAIR2 RIO	LED	62.0	120-277	REC GRID	1/E1.2	NLTAIR2
KE	LITHONIA	EPANL 2X4 6800LMHE 80CRI 35K MIN10 EZT MVOLT EMG NLTAIR2 RIO	LED	62.0	120-277	REC GRID	1/E1.2	NLTAIR2 / EMERGENCY
KS	LITHONIA	EPANL 2X4 6800LMHE 80CRI 35K MIN10 EZT MVOLT NLTAIR2 RES7	LED	62.0	120-277	REC GRID	1/E1.2	NLTAIR2 / INTEGRAL OCC/DL SENSOR
KSE	LITHONIA	EPANL 2X4 6800LMHE 80CRI 35K MIN10 EZT MVOLT EMG NLTAIR2 RES7	LED	62.0	120-277	REC GRID	1/E1.2	NLTAIR2 / INTEGRAL OCC/DL SENSOR / EMERGENCY
K2	LITHONIA	EPANL 2X2 3400LMHE 80CRI 35K MIN10 EZT MVOLT NLTAIR2 RIO	LED	30.0	120-277	REC GRID	1/E1.2	NLTAIR2
K2S	LITHONIA	EPANL 2X2 3400LMHE 80CRI 35K MIN10 EZT MVOLT NLTAIR2 RES7	LED	30.0	120-277	REC GRID	1/E1.2	NLTAIR2 / INTEGRAL OCC/DL SENSOR
P1	LIGMAN	USA 314481 (SANDY 2) 10w LED W40 [COLOR] 120/277V DIM	LED	10.0	120-277	SURF CLG	N/A	<20 LBS.
P1E	LIGMAN	USA 314481 (SANDY 2) 10w LED W40 [COLOR] 120/277V DIM	LED	10.0	120-277	SURF CLG	N/A	<20 LBS. / EMERGENCY
P2	LIGMAN	USA 314481 (SANDY 2) 15w LED W40 [COLOR] 120/277V DIM	LED	15.0	120-277	SURF CLG	N/A	<20 LBS.
P3	LIGMAN	USA 314471 (SANDY 1) 10w LED W40 [COLOR] 120/277V DIM	LED	10.0	120-277	WALL	N/A	<20 LBS.
P3E	LIGMAN	USA 314471 (SANDY 1) 10w LED W40 [COLOR] 120/277V DIM	LED	10.0	120-277	WALL	N/A	< 20 LBS. / EMERGENCY
P4	LIGMAN	USA 314481 (SANDY 2) 10w LED W40 [COLOR] 120/277V DIM	LED	10.0	120-277	SURFACE	N/A	<20 LBS.
P5	PINNACLE	EX3 WET N 840 4FT IND S U FSD 1 0 [COLOR] EPF	LED	17.2	120-277	SURF BEAM	N/A	<20 LBS.
P5E	PINNACLE	EX3 WET N 840 4FT IND S U FSD 1 0 [COLOR] EPF	LED	17.2	120-277	SURF BEAM	N/A	<20 LBS. / EMERGENCY
S1	LITHONIA	RADPT LED P4 SYM MVOLT PT4 SF [COLOR] / RSBOR / RSS 12 48 PT [COLOR]	LED	86.0	277	12' POLE	4/E1.3	
S4	LITHONIA	RADPT LED P4 ASY MVOLT PT4 SF [COLOR] / RSBOR / RSS 12 48 PT [COLOR]	LED	86.0	277	12' POLE	4/E1.3	
X	LITHONIA	LQC [COLOR] * G (AC ONLY)	LED	1.2	120-277	UNIVERSAL	MFG'R	< 20 LBS. / EMERGENCY * SEE PLANS FOR 1 OR 2 FACES.

NOTES:
1. FIXTURE COLORS ARE TO BE SELECTED BY THE ARCHITECT. OBTAIN WRITTEN SELECTION PRIOR TO ORDERING FIXTURES.
2. FIXTURE TYPES WITH AN "E" SUFFIX ARE POWERED BY AN EMERGENCY LIGHTING INVERTER AND WILL MAINTAIN 100% LUMEN OUTPUT FOR 90 MINUTES MINIMUM.

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

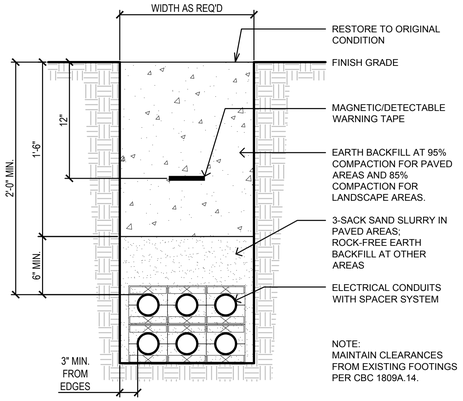
DATE: 4/12/2024

SHEET TITLE:
LIGHTING DETAILS AND FIXTURE SCHEDULE

E1.4

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

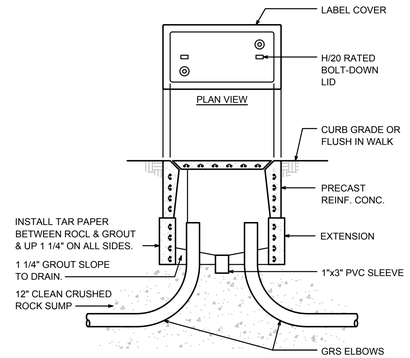
Hardin-Davidson Engineering
356 Pollasky Ave. Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax



TRENCH DETAIL

NO SCALE

1

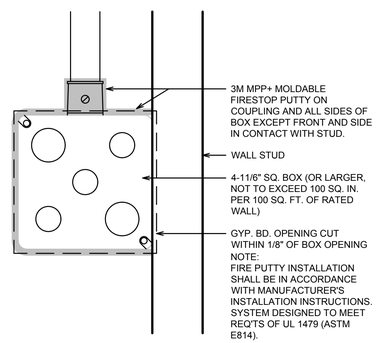


NOTE:
COORDINATE WITH SCHOOL DISTRICT ALL LOCATIONS AT UNDERGROUND PULL BOXES PRIOR TO INSTALLATION.

VAULT DETAIL

NO SCALE

2

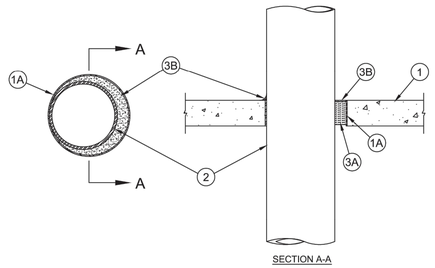


ELECTRICAL BOX IN FIRE RATED WALL DETAIL

NO SCALE

3

System No. C-AJ-1366
December 04, 2008
F Rating – 2 Hr
T Rating – 0 Hr
L Rating At Ambient – Less Than 1 CFM/sq ft
L Rating At 400 F – 2 CFM/sq ft



1. **Floor or Wall Assembly** – Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete floor or min 3 in. (76 mm) thick. reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete wall. Wall may also be constructed of any UL Classified **Concerete Blocks***. Max diam of opening is 10 in. (254 mm).

   See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

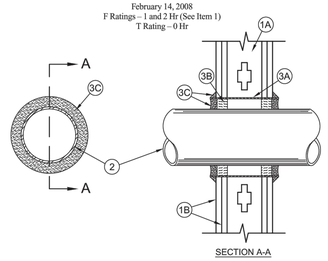
1A. **Steel Sleeve** (Optional) – Nom 10 in. (254 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with top and bottom surfaces of floor or both surfaces of wall.

2. **Through Penetrants** – One metallic pipe, tubing or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between tube and periphery of opening shall be min 0 in. to max 7/8 in. (22 mm). Penetrants to be rigidly supported on both sides of floor assembly. The following types and sizes of metallic pipes, tubing or conduit may be used:
   A. **Steel Pipe** – Nom 8 in. (203 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Iron Pipe** – Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe.
   C. **Conduit** – Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.
   D. **Conduit** – Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
   E. **Copper Tubing** – Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tube.
   F. **Copper Pipe** – Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. **Firestop System** – The details of the firestop system shall be as follows:
   A. **Packing Material** – Min 2 in. (51 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or both surfaces of wall to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Materials*** – **Caulk** – Min 1/2 in. (13 mm) thickness of caulk applied within the annulus, flush with top surface of floor or both surfaces of wall. Min 1/2 in. (13 mm) diam bead of caulk applied to the penetrant/concrete interface at the point contact location on the top surface of floor or both surfaces of wall.

      3M COMPANY – FireDam 150+

*Bearing the UL Classification Mark

System No. W-L-1003
February 14, 2008
F Ratings – 1 and 2 Hr (See Item 1)
T Rating – 0 Hr



1. **Wall Assembly** – The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs** – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-1/2 in. (89 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
   B. **Gypsum Board*** – Nom 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 15 in. (381 mm).

      The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. **Through Penetrant** – One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The space between pipes, conduits or tubing and the steel sleeve (Item 3A) shall be min of 0 in. (point contact) to max 2-3/8 in. (60 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. **Steel Pipe** – Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Iron Pipe** – Nom 12 in. (305 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.
   C. **Conduit** – Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
   D. **Copper Tubing** – Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   E. **Copper Pipe** – Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. **Firestop System** – Installed symmetrically on both sides of wall assembly. The details of the firestop system shall be as follows.
   A. **Steel Sleeve** – Cylindrical sleeve fabricated from min 0.019 in. thick (0.48 mm) galv sheet steel and having a min 2 in. (51 mm) lap along the longitudinal seam. Length of steel sleeve to be equal to thickness of wall plus 1 to 4 in. (25 to 102 mm) such that, when installed, the ends of the sleeve will project approx 1/2 to 2 in. (13 to 51 mm) beyond the surface of the wall on both sides of the wall assembly.

      Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the gypsum board layers.
   B. **Packing Material** – Min 1 in. (25 mm) thickness of mineral wool batt insulation firmly packed into steel sleeve on both sides of the wall assembly as permanent forms. Packing material to be recessed min 1/2 in. (13 mm) from end of steel sleeve (flush with or recessed into gypsum board surface) on both sides of wall assembly.
   B1. **Packing Material** – (Not shown) – As an alternate to Item B, nom 1 in. (25 mm) thick polyethylene backer rod may be used. The backer rod is to be recessed within the steel sleeve a min of 1 in. (25 mm) from each surface of wall.
   C. **Fill, Void or Cavity Materials*** – **Caulk or Sealant** – When mineral wool batt insulation is used, caulk or sealant applied to fill the steel sleeve to a min depth of 1/2 in. (13 mm) on both sides of wall assembly. When backer rod is used, a min thickness of 1 in. (25 mm) of caulk or sealant is required flush with both sides of wall. A nom 1/4 in. (6 mm) diam continuous bead of caulk or sealant shall be applied around the circumference of the steel sleeve at its egress from the gypsum board layers on both sides of the wall assembly.

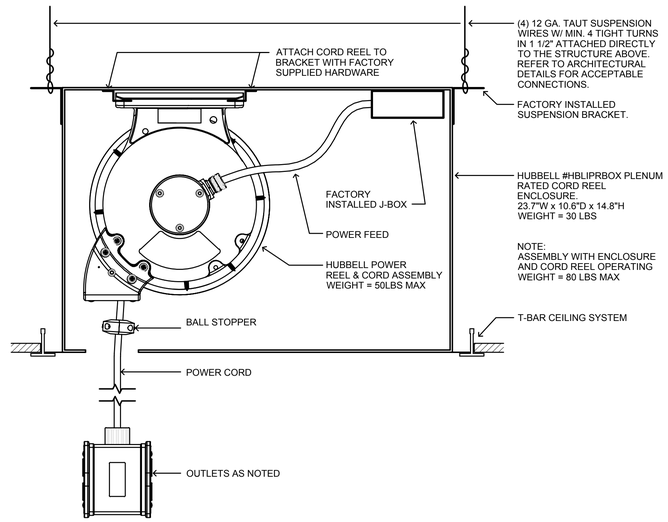
      3M COMPANY – CP 25WB+, IC 15WB+ or FB-3000 WT

*Bearing the UL Classification Mark

CONDUIT PENETRATION FIRE STOP DETAIL

NO SCALE

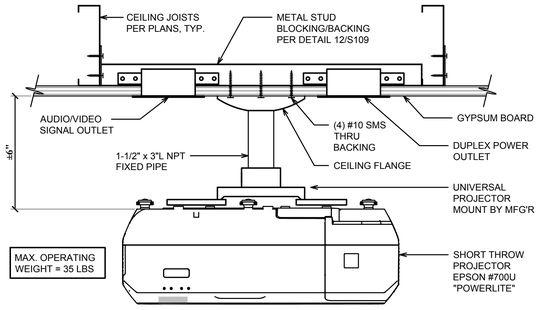
4



CORD REEL & ENCLOSURE DETAIL

NO SCALE

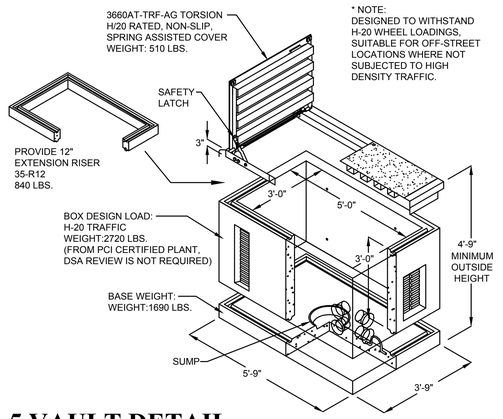
5



PROJECTOR MOUNTING DETAIL

NO SCALE

6



3x5 VAULT DETAIL

NO SCALE

7

Hardin-Davidson Engineering
356 Pollasky Ave. Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 ARCHITECTURE PLANNING
TEL: 559-497-1542 JUAN M. GONZALEZ, A.I.A.
FAX: 559-497-1549
FRESNO CALIFORNIA 93711

PROJECT NO: 2318

DATE: 4/12/2024

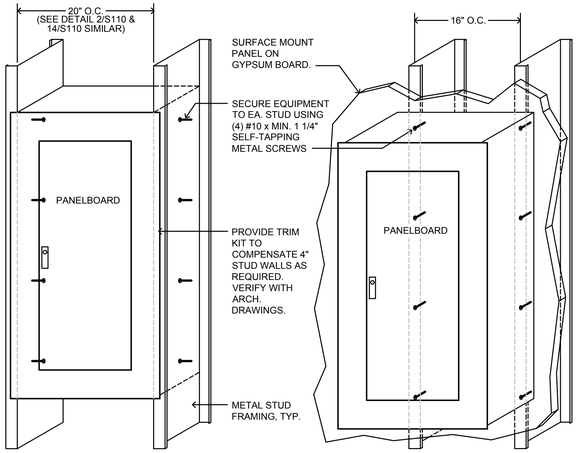
SHEET TITLE:
ELECTRICAL DETAILS

E1.5

REGISTERED PROFESSIONAL ENGINEER — C. SCOTT DAVIDSON — E17850 — ELECTRICAL — STATE OF CALIFORNIA

PLOTTED: 4/12/2024 6:21:52 PM
LOCATION: Z:\Clients\Gonzalez Architects\2329 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backsheet 2.dwg

PANELBOARD WEIGHTS/DIMS	
UP TO 400 AMPS - 20"W x 5.75"D	600-800 AMPS - 30"W x 8"D
30 CIRCUITS: 72"H, 430 LBS.	30 CIRCUITS: 72"H, 475 LBS.
42 CIRCUITS: 72"H, 450 LBS.	42 CIRCUITS: 72"H, 495 LBS.
54 CIRCUITS: 84"H, 525 LBS.	54 CIRCUITS: NOT APPLICABLE



RECESSED MOUNT

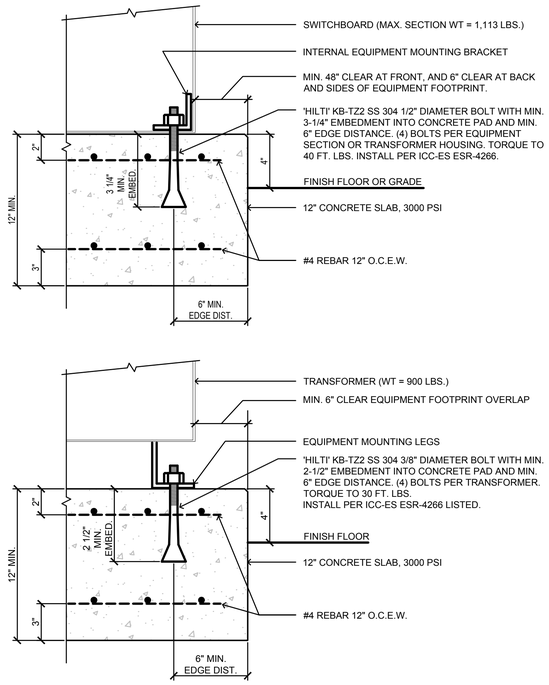
THIS DETAIL APPLIES TO NEW WALL CONSTRUCTION WHERE STUD SPACING CAN BE ADJUSTED. AT EXISTING WALLS, RECESSED INSTALLATION MAY REQUIRE FIELD INSPECTION AND DETAILING, SUBJECT TO APPROVAL BY ON-SITE DSA INSPECTOR.

SURFACE MOUNT

THIS DETAIL APPLIES TO EITHER NEW OR EXISTING WALL CONSTRUCTION. PANEL SHALL BE CENTERED OVER EXISTING STUD FRAMING. WHERE THIS IS NOT POSSIBLE, METALLIC HORIZONTAL BRACING SHALL BE ATTACHED ACROSS (3) WALL STUDS AND LINED UP WITH TOP, CENTER, AND BOTTOM OF PANEL.

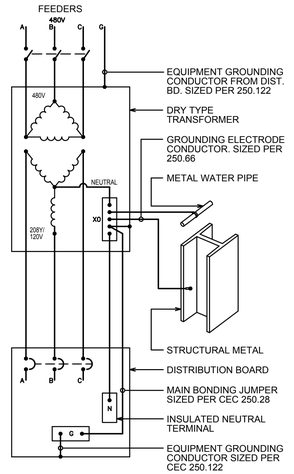
ELECTRICAL PANEL MOUNTING DETAIL (1)

NO SCALE



EQUIPMENT CONCRETE PAD MOUNTING DETAILS (3)

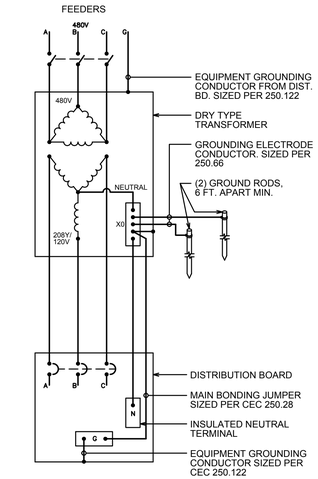
NO SCALE



A GROUNDING ARRANGEMENT FOR A SEPARATELY DERIVED SYSTEM WHERE THE GROUNDING ELECTRODE CONDUCTOR CONNECTION IS MADE AT THE TRANSFORMER.

TRANSFORMER GROUNDING DETAIL (5)

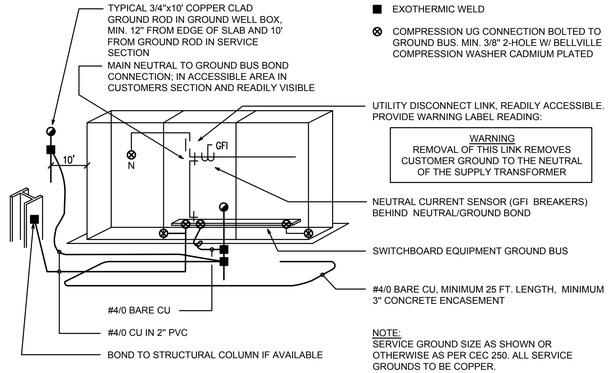
NO SCALE



A GROUNDING ARRANGEMENT FOR A SEPARATELY DERIVED SYSTEM WHERE THE GROUNDING ELECTRODE CONDUCTOR CONNECTION IS MADE AT THE TRANSFORMER.

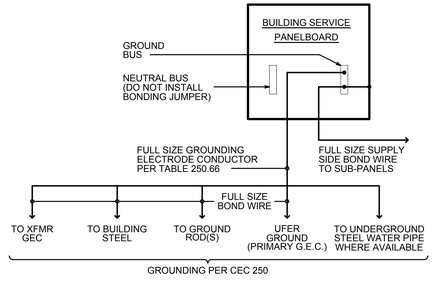
TRANSFORMER GROUNDING DETAIL (2)

NO SCALE



SWITCHBOARD GROUNDING DETAIL (4)

NO SCALE



PANEL GROUNDING DETAIL (6)

NO SCALE

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318

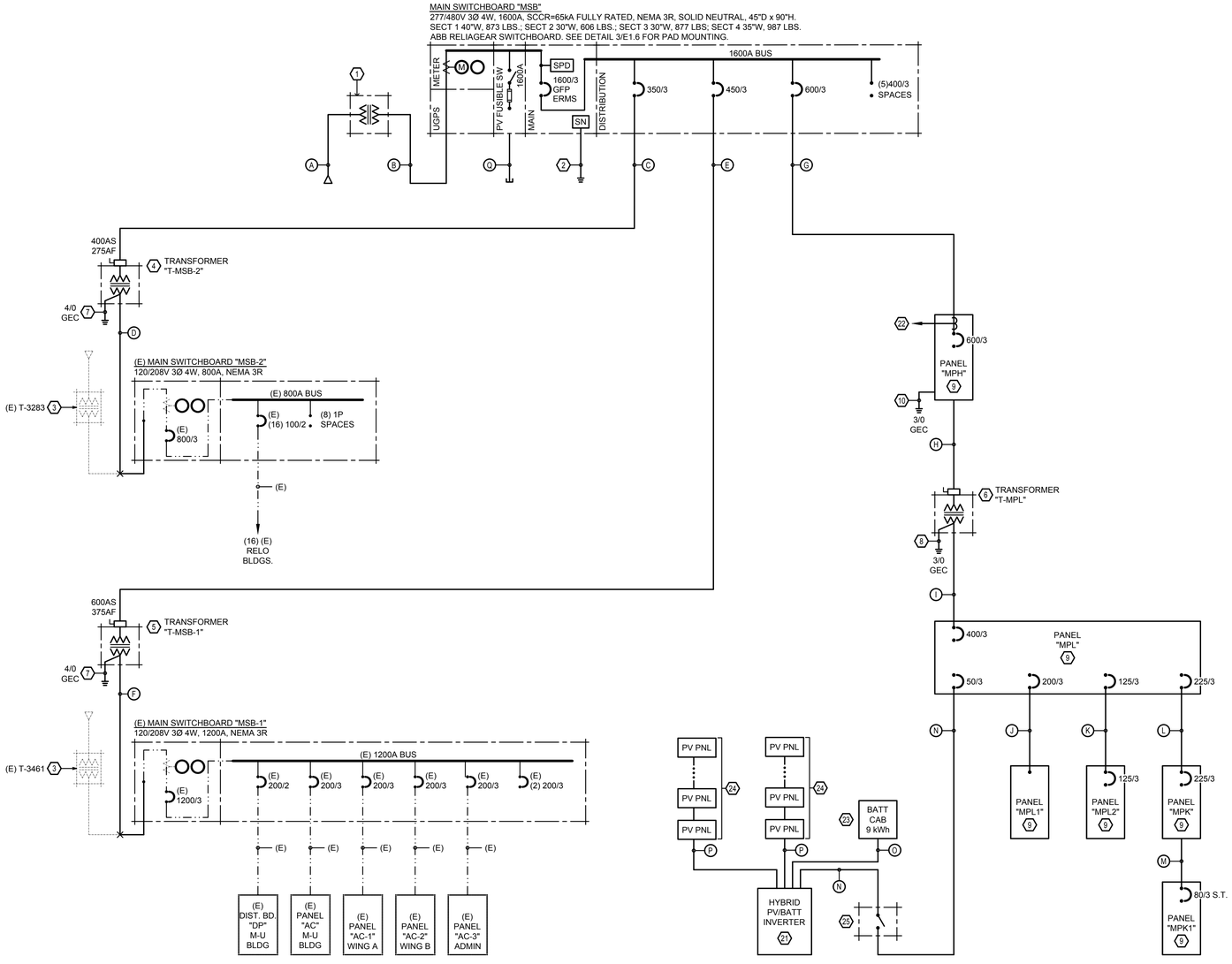
DATE: 4/12/2024

SHEET TITLE:
POWER DETAILS

E1.6

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave. Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax



POWER SINGLE LINE DIAGRAM

NO SCALE

1

KEYNOTES

1. PROPOSED PG&E UTILITY TRANSFORMER. PROVIDE CONCRETE PAD PER PG&E RULE 16. TRANSFORMER INSTALLED BY PG&E.
2. GROUNDING ELECTRODE CONDUCTORS PER DETAIL 4/E1.6.
3. REMOVE EXISTING PG&E FACILITIES, INCLUDING TRANSFORMER PAD AND PRIMARY AND SECONDARY SERVICE CONDUITS. MAKE ALL ARRANGEMENTS AND SCHEDULE CUT OVER WITH PG&E FIELD SERVICES.
4. 225kVA TRANSFORMER: ABB 9T14A1007G33.
   480/208/120V 3Ø 4W; 115°C RISE; K-4 RATED; AL; NEMA 3R.
   38.4"W x 33.0"D x 57.1"H; 1,670 LBS.
   PAD MOUNT PER DETAIL 3/E1.6.
5. 300kVA TRANSFORMER: ABB 9T14A1008G33.
   480/208/120V 3Ø 4W; 115°C RISE; K-4 RATED; AL; NEMA 3R.
   46.5"W x 37.8"D x 65.7"H; 2,900 LBS.
   PAD MOUNT PER DETAIL 3/E1.6.
6. 112.5kVA TRANSFORMER: ABB 9T14C1005G63.
   480/208/120V 3Ø 4W; 80°C RISE; K-4 RATED; CU; NEMA 1.
   34.8"W x 24.0"D x 45.8"H; 1,085 LBS.
   PAD MOUNT PER DETAIL 3/E1.6.
7. TRANSFORMER GROUNDING ELECTRODE CONDUCTOR PER DETAIL 2/E1.5. BOND X0 TERMINAL TO GROUND TERMINAL.
8. TRANSFORMER GROUNDING ELECTRODE CONDUCTOR PER DETAIL 5/E1.5. BOND X0 TERMINAL TO GROUND TERMINAL.
9. WALL MOUNT PANELBOARD PER 1/E1.6.
10. GROUNDING ELECTRODE CONDUCTOR PER DETAIL 6/E1.6.
21. GENERAC X11402 PHOTOVOLTAIC/BATTERY INVERTER SYSTEM.
    PROVIDE APSMART OR EQUAL RAPID SHUTDOWN SYSTEM TO DE-ENERGIZE THE SYSTEM WHEN THE PV DISCONNECT IS OPENED AND LABEL PER 4/E1.10. SET OPERATING MODES FOR ANTI-ISLANDING AND NON-EXPORT. UL 1741 LISTED.
    DIMENSIONS: 19.25"W x 24.5"H x 8.0"D; WEIGHT: 62.7 LBS.
    MOUNT CABINET PER 2/E1.10.
22. GENERAC C.T.s ON BUILDING MAIN PANEL FEEDER AHEAD OF MAIN. HOMERUN WIRING TO INVERTER IN 3/4"C. VERIFY C.T. VOLTAGE RATIO IS CORRECT FOR THE 480V SERVICE PANEL.
23. BATTERIES: GENERAC PWRcell-OR-M3-DCB BATTERY CABINET AND (3) GENERAC DCB 3.00kWh BATTERY MODULES. UL 1973 LISTED.
    BATTERY TECHNOLOGY: LITHIUM NICKEL MANGANESE COBALT (LITHIUM ION)
    BATTERY TOTAL CAPACITY: 9.0 kWh
    DIMENSIONS: 22.0"W x 68.0"H x 10.0"D;
    INSTALLED WEIGHT: 280 LBS / MAX. WEIGHT: 445 LBS. WITH FUTURE ADDITIONAL BATTERIES INSTALLED.
    MOUNT CABINET AT EXTERIOR WALL PER DETAIL 2/E1.10.
24. PV PANEL STRING: (8) JA SOLAR JAM72S20-450/MR 450 WATT MODULES WITH (1) GENERAC APKE00010 STRING OPTIMIZER AND APSMART RSD-S-PLC RAPID SHUTDOWN DEVICES. SEE 1/E1.10 FOR PANEL CUT SHEETS. UL 61730-1 AND UL 61730-2 LISTED. PANELS APPROVED FOR INSTALLATION IN EITHER PORTRAIT OR LANDSCAPE ORIENTATION. REFER TO DETAIL 3/E1.10 FOR RACKING AND MOUNTING.

    PV PANEL STATIC LOADS (WIND), ASD (SD):
    BACK SIDE = 24.1 PSF (40.1 PSF),
    FRONT SIDE = 24.1 PSF (40.1 PSF).
25. VERIFIABLE DISCONNECT SWITCH, 60A, 250V, 3-POLE, NEMA 3R, MOUNTED AT BUILDING EXTERIOR. PROVIDE LABELING PER 4/E1.10.

FEEDERS

- A. POLE RISER AND 4" PRIMARY SERVICE CONDUIT WITH MULE TAPE PER PG&E RULE 16. CONDUCTORS INSTALLED BY PG&E.
- B. (5) 5" SECONDARY SERVICE CONDUITS WITH MULE TAPE PER PG&E RULE 16. CONDUCTORS INSTALLED BY PG&E.
- C. 3"C. (3) 500kCMIL, (1) #3G.
- D. (2) SETS - 5"C. (4) 500kCMIL, (1) 3/0G. INTERCEPT PORTION OF EXISTING PG&E SERVICE CONDUITS TO GAIN ACCESS TO RISER SECTION.
- E. 4"C. (3) 750kCMIL, (1) 1/0G.
- F. (3) SETS - 5"C. (4) 600kCMIL, (1) 3/0G. INTERCEPT PORTION OF EXISTING PG&E SERVICE CONDUITS TO GAIN ACCESS TO RISER SECTION.
- G. (2) SETS - 4"C. (4) 350kCMIL, (1) #3/0G.
- H. 2"C. (3) 2/0, (1) #6G.
- I. 4"C. (4) 600kCMIL, (1) #1/0G.
- J. 2"C. (4) 3/0, (1) #6G.
- K. 2"C. (4) 2/0, (1) #3G.
- L. 2-1/2"C. (4) 4/0, (1) #6G.
- M. 1-1/4"C. (4) #3, (1) #8G.
- N. 1"C. (4) #6, (1) #10G.
- O. 3/4"C. (2) #10, (1) #10G. & 3/4"C. COMM.
- P. 3/4"C. (2) #10, (1) #10G.
- Q. (3) 4"C. STUB OUTS 10 FT. FROM SWITCHBOARD FOR FUTURE SOLAR.

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POWER SINGLE LINE DIAGRAM

E1.7

REGISTERED PROFESSIONAL ENGINEER
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ELECTRICAL
STATE OF CALIFORNIA

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356 Pollasky Ave.
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PANEL "MPH" SCHEDULE

277/480V 3Φ 4W — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	LIGHTS - MULTI-USE RM. (NORTH)	20	1	1470	A	36176	175	3	HEAT PUMP WATER CHILLER WC-1	2
3	LIGHTS - MULTI-USE RM. (SOUTH)	20	1	1870	B	36176	--	--	-----	4
5	LIGHTS - PLATFORM, COSTUMES, INSTRU.	20	1	743	C	36176	--	--	-----	6
7	LIGHTS - ELEC, JAN, GIRLS, KITCHEN AREA	20	1	1395	A	7756	45	3	AIR HANDLER AH-1	8
9	LIGHTS - SNACK BAR, BOYS, STOR.	20	1	995	B	7756	--	--	-----	10
11	LIGHTS - EXTERIOR	20	1	488	C	7756	--	--	-----	12
13	LIGHTS - PEDESTRIAN POLE LIGHTS	20	1	774	A	7756	45	3	AIR HANDLER AH-2	14
15	EMERGENCY LIGHTING INVERTER "INV-MP"	20	1	2027	B	7756	--	--	-----	16
17	LIGHTING CONTROL PANEL "LCP-MP"	15	1	200	C	7756	--	--	-----	18
19	SPARE	20	1		A	831	15	3	HOOD EXHAUST FAN EF-1	20
21	SPARE	20	1		B	831	--	--	-----	22
23	SPARE	20	1		C	831	--	--	-----	24
25	SPACE ONLY				A	19142	90	3	OUTSIDE AIR SYSTEM OAS-1	26
27	SPACE ONLY				B	19142	--	--	-----	28
29	SPACE ONLY				C	19142	--	--	-----	30
31	SPACE ONLY				A				SPACE ONLY	32
33	SPACE ONLY				B				SPACE ONLY	34
35	SPACE ONLY				C				SPACE ONLY	36
37	SURGE PROTECTIVE DEVICE	--	--	0	A	38652	175	3	XFMR "TMPL" / PANEL "MPL"	38
39	-----	--	--	0	B	45660	--	--	-----	40
41	-----	--	--	0	C	38272	--	--	-----	42

LOAD SUMMARY: ΦA 113952 VA; ΦB 122212 VA; ΦC 111365 VA
CONNECTED LOAD: 347.5 kVA
MAX CURRENT: 441 A

BUSING: 600A CU
MAIN: 600A
TYPE: ABB RELIAGEAR PANELBOARD

PANEL "MPL2" SCHEDULE

120/208V 3Φ 4W — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	OUTLETS - COSTUME, STAGE, MU	20	1	900	A	2750	40	2	IDU/ODU-1	2
3	OUTLETS - COSTUME, STAGE, MU	20	1	720	B	2750	--	--	-----	4
5	OUTLETS - STAGE, MULTI-USE	20	1	720	C	180	15	2	EXHAUST FAN EF-7	6
7	OUTLETS - INSTRUMENT	20	1	360	A	180	--	--	-----	8
9	AV EQUIP. CABINET - INSTRUMENT	20	1	360	B	180	15	2	EXHAUST FAN EF-8	10
11	WHEELCHAIR LIFT - STAGE	20	1	500	C	180	--	--	-----	12
13	PROJECTOR SCREEN - STAGE	20	1	500	A				SPACE ONLY	14
15	PROJECTOR - STAGE	20	1	500	B				SPACE ONLY	16
17	MOTORIZED DOOR - STAGE	20	1	1000	C				SPACE ONLY	18
19	OUTLETS - STOR. 5	20	1	360	A				SPACE ONLY	20
21	OUTLETS - STOR. 5	20	1	360	B				SPACE ONLY	22
23	SPARE	20	1		C				SPACE ONLY	24
25	SPARE	20	1		A		20	1	SPARE	26
27	SPARE	20	1		B		20	1	SPARE	28
29	SPARE	20	1		C		20	1	SPARE	30
31	BLEACHERS - MULTI-USE	20	3	1200	A		20	1	SPARE	32
33	-----	--	--	1200	B	572	20	1	THEATRICAL LIGHTS (BACK NORTH)	34
35	-----	--	--	1200	C	572	20	1	THEATRICAL LIGHTS (BACK SOUTH)	36
37	BASKETBALL BACKSTOP LIFT - MAIN COURT E	25	1	1656	A	572	20	1	THEATRICAL LIGHTS (FRONT NORTH)	38
39	BASKETBALL BACKSTOP LIFT - EAST COURT	25	1	1656	B	572	20	1	THEATRICAL LIGHTS (FRONT SOUTH)	40
41	BASKETBALL BACKSTOP LIFT - EAST COURT	25	1	1656	C	500	20	1	THEATRICAL LIGHTING CONTROLLERS	42

LOAD SUMMARY: ΦA 8478 VA; ΦB 8871 VA; ΦC 6508 VA
CONNECTED LOAD: 23.9 kVA
MAX CURRENT: 74 A

BUSING: 125A CU
MAIN: 125A
TYPE: ABB RELIAGEAR PANELBOARD

PANEL "MPL" SCHEDULE

120/208V 3Φ 4W — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	OUTLETS - ELECT, MULTI-USE, TP-2	20	1	741	A		20	1	SPARE	2
3	OUTLETS - DATA, JAN, GIRLS	20	1	720	B		20	1	SPARE	4
5	DRINKING FOUNTAIN - EXTERIOR	20	1	528	C		20	1	SPARE	6
7	MILK COOLER - MULTI-USE	20	1	160	A		20	1	SPARE	8
9	OUTLET - SNACK BAR COUNTER	20	1	360	B		20	1	SPARE	10
11	OUTLET - SNACK BAR COUNTER	20	1	360	C		20	1	SPARE	12
13	OUTLET - SNACK BAR COUNTER	20	1	360	A		20	1	SPARE	14
15	REFRIGERATOR - SNACK BAR	20	1	648	B		20	1	SPARE	16
17	OUTLETS - SNACK BAR	20	1	360	C		20	1	SPARE	18
19	OUTLETS - SNACK BAR	20	1	360	A	0	50	3	SOLAR/BATTERY INVERTER	20
21	ICE MACHINE - SNACK BAR	20	1	1428	B	0	--	--	-----	22
23	MOTORIZED DOOR - SNACK BAR	20	1	1000	C	0	--	--	-----	24
25	OUTLETS - MULTI-USE, BOYS, STOR. 6	20	1	720	A	13454	225	3	PANEL "MPK"	26
27	OUTLETS - MULTI-USE, STOR. 6	20	1	540	B	15647	--	--	-----	28
29	DRINKING FOUNTAIN - MULTI-USE	20	1	528	C	17060	--	--	-----	30
31	SPARE	20	1		A	8478	125	3	PANEL "MPL2"	32
33	SPARE	20	1		B	8871	--	--	-----	34
35	SPARE	20	1		C	6508	--	--	-----	36
37	BASKETBALL BACKSTOP LIFT - MAIN COURT	25	1	1656	A	12722	200	3	PANEL "MPL1"	38
39	BASKETBALL BACKSTOP LIFT - WEST COURT	25	1	1656	B	15790	--	--	-----	40
41	BASKETBALL BACKSTOP LIFT - WEST COURT	25	1	1656	C	10272	--	--	-----	42

LOAD SUMMARY: ΦA 38652 VA; ΦB 45660 VA; ΦC 38272 VA
CONNECTED LOAD: 122.6 kVA
MAX CURRENT: 380 A

BUSING: 400A CU
MAIN: 400A 100% RATED
TYPE: ABB RELIAGEAR PANELBOARD

PANEL "MPK" SCHEDULE

120/208V 3Φ 4W — INDOOR / FLUSH

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	OUTLETS - KITCHEN, TR	20	1	720	A	500	20	2	CORD REEL	2
3	OUTLETS - KITCHEN, JAN	20	1	720	B	500	--	--	-----	4
5	OUTLETS - COOK	20	1	900	C	500	20	2	CORD REEL	6
7	GARBAGE DISPOSAL - SCUL/PREP	20	3	720	A	500	--	--	-----	8
9	-----	--	--	720	B	672	20	3	** OUTLET - MIXER	10
11	-----	--	--	720	C	672	--	--	-----	12
13	OUTLETS - SCUL/PREP	20	1	360	A	672	--	--	-----	14
15	TP-2	20	1	21	B	1500	20	1	OUTLET - WARMING CART	16
17	FLY FAN - KITCHEN SOUTH	20	1	2160	C	1500	20	1	OUTLET - WARMING CART	18
19	HOOD CONTROL PANEL	20	1	180	A	1428	20	1	OUTLET - ICE MACHINE	20
21	HOOD LIGHTS	20	1	180	B	2300	20	1	HAND DRYER - TOILET RM	22
23	OUTLET - HOT FOOD TABLE	30	1	1920	C		20	1	SPARE	24
25	OUTLET - HOT FOOD TABLE	30	1	1920	A		20	1	SPARE	26
27	MOTORIZED DOOR - SERVING COUINTER	20	1	1000	B		20	1	SPARE	28
29	SPARE	20	1		C		20	1	SPARE	30
31	SPARE	20	1		A		20	1	SPARE	32
33	SPARE	20	1		B		20	1	SPARE	34
35	SPARE	20	1		C		20	1	SPARE	36
37	SPACE ONLY				A				SPACE ONLY	38
39	SPACE ONLY				B				SPACE ONLY	40
41	SPACE ONLY				C				SPACE ONLY	42
43	SPACE ONLY				A				SPACE ONLY	44
45	WALK-IN REG. & FREEZER HEAT CABLE & LTG	20	1	500	B				SPACE ONLY	46
47	WALK-IN REFRIG. CONDENSER & EVAP	20	2	1154	C				SPACE ONLY	48
49	-----	--	--	1154	A	5300	80	3	PANEL "MPK1"	50
51	WALK-IN FREEZER CONDENSER & EVAP	30	2	1810	B	5724	--	--	-----	52
53	-----	--	--	1810	C	5724	--	--	-----	54

LOAD SUMMARY: ΦA 13454 VA; ΦB 15647 VA; ΦC 17060 VA
CONNECTED LOAD: 46.2 kVA
MAX CURRENT: 142 A

BUSING: 225A CU
MAIN: 225A
TYPE: ABB RELIAGEAR PANELBOARD
** PROVIDE GFCI C.B.

PANEL "MPL1" SCHEDULE

120/208V 3Φ 4W — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	* FIRE ALARM SPRINKLER RISER BELL	15	1	60	A	2750	40	2	IDU/ODU-2	2
3	* FIRE ALARM CONTROL PANEL	20	1	180	B	2750	--	--	-----	4
5	OUTLETS - ELEC. RM	20	1	720	C	180	15	2	EXHAUST FAN EF-2	6
7	OUTLETS - ELEC. RM	20	1	720	A	180	--	--	-----	8
9	OUTLETS - ELEC. RM	20	1	720	B	180	15	2	EXHAUST FAN EF-3	10
11	OUTLETS - ELEC. RM	20	1	720	C	180	--	--	-----	12
13	OUTLETS - DATA "IDF"	20	1	1000	A	180	15	2	EXHAUST FAN EF-4	14
15	LIGHTING CONTROL PANEL "LCP-MP"	20	1	180	B	180	--	--	-----	16
17	OUTLETS - ROOF	20	1	540	C	252	15	2	EXHAUST FAN EF-5	18
19	SPARE	20	1		A	252	--	--	-----	20
21	SPARE	20	1		B	180	15	2	EXHAUST FAN EF-6	22
23	SPARE	20	1		C	180	--	--	-----	24
25	SPARE	20	1		A	2300	20	1	HARD DRYER - GIRLS	26
27	SPARE	20	1		B	2300	20	1	HARD DRYER - BOYS	28
29	SPARE	20	1		C	1932	20	1	WATER HEATER WH-1, CIRC. PUMP CP-1	30
31	SPACE ONLY				A	2640	50	3	WATER HEATER WH-2, CIRC. PUMP CP-1	32
33	SPACE ONLY				B	4560	--	--	-----	34
35	SPACE ONLY				C	2784	--	--	-----	36
37	SPACE ONLY				A	2640	50	3	WATER HEATER WH-2, CIRC. PUMP CP-1	38
39	SPACE ONLY				B	4560	--	--	-----	40
41	SPACE ONLY				C	2784	--	--	-----	42

LOAD SUMMARY: ΦA 12722 VA; ΦB 15790 VA; ΦC 10272 VA
CONNECTED LOAD: 38.8 kVA
MAX CURRENT: 132 A

BUSING: 200A CU
MAIN: LUGS ONLY
TYPE: ABB RELIAGEAR PANELBOARD
* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

PANEL "MPK1" SCHEDULE

120/208V 3Φ 4W — INDOOR / FLUSH

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	OUTLET - RANGE	20	1	500	A	4800	50	3	SKILLET	2
3	OUTLET - STACKED OVEN (BOTTOM)	20	1	924	B	4800	--	--	-----	4
5	OUTLET - STACKED OVEN (TOP)	20	1	924	C	4800	--	--	-----	6
7	SPARE	20	1		A				SPACE ONLY	8
9	SPARE	20	1		B				SPACE ONLY	10
11	SPARE	20	1		C				SPACE ONLY	12

LOAD SUMMARY: ΦA 5300 VA; ΦB 5724 VA; ΦC 5724 VA
CONNECTED LOAD: 16.7 kVA
MAX CURRENT: 48 A

BUSING: 100A CU
MAIN: 80A SHUNT TRIP BREAKER
TYPE: ABB RELIAGEAR PANELBOARD

REGISTERED PROFESSIONAL ENGINEER — C. SCOTT DAVIDSON — E17850 — ELECTRICAL — STATE OF CALIFORNIA

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PLOTTED: 4/12/2024 6:21:54 PM
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backcheck 2.dwg

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

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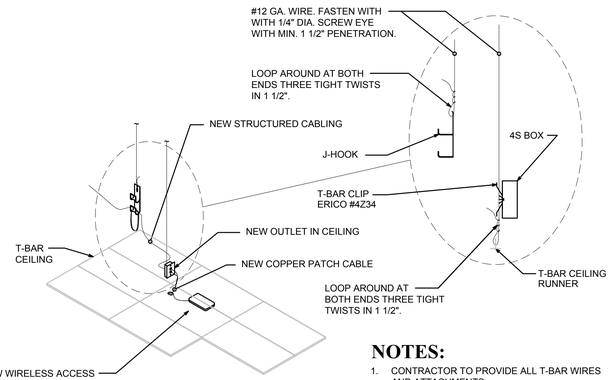
FAX: 559-497-1549

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
PANEL SCHEDULES

E1.8

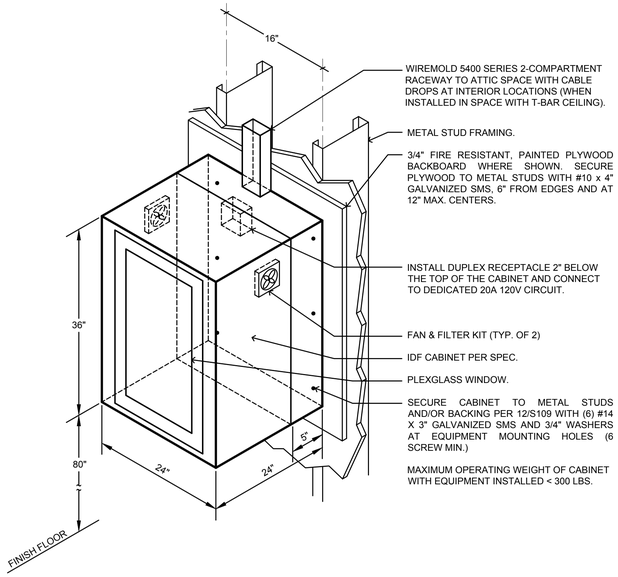


NOTES:

1. CONTRACTOR TO PROVIDE ALL T-BAR WIRES AND ATTACHMENTS.
2. PROVIDE STRUCTURED CABLING AS SPECIFIED, TERMINATE AT CEILING BOX AS SHOWN.
3. REPLACE ANY BROKEN TILES. ALERT OWNER TO ANY PREVIOUS DAMAGE PRIOR TO INSTALLATION.

CEILING WIRELESS ACCESS POINT DETAIL (1)

NO SCALE



IDF AND A/V CABINET MOUNTING DETAIL (3)

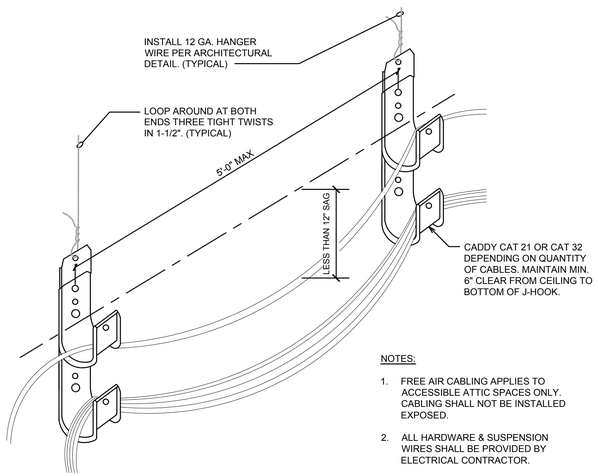
NO SCALE

LOW VOLTAGE SYSTEMS GENERAL SCOPE OF WORK

1. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL DATA AND VOICE COMMUNICATIONS LOCAL AREA NETWORK (LAN), INCLUDING INTERMEDIATE DATA FRAME, FIBER OPTIC CABLING, COPPER CAT6 AND CAT6A CABLING, LABELING, LADDER RACKING, CABLE MANAGEMENT, TERMINATION OF ALL CABLES, PATCH PANELS AND CABLES, COMMUNICATIONS GROUND BUS BAR AND GROUND CONNECTION, UNINTERRUPTABLE POWER SUPPLIES, GATEWAYS AND SWITCHES, PATCH CABLES, DATA AND COMMUNICATION OUTLETS, WIRELESS ACCESS POINT OUTLETS, AND TESTING AND REPORTS FOR ALL INSTALLED CABLES. DELIVER REPORTS TO OWNER. REFER TO SPECIFICATIONS SECTIONS 270000, 272000.
2. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL INTERNET PROTOCOL "IP" BASED, PUBLIC ADDRESS SYSTEM, INCLUDING SOFTWARE AND LICENSING, COMBINATION SPEAKER CLOCKS, SPEAKERS, CAT6 CABLING, GATEWAY WITH AMPLIFIER AND SPEAKER CABLING FOR ANALOG SPEAKERS WHEN MORE THAN THREE SPEAKERS ARE GROUPED TOGETHER IN A COMMON AREA, TERMINATION BLOCKS, LABELING, PROGRAMMING, TESTING, AND REPORTS. THE SYSTEM SHALL BE INTERFACED WITH THE TELEPHONE SYSTEM TO ALLOW ANNOUNCEMENTS, AND INTERFACED WITH THE MPR A/V SYSTEM TO OVERRIDE THAT SYSTEM WHEN ANNOUNCEMENTS ARE MADE. REFER TO SPECIFICATIONS SECTIONS 270000, 272000 AND 275113.
3. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL INTRUSION SYSTEM, TO INCLUDE CONTROL PANELS, KEYPADS, MOTIONS SENSORS, DOOR CONTACTS, CABLING, LABELING, PROGRAMMING, AND TESTING. THE INTRUSION SYSTEM SHALL BE INTEGRATED WITH THE EXISTING INTRUSION SYSTEM HEAD END AND REPORTING LOCATED IN THE EXISTING ADMIN BUILDING. IN CASE AN ALTERNATE SYSTEM WOULD INTEGRATE BETTER WITH THE EXISTING SYSTEM, THAT SYSTEM MAY BE SUBMITTED IN LIEU OF THE SPECIFIED SYSTEM. REFER TO SPECIFICATIONS SECTIONS 280000 AND 281600.
4. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL MULTIPURPOSE ROOM AUDIO/VIDEO SYSTEM, TO INCLUDE EQUIPMENT RACK, POWER SEQUENCER, MIXER, AMPLIFIER, CABLING, LABELING, INPUT JACKS FOR MICROPHONE, AUDIO AND VIDEO, DATA JACKS, MICROPHONES AND ACCESSORIES, LOUDSPEAKERS, ASSISTIVE LISTENING SYSTEM WITH TRANSCEIVER, ANTENNA, AND DEVICES, PROGRAMMING, TESTING, AND REPORTS. THE PROJECTOR SHALL BE FURNISHED BY THE OWNER AND INSTALLED BY THE CONTRACTOR. REFER TO SPECIFICATIONS SECTIONS 270000, 274040, AND 274220 (2.1) (B).
5. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL, TOTAL COVERAGE, FIRE ALARM SYSTEM WITH EMERGENCY VOICE/ALARM COMMUNICATIONS, TO INCLUDE CONTROL PANELS, ANNUNCIATORS, OPERATING CONSOLES, POWER SUPPLIES, AMPLIFIERS, PULL STATIONS, SMOKE AND HEAT DETECTION DEVICES, ADDRESSABLE INPUT AND OUTPUT MODULES, SPEAKER STROBES, SPEAKERS, DEDICATED 6-STRAND MULTIMODE FIBER OPTIC CABLING, LOCAL COPPER CABLING, LABELING, PROGRAMMING, TESTING, AND REPORTS. THE SYSTEM SHALL BE INTEGRATED WITH THE EXISTING FIRE ALARM SYSTEM. DELIVER REPORTS TO OWNER FOR REVIEW. REFER TO SPECIFICATIONS SECTIONS 280000 AND 283100.

LOW VOLTAGE GENERAL NOTES

1. THE ELECTRICAL CONTRACTOR SHALL CONTACT EACH SIGNAL SYSTEM VENDOR AND THOROUGHLY INVESTIGATE THE EXPANDABILITY OF ALL EXISTING SYSTEMS. THE CONTRACTOR'S BID SHALL INCLUDE ALL REQUIRED COMPONENTS, PROGRAMMING, ETC. TO INTEGRATE THE WORK SHOWN IN DIV. 26, 27, AND 28 DRAWINGS AND SPECIFICATIONS, AND PROVIDE FOR FULLY FUNCTIONAL LOW VOLTAGE ELECTRONIC SYSTEMS.
2. EXISTING PULL BOX LOCATIONS ARE DIAGRAMMATIC. FIELD VERIFY EXACT LOCATIONS. ADD CONDUITS TO EXISTING PULL BOXES WHERE INDICATED. REPAIR ANY DAMAGE INCURRED. PROVIDE EXTENSIONS AND LEVEL EXISTING BOXES TO GRADE WHERE NEW THE FINISH GRADE WILL CHANGE.
3. DISCONNECT, REMOVE, REPULL, AND RETERMINATE EXISTING CABLING AS REQUIRED TO INSTALL NEW CABLING IN EXISTING CONDUITS.
4. TERMINAL CABINETS TO BE WIEGMANN RHC SERIES, OR EQUAL, W/ MOUNTING PANELS / PLYWOOD BACK BOARD. INSTALL ALL REQUIRED TERMINAL STRIPS, PUNCH DOWN BLOCKS, ETC.
5. INSTALL NYLON PULL LINE WITH ALL CABLE RUNS IN UNDERGROUND CONDUITS.

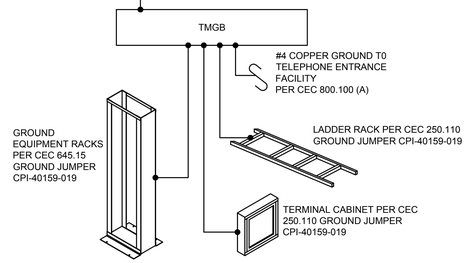


NOTES:

1. FREE AIR CABLING APPLIES TO ACCESSIBLE ATTIC SPACES ONLY. CABLING SHALL NOT BE INSTALLED EXPOSED.
2. ALL HARDWARE & SUSPENSION WIRES SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.
3. IN EXPOSED AREAS, CABLING SHALL BE INSTALLED IN CONDUIT.

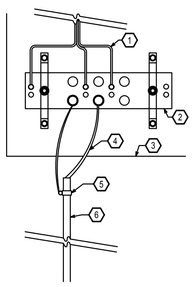
J-HOOK CABLE SUPPORT DETAIL (CONCEALED ATTIC SPACES ONLY) (2)

NO SCALE



TELECOMMUNICATIONS MAIN GROUNDING BUS (TMGB) DETAIL (4)

NO SCALE



KEYNOTES

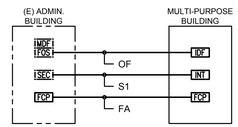
1. GROUNDING WIRE TO CONNECTED DEVICES PER CEC 654.15.
2. MDF: TMGB CPI PART NUMBER 40153-012; 4"W x 12"L x 1/4" THICK. IDF: TGB CPI PART NUMBER 13622-012; 2"W x 12"L x 1/4" THICK.
3. LOW VOLTAGE SYSTEMS BACKBOARD.
4. #2 BARE GROUNDING WIRE.
5. GROUND CLAMP. #12CU BOND TO BUS.
6. 3/4" CONDUIT TO MAIN BUILDING GROUND BUS BAR/ROD/PANEL.

TMGB INSTALLATION DETAIL (5)

NO SCALE

LOW VOLTAGE SYSTEMS CABLE SCHEDULE

TELECOM		
T	CAT6	(TC - JACK)
PUBLIC ADDRESS		
A	MATCH EXISTING SYSTEM	
SECURITY		
S1	MATCH EXISTING SYSTEM	
DATA		
OF	12-STR SM FIBER	(MDF - IDF)
D	CAT6	(IDF - JACK)
FIRE ALARM		
FA	REFER TO FIRE ALARM DRAWINGS FOR CABLE TYPES AND QUANTITIES	



SITE COMM/SIGNAL SYSTEMS LINE DIAGRAM (6)

NO SCALE

FILE NO. 20-10 APPL. NO. 02-1219093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 JUAN M. GONZALEZ, A.I.A.
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
SYSTEMS NOTES, DETAILS AND LINE DIAGRAM

E1.9

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

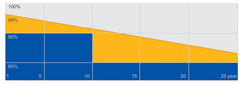
Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

PLOTTED: 4/12/2024 6:21:57 PM
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backsheet 2.dwg

- Higher output power
- Lower LCOE
- Less shading and lower resistive loss
- Better mechanical loading tolerance

Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty



■ JA Linear Power Warranty ■ Industry Warranty

Comprehensive Certificates

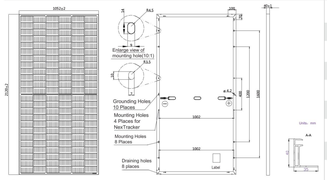
- IEC 61215, IEC 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- OHSAS 18001: 2007 Occupational health and safety management systems

JA SOLAR

www.jasolar.com
Specifications subject to technical changes and tests.
JA Solar reserves the right of final interpretation.
Shanghai JA Solar Technology Co., Ltd.

JA SOLAR JAM72S20 440-465/MR/1000V Series

MECHANICAL DIAGRAMS



Remark: customized frame color and cable length available upon request

SPECIFICATIONS

Cell	Mono
Weight	25.0kg±3%
Dimensions	2120±2mm×1052±2mm×40±1mm
Cable Cross Section Size	4mm² (IEC)
No. of cells	144 (6×24)
Junction Box	IP68, 3 diodes
Connector	Genuine MC4 QC4.10
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-); Landscape: 1200mm(+)/1200mm(-)
Country of Manufacturer	China/Vietnam

ELECTRICAL PARAMETERS AT STC

TYPE	JAM72S20 -440/MR/1000V	JAM72S20 -445/MR/1000V	JAM72S20 -450/MR/1000V	JAM72S20 -455/MR/1000V	JAM72S20 -460/MR/1000V	JAM72S20 -465/MR/1000V
Rated Maximum Power(Pmax) [W]	440	445	450	455	460	465
Open Circuit Voltage(Voc) [V]	49.40	49.56	49.70	49.85	50.01	50.15
Maximum Power Voltage(Vmp) [V]	40.90	41.21	41.52	41.82	42.13	42.43
Short Circuit Current(Isc) [A]	11.28	11.32	11.36	11.41	11.45	11.49
Maximum Power Current(Imp) [A]	10.76	10.80	10.84	10.88	10.92	10.96
Module Efficiency [%]	19.7	20.0	20.2	20.4	20.6	20.8
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α_Isc)	+0.044%/℃					
Temperature Coefficient of Voc(β_Voc)	-0.272%/℃					
Temperature Coefficient of Pmax(γ_Pmp)	-0.350%/℃					
STC	Irradiance 1000W/m², cell temperature 25℃, AM1.5G					

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.They only serve for comparison among different module types.
Measurement tolerance at STC: Pmax ±3 %, Voc ±2% and Isc ±4%.

ELECTRICAL PARAMETERS AT NOCT

TYPE	JAM72S20-440 /MR/1000V	JAM72S20-445 /MR/1000V	JAM72S20-450 /MR/1000V	JAM72S20-455 /MR/1000V	JAM72S20-460 /MR/1000V	JAM72S20-465 /MR/1000V
Rated Max Power(Pmax) [W]	333	336	340	344	348	352
Open Circuit Voltage(Voc) [V]	46.40	46.65	46.90	47.15	47.38	47.61
Max Power Voltage(Vmp) [V]	38.70	38.95	39.19	39.44	39.68	39.90
Short Circuit Current(Isc) [A]	9.16	9.20	9.25	9.29	9.33	9.38
Max Power Current(Imp) [A]	8.60	8.64	8.68	8.72	8.76	8.81
NOCT	Irradiance 800W/m², ambient temperature 20℃,wind speed 1m/s, AM1.5G					

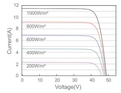
*For NexTracker installations ,Maximum Static Load, Front is 2400Pa while Maximum Static Load, Back is 2400Pa.

OPERATING CONDITIONS

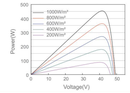
Maximum System Voltage	1000V DC(IEC)
Operating Temperature	-40℃~+85℃
Maximum Series Fuse	20A
Maximum Static Load,Front*	3600Pa, 1.5
Maximum Static Load,Back*	1600Pa, 1.5
NOCT	45±2℃
Safety Class	Class Ⅱ

CHARACTERISTICS

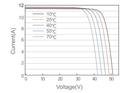
Current-Voltage Curve JAM72S20-455/MR/1000V



Power-Voltage Curve JAM72S20-455/MR/1000V



Current-Voltage Curve JAM72S20-455/MR/1000V

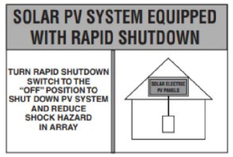


Premium Cells, Premium Modules — Version No. : Global_EN_20200530A

PV PANEL CUT SHEET

NO SCALE — 1

THE SOLAR PHOTOVOLTAIC SYSTEM SHUTS DOWN THE ARRAY AND THE CONDUCTORS LEAVING THE ARRAY. A LABEL COMPLYING WITH CFC 1205.4 SHALL BE PROVIDED. THE FIRST TWO LINES OF THE LABEL SHALL BE UPPERCASE CHARACTERS WITH A MINIMUM HEIGHT OF 3/8 INCH (10 MM) IN BLACK ON A YELLOW BACKGROUND. THE REMAINING CHARACTERS SHALL BE UPPERCASE WITH A MINIMUM HEIGHT OF 3/16 INCH (5 MM) IN BLACK ON A WHITE BACKGROUND AND BE SIMILAR TO THE FOLLOWING:



RAPID SHUTDOWN LABELING

NO SCALE — 4

SOLAR PV/BATTERY GENERAL NOTES

1. PROVIDE A COMPLETE AND OPERATIONAL SOLAR PV AND BATTERY ENERGY STORAGE SYSTEM, TO INCLUDE PV PANELS, COMBINATION OPTIMIZERS/DC RAPID SHUTDOWN DEVICES, PANEL RACKING AND GROUNDING, 208V 3Ø HYBRID PV/BESS INVERTER, CTs FOR MAIN BREAKER BUILDING PANEL, ENERGY MONITORING SOFTWARE AND PROGRAMMING, MOBILE APPLICATION INSTALLATION, WIRING, ELECTRICAL CONNECTORS, AND QD TERMINATORS, CAT6 CONNECTION TO LAN, AND ALL REQUIRED APPURTENANCES.
2. BOND ALL RACKING AND PANELS TO BUILDING SYSTEM GROUND.
3. FOR ANY SUBSTITUTE SYSTEM, THE CONTRACTOR SHALL INCLUDE COMPLETE FACTORY DRAWINGS AND SUBMITTALS DETAILING THE SYSTEM INSTALLATION AND CALCULATIONS TO ENGINEER'S OFFICE FOR REVIEW AND APPROVAL. A SUBSTITUTE SYSTEM WILL REQUIRE REVIEW BY DSA.

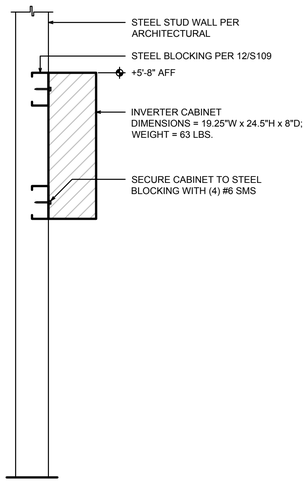
T24 SOLAR PV/BATTERY CALCULATIONS

BUILDING CLASSIFICATION
ASSEMBLY

REQUIRED PV SYSTEM SIZE
EQUATION 9-1
kWPVdc = 13,137 S.F. (CFA) x 0.44 (A) = 5.781
PV SYSTEM PROVIDED = 7.20 kWdc

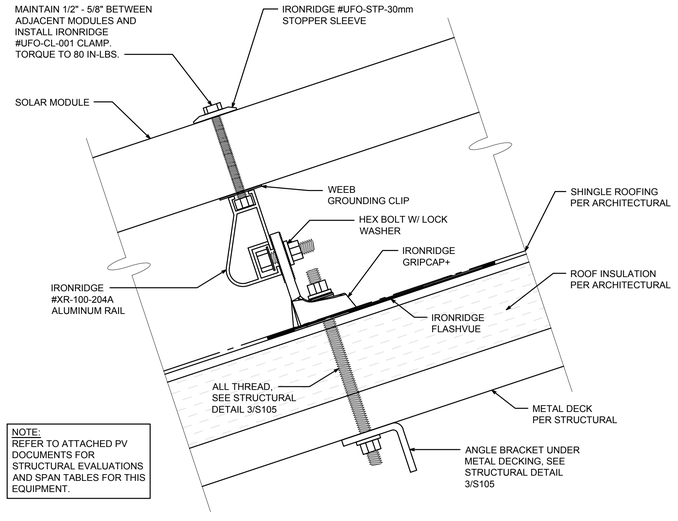
REQUIRED BATTERY STORAGE SIZE
EQUATION 9-3
kWhbatt = 5.781 (kWPVdc) x 0.9 (B) / 0.975 (D) = 5.37 kWh
BATTERY STORAGE PROVIDED = 9.00 kWh (LITHIUM ION)

REQUIRED POWER CAPACITY OF BATTERY STORAGE SYSTEM
EQUATION 9-4
kWbatt = 5.781 kWPVdc x 0.46 (C) = 2.66 kW
BATTERY POWER RATING = 5.60 kW CONTINUOUS



PV INVERTER AND BATTERY MOUNTING DETAILS

NO SCALE — 2



SOLAR PV PANEL RACKING ATTACHMENT DETAIL

NO SCALE — 3

REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON E17850 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave. Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

FILE NO. 20-10 APPL. NO. 02-1210993

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 — TEL: 559-497-1542 — ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 — FAX: 559-497-1549 — JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 4/12/2024

SHEET TITLE:
PV AND BESS DETAILS

E1.10

PLOTTED: 4/12/2024 6:21:58 PM
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backcheck 2.dwg

ESS Technology Information			
Type of ESS			
ESS chemistry (if electrochemical)			
Enclosure Type			
Footprint Area (ft.^{2})			
Weight (lbs.)			
Overall Dimensions L x W x H (ft.)	Length	Width	Height
Rated Continuous Discharge Power (kW)			
Input Voltage into the ESS (VAC)			
Output Voltage (nominal)(VAC)			
Frequency (Hz)			
Number of phases (input and output)	Input	Output	
Duty cycle (if applicable)			
Maximum short circuit current (A)			
Auxiliary (if applicable)	Input voltage (V)	Output voltage (V)	
Auxiliary (if applicable)	Current (A)	Frequency (Hz)	
Rated Discharge Energy (kWh)			
Minimum Discharge Time (min.)			
Maximum Discharge Time (min.)			
Operating Temperature Range (°F)			
Stored Energy Capacity (kWh)			
Self-discharge Rate (% energy loss/day)			
Liquid Capacity (Gal.) needed for secondary containment of flow batteries			
Special environmental ratings and limitations as applicable	Seismic	Indoor	Outdoor

Pre-Inspection/Plan Review				
1.1	Documentation prepared by a registered engineer or approved third party indicating that the system and system components meet all applicable safety standards (e.g., UL 9540, UL 1973, etc.).			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ N/A	Complies: ☐ Yes ☐ No ☐ N/A	Comments/Assumptions
1.2	Documentation of Failure Modes and Effects Analysis (FMEA), Hazard Analysis, or other analysis is provided that supports the safety of the system and system components.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ N/A	Complies: ☐ Yes ☐ No ☐ N/A	Comments/Assumptions
Self-Contained, Prepackaged Energy Storage Systems				
2.1	Each self-contained, prepackage energy storage system is designed, tested, and listed in accordance with applicable safety standards (e.g., UL 9540).			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
Pre-Engineered Energy Storage Systems				
3.1	Each pre-engineered energy storage system comprising two or more factor-matched modular components intended to be assembled in the field is designed, tested, and listed in accordance with applicable safety standards (e.g., UL 9540).			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
Engineered and Field-Constructed Energy Storage Systems				
4.1	System is composed of components that have been listed and evaluated to safety standards that are applicable to each component.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
4.2	Documentation in the form of a Failure Modes and Effects Analysis (FMEA), Hazard Analysis or other approved analysis is provided that supports the safety of the system and its components.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions

Repairs to Existing Energy Storage System				
5.1	Repairs to an existing energy storage system are made in such a manner that the existing system as approved (when originally installed and commissioned) is not modified or documentation is provided by the entity performing the repair(s) (e.g., Failure Modes and Effects Analysis [FMEA] or other approved analysis) that supports the safety of the repair(s) to an existing system and is approved by the authority having jurisdiction.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
5.2	Repairs that necessitate any substantial change to the existing energy storage system as originally installed have been assessed in relation to the applicable provisions of the sections below and the system has been recommissioned.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
5.3	Any repairs to batteries associated with the existing energy storage system have been performed according to the battery manufacturer's instructions. Where an energy storage system battery is replaced, it has been replaced with a battery that has been tested and listed in accordance with UL 1973 or otherwise approved by the authority having jurisdiction.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
Additions to Existing Energy Storage System				
6.1	Additions to existing energy storage system satisfy the provisions applicable to the original system classifications and are made in such a manner that the existing system, as approved when originally installed and commissioned, is not materially modified or documentation is provided (e.g., Failure Modes and Effects Analysis [FMEA] or other approved analysis) by the entity performing the addition that supports the safety of the addition to an existing system and is approved by the authority having jurisdiction.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
6.2	Additions to existing energy storage system which necessitate a change to the manner in which the existing system is installed, meet the applicable provisions of this document, and the system has been recommissioned in accordance with the commissioning requirements after the addition is completed.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions

Renewal or Renovation of Existing Energy Storage System				
7.1	Renewal or renovation to existing energy storage system is made in such a manner that the existing system, as approved when originally installed and commissioned, is not materially modified or documentation (e.g., Failure Modes and Effects Analysis [FMEA] or other approved analysis) is provided by the entity performing the renewal or renovation that supports the safety of the renewal or renovation, and is approved by the authority having jurisdiction.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
7.2	Renewal or renovation that necessitates any material change meets the applicable provisions of this document and the system is recommissioned in accordance with commissioning requirements.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
General Siting of ESS and Associated Equipment, Components, and Controls				
8.1	The system is sited and installed in accordance with the manufacturer's installation instructions or when relevant the system designer or integrator.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.2	The system is placed on an approved bearing surface capable of supporting the calculated dead and live loads of all system components designed to bear on the foundation.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.3	When inside or on a building, dead and live loads associated with the system are considered in the building design.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.4	The system is located or protected where it will not be adversely impacted by natural hazards (i.e., rain, snow, wind, lightning, and wildfire).			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions

8.5	The system is anchored to resist anticipated seismic forces in accordance with IEEE 693 or locally adopted building codes.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.6	The system is located above the base flood elevation or otherwise protected against flooding.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.7	Signage indicating the designated means of access to and egress from the installation is provided.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.8	Signage indicating containment and/or neutralization means provided for incident response mechanisms and any flow battery electrolyte tanks.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.9	The system is installed outside potentially hazardous atmospheres as defined by NFPA 70 or IEEE C-2 or tested and listed for installation within such atmospheres.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.10	Emergency egress: The system is located in a manner to not adversely affect emergency egress from its location and buildings or facilities in which it is installed.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.11	Emergency access: The system is located in a manner that is accessible by emergency responders.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions

8.12	The system is designed and located to allow for service and maintenance and provided with artificial lighting on the serviceable areas of the system.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.13	The system is located at or greater than minimum required distance away from stored combustible materials, hazardous chemicals, high-piled stock and other fire hazard exposures.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.14	The system is located or protected to prevent physical damage.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.15	Multiple systems are located or protected such that a fire or failure of one system does not pose an exposure hazard to an adjacent system.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.16	Fire protection of systems and the surrounding area is provided during construction.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
8.17	Safety signs and labels indicating hazards associated with the system are provided.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
Outdoor Installations of Energy Storage System and Associated Equipment, Components and Controls				
9.1	System is designed and constructed for outdoor installation.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions

9.2	Any air intakes and exhausts are designed and located so they are not adversely affected by other exhausts, gases or contaminants.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
9.3	Exhaust outlet(s) that exhaust other than ventilation air are designed and located the required distance from heating, ventilating, and air conditioning (HVAC) air intakes; windows, doors; loading docks; and other openings into buildings and facilities.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
9.4	Exhaust outlet(s) are not directed onto walkways or pedestrian or vehicular travel paths.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
9.5	Security barriers, fences, landscaping and other enclosures do not affect required intake and exhaust air flow.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
9.6	Systems and air intakes and exhausts are not located in areas used for combustible, flammable, or hazardous materials storage.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
9.7	The system is not located in an area designated as an Urban Wildland Interface.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
Rooftop Installations of Energy Storage System and Associated Equipment, Components and Controls				
10.1	Designed and installed in accordance with applicable outdoor installation requirements and protected against anticipated environmental exposures.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions

10.2	The system is installed on noncombustible rooftops of buildings that are not located above the maximum acceptable height above grade.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptionis
10.3	Access to the roof for first responders is provided either through the interior of the building or on the exterior of the building.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
10.4	A service walkway meeting the minimum required width is provided for service and emergency personnel from the point of access to the roof to and around the system.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
10.5	The system is located from the edge of the roof a distance equal to at least the height of the system, equipment, or component, but not less than the minimum acceptable distance for roof mounted equipment.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
10.6	Roofing materials under and within the required horizontal distance are noncombustible or have a Class A rating when tested in accordance with ASTM E108, Standard Test Method for Fire Tests of Roof Coverings, or UL 790, Standard Test Methods for Fire Tests of Roof Coverings.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
Interior Installations of ESS and Associated Equipment, Components and Controls				
11.1	Rooms, spaces, and areas in which the system is located have a floor level that is not more than the established safe distance above the lowest level of fire department vehicle access and that is not more than the established safe distance below the finished floor of the lowest level of exit discharge (portion of a means of egress system between the termination of an exit and a public way).			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions
11.2	Rooms, spaces, or areas dedicated to or housing the system or system components are separated from other areas of the building by building construction in accordance with the building and fire codes.			
	Plans Verified: ☐ Yes ☐ No ☐ N/A	Field Verified: ☐ Yes ☐ No ☐ N/A	Complies: ☐ Does Not Comply ☐ Not Observable ☐ Not Applicable	Comments/Assumptions

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LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 02 Electrical Backcheck 2.dwg

FILE NO. 20-10 APPL. NO. 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 TEL: 559-497-1542 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
BATTERY ESS COMMISSIONING

E1.11

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

11.3	Openings into rooms, spaces, or areas dedicated to or housing the system or system components are protected by fire doors and dampers in accordance with the building and fire codes.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
11.4	Rooms, spaces, or areas containing dedicated to or housing the system or system components are provided with egress in accordance with the building and fire codes.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
11.5	Rooms, spaces, or areas that contain a potential hazardous level of flammable gas are provided with a gas detection system in accordance with the fire code.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
11.6	When located in an area accessible to other than service personnel, batteries are contained in a noncombustible cabinet or other enclosure that prevents access by unauthorized personnel.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
Interconnections with Other Systems							
12.1	All electrical connections to a self-contained prepackaged energy storage system or the components of a pre-engineered energy storage system comply with the provisions of NFPA 70, National Electrical Code, when installed on the customer side of the primary electrical meter, or IEEE C-2, National Electrical Safety Code, when installed on the utility side of the primary electrical meter.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
12.2	Connections to other energy sources are in accordance with NFPA 54, National Fuel Gas Code; NFPA 58, Liquefied Petroleum Gas Code; NFPA 2, Hydrogen Gas Code; and other national standards applicable to the energy source connected to the energy storage system.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			

12.3	All energy sources are provided with disconnecting means and a visible identification of the disconnecting means in accordance with the standards applicable to the interconnection of the energy storage system.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
12.4	All connections associated with the energy storage system including any required plumbing, fire alarm, detection, control circuits, or mechanical systems are in accordance with applicable nationally recognized standards, including any necessary provisions for ventilation, thermal management, exhaust, and fire protection.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
12.5	Where the building or facilities in which the energy storage system is installed are required by the local building or fire code to have central operation and control systems, the control and management systems associated with the energy storage system are connected into those operational and control systems.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
Ventilation, Thermal Management and Exhaust							
13.1	Where self-contained and prepackaged or pre-engineered energy storage system include a tested and listed enclosure as part of the system are located indoors and have sealed direct ventilation and exhaust systems, the ventilation and exhaust systems that connect the system with the outdoor environment are designed and installed in accordance with the terms of the listing and manufacturer's installation instructions.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.2	Ventilation and exhaust systems are designed to provide a negative or neutral pressure in the room or area where the energy storage system is installed, relative to the remainder of the adjacent interior spaces that are not completely sealed from and have no openings into the room or area where the system is installed.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.3	Where located indoors and where there is a potential for a hazardous level of gases being produced by the energy storage system or occurring within the indoor space where the system is located, the indoor space is provided by either an explosion prevention system or the indoor space is provided with sufficient ventilation to prevent a potentially hazardous level of flammable gases.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			

13.4	A separate mechanical ventilation system meeting the provisions of the local building, mechanical, and fire codes is provided for any dedicated room or enclosed area containing an energy storage system.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.5	Where required, a means of temperature and/or humidity control in the room or enclosed area is provided to maintain required operating conditions for the energy storage system.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.6	The mechanical ventilation system serving the energy storage system provides sufficient ventilation air for thermal management of the system.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.7	The inlets of the mechanical ventilation system are designed to prevent foreign matter from entering the ventilation system and accumulating on the outside of or immediately adjacent to the inlet.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.8	The mechanical ventilation system is controlled so that, if needed, it continues to operate regardless of the operating status of the energy storage system.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.9	The mechanical ventilation system has a manual control to shut off the energy storage system in case of emergency. The manual control readily visible and accessible and is provided with the necessary signage to immediately identify the control.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.10	Where required, a separate mechanical exhaust system meeting the provisions of the local building, mechanical and fire codes is provided for the room or area where the energy storage system is located.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			

13.11	The mechanical exhaust system provides exhaust air equal to or greater than that provided by the ventilation and thermal management system and is interlocked to operate in conjunction with the ventilation and thermal management system.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.12	Where harmful emissions from the energy storage system are possible, a mechanical exhaust system is provided and is designed to ensure that harmful emissions are exhausted to a safe location.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.13	Inlets to the mechanical exhaust system are designed to prevent foreign matter from entering the system and to prevent the accumulation of foreign matter outside and immediately adjacent to the inlet.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.14	Outlets of the mechanical exhaust system are designed to prevent the accumulation of foreign matter outside and immediately adjacent to the outlet.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.15	The mechanical exhaust system is controlled so that, if needed, it continues to operate regardless of the operating status of the energy storage system.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
13.16	The mechanical exhaust system has a manual control to shut off the energy storage system in case of emergency, and the manual control is interconnected with the manual control provided on the mechanical ventilation system.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
Fire Protection–Fire and Smoke Detection							
14.1	Self-contained, prepackaged, or pre-engineered energy storage systems that include fire and smoke detection systems in accordance with the manufacturer's installation instructions are interconnected with fire and smoke detection systems as required by local codes for the building, facility, or property associated with the system installation.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			

14.2	Engineered and field-constructed energy storage systems that include fire and smoke detection systems in accordance with the system installation hazard analysis and local fire codes are interconnected with fire and smoke detection systems required by local codes for the building, facility or property associated with the system installation.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
14.3	Energy storage systems not capable of being assessed under 14.1 or 14.2 above are accompanied by a fire risk assessment documenting the acceptability of the proposed fire detection and smoke detection systems.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
14.4	Fire protection systems not provided as a component of a tested and listed energy storage system comply with applicable criteria in fire alarm and signaling codes.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
14.5	Smoke detection systems not provided as a component of a tested and listed energy storage system comply with applicable criteria in standards covering smoke alarms.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
Fire Protection–Fire Suppression							
15.1	Self-contained, prepackaged, or pre-engineered energy storage systems that include fire suppression system(s) in accordance with the manufacturer's installation instructions have the fire suppression system(s) interconnected with fire and smoke detection systems as required by local codes for the building, facility or property associated with the system installation.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
15.2	Engineered and field-constructed energy storage systems that include fire suppression system(s) in accordance with the system installation hazard analysis and local fire codes have the fire suppression system(s)interconnected with fire and smoke detection systems as required by local codes for the building, facility or property associated with the system installation.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			

15.3	Energy storage systems not capable of being assessed under 15.1 or 15.2 above are accompanied by a fire risk assessment documenting the acceptability of the proposed fire suppression systems.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
15.4	Fire suppression systems that are not provided as a component of a tested and listed energy storage system meet the provisions of an applicable standard as documented in accordance with the hazard analysis.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
15.5	Where the energy storage system type and/or hazard analysis indicates that fire suppression could result in a greater hazard (than if the system is not provided with fire suppression), a fire suppression system is not required subject to the approval of the authority having jurisdiction.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
Fire Protection–Fire Containment							
16.1	Rooms, spaces, and areas dedicated to an energy storage system are separated from other areas of the building in accordance with local building and fire codes.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
Fire Protection–Removal of Smoke							
17.1	Smoke control meeting the provisions of standards for smoke control systems and local fire codes is provided unless: • The energy storage system is installed outdoors and able to freely communicate directly with the outdoor environment • The energy storage system is self-contained and prepackaged or pre-engineered and is listed for application without a smoke control system • A hazard analysis is provided that documents the system or its intended installation does not require smoke containment or management.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
Fire Protection–Containment of Fluids							
18.1	Where the energy storage system contains fluids, it is provided with a means to safely contain the volume of fluid contained in the system unless a hazard analysis documents that all fluids in the system are not hazardous and can be safely conveyed to the sanitary drainage system serving the building, facility or site associated with the energy storage system installation.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			

Fire Protection–Signage							
19.1	Self-contained and prepackage or pre-engineered energy storage system include signage on the system and its component parts as required by their listing either on the system or system component or installed onsite in accordance with the manufacture's installation instructions.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
19.2	Signage adjacent to all doors, gates, or other means of access to the energy storage system contains the following information: • Point-of-contact(s) in case of emergency (ICE) to include facility owner and energy storage owner, integrator, and operator • Type of system(s) battery technology if applicable and capacity of each system in kWh • Location and purpose of all manual controls and emergency shutoff devices • Amount and type of any corrosive liquids • Amount and type of any hazardous chemicals • Type of any fire suppression system provided • Instructions for first responders for addressing fire and smoke control • Signage should be in accordance with ANSI Z535, locally adopted codes, or approved by the authority having jurisdiction.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
Commissioning							
20.1	Self-contained, prepackaged energy, or pre-engineered energy storage systems are evaluated for proper operation by an approved entity in accordance with manufacturer's instructions and a commissioning plan they have prepared that outlines how the safety systems will be tested to ensure they are calibrated, adjusted and in proper working condition after the installation is complete, but prior to final approval. A report documenting the commissioning process and the results are provided prior to final inspection and approval.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			
20.2	Engineered and field-constructed energy storage systems are evaluated for proper operation by the party responsible for the documentation of the system safety in accordance with a commissioning plan they have prepared that outlines how the safety systems will be tested to ensure they are calibrated, adjusted and in proper working condition after the installation is complete, but prior to final approval. A report documenting the commissioning process and the results are provided prior to final inspection and approval.						
	Plans Verified	**Field Verified**		Complies	**Comments/Assumptions**		
	Yes	Yes		Does Not Comply			
	No	No		Not Observable			
	N/A	N/A		Not Applicable			

PLOTTED: 4/12/2024 6:22:05 PM
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 02 Electrical Backcheck 2.dwg

FILE NO. 20-10 APPL. NO. 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 TEL: 559-497-1542 ARCHITECTURE PLANNING
FRESNO CALIFORNIA 93711 FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
BATTERY ESS COMMISSIONING

E1.12

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

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AUTHORIZATION TO MARK

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Applicant:	Pika Energy Inc	**Manufacturer:**	[redacted]
Address:	35 Bradley Dr., Stop # 1, Westbrook, ME 04092	**Address:**	[redacted]
Country:	USA	**Country:**	[redacted]
Contact:	Mr. Uwe Uhmeyer	**Contact:**	[redacted]
Phone:	[redacted]	**Phone:**	[redacted]
FAX:	NA	**FAX:**	[redacted]
Email:	uuhmeyer@pika-energy.com	**Email:**	[redacted]

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Cortland, NY 13045

Control Number: 5005377 **Authorized by:** for Dean Davidson, Certification Manager

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Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Inverters, Converters, Controllers and Interconnection System Equipment For Use With Distributed Energy Resources [UL1741:2010 Ed.2(Supplement SA)+R:07Sep2016] CSA C22.2#107.1: Issued: 2001/09/01 Ed: 3 (R2011) General Use Power Supplies
Product:	Grid Support Utility Interactive Inverter
Brand Name:	Pika Energy, Generac Power Systems, Generac.
Models:	X7601, X7602, X11402, X7603, X11403.

ATM for Report 102589015CRT-001c Page 1 of 3 ATM Issued: 11-Nov-2019
ED 16.3.15 (20-Apr-17) Mandatory

INVERTER UL 1741 CERTIFICATION ①

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<- Back **Product Description**

Title:	BATTERIES
Company:	PANASONIC ENERGY CO., LTD - Moriguchi, Osaka JAPAN
Product Information:	Trade Name(s): Panasonic. Rechargeable Li-ion Battery, Model Nos. BJ-DCB05ZKBG.
Evaluated to the following:	A representative sample of the listed devices have been tested, investigated and found to comply with the requirements of the Standard(s) for the Batteries for Use In Stationary, Vehicle Auxiliary Power and Lght Electric Rail (Ler) Applications (ANSI/CAN/UL-1973 REC) and are identified with the cETLus RECOGNIZED COMPONENT Mark.

<- Back

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ETL listed products that are in doubt or for products that do not appear in the directory, please request a verification of certification.
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BATTERY UL 1973 CERTIFICATION ②

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Applicant:	IronRidge, Inc.	**Manufacturer:**	IronRidge, Inc.
Address:	1495 Zephyr Ave Hayward, CA 94544	**Address:**	1495 Zephyr Ave Hayward, CA 94544
Country:	USA	**Country:**	USA
Contact:	Yann Schwarz	**Contact:**	Jim Norsworthy Or
Phone:	(800) 227-9523	**Phone:**	(707) 363-3025
FAX:	(707) 459-1833	**FAX:**	(510) 225-0975
Email:	yschwarz@ironridge.com	**Email:**	jnorsworthy@ironridge.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Lake Forest, CA

Control Number: 4008377 **Authorized by:** for Thomas J. Patterson, Certification Manager

ETL CLASSIFIED
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Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	UL Subject 2703 Outline of Investigation for Rack Mounting Systems and Clamping Devices for Flat-Plate Photovoltaic Modules and Panels, Issue Number: 1, October 4, 2010
Product:	XR Rails with Integrated Grounding.
Brand Name:	IronRidge Roof Mount
Models:	IR XR followed by 4 Alphanumeric Characters

ATM for Report 101541132LAX-002 Page 1 of 2 ATM Issued: 28-Jan-2016
ED 16.3.15 (1-Jan-13) Mandatory

XR100 UL 2703 CERTIFICATION ③

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Applicant:	Shanghai JA Solar Technology Co., Ltd.	**Manufacturer:**	Yiwu JA Solar Technology Co., Ltd.
Address:	No. 118, Lane 3111, West Huancheng Road, Fengxian District, 201401 Shanghai	**Address:**	No.165, Tongze Road, Yiting Town, 322000 Yiwu City, Zhejiang Province
Country:	P. R. China	**Country:**	P. R. China

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Intertek Testing Services Shanghai Limited

Control Number: 5020726 **Authorized by:** for L. Matthew Snyder, Certification Manager

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Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Terrestrial Photovoltaic (PV) Modules - Design Qualification And Type Approval - Part 1: Test Requirements [UL 61215-1:2017 Ed.1] Terrestrial Photovoltaic (PV) Modules - Design Qualification And Type Approval - Part 1-1: Special Requirements For Testing Of Crystalline Silicon Photovoltaic (PV) Modules [UL 61215-1-1:2017 Ed.1] Terrestrial Photovoltaic (PV) Modules - Design Qualification And Type Approval - Part 2: Test Procedures [UL 61215-2:2017 Ed.1] Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements For Construction [UL 61730-1:2017 Ed.1] Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements For Testing [UL 61730-2:2017 Ed.1] Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction [CSA C22.2#61730-1:2019 Ed.2] Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing [CSA C22.2#61730-2:2019 Ed.2]
Product:	Crystalline Silicon Photovoltaic modules

ATM for Report 190900406SHA-001 Page 11 of 14 ATM Issued: 10-Jan-2023
ED 16.3.15 (1-Jul-2022) Mandatory

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AUTHORIZATION TO MARK

Brand Name:	JA SOLAR 晶澳
Models:	JAM72S03-385/PR, JAP72S03-340/SC, JAM72S10- followed by 395, 400, 405, 410 or 415 followed by /MB, JAM60S10- followed by 330, 335, 340 or 345 followed by /MB, JAM72S10- followed by 395, 400, 405, 410 or 415 followed by /MR, JAM66S10- followed by 365, 365, 370, 375 or 380 followed by /MR, JAM60S10- followed by 330, 335, 340 or 345 followed by /MR, JAM72S09- followed by 370, 375, 380, 385, 390, 395 or 400 followed by /PR, JAM60S09- followed by 310, 315, 320 or 325 followed by /PR, JAM72S09- followed by 375, 380 or 385 followed by /BP, JAM60S09- followed by 315 or 320 followed by /BP, JAM72S10- followed by 385, 390, 395 or 400 followed by /BP, JAM60S10- followed by 320, 325 or 330 followed by /BP, JAM72S10- followed by 380, 385, 390, 395, 400 or 405 followed by /PR, JAM60S10- followed by 320, 325, 330 or 335 followed by /PR, JAM72S12- followed by 365, 370, 375, 380 or 385 followed by /PR, JAM60S12- followed by 305, 310, 315 or 320 followed by /PR, 1JAM78S10- followed by 435, 440, 445, 450 or 455 followed by /MR, 1JAM6(K)-72-335/4BB/1500V, JAM60S17- followed by 320, 325, or 330 followed by /MR, JAM72S20- followed by 430, 435, 440, 445, 450, 455, 460, 465 or 470 followed by /MR, JAM60S20- followed by 355, 360, 365, 370, 375, 380, 385 or 390 followed by /MR, JAM72S30- followed by 530, 535, 540, 545, 550 or 555 followed by /MR, JAM66S30- followed by 490, 495 or 500 followed by /MR, JAM68S11- followed by 355, 360 or 365 followed by /PR, JAM68S11- followed by 345, 350, 355, 360 or 365 followed by /PR(B), JAM76S11- followed by 395, 400, 405, 410 or 415 followed by /PR(B), JAM76S11- followed by 395, 400, 405, 410 or 415 followed by /PR(B)/1000V, JAM78S30-followed by 575, 580, 585, 590, 595 or 600 followed by /GR, JAM72S30-followed by 535, 540, 545 or 550 followed by /GR, JAM66S30-followed by 490, 495, 500 or 505 followed by /GR, JAM60S30-followed by 445, 450, 455 or 460 followed by /GR, JAM54S30-followed by 400, 405, 410 or 415 followed by /GR, JAM78S31-followed by 570, 575, 580, 585 or 590 followed by /GR, JAM72S31-followed by 530, 535 or 540 followed by /GR, JAM66S31-followed by 485, 490 or 495 followed by /GR, JAM60S31-followed by 440, 445 or 450 followed by /GR, JAM54S31-followed by 395, 400 or 405 followed by /GR. JAM60S31-followed by 430, 435, 440, 445 or 450 followed by /GR/1000V, JAM54S31-followed by 390, 395, 400 or 405 followed by /GR/1000V JAM54S30-followed by 400, 405, 410 or 415 followed by /MR, JAM72S31-followed by 510, 515, 520, 525, 530, 535, 540 or 545 followed by /MR, JAM54S31-followed by 385, 390, 395, 400 or 405 followed by /MR, JAM54S30-followed by 400, 405, 410 or 415 followed by /MR/1000V, JAM72S31-followed by 510, 515, 520, 525, 530,535, 540 or 545 followed by /MR/1000V, JAM54S31-followed by 385, 390, 395, 400 or 405 followed by /MR/1000V, JAM72S17-followed by 390, 395, 400 or 405 followed by /MR, JAM72S17-followed by 390, 395, 400 or 405 followed by /MR/1000V, JAM78S30- followed by 580, 585, 590, 595, 600 or 605 followed by /MR.

ATM for Report 190900406SHA-001 Page 12 of 14 ATM Issued: 10-Jan-2023
ED 16.3.15 (1-Jul-2022) Mandatory

PV MODULES UL 61730-1, UL 61730-2 CERTIFICATION ④

NO SCALE

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
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STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
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FILE NO. 20-10 APPL. NO. 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 4/12/2024

SHEET TITLE:
BESS SYSTEMS UL CERTIFICATES

E1.13

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FIRE ALARM GENERAL NOTES

1. FIRE ALARM SYSTEM: ADDRESSABLES, CLASS B, AUTOMATIC.
2. ALL WORK SHALL CONFORM TO THE 2022 EDITION OF NFPA 72, CBC, CEC, AND CFC.
3. INSTALLATION OF THE FIRE ALARM SYSTEM (FAS) SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATIONS, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
4. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR. (THE LOCAL FIRE AUTHORITY MAY WITNESS THE TEST).
5. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR THE INSTALLATION.
6. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
7. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
8. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL, OR OTHER LAB TESTING CRITERIA. APPROVED TYPE OF MATERIALS SHALL BE IDENTIFIED WITHIN THE SPECIFICATION WITHIN THE FIRE ALARM SECTION.
9. MICROPHONE ACCESSIBILITY SHALL COMPLY WITH CBC 11B-305 AND 11B-308.
10. WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR ENTIRE LENS WITHIN AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
11. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE.
12. AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (dBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY SPACE WITHIN A BUILDING THAT MAY BE OCCUPIED AND BE INTELLIGIBLE.
13. AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN, PRIOR TO "EVAC" ANNOUNCEMENT. THE CARBON MONOXIDE SIGNAL SHALL SOUND A FOUR-PULSE TEMPORAL PATTERN PER NFPA 720, 5.8.6.5.1.
14. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
15. VISUAL DEVICES SHALL NOT EXCEED 2 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH PER SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA. VISUAL DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
16. UNDERGROUND AND EXTERIOR CONDUITS SHALL HAVE WATERTIGHT FITTINGS AND WIRE APPROVED FOR WET LOCATIONS.
17. ALL FIRE ALARM WIRING SHALL BE FLP OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
18. PER CEC STANDARDS, ALL WIRING SHALL BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE WIRE. ANY CONNECTION SHALL BE BY LUG CONNECTION AT A DEVICE OR AT A FATC TERMINAL BLOCK ONLY. ALL BOXES TO BE SIZED PER CEC.
19. SMOKE DETECTORS SHALL NOT BE CLOSER THAN 12" FROM FIRE SPRINKLERS NOR 36" FROM SUPPLY AIR DIFFUSERS. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION, NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
20. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY, OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS, AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS. OWNER STANDARDS MAY BE MORE STRINGENT.
21. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS' SPECIFICATIONS. ANY SINGLE DEVICE SHALL NOT EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
22. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A LOCKING DEVICE WITH RED MARKING PER NFPA 72, SECTION 10.6.5.4 AND 10.6.5.2.3 TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL". CIRCUIT ID TO BE LABELED AT THE FIRE PANEL/EXTENDERS.
23. THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION IN COMPLIANCE WITH NFPA 72, SECTION 7.5.6.
24. CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48".
25. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC 901.6.2.
26. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTIONS WITH FINAL TEST. FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATIONS SHALL BE LISTED AS EITHER UUFX (CENTRAL STATION) OR UUJS (REMOTE AND PROPRIETARY) BY UNDERWRITERS LABORATORY (UL) OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD FM 3011. A COPY OF ALL DEVICES REPORTED TO THE CENTRAL STATION SHALL BE PROVIDED TO THE OWNER'S ELECTRONICS DEPARTMENT.
27. THE OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT.
28. ALL WIRING IS SHOWN DIAGRAMMATICALLY. SUBJECT TO DSA APPROVAL, CONTRACTOR MAY VARY SEQUENCE OF CIRCUITRY; HOWEVER, ALL CIRCUITS SHALL BE CONTINUOUS AND SUPERVISED.
29. ALL CONNECTIONS SHALL BE PROPERLY LABELED BY CONDUCTOR AND SHALL HAVE STA-KON LUG CONNECTORS. PANDUIT TAG (TIE WRAP) SEPARATELY.
30. FIRE ALARM TERMINAL CABINETS SHALL HAVE SUFFICIENT SPACE, TERMINAL BOARDS AND SCREW TERMINAL CONNECTORS TO ALLOW CONNECTION OF ALL CONDUCTORS SHOWN. PROVIDE BARRIER TO SEPARATE FIRE ALARM SYSTEM WHEN TERMINAL CABINET IS SHARED WITH NON-FIRE ALARM SYSTEMS. CONTRACTOR SHALL BE REQUIRED TO SUBMIT WITH HIS OTHER SHOP DRAWINGS DETAILED DRAWINGS OF HIS PROPOSED CONNECTIONS AT EACH FIRE ALARM TERMINAL CABINET PRIOR TO COMMENCING ANY WORK.
31. ALL NAC CIRCUIT CONDUCTORS SHALL BE #12 AWG, STRANDED (19 STRANDS OR LESS) COPPER, UNLESS OTHERWISE NOTED.
32. SET END-OF-LINE RESISTORS IN DISTRIBUTION TERMINAL CABINETS.
33. BATTERIES SHALL BE STAMPED WITH DATE OF MANUFACTURE.
34. INSTALLATION OF FAS EQUIPMENT SHALL BE BY AN AUTHORIZED ENGINEERED SYSTEM DISTRIBUTOR FOR THE EQUIPMENT SPECIFIED BY THE MANUFACTURER FOR SALES, SERVICE, INSTALLATION AND MAINTENANCE. PROVIDE CERTIFICATIONS WITH EQUIPMENT SUBMITTALS. SUBMITTALS BY FIRMS NOT FULFILLING THIS REQUIREMENT WILL BE AUTOMATICALLY REJECTED.
35. THE FAS INSTALLER SHALL BE NICET LEVEL 2 CERTIFIED.
36. THE FAS INSTALLER SHALL PROVIDE ALL FACTORY WARRANTIES TO THE OWNER AT THE CLOSE UP OF THE PROJECT.
37. THE FAS INSTALLER SHALL PROVIDE WRITTEN CERTIFICATION USING NFPA 72 INSPECTION AND TESTING FORMS AND SHALL CERTIFY THAT THE INSTALLATION, TESTING, AND OPERATION CONFORM IN ALL RESPECTS TO THE REQUIREMENTS AS SET FORTH IN TITLE 19 OF THE CALIFORNIA CODE OF REGULATIONS AND PART 3, ARTICLE 760 OF TITLE 24 OF THE C.C.R. AND C.B.C. SECTION 907. THE CONTRACTOR SHALL SUBMIT THE COMPLETED FAS CERTIFICATION AND DESCRIPTION FORM TO DIVISION OF STATE ARCHITECT.
38. INCLUDE ALL DEMOLITION OF EXISTING FIRE ALARM SYSTEM WHETHER SPECIFICALLY SHOWN OR NOT. REMOVE ALL CABLING & UNUSED EXPOSED RACEWAY & OUTLETS. BLANK OFF ALL UNUSED WALL & HARD CEILING OUTLETS. REMOVE ALL UNUSED OUTLETS IN TEE-BAR CEILING & REPLACE ACOUSTIC TILES. RETURN ALL DEVICES, APPLIANCES, & CONTROL PANELS TO OWNER IF REQUESTED BY OWNER DURING CONSTRUCTION.
39. WHEN FIRE ALARM WORK WILL DISABLE PORTIONS OF THE EXISTING FAS, PROVIDE ALL REQUIRED OVERTIME AND FIRE WATCH IN SCOPE OF WORK.
40. WHERE FIRE ALARM DEVICES ARE BEING INSTALLED IN OTHERWISE INACCESSIBLE AREAS, PROVIDE AN ALLOWANCE FOR THE INSTALLATION OF ACCESS PANELS AND ALL WORK ASSOCIATED WITH THE INSTALLATION. THE CONTRACTOR SHALL CUT ALL THE OPENINGS. THE SIZE OF THE ACCESS PANEL SHALL BE DETERMINED BY THE MAN ACCESS REQUIREMENTS. PROVIDE PAINT GRADE ACCESS DOORS AND PAINT TO MATCH THE COLOR & SHEEN OF THE EXISTING CEILING.
41. FIRE ALARM SYSTEM INSPECTION, TESTING, AND MAINTENANCE SHALL COMPLY WITH NFPA 72, CHAPTER 14.
42. PROVIDE FIRE ALARM RECORD DOCUMENTS CABINET NFPA 72, 7.7.2

- EVERY NEW FILE ALARM SYSTEM SHALL PROVIDE A DOCUMENTATION CABINET, INSTALLED AT THE SYSTEM CONTROL PANEL OR OTHER APPROVED LOCATION.
- THE DOCUMENTATION CABINET SHALL BE PROMINENTLY LABELED, "FIRE ALARM SYSTEM RECORD DOCUMENTS".
- ALL RECORD AND TESTING DOCUMENTATION SHALL BE STORED IN THE CABINET.
- CONTENTS SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY.
- WHERE CABINET IS INSTALLED IN A LOCATION OTHER THAN THE SYSTEM CONTROL UNIT, ITS LOCATION SHALL BE IDENTIFIED AT THE SYSTEM CONTROL UNIT.

PROVIDE SYSTEM DOCUMENTS AS APPLICABLE:

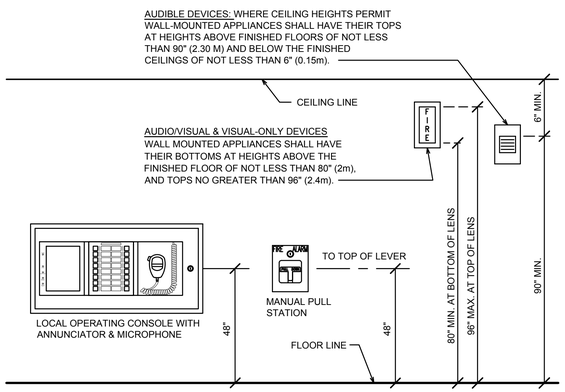
- RECORD DRAWINGS/AS-BUILTS
- EQUIPMENT CUT SHEETS & CA SFM LISTINGS
- ALTERNATIVE MEANS AND METHODS
- PERFORMANCE BASED DESIGN DOCUMENTATION (NFPA 72, 7.3.7)
- SYSTEM RECORD OF COMPLETION & ANY SUPPLEMENTAL INSPECTION AND TESTING DOCUMENTATION (NFPA 72, 7.8.2)
- EMERGENCY RESPONSE PLAN (NFPA 72, 7.3.8)
- EVALUATION DOCUMENTATION (NFPA 72, 7.3.9)
- RISK ANALYSIS DOCUMENTATION (NFPA 72, 7.3.6)
- SOFTWARE & FIRMWARE CONTROL DOCUMENTATION (NFPA 72, 23.2.2)

FIRE ALARM SYMBOLS

SYMBOL	NAME	DESCRIPTION	CSFM
FCPU	MAIN FIRE ALARM CONTROL PANEL W/ EMERGENCY VOICE/ALARM COMMUNICATION	GAMEWELL-FCI E3 SERIES W/ ILI-MB-E3, RPT-E3-UTP, DACT-E3, INI-VGC, ASM-16, PM-9, LCD-E3, (2) MMI-6SF	7165-1703:0125
LOC	LOCAL OPERATING CONSOLE W/ ANNUNCIATOR & PAGING MICROPHONE	GAMEWELL-FCI #E3-LOC W/ NGA, ASM-16, INI-VGC, INCC-MIC	7165-1703:0125
FCP	NETWORK FIRE ALARM CONTROL PANEL W/ EMERGENCY VOICE/ALARM COMMUNICATION	GAMEWELL-FCI E3 SERIES W/ ILI-MB-E3, RPT-E3-UTP, INI-VGC, AM-50-70, ASM-16, PM-9, LCD-E3	7165-1703:0125
S	SMOKE DETECTOR, PHOTOELECTRIC DETECTOR BASE	GAMEWELL-FCI #ASD-PL3 GAMEWELL-FCI #B300-6	7272-1703:0501 7300-1653:0109
H	HEAT DETECTOR, 135°F DETECTOR BASE	GAMEWELL-FCI #ATD-L3 GAMEWELL-FCI #B300-6	7270-1703:0502 7300-1653:0109
S CO	FIRE/CARBON-MONOXIDE DETECTOR SOUNDER BASE	GAMEWELL-FCI #MCS-COF GAMEWELL-FCI #B200S	7275-1703:0175 7300-1653:0213
MM	MONITOR MODULE	GAMEWELL-FCI #AMM-2F	7300-1703:0102
RM	RELAY MODULE	GAMEWELL-FCI #AOM-2SF	7300-1703:0102
	VISIBLE NAC DEVICE, CEILING MT'D (CANDELA INDICATED ON PLANS)	EATON/WHEELOCK #ELSTWC	7135-0785:0504
	VISIBLE NAC DEVICE, WALL MT'D (CANDELA INDICATED ON PLANS)	EATON/WHEELOCK #ELSTR	7135-0785:0504
	SPEAKER/VISIBLE NAC DEVICE, CEILING MT'D (WATTAGE & CANDELA INDICATED ON PLANS)	EATON/WHEELOCK #ELSPSTWC	7320-0785:0505
	SPEAKER/VISIBLE NAC DEVICE, WALL MT'D (WATTS & cd INDICATED ON PLANS)	EATON/WHEELOCK #ELSPSTR	7320-0785:0505
WP	EXTERIOR SPEAKER, WP, WALL MT'D (WATTS INDICATED ON PLANS)	EATON/WHEELOCK #ET-1010-R	7320-0785:0105
RPDA	REDUCED PRESSURE DETECTOR ASSEMBLY	SPECIFIED BY FIRE PROTECTION ENG.	
PIV	SPRINKLER POST INDICATOR VALVE	SPECIFIED BY FIRE PROTECTION ENG.	
TS	SPRINKLER RISER TAMPER SWITCH	SPECIFIED BY FIRE PROTECTION ENG.	
FS	SPRINKLER RISER FLOW SWITCH	SPECIFIED BY FIRE PROTECTION ENG.	
B	SPRINKLER RISER BELL	SPECIFIED BY FIRE PROTECTION ENG.	

FIRE ALARM CABLE SCHEDULE

SYMBOL	NAME	DESCRIPTION
A	SIGNALING LINE CIRCUIT (SLC) CABLE WEST PENN #D990	16/2 TWISTED PAIR, STRANDED, LOW CAPACITANCE FA POWER LIMITED, RISER CABLE (FPLR)
AW	SIGNALING LINE CIRCUIT (SLC) CABLE, OSP WEST PENN #AQC225	16/2 TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
B	NOTIFICATION APPLIANCE CKT (NAC) CABLE WEST PENN #998S	12/2 TWISTED PAIR, STRANDED FA POWER LIMITED, RISER CABLE (FPLR)
BW	NOTIFICATION APPLIANCE CKT (NAC) CABLE, OSP WEST PENN #AQ227	12/2 TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
C	EM. VOICE/ALARM COMM. (EV/AC) CABLE WEST PENN #HF995	18/2 SHIELDED TWISTED PAIR, STRANDED FA POWER LIMITED CABLE (FPL)
CW	EM. VOICE/ALARM COMM. (EV/AC) CABLE, OSP WEST PENN #AQC295	16/2 SHIELDED TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
D	INITIATING DEVICE CKT (IDC) CABLE WEST PENN #994S	14/2 TWISTED PAIR, STRANDED FA POWER LIMITED, RISER CABLE (FPLR)
DW	INITIATING DEVICE CKT (IDC) CABLE, OSP WEST PENN #AQC226	14/2, TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
G	POWER CABLE WEST PENN #998S	12/2, TWISTED PAIR, STRANDED FA POWER LIMITED, RISER CABLE (FPLR)



F.A. WALL MOUNTED DEVICES ELEVATION

NO SCALE

2

ACTION \ INITIATION CONDITON	FIRE SPRINKLER TAMPER SWITCH, POST INDICATOR VALVE, RPDA	SMOKE, HEAT, OR DUCT DETECTOR, FIRE SPRINKER FLOW SWITCH	POWER LOSS, SHORT CIRCUIT, GROUND FAULT	CARBON-MONOXIDE (CO) DETECTOR END OF LIFE	CARBON-MONOXIDE (CO) DETECTOR ALARM
ANNUNCIATE TROUBLE			●		
ANNUNCIATE ALARM		●			
ANNUNCIATE CO ALARM					●
ANNUNCIATE SUPERVISORY	●	●		●	
INITIATE VISUAL NOTIFICATION APPLICANCES		●			
INITIATE VISUAL NOTIFICATION APPLICANCES IN AFFECTED BUILDING ONLY					●
INITIATE EV/AC SPEAKER APPLICANCES		●			
INITIATE CO SOUNDER BASE					●
TRANSMIT TO CENTRAL STATION	●	●	●		●
SHUTDOWN HVAC UNITS		●			
DOOR RELEASE		●	●		
ACCESS CONTROL OVERRIDE		●			

F.A. SEQUENCE OF OPERATION MATRIX

NO SCALE

3

REGISTERED PROFESSIONAL ENGINEER
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FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
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TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
FIRE ALARM SYMBOLS, NOTES, DETAILS

E2.1

PLOTTED: 4/12/2024 6:22:07 PM
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backsheet 2.dwg

BATTERY CALCULATION

F.A. Control Panel 'FCP'

POWER REQUIREMENTS

	CURRENT [A] SUPERVISORY	ALARM
ILI-MB-E3 (SLCs at max. output)	0.0810	0.1500
DACT-E3 (Communicator)	0.0180	0.0180
LCD-E3 (Panel Display)	0.0240	0.2800
ASM-16 (Panel Switches)	0.0110	0.1550
PM-9 (Power Supply)	0.0500	0.0500
RPT-E3-UTP (Network Repeater)	0.0160	0.0170
INI-VG (Voice Gateway)	0.1500	0.1500
(2) MMI-6SF (Multi-Mod IDC Module)	0.0040	0.0800
INCC-MIC (Paging Microphone)	0.0010	0.0010
NGA (Annunciator)	0.2000	0.2000
(E) NAC Circuits (2 NACs at max.)	-	4.0000
TOTALS	0.5550	5.1010

BATTERY CAPACITY

SUPERVISORY POWER (24 HOURS)	= 24 Hr * .555A	=	13.320 AHr
ALARM POWER (15 MINUTES)	= 0.25 Hr * 5.101A	=	1.275 AHr
	TOTAL POWER REQUIREMENT =		14.595 AHr
	MINIMUM BATTERY CAPACITY (includes 25% safety factor) =		19 AHr

BATTERY CALCULATION

F.A. Control Panel 'FCP-MP'

POWER REQUIREMENTS

	CURRENT [A] SUPERVISORY	ALARM
ILI-MB-E3 (SLCs at max. output)	0.0810	0.1500
LCD-E3 (Panel Display)	0.0240	0.2800
ASM-16 (Panel Switches)	0.0110	0.1550
PM-9 (Power Supply)	0.0500	0.0500
RPT-E3-UTP (Network Repeater)	0.0160	0.0170
INI-VG (Voice Gateway)	0.1500	0.1500
AM-50-70 (Amp)	0.0490	2.3000
NAC Circuits	-	0.7760
24VDC Auxiliary (CO Sounder Bases)	0.0003	0.0422
TOTALS	0.3813	3.9202

BATTERY CAPACITY

SUPERVISORY POWER (24 HOURS)	= 24 Hr * 0.3813A	=	9.151 AHr
ALARM POWER (15 MINUTES)	= 0.25 Hr * 3.9202A	=	0.980 AHr
	TOTAL POWER REQUIREMENT =		10.131 AHr
	MINIMUM BATTERY CAPACITY (includes 25% safety factor) =		13 AHr

VOLTAGE DROP CALCULATION

NAC Circuit 'n1'

VD = Voltage Drop [V]
I = Current [A] (0.47A)
K = 12.9 (Copper Constant)
L = Distance to Load [ft.] (560')
CM = Circular Mils (#12 AWG = 6530)
V = Voltage [V] (24VDC)

$VD = \frac{K * I * 2L}{CM} = \frac{12.9 * 0.47 * 2 * 560'}{6530} = 1.040\ V$

$VD\% = \frac{VD}{24} = 4.3\%$

VOLTAGE DROP CALCULATION

NAC Circuit 'n2'

VD = Voltage Drop [V]
I = Current [A] (0.306A)
K = 12.9 (Copper Constant)
L = Distance to Load [ft.] (580')
CM = Circular Mils (#12 AWG = 6530)
V = Voltage [V] (24VDC)

$VD = \frac{K * I * 2L}{CM} = \frac{12.9 * 0.306 * 2 * 580}{6530} = 0.701\ V$

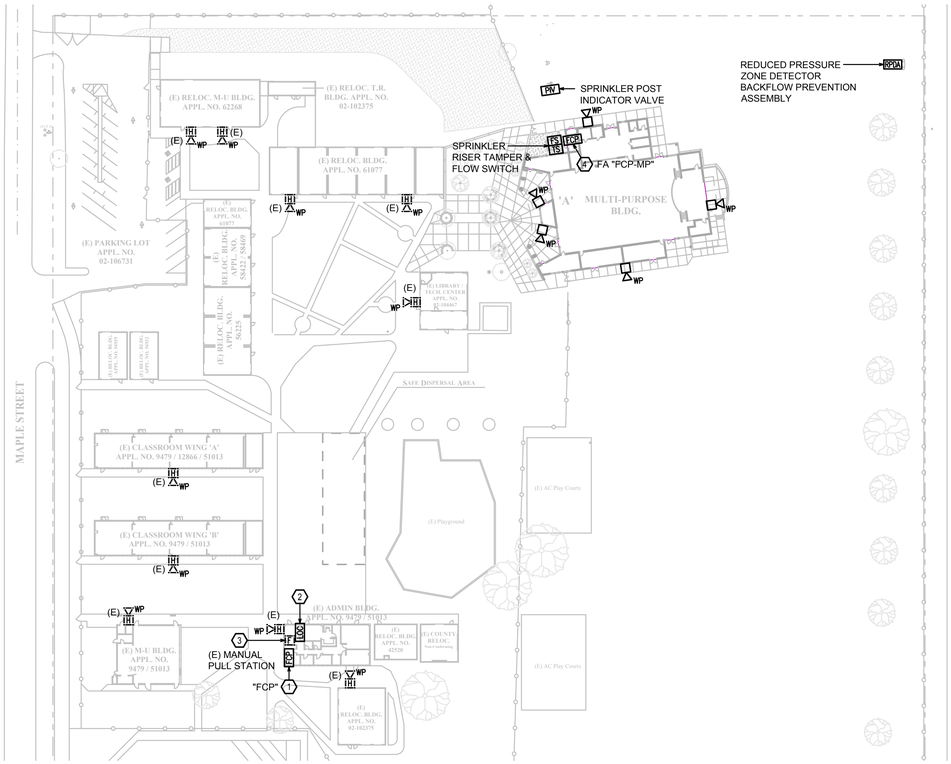
$VD\% = \frac{VD}{24} = 2.9\%$

VOICE EVACUATION SPEAKER VOLTAGE DROP

Volt Drop Common Parameters

Volts 70.7 Volts
Wire Size 18 AWG
Wire Resistance 8.45 ohm/Kft

	INDOOR					OUTDOOR				CIRCUIT LENGTH		
Type / Wattage Tap	1/8 W	1/4 W	1/2W	1W	2W	1W	2W	4W	8W	Total Watts	Max Length	Actual Length
v1	1	1	4	3		1				7.375	4752	560
v2		1	2	3		4				12.25	2861	580



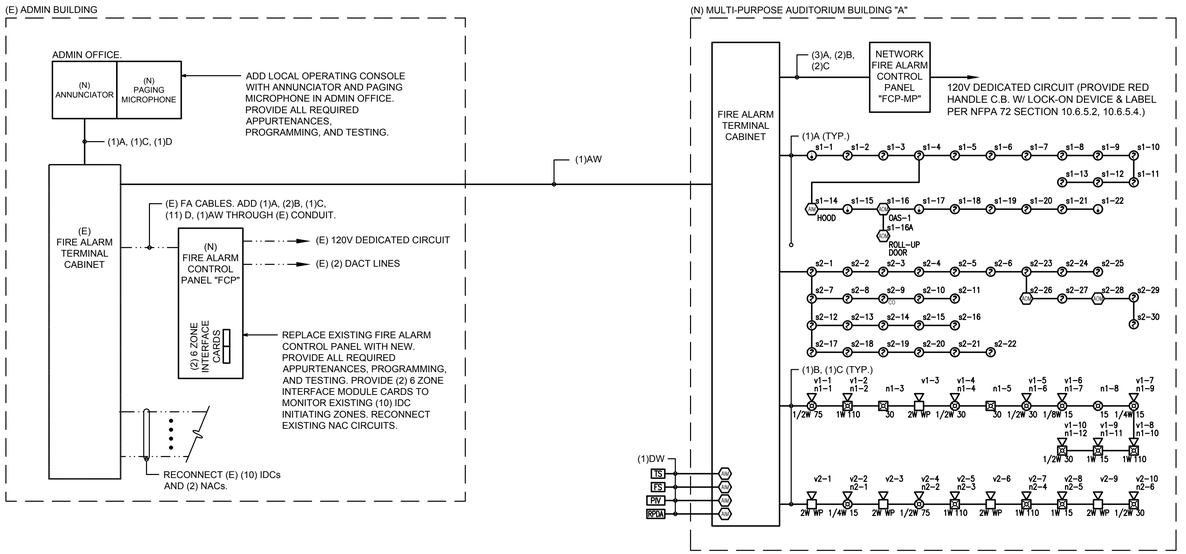
NORTH

FIRE ALARM REFERENCE SITE PLAN

SCALE: 1" = 60'-0"

KEY NOTES ⬡

1. REPLACE EXISTING FIRE ALARM CONTROL PANEL WITH NEW. CONNECT FA PER FIRE ALARM SINGLE LINE DIAGRAM 2/E2.2. SEE DETAIL 3/E2.3 FOR MOUNTING.
2. INSTALL LOCAL OPERATING CONSOLE WITH ANNAUNCIATOR AND PAGING MICROPHONE AT ADMIN OFFICE. CONNECT FA PER FIRE ALARM SINGLE LINE DIAGRAM 2/E2.2.
3. EXISTING MANUAL PULL STATION AT ADMIN OFFICE.
4. INSTALL NETWORK FIRE ALARM CONTROL PANEL. CONNECT TO DEDICATED 120V 20A 1-POLE CIRCUIT BREAKER WITH RED HANDLE LOCK-ON DEVICE AT BUILDING PANEL. CONNECT FA PER FIRE ALARM SINGLE LINE DIAGRAM 2/E2.2. SEE DETAIL 2/E2.3 FOR MOUNTING.
5. EXISTING WEATHERPROOF HORN LOCATION. SHOWN FOR REFERENCE.
6. NEW WEATHERPROOF SPEAKER LOCATION.



FIRE ALARM CALCULATIONS

NO SCALE

1

FIRE ALARM SINGLE LINE DIAGRAM

NO SCALE

2

REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON E17850 ELECTRICAL STATE OF CALIFORNIA

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FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT JUAN M. GONZALEZ No. C-12865 RENEWAL DATE 12/31/2023 STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
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FRESNO CALIFORNIA 93711 FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
FIRE ALARM SITE PLAN, LINE DIAGRAM, CALCS

E2.2

PLOTTED: 4/12/2024 6:22:10 PM
LOCATION: Z:\Clients\Gonzalez Architects\2312\9 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backcheck 2.dwg

NAC Circuit Calculation Worksheet

NAC Circuit ID	n1
Run Length	560

Description	Candela	Note	Current [A]	Quantity	Ext. Current [A]
Wall Mount					
Strobes					
#ELSTR	15		0.022		0.000
#ELSTR	30		0.030	2	0.060
#ELSTR	75		0.060		0.000
#ELSTR	110		0.086		0.000
#ELSTR	135		0.125		0.000
#ELSTR	185		0.185		0.000
Speaker/Strobes					
#ELSPSTR	15		0.022	1	0.022
#ELSPSTR	30		0.030	1	0.030
#ELSPSTR	75		0.060		0.000
#ELSPSTR	110		0.086	2	0.172
#ELSPSTR	135		0.125		0.000
#ELSPSTR	185		0.185		0.000
Speakers (exterior)					
#ET-1010	n/a		0.000	1	0.000
Ceiling Mount					
Strobes					
#ELSTWC	15		0.022	1	0.022
#ELSTWC	30		0.030		0.000
#ELSTWC	75		0.060		0.000
#ELSTWC	115		0.086		0.000
#ELSTWC	150		0.125		0.000
#ELSTWC	177		0.185		0.000
Speaker/Strobes					
#ELSPSTWC	15		0.022	2	0.044
#ELSPSTWC	30		0.030	2	0.060
#ELSPSTWC	75		0.060	1	0.060
#ELSPSTWC	110		0.086		0.000
#ELSPSTWC	150		0.125		0.000
#ELSPSTWC	177		0.185		0.000
			Total Current [A]		**0.470**

NAC Circuit Calculation Worksheet

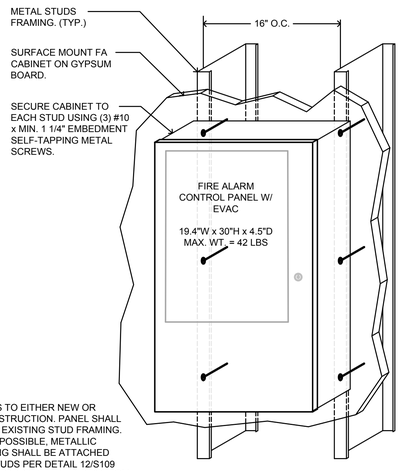
NAC Circuit ID	n2
Run Length	580

Description	Candela	Note	Current [A]	Quantity	Ext. Current [A]
Wall Mount					
Strobes					
#ELSTR	15		0.022		0.000
#ELSTR	30		0.030		0.000
#ELSTR	75		0.060		0.000
#ELSTR	110		0.086		0.000
#ELSTR	135		0.125		0.000
#ELSTR	185		0.185		0.000
Speaker/Strobes					
#ELSPSTR	15		0.022	1	0.022
#ELSPSTR	30		0.030	1	0.030
#ELSPSTR	75		0.060		0.000
#ELSPSTR	110		0.086	2	0.172
#ELSPSTR	135		0.125		0.000
#ELSPSTR	185		0.185		0.000
Speakers (exterior)					
#ET-1010	n/a		0.000	4	0.000
Ceiling Mount					
Strobes					
#ELSTWC	15		0.022		0.000
#ELSTWC	30		0.030		0.000
#ELSTWC	75		0.060		0.000
#ELSTWC	110		0.086		0.000
#ELSTWC	150		0.125		0.000
#ELSTWC	177		0.185		0.000
Speaker/Strobes					
#ELSPSTWC	15		0.022	1	0.022
#ELSPSTWC	30		0.030		0.000
#ELSPSTWC	75		0.060	1	0.060
#ELSPSTWC	110		0.086		0.000
#ELSPSTWC	150		0.125		0.000
#ELSPSTWC	177		0.185		0.000
			Total Current [A]		**0.306**

FIRE ALARM CALCULATIONS

NO SCALE

1

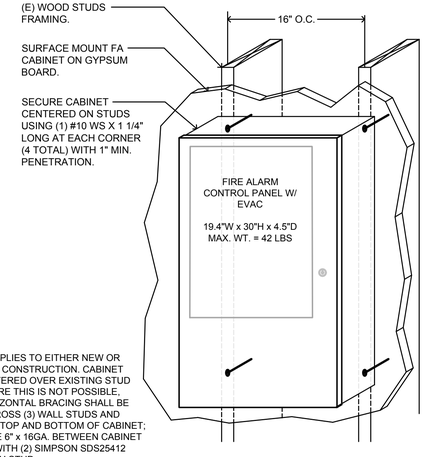


THIS DETAIL APPLIES TO EITHER NEW OR EXISTING WALL CONSTRUCTION. PANEL SHALL BE CENTERED OVER EXISTING STUD FRAMING. WHERE THIS IS NOT POSSIBLE, METALLIC HORIZONTAL BRACING SHALL BE ATTACHED ACROSS (3) WALL STUDS PER DETAIL 12/S109 AND LINED UP WITH TOP, CENTER, AND BOTTOM OF PANEL.

FIRE ALARM CONTROL PANEL MOUNTING DETAIL

NO SCALE

2



THIS DETAIL APPLIES TO EITHER NEW OR EXISTING WALL CONSTRUCTION. CABINET SHALL BE CENTERED OVER EXISTING STUD FRAMING. WHERE THIS IS NOT POSSIBLE, METALLIC HORIZONTAL BRACING SHALL BE ATTACHED ACROSS (3) WALL STUDS AND LINED UP WITH TOP AND BOTTOM OF CABINET; BACKING PLATE 6" x 16GA. BETWEEN CABINET AND GYP. BD. WITH (2) SIMPSON SDS25412 SCREW AT EACH STUD.

FIRE ALARM CONTROL PANEL MOUNTING DETAIL

NO SCALE

3

FILE NO. 20-10 APPL. NO. 02-1210993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

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PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
FIRE ALARM CALCS, DETAILS

E2.3

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LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backsheet 2.dwg

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-ELC-E**

This document is used to demonstrate compliance with mandatory requirements in 130.5, for electrical systems in newly constructed nonresidential and hotel/motel occupancies and 160.6 and 160.9 for electrical systems in newly constructed multifamily occupancies. Additions and alterations to electrical service systems in nonresidential and hotel/motel occupancies will also use this document to demonstrate compliance per 141.0(a) or 141.0(b)2P for alterations. For multifamily addition or alterations compliance will be documented per 180.1(a) or 180.2 (b)4Bvii

Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	**(Page 1 of 6)**
Project Address:	19421 Ave. 22 3/4	**Date Prepared:**	12/19/2023

A. GENERAL INFORMATION

01	Project Location (city)	Chowchilla	02	Climate Zone	13
			03	Occupancy Types Within Project:	All Other Occupancies

B. PROJECT SCOPE

This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05	06	07
Electrical Service Designation/ Description	Scope of Work[1]	Rating[2] (kVA)	Utility Provided Metering System Exception to 130.5(a)/ 160.6(a)[3]	System subject to CA Elec Code Article 517 Exception to 130.5(a)and (b)	Demand Response Controls	Provides power to dwelling units/common living areas only in multifamily occupancy
HM	New electrical service equipment and meter	332	☐	☐	Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections 120.2/ 160.3, 130.1/ 160.5, and 130.3/ 160.5, and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required.	☐

[1] FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c)/160.6(c), no other requirements from 130.5/160.6 are required.
[2] If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.
[3] Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.

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Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	**(Page 2 of 6)**
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C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through J. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01		02		03		04	05	06
Service Electrical Metering 130.5(a)/ 160.6(a) (See Table F)	AND	Separation for Monitoring 130.5(b)/ 160.6(b) (See Table G)	AND	Voltage Drop 130.5(c)/ 160.6(c) (See Table H)	AND	Controlled Receptacles 130.5(d)/ 160.6(d) (See Table I)	Electric Ready 160.9 (See Table J)	**Compliance Results**
Yes	AND	Yes	AND	Yes	AND	Yes		COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. SERVICE ELECTRICAL METERING

This table includes new or replacement electrical service systems OR equipment to demonstrate compliance with 130.5(a) / 160.6(a). For multifamily occupancies, submetered systems that provide power to common use areas must meet the following metering requirements. Submetered systems providing power to dwelling units do not.

01	02	03				04	05	
		Required Metering Capabilities per Table 130.5-A					Field Inspector	
Electrical Service Designation/ Description	Rating[1] (kVA)	Instantaneous Demand (kW)	Historical Peak Demand (kW)	Tracking kWh for user-defined period	kWh per rate period	Location of Requirements in Construction Documents	Pass	Fail
HM	332	☒	☒	☒	☐	E1.7	☐	☐

[1] FOOTNOTES: If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.

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G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(b)/ 160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B[1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail
HM					
HVAC systems and components	All HVAC in aggregate and each HVAC load rated at least 50 kVA	Method 1: Switchboards, motor control centers, or panelboard loads disaggregated for each load type	E1.7	☐	☐
Lighting including exit, egress and exterior	All lighting disaggregated by floor, type or area	Method 1: Switchboards, motor control centers, or panelboard loads disaggregated for each load type	E1.7	☐	☐
Plug Loads and appliances less than 25kVA	All plug loads separated by floor, type or area Groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf	Method 1: Switchboards, motor control centers, or panelboard loads disaggregated for each load type	E1.7	☐	☐
Other non-HVAC loads and appliances greater than or equal to 25kVA	All loads in aggregate	Method 1: Switchboards, motor control centers, or panelboard loads disaggregated for each load type	E1.7	☐	☐

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Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	**(Page 4 of 6)**
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G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(b)/ 160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B[1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail
Renewable power sources (net or total)	Each group	Method 1: Switchboards, motor control centers, or panelboard loads disaggregated for each load type	E1.7	☐	☐

** NOTES: If "Other"* is selected under Compliance Method above, please indicate how compliance has been achieved in the space provided below.*

[1] FOOTNOTES: For each separate load type, up to 10% of the connected load may be of any type.
[2] Method 1: Switchboards/ motor control centers/ panelboard loads disaggregated for each load type.
Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type.
Method 3: Branch circuits serve load types individually and provisions for adding future branch circuit monitoring.
Method 4: Complete metering system measures and reports loads by type.
See Chapter 8 of the Nonresidential Compliance Manual for more detail on Compliance Methods.

H. VOLTAGE DROP

This table includes entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with 130.5(c)/ 160.6(c). For alterations, only the altered circuits must demonstrate compliance per 141.0(b)2Piii/ 180.2(b)4Bviic.

01	02			03	04	05	
Electrical Service Designation/Description	Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method			Location of Voltage Drop Calculations[1]	Sheet Number for Voltage Drop Calculations in Construction Documents	Field Inspector	
						Pass	Fail
HM	☒	Voltage drop less than 5%	☐	Permitted by CA Elec Code (Exception to 130.5(c))*	Contractor Responsible	E-Sheets	☐	☐

** NOTES: If "Permitted by CA Elec Code *" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.*

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H. VOLTAGE DROP

[1] FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction. Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".

I. CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(d)/ 160.6(d).. Both controlled and uncontrolled receptacles must be provided in office areas, lobbies, conference rooms, kitchen areas in office spaces, copy rooms and hotel/motel guest rooms.

01	02	03	04	05	06	07	
Room name or Description	Location/ Type of Controlled Receptacles[1]	Shut-Off Controls	Demand Responsive Controls	Permanent Durable Marking Will be Used	Location of Requirements in Construction Documents	Field Inspector	
						Pass	Fail
Not Required	Split-wired receptacle	Occupancy Sensor	NA: Building does not require demand responsive lighting controls per 110.12(c)	☒		☐	☐

** NOTES: If "Other"* is selected under Shut-Off Controls above, please indicate how compliance has been achieved in the space provided below.*

[1] FOOTNOTES: Receptacles dedicated to refrigerators and water dispensers in kitchens, located a minimum of 6ft above the floor specifically for clocks, network copiers, fax machines, A/V and data equipment other than personal computers in copy rooms, circuits rated more than 20 Amps, or connected to a UPS that are intended to be in continuous use and are marked to differentiate them from other receptacles or circuits are excepted from the requirements. .

J. ELECTRIC READY BUILDINGS

This section does not apply to this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-ELC-E - Must be submitted for all buildings

STATE OF CALIFORNIA
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CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-ELC-E**

Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	**(Page 6 of 6)**
Project Address:	19421 Ave. 22 3/4	**Date Prepared:**	12/19/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: C. Scott Davidson	Documentation Author Signature:
Company: Hardin-Davidson Engineering	Signature Date: 2023-12-19
Address: 356 Pollasky Ave., Suite 200	CEA/ HERS Certification Identification (if applicable): E17850
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: C. Scott Davidson	Responsible Designer Signature:
Company: Hardin-Davidson Engineering	Date Signed: 2023-12-19
Address: 356 Pollasky Ave., Suite 200	License: E17850
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	**(Page 1 of 8)**
Project Address:	19421 Ave. 22 3/4	**Date Prepared:**	12/19/2023

A. GENERAL INFORMATION

01	Project Location (city)	Chowchilla	04	Total Conditioned Floor Area (ft²)	13,137
02	Climate Zone	13	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1
● All Other Occupancies					

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☒ New Lighting System	Complete Building Method	13137	Complete Building Method	0
☐ New Lighting System - Parking Garage				
Total Area of Work (ft²)	13137		0	

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	**(Page 2 of 8)**
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C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)				Compliance Results
	01	02	03	04		05	06	07		08	09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2Gi / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)		**Total Allowed** (Watts)	Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)		**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 140.6 / 170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)			
Conditioned	8,539				=	8,539	8,777	0	=	8777	DOES NOT COMPLY
Unconditioned					=				=		
Controls Compliance (See Table H for Details)											COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)											

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL.: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

PROJECT NO: 2318
DATE: 4/12/2024

SHEET TITLE:
ENERGY COMPLIANCE FORMS

E3.1

REGISTERED PROFESSIONAL ENGINEER — C. SCOTT DAVIDSON — E17850 — ELECTRICAL — STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	**(Page 3 of 8)**
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F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
A/AE/AS	45.0w LED 2x4 Lay-In	No	NA	45	Mfr. Spec	16	No	720	☐	☐
B/BS	30.0w LED 2x2 Lay-In	No	NA	30	Mfr. Spec	6	No	180	☐	☐
C/CSE	66.0w LED 2x4 Surface	No	NA	66	Mfr. Spec	4	No	264	☐	☐
D/DN	26.6w LED 1x4	No	NA	26.6	Mfr. Spec	3	No	79.8	☐	☐
F4/F4E	41.0w LED 4 Ft. Striplight	No	NA	41	Mfr. Spec	3	No	123	☐	☐
F8	81.0w LED 8 Ft. Striplight	No	NA	81	Mfr. Spec	1	No	81	☐	☐
G4/G4S	59.0w LED 4 Ft. Striplight	No	NA	59	Mfr. Spec	16	No	944	☐	☐
H/HSE	186.2w LED High Bay	No	NA	186.2	Mfr. Spec	27	No	5,027.4	☐	☐
J4	13.7w LED Downlight	No	NA	13.7	Mfr. Spec	8	No	109.6	☐	☐
J6	38.4w LED Downlight	No	NA	38.4	Mfr. Spec	6	No	230.4	☐	☐
K/KE/KS/KSE	62.0w LED 2x4 Lay-In	No	NA	62	Mfr. Spec	14	No	868	☐	☐
K2/K2S	30.0w LED 2x2 Lay-In	No	NA	30	Mfr. Spec	5	No	150	☐	☐
							Total Designed Watts: CONDITIONED SPACES	8,777		

[1]*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

[2]*Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

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CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
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H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C	Field Inspector	
		Pass	Fail
Required >= 4,000W subject to multilevel	See Area/Space Level Controls	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
Whole Building	All Other Occupancies	Readily Accessible	Dimmer	Occupancy Sensor	Included	Included	No	☐	☐
Small Closets	All Other Occupancies	Readily Accessible	NA: Enclosed area w/ 1 luminaire <=2 Lamps	Occupancy Sensor	NA: Rm < 24sf Glazing	NA: Rm < 24sf Glazing	No	☐	☐
							13		
							Plan Sheet Showing Daylit Zones:		

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06

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	Date Prepared:	12/19/2023

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft^2)	Area (ft^2)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Whole Building	Assembly	0.65	13,137	8,539.1	No	No
		TOTALS:	13,137	8,539.1	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

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P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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Form/Title
NRCI-LTI-E - Must be submitted for all buildings

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	**(Page 7 of 8)**
	Date Prepared:	12/19/2023

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	Whole Building; Small Closets;
NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	Whole Building;
NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	Whole Building Demand Response;

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Project Address: 19421 Ave. 22 3/4	**Date Prepared:**	12/19/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
C. Scott Davidson	C. Scott Davidson
Company: Hardin-Davidson Engineering	Signature Date: 2023-12-19
Address: 356 Pollasky Ave., Suite 200	CEA/ HERS Certification Identification (if applicable): E17850
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
C. Scott Davidson	C. Scott Davidson
Company: Hardin-Davidson Engineering	Date Signed: 2023-12-19
Address: 356 Pollasky Ave., Suite 200	License: E17850
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	**(Page 1 of 8)**
Project Address: 19421 Ave. 22 3/4	**Date Prepared:**	12/19/2023

This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.

A. GENERAL INFORMATION

01	Project Location (city)	Chowchilla	04	Total Illuminated Hardscape Area (ft^2)	65242
02	Climate Zone	13			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☒ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐	LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project				
● All Other Occupancies					

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02		
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6		
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes	○ No
03	04	05	
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method	
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%			

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

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CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	**(Page 2 of 8)**
	Date Prepared:	12/19/2023

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv												Compliance Results		
01		02		03		04		05		06		07		08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
1,815	+	---	+	---	+	---	+	---	OR	---	=	1,815	≥	1,377	COMPLIES
Shielding Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 4/12/2024

SHEET TITLE:
ENERGY COMPLIANCE FORMS

E3.2

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave. Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:** (Page 3 of 8)
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F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
P1/P1E	10.0w LED Surface Drum	☐ Linear	10	Mfr. Spec	5	New	☐	50	NA: < 6200 lumens	☐	☐
P2	15.0w LED Surface Drum	☐ Linear	15	Mfr. Spec	3	New	☐	45	NA: < 6200 lumens	☐	☐
P3/P3E	10.0w LED Wall Light	☐ Linear	10	Mfr. Spec	26	New	☐	260	NA: < 6200 lumens	☐	☐
P4	10.0w LED Surface Drum	☐ Linear	10	Mfr. Spec	11	New	☐	110	NA: < 6200 lumens	☐	☐
P5/P5E	17.2w LED Surface Linear	☐ Linear	17.2	Mfr. Spec	8	New	☐	137.6	NA: < 6200 lumens	☐	☐
S1	86.0w LED Post-Top Light	☐ Linear	86	Mfr. Spec	6	New	☐	516	NA: < 6200 lumens	☐	☐
S4	86.0w LED Post-Top Light	☐ Linear	86	Mfr. Spec	3	New	☐	258	NA: < 6200 lumens	☐	☐
							Total Design Watts:	1377			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*

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CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:** (Page 4 of 8)
		Date Prepared: 12/19/2023

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02	03	04	05	06	07	08	09	10

[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)*

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

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H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail
Exterior Perimeter	Astronomical Timer	Provided	NA: Each Luminaire <= 40 Watts	☐	☐
Pole Lights	Astronomical Timer	Provided	Provided	☐	☐

[1] *FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.*
[2] *Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.*
[3] *Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.*

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CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:** (Page 6 of 8)
		Date Prepared: 12/19/2023

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.
Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

01					
	"Use it or lose it" Allowance (select all that apply) (select all that apply)				
☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M	

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
Building Exterior	12648	0.019	240.3	715	0.2	107.2	348
Site Lighting	29052	0.019	552	1065	0.2	159.8	712
Site Lighting	23542	0.019	447.3	726	0.2	108.9	556
						Initial Wattage Allowance for Entire Site (Watts):	200
						Instances of Initial Wattage Allowance (LZ 0 only)[1]	
						Total General Hardscape Allowance (Watts):	1815

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

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CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:** (Page 7 of 8)
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L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	Exterior Perimeter; Pole Lights;

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CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Multi-Purpose Building at Fairmead Elementary School	**Report Page:** (Page 8 of 8)
Project Address:	19421 Ave. 22 3/4	**Date Prepared:** 12/19/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: C. Scott Davidson	Documentation Author Signature: C. Scott Davidson
Company: Hardin-Davidson Engineering	Signature Date: 2023-12-19
Address: 356 Pollasky Ave., Suite 200	CEA/ HERS Certification Identification (if applicable): E17850
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: C. Scott Davidson	Responsible Designer Signature: C. Scott Davidson
Company: Hardin-Davidson Engineering	Date Signed: 2023-12-19
Address: 356 Pollasky Ave., Suite 200	License: E17850
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

STATE OF CALIFORNIA
Solar And Battery
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
This document is used to demonstrate compliance with prescriptive PV and battery requirements in 140.10/ 170.2 for nonresidential, multifamily and mixed-use buildings and prescriptive solar thermal requirements in 170.2(d)3C for multifamily and hotel/ motel occupancies. When PV/battery/solar thermal requirements don't apply or are traded using the performance approach, this document demonstrates compliance with mandatory solar readiness requirements in 110.10/ 160.8 for newly constructed buildings which are either multifamily ten stories or fewer, hotel/motel ten stories or fewer or all other nonresidential buildings three stories or fewer. It is also used to demonstrate compliance with solar readiness in 110.10/ 160.8 for additions to nonresidential, multifamily or hotel/motel building types which add more than 2,000 ft² of roof area. Alterations, or additions of less than 2,000 ft² of roof area, are not required to comply with solar readiness, solar PV and battery requirements and do not need to complete this document.		
Project Name: Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	(Page 1 of 6)
Project Address: 19421 Ave. 22 3/4	**Date Prepared:**	12/19/2023

A. GENERAL INFORMATION

01	Project Location (city)	Chowchilla	04	Building Occupancies	All Other Occupancies
02	Climate Zone	13	05	Construction Type	New construction
03	Conditioned Floor Area (ft²)	13137	06	Number of Stories	Bldg <= 3 stories

B. PROJECT SCOPE

The compliance path the project is using to comply per 110.10(b)1B/ 140.10/ 170.2(g and h) is indicated below.

Compliance with Solar Photovoltaic (PV) and Battery Requirements in 140.10/ 170.2(g and h)

01		
☒	Provided PV system and battery storage sized per 140.10/ 170.2 (g and h)	The project has included an installed PV system and battery storage system per requirements in 140.10/ 170.2(g and h) as documented in Table J.
☐	Exception to PV and Battery: Not enough Solar Access Roof Area	The total of all available Solar Access Roof Area(s) of the project site is less than three percent of the conditioned floor area as documented in Table J.
☐	Exception to PV and Battery: Required PV < 4kW	The required PV system size is less than 4 kW dc as documented in Table J..
☐	Exception to PV and Battery: No contiguous Solar Access Roof Area	The Solar Access Roof Area(s) of the project site contains less than 80 contiguous square feet as documented in Table J.
☐	Exception to PV and Battery: Can't meet snow load	The project has a roof design where the enforcement authority has verified it is not possible for the PV system, including panels, modules, components, supports, and attachments to the roof structure, to meet ASCE 7-16 Chapter 7, Snow Loads.
☐	Exception to PV and Battery: Multi-tenant without VNEM or Community Solar	The project is a multi-tenant building in an area where a load serving entity does not provide either a Virtual Net Metering (VNEM) or community solar program.
☐	The prescriptive PV/battery requirement has been traded off using the performance compliance approach as documented on the PRF Certificate of Compliance form.	

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Compliance with Solar Thermal Water Heating Requirements in 170.2(d)3C (Multifamily and hotel/ motel occupancies only)

01	
☐	The project includes a hotel/motel or multifamily occupancy with a gas or propane central water-heating system (serves 2+ dwelling units) and includes a permanently installed domestic solar water-heating system to comply with 170.2(d)3C and Reference Residential Appendix RA4, as documented in Table H. Compliance meets Exception 2 to solar ready requirements in 110.10(b).

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance or see the applicable Table referenced below.

Allocated Solar Zone				Installed PV System				Installed SWH System				Smart Tstat and Alternative EE Measure		Compliance Results
01		02		03		04		05		06		07	08	
Required Minimum Area (ft²)	<=	Designated Area (ft²)	OR	Required Minimum DC Power Rating (Watts)	<=	Designed DC Power Rating (Watts)	OR	Required Minimum Solar Savings Fraction	<=	Designed/Rated Solar Savings Fraction	OR	JA5 Compliant Thermostat Specified?	Alternative Energy Efficiency Measure	
(See Table F)				(See Tables G or J)				(See Table H)				(See Table I)		
	<=		OR	5,780	<=	7,200	OR		<=		OR			
Location in construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/ plumbing to the electrical service/ water heating system per §110.10(c).														
Battery storage system design meets the minimum requirements in Joint Appendix JA12 and the minimum energy (kWh)/ power (kW) capacity per Table J.														COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

PLOTTED: 4/12/2024 6:22:20 PM
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backcheck 2.dwg

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE 12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318
DATE: 4/12/2024

SHEET TITLE:
ENERGY COMPLIANCE FORMS

E3.3

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave. Suite 200
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STATE OF CALIFORNIA
Solar And Battery
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	(Page 3 of 6)
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F. ALLOCATED SOLAR ZONE

This section does not apply to this project.

G. PERMANENTLY INSTALLED SOLAR PV FOR SOLAR READY EXCEPTION

This section does not apply to this project.

H. PERMANENTLY INSTALLED SOLAR HOT WATER SYSTEMS

This section does not apply to this project.

I. SMART THERMOSTATS AND ALTERNATIVE EFFICIENCY MEASURE FOR SOLAR READY EXCEPTION

This section does not apply to this project.

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CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
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	Date Prepared:	12/19/2023

J. PHOTOVOLTAIC (PV) AND BATTERY SYSTEMS

This table documents compliance with prescriptive photovoltaic and battery system requirements in 140.10/ 170.2(g and h). Unless the project meets one of the listed exceptions, or trades-off PV in an energy model using performance path, 140.10/ 170.2(g and h) requires installed photovoltaic and battery systems for newly constructed buildings. The installed PV systems must meet the minimum requirements in Joint Appendix 11.

Photovoltaic (PV) System

01	02	03	04	05	06	07	08
Occupancy	Conditioned Floor Area (ft^2)	Area of New Roof[1] (ft^2)	Roof Area < 70% Solar Access[2] (ft^2)	Plansheet or Document showing Solar Access Calculations	Occupied Roof Area[3] (ft^2)	Solar Access Roof Area (SARA) (ft^2)	Min Size of PV System Required (kWdc)
Auditorium	13,137	12,183	6,729		0	5,454	5.78
					Total Min Size PV System Required for all Spaces (kWdc):		5.78
					Total Size PV System in Design (kWdc):		7.2

[1]FOOTNOTES: Includes the area of the building's roof space capable of structurally supporting a PV system and the area of all roof space on covered parking areas, carports, and all other newly constructed structures on the site that are compatible with supporting a PV system per Title 24, Part 2 Section 1511.2.
[2]Solar access must be determined using CEC approved solar access calculation tools found at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/solar-assessment-tools.
[3]As specified by CBC Section 503.1.4.

Battery Storage System

01	02	03	04	05
Space Type	Min Size of PV System Required (kWdc)	Rated Single Charge-Discharge AC Efficiency of Battery System[1]	Min Battery Rated Energy Capacity Required (kWh)	Min Power Capacity of Battery Required (kWdc)
Auditorium	5.78	98	5.51	1.33
		Total Min Energy (kWh) and Power (kW) Capacity Required	0	0
		Total Energy (kWh) and Power (kW) Capacity in Design	9	5.6

[1]FOOTNOTE: Rated single charge-discharge cycle AC to AC (round trip) efficiency of the battery storage system

STATE OF CALIFORNIA
Solar And Battery
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	(Page 5 of 6)
	Date Prepared:	12/19/2023

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included Table E. Additional Remarks and ExceptionalConditionMessageCCSABE += UserChangedSelectionInCI. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-SAB-01-E - Must be submitted for all buildings that must comply with solar readiness or PV/Battery requirements.

L. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

STATE OF CALIFORNIA
Solar And Battery
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Multi-Purpose Building at Fairmead Elementary School	**Report Page:**	(Page 6 of 6)
Project Address: 19421 Ave. 22 3/4	**Date Prepared:**	12/19/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
C. Scott Davidson	C. Scott Davidson
Company: Hardin-Davidson Engineering	Signature Date: 2023-12-19
Address: 356 Pollasky Ave., Suite 200	CEA/ HERS Certification Identification (if applicable): E17850
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
Company: Gonzalez Architects	Date Signed: 2023-12-19
Address: 7545 N. Del Mar Ave., Suite 203	License: E17850
City/State/Zip: Fresno CA 93711	Phone: 559-323-4995

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318

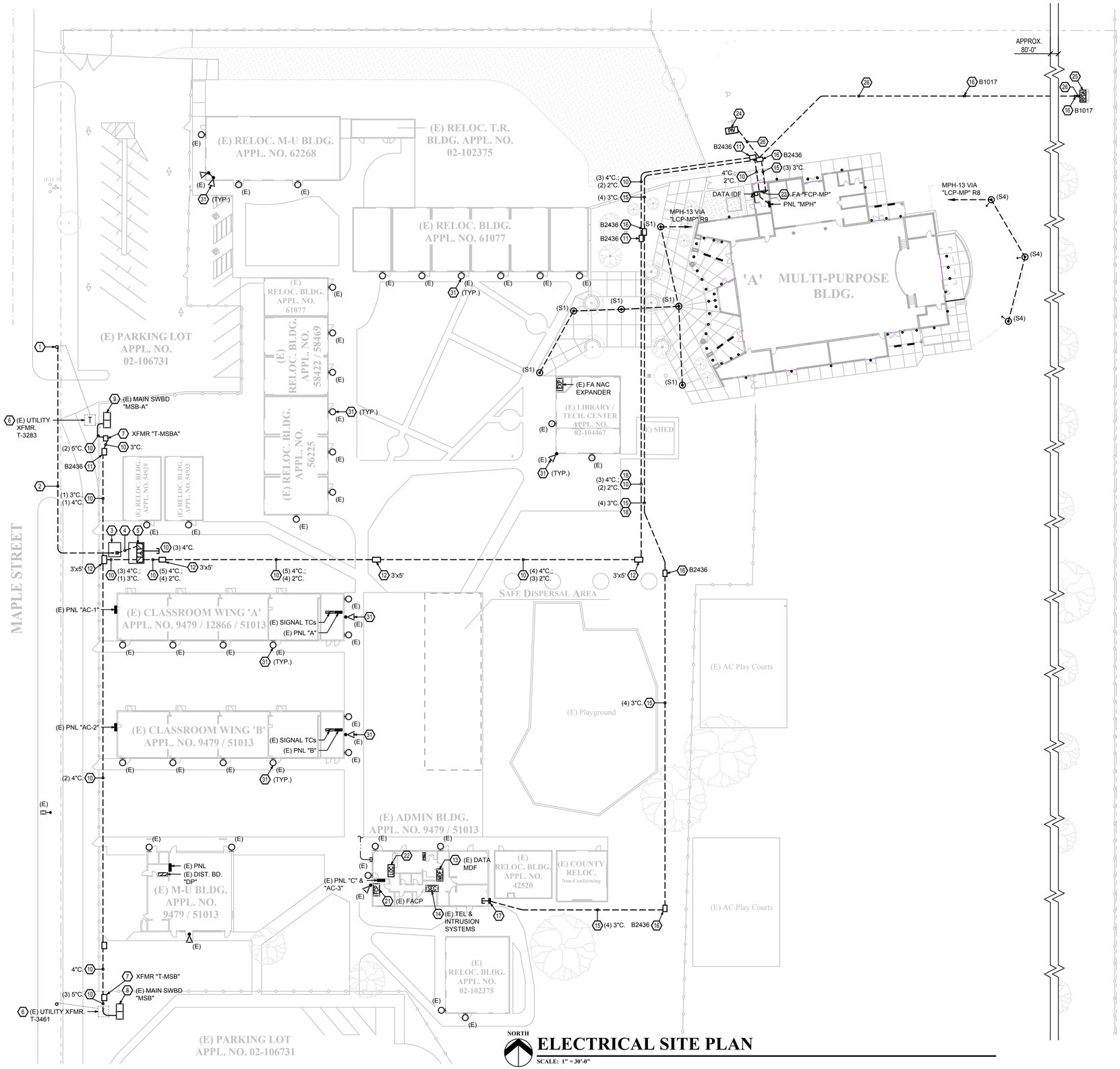
DATE: 4/12/2024

SHEET TITLE:
ENERGY COMPLIANCE FORMS

E3.4

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax



ELECTRICAL SITE PLAN

SCALE: 1" = 30'-0"

KEY NOTES

1. EXISTING PG&E SERVICE POLE. ADD NEW RISER PER PG&E RULE 16.
2. 4" PRIMARY SERVICE CONDUIT PER PG&E RULE 16.
3. 90" x 106" PRE-CASE CONCRETE TRANSFORMER PAD PER PG&E RULE 16.
4. (5) 5" SECONDARY SERVICE CONDUIT PER PG&E RULE 16.
5. MAIN SWITCHBOARD "MSB" AND CONCRETE PAD. PAD SHALL HAVE 48" MIN. CLEAR AND LEVEL EXTENSION IN FRONT OF SWITCHBOARD. SEE 1/E1.7.
6. EXISTING PG&E TRANSFORMER, PRIMARY SERVICE CONDUIT AND RISER, AND SECONDARY SERVICE CONDUITS TO BE REMOVED.
7. NEW TRANSFORMER AND CONCRETE PAD. SEE 1/E1.7.
8. EXISTING MAIN SWITCHBOARD "MSB-1". DISCONNECT EXISTING PG&E FACILITIES AND CONNECT TO NEW TRANSFORMER. SEE 1/E1.7.
9. EXISTING MAIN SWITCHBOARD "MSB-2". DISCONNECT EXISTING PG&E FACILITIES AND CONNECT TO NEW TRANSFORMER. SEE 1/E1.7.
10. POWER CONDUITS WITH MULE TAPE - QUANTITY AND SIZES NOTED. SEE 1/E1.7 FOR FEEDERS.
11. POWER VAULT - SIZE NOTED. SEE 2/E1.5.
12. 3'x5' POWER VAULT. SEE 7/E1.5.
13. EXISTING DATA MDF. PULL NEW FIBER OPTIC CABLE TO MULTI-PURPOSE AUDITORIUM BUILDING. PROVIDE CABLING AND CONNECTIONS PER SITE COMM/SIGNAL LINE DIAGRAM 6/E1.9.
14. EXISTING LOW VOLTAGE SYSTEMS HEAD ENDS. PROVIDE CABLING AND CONNECTIONS PER SITE COMM/SIGNAL LINE DIAGRAM 6/E1.9.
15. SYSTEMS CONDUITS WITH MULE TAPE - QUANTITY AND SIZES NOTED. SEE 6/E1.9 FOR CABLING.
16. SYSTEMS VAULT - SIZE NOTED. SEE 2/E1.5.
17. RISE CONDUITS AT EXTERIOR WALL, INSTALL 24" SQ. NEMA 3R PULL CAN, AND CHASE CONDUITS INTO ATTIC SPACE. PAINT ELECTRICAL WORK TO MATCH BUILDING.
18. DIRECTIONAL BORE FOR THIS SECTION UNDER EXISTING SHED.
21. REPLACE EXISTING FIRE ALARM CONTROL PANEL AT ADMIN OFFICE WITH NEW. CONNECT FA. SEE FIRE ALARM PLANS.
22. INSTALL LOCAL OPERATING CONSOLE WITH ANNUNCIATOR AND PAGING MICROPHONE AT ADMIN OFFICE. CONNECT FA. SEE FIRE ALARM PLANS.
23. INSTALL NETWORKED FIRE ALARM PANEL. CONNECT FA. SEE FIRE ALARM PLANS.
24. FIRE SPRINKLER POST INDICATOR VALVE. VERIFY EXCAT LOCATION. RUN 1"C. TO FIRE ALARM CONTROL PANEL.
25. FIRE SPRINKLER REDUCED PRESSURE ZONE DETECTOR ASSEMBLY. VERIFY EXACT LOCATION. RUN 1"C. TO FIRE ALARM CONTROL PANEL.
26. 1"C. FA. SEE FIRE ALARM PLANS FOR CABLING.
31. EXISTING SITE AND AREA LIGHTING.

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE 12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

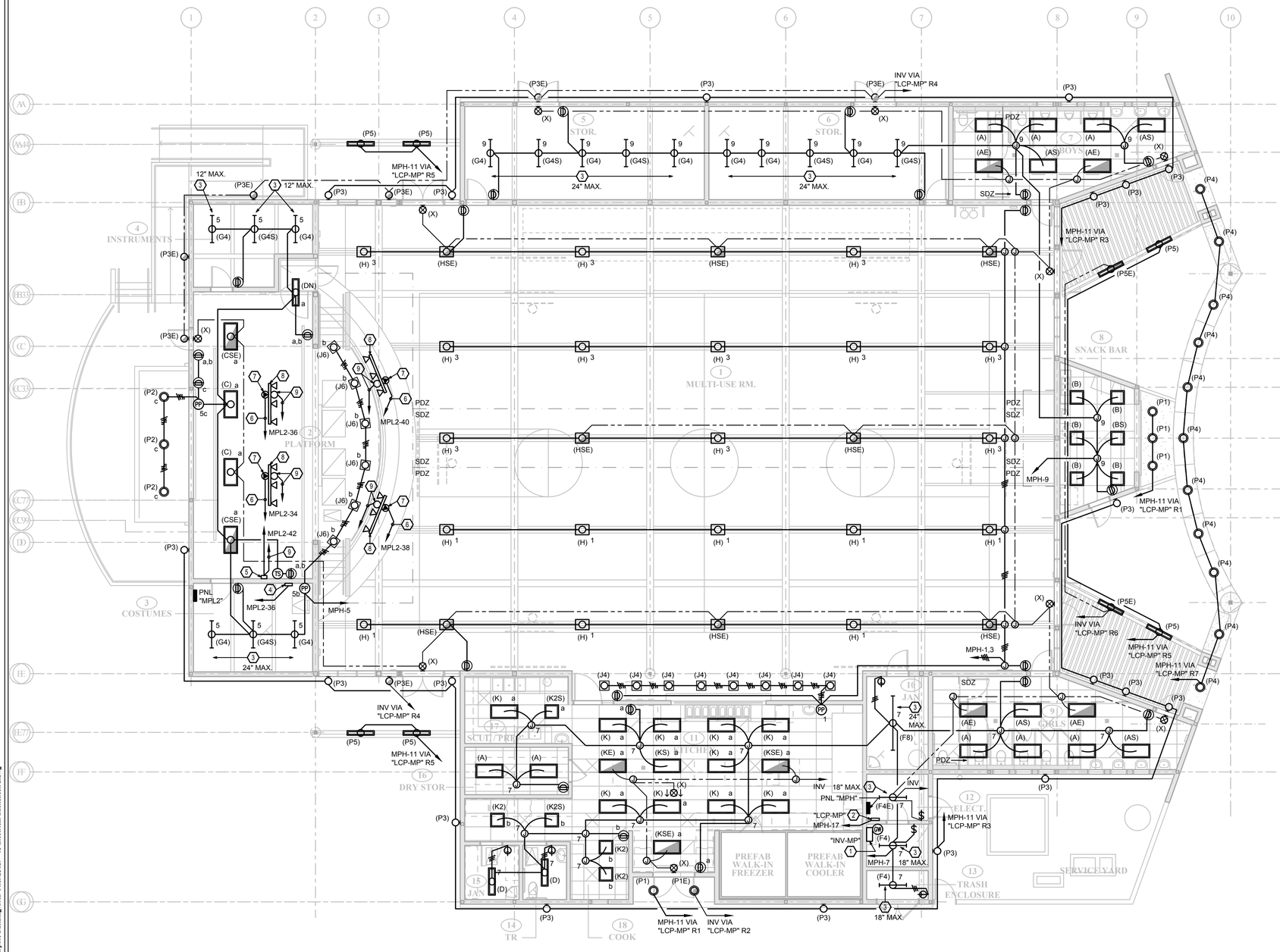
SHEET TITLE:
ELECTRICAL SITE PLAN

E4.1

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

PLOTTED: 4/12/2024 6:22:23 PM
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backsheet 2.dwg



NORTH

LIGHTING PLAN

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

KEY NOTES ⬡

1. EMERGENCY LIGHTING INVERTER "INV". 90 MINUTES RUNTIME. IOTA #IISC-2800-277IN-277OUT-BYPASS-OB2/1PZ77/16AMP/ON. WHEN POWER FAILS. EMERGENCY LIGHTS AUTOMATICALLY SWITCH ON. SEE DETAIL 6/E1.2 FOR MOUNTING. SEE ENLARGED ELECTRICAL PLAN SHEET E5.2 FOR CIRCUIT.
2. LIGHTING CONTROL PANEL "LCP". LITHONIA #ARP-INTENC16 NLT-16FCR-MVOLT-2VB-HLK-SM-DTC. SEE ENLARGED ELECTRICAL PLAN ON SHEET E5.2 FOR CIRCUIT.
3. SUSPENSION LENGTH SHOWN. LENGTH ALLOWS FIXTURE TO SWING 45 DEGREE WITHOUT CONTACTING OBSTRUCTION.
4. THEATRICAL LIGHTING DMX CABINET. MOUNT IN LOCATION HIGH ON WALL PER MANUFACTURER INSTRUCTIONS.
5. COLOR TOUCHSCREEN CONTROLLER AND DMX CONSOLE OUTLET FOR THEATRICAL LIGHTS.
6. RUN #10 WIRES WITH DEDICATED NEUTRALS AND HOMERUN VIA "LCP".
7. PROVIDE L5-20 LOCKING RECEPTACLE ABOVE BATTEN ON CEILING. SEE DETAILS 1/E1.3 AND 2/E1.3.
8. THEATRICAL LIGHTS, DMX/RELAY MODULE, AND PIPE BATTEN. PROVIDE (3) LIGHTS PER BATTEN. MOUNT BATTEN ON CEILING. SEE DETAILS 1/E1.3, 2/E1.3, AND 3/E1.3.
9. PROVIDE DMV OUTLET AND RUN DMX CABLING PER MANUFACTURER TO DMX CONTROLLER.

THEATRICAL LIGHTING SYS.

PROVIDE A COMPLETE AND OPERATIONAL THEATRICAL LIGHTING SYSTEM. THE SYSTEM SHALL BE COMPRISED OF A COLOR TOUCHSCREEN CONTROLLERS, CONSOLE OUTLETS, DMX PROCESSOR, WIRELESS TRANSCEIVERS, DMX/RELAY MODULES, CONTROL CABLING, POWER OUTLETS, PIPE BATTENS, AND FIVE-COLOR LED THEATRICAL LIGHTS. PROVIDE ALL PROGRAMMING, STARTUP, AND ANY ADDITIONAL REQUIRED COMPONENTS NEEDED FOR A FULLY FUNCTIONAL, TURN KEY SYSTEM. PROVIDE 8 HOURS OF TRAINING FOR OWNER'S DESIGNATED PERSONNEL.

THE SYSTEM SHOWN ON THE PLANS IS BASED ON COMPONENTS FROM ETC AND PATHWAY. THE MAJOR SYSTEM COMPONENTS CONSIST OF:

1. ONE (1) DMX CABINET,
   ABL PATHWAY #PWSA-50W-24VDC-SML-HOR-1NPWDMX-2REPHUBB
2. ONE (1) INTERFACE TOUCHSCREENS,
   ABL PATHWAY #PWCHOREO-WM-512
3. FOUR (4) "IMPRESS" COMPATIBLE DMX CONSOLE OUTLETS
4. FOUR (4) 6FT PIPE BATTENS CONSTRUCTED OF STANDARD 1.5" SCHEDULE 40 BLACK PIPE WITH THREE (3) ETC COLORSOURCE PAR JR (PART #CSSPOTJR2550). MOUNT PER DETAIL 3/E1.3.

THE THEATRICAL LIGHTING SYSTEM INSTALLATION SHALL BE INSTALLED AS PER THE MANUFACTURER'S APPROVED SHOP DRAWINGS AND THESE PLANS. INTERFACE THE THEATRICAL LIGHTING CONTROLS WITH THE BUILDING'S NLIGHT CONTROLS.

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
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TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
LIGHTING PLAN

E5.1

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
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STATE OF CALIFORNIA

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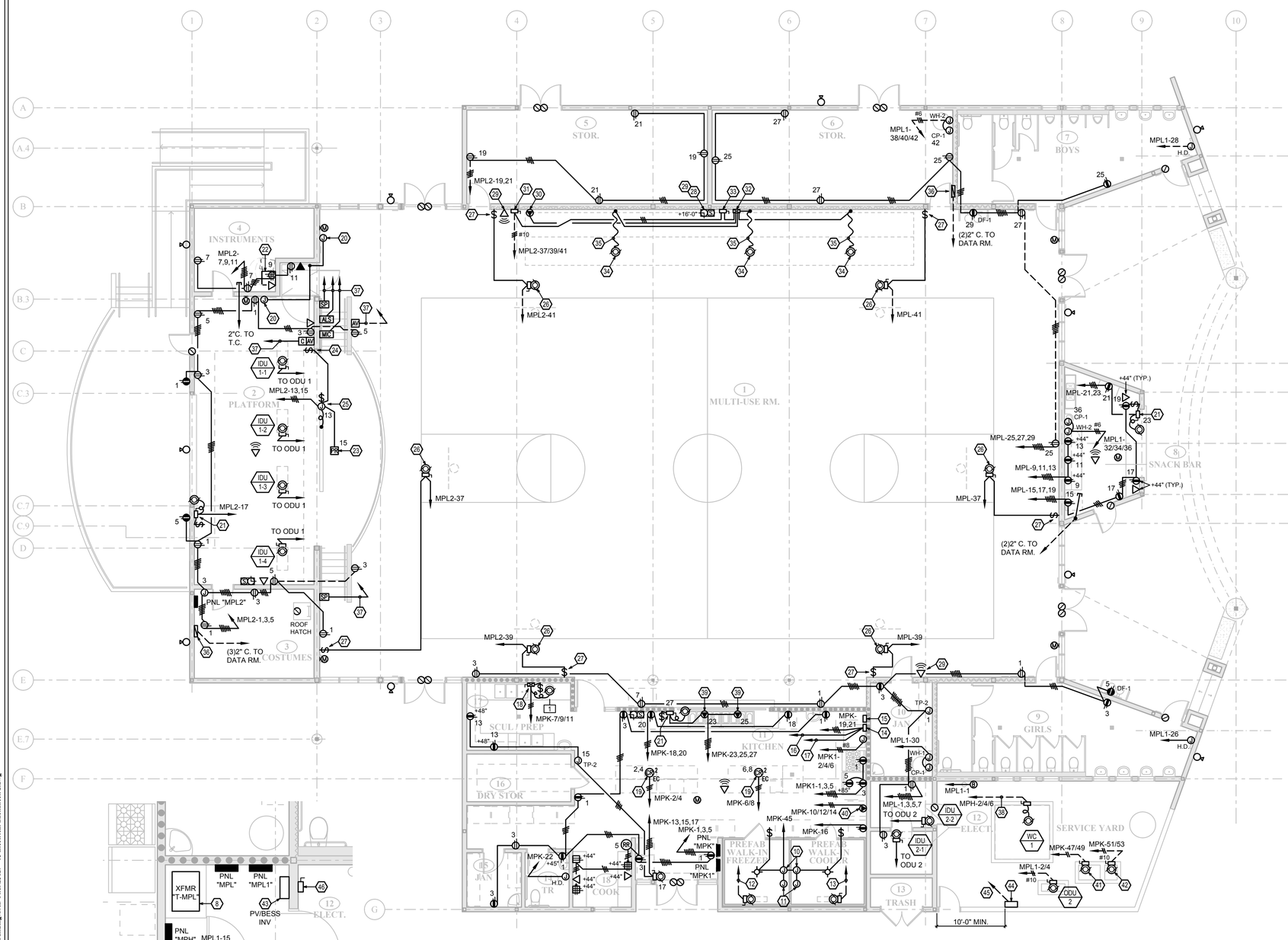
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backsheet 2.dwg



NORTH

POWER & SYSTEMS PLAN

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

NORTH

ENLARGED ELEC. ROOM

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

KEY NOTES ⬡

1. 3/4" THICK x 8FT HIGH, FIRE RESISTANT PLYWOOD BACKBOARD. PAINTED WITH FIRE RESISTANT PAINT. SECURE PLYWOOD TO (2) METAL STUDS WITH #10 x 4" GALVANIZED FLAT HEAD SMS AT 8" CENTERS, WITH MIN. (4) SCREWS AT 6" CENTERS AT EACH WALL STUD. WITH MIN. 2 1/2" EMBEDMENT INTO WALL STUD.
2. PROVIDE TELECOM GROUND BUS PER DETAIL 4/E1.9 AND 5/E1.9.
3. MOUNT OUTLETS AT BACKBOARD AT +24" AFF. AND +78" AFF. CONNECT POWER TO EMS, SECURITY SYSTEMS AND LIGHTING GATEWAY.
4. PROVIDE 36"H IDF CABINET PER SPECS AT +60" AFF. TO BOTTOM OF CABINET. MOUNT POWER OUTLET INSIDE CABINET. SEE DETAIL 3/E1.9.
5. EMERGENCY LIGHTING INVERTER "INV" PER DETAIL 6/E1.2.
6. LIGHTING CONTROL PANEL "LCP".
7. FIRE ALARM CONTROL PANEL. CONNECT TO DEDICATED 120V 20A CIRCUIT. CIRCUIT BREAKER TO BE EQUIPPED WITH RED HANDLE LOCK-ON DEVICE AND LABEL READING "FIRE ALARM CIRCUIT. DO NOT TURN OFF". CONNECT FA. SEE FIRE ALARM PLANS.
8. PAD MOUNTED TRANSFORMER. SEE DETAIL 3/E1.6 FOR MOUNTING. SEE POWER SINGLE LINE DIAGRAM 1/E1.7.
10. MAKE CONNECTIONS TO COLD BOX LIGHTS AND HEAT TRACE CABLE. INSTALL AND CONNECT LIGHTS AND SWITCHES PROVIDED BY MANUFACTURER.
11. CONNECT TO SELF-REGULATING HEAT TRACE CABLE.
12. CONNECT WALK-IN FREEZER EVAPORATOR TO CONDENSER ON ROOF. PROVIDE CONDUIT AND WIRING PER MANUFACTURER.
13. CONNECT WALK-IN REFRIGERATOR EVAPORATOR TO CONDENSER ON ROOF. PROVIDE CONDUIT AND WIRING PER MANUFACTURER.
14. HOOD EXHAUST SYSTEM WITH HOOD CONTROLS AND EXHAUST FAN CONTROLS. VERIFY LOCATION. CONNECT ALL ELECTRICAL PORTIONS. INCLUDING OUTLETS, LIGHTS, GAS SOLENOID, EXHAUST FAN, MAKE-UP AIR UNIT, TEMPERATURE SENSOR, AND CONTROLS. REFER TO MANUFACTURER DRAWINGS.
15. FIRE SUPPRESSION SYSTEM. VERIFY LOCATION. 3/4"C. 2#14 TO FIRE SYSTEM MICROSWITCH IN HOOD CONTROL PANEL.
16. CONNECT GAS SOLENOID.
17. CONNECT TO FIRE SUPPRESSION SYSTEM.
18. CONNECT TO SINK DISPOSAL AND CONTROLS PER MANUFACTURER. VERIFY LOCATION PRIOR TO ROUGH-IN.
19. RETRACTABLE CORD REEL WITH QUAD GFI OUTLET IN RECESSED CEILING ENCLOSURE. VERIFY DIMENSION AND LOCATION PRIOR TO ROUGH-IN. SEE DETAIL 5/E1.5.
20. PROVIDE J-BOX FOR CALL BUTTONS AND STUB 3/4"C. INTO CONTROL COMPARTMENT OF LIFT.
21. CONNECT TO MOTORIZED ROLL-UP DOOR AND CONTROLS PER MANUFACTURER. VERIFY LOCATION AND HEIGHT WITH MANUFACTURER INFORMATION PRIOR TO ROUGH-IN. PROVIDE ALL REQUIREMENT PER MANUFACTURER.
22. PROVIDE AUDIO/VIDEO CABINET PER SPECS. MOUNT QUAD OUTLET AND DATA OUTLET INSIDE CABINET. SEE DETAIL 3/E1.9. VERIFY LOCATION PRIOR TO ROUGH-IN.
23. PROVIDE POWER OUTLET FOR PROJECTOR. VERIFY LOCATION OF PROJECTOR/MOUNT WITH FACTORY DATA IN RELATION TO SCREEN PRIOR TO ROUGH-IN. MOUNT PROJECTOR PER DETAIL 6/E1.5. (NOTE: BACKING/BLOCKING IS REQUIRED AND MUST BE PLACED PRIOR TO CEILING INSTALLATION.)
24. MOTORIZED SCREEN FACTORY WALL CONTROLLER. VERIFY LOCATION PRIOR TO ROUGH-IN. VERIFY ALL REQUIREMENT PER MANUFACTURER.
25. PROVIDE L5-20R TWIST-LOCK POWER OUTLET AND CONNECT MOTORIZED SCREEN. VERIFY LOCATION PRIOR TO ROUGH-IN.
26. BASKETBALL BACKSTOP OPERATOR. VERIFY LOCATION WITH OWNER PRIOR TO ROUGH-IN. VERIFY ALL REQUIREMENT PER MANUFACTURER.
27. BASKETBALL BACKSTOP OPERATOR SWITCH BY MANUFACTURER. VERIFY LOCATION WITH OWNER PRIOR TO ROUGH-IN.
28. PROVIDE LARGE FORMAT PA CLOCK/ SPEAKER.
29. INSTALL PROTECTIVE WIRE CAGE ON DEVICE.
30. BLEACHER CONTROL RECEPTACLE AT +45" AFF. VERIFY LOCATION WITH VENDER.
31. MAIN DISCONNECT SWITCH. MOUNT DISCONNECT AT +82" (OR HIGHER TO CLEAR DOOR).
32. START/STOP REVERSING CONTACTOR AND WIRING HARNESS.
33. SECONDARY DISCONNECT SWITCH AT WALL, BEHIND BLEACHERS. MOUNT AT APPROX. 19" A.F.F.; VERIFY LOCATION WITH VENDER.
34. FRICTION POWER MOTOR, 1/2HP 2.2A.
35. CONTROL CABLES; LOOP BACK TO WIRING HARNESS PER MANUFACTURER.
36. PROVIDE 12"W x 12"H x 6"D PULLCAN WITH IDENTIFIED CONDUITS TO DATA ROOM.
37. 1"C. TO AUDIO/VIDEO CABINET.
38. 1 1/2"C. (3) #1/0, (1) #6G.
39. PROVIDE NEMR L5-30R POWER OUTLET. VERIFY KITCHEN EQUIPMENT REQUIREMENT WITH MANUFACTURER INFORMATION.
40. PROVIDE NEMR L15-20R POWER OUTLET. VERIFY KITCHEN EQUIPMENT REQUIREMENT WITH MANUFACTURER INFORMATION.
41. WALK-IN REFRIGERATOR CONDENSER. VERIFY LOCATION WITH MECHANICAL. COORDINATE ALL REQUIREMENT WITH EQUIPMENT VENDER.
42. WALK-IN FREEZER CONDENSER. VERIFY LOCATION WITH MECHANICAL. COORDINATE ALL REQUIREMENT WITH EQUIPMENT VENDER.
43. PV/BESS INVERTER. SEE KEYNOTE "21", DETAIL 1/E1.7.
44. BESS BATTERY CABINET. SEE KEYNOTE "23", DETAIL 1/E1.7.
45. (2) 3/4"C. TO PV/BESS INVERTER. SEE FEEDER "O" , DETAIL 1/E1.7.
46. PV VERIFIABLE DISCONNECT SWITCH. SEE KEYNOTE "25", DETAIL 1/E1.7.

NOTES:

1. REFER TO ARCHITECTURAL SHEET A4 FOR KITCHEN EQUIPMENT DETAIL.
2. COORDINATE ALL EQUIPMENT LOCATIONS WITH ARCHITECTURAL DRAWINGS.

FILE NO. 20-10 APPL. NO. 02-1210993

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
POWER & SYSTEMS PLAN

E5.2

REGISTERED PROFESSIONAL ENGINEER — C. SCOTT DAVIDSON — E17850 — ELECTRICAL — STATE OF CALIFORNIA

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356 Pollasky Ave. Suite 200
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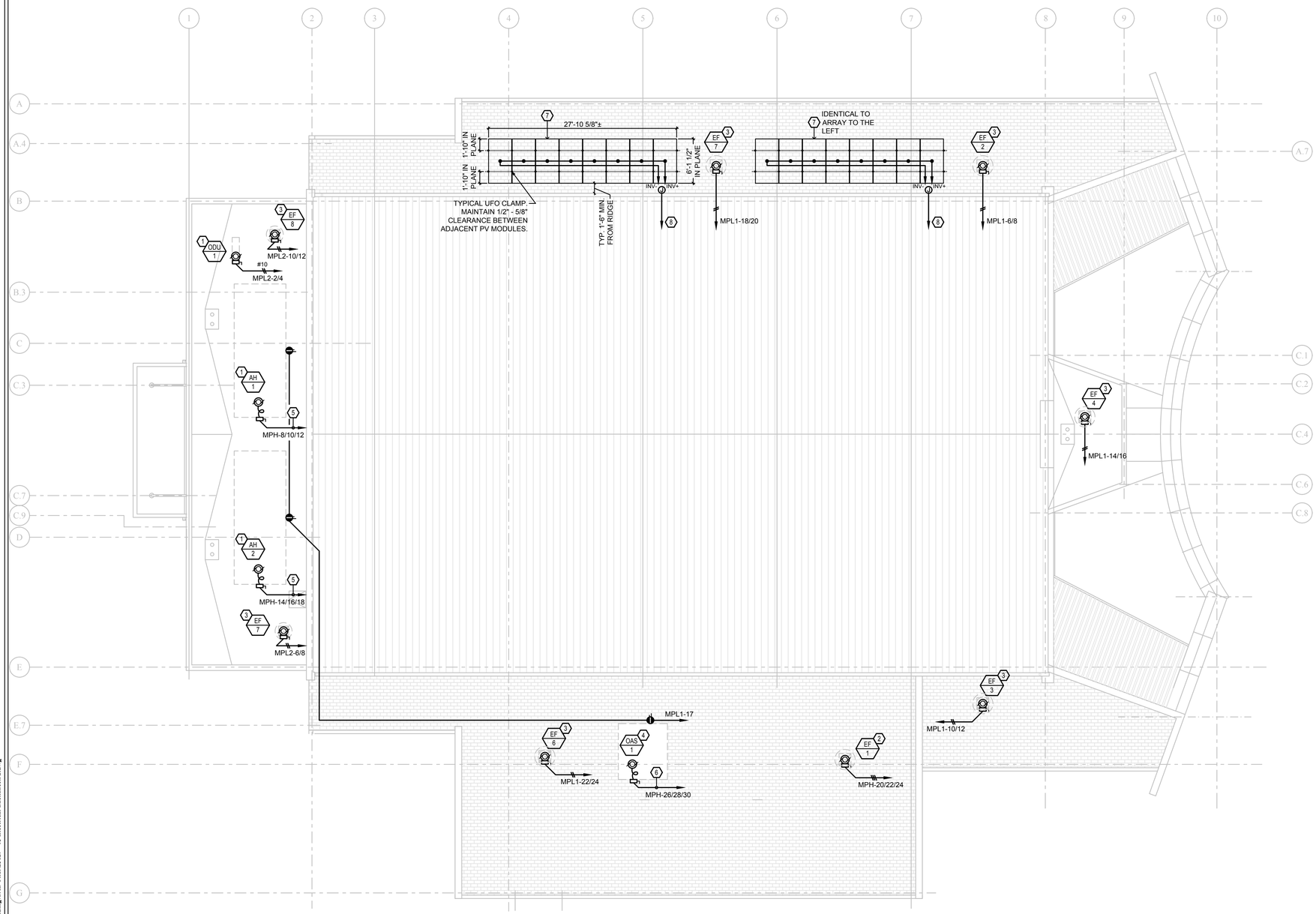
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backsheet 2.dwg



NORTH

ELECTRICAL ROOF PLAN

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

KEY NOTES ⬡

1. CONNECT HVAC UNIT AND INTERLOCK/ CONTROL PER MECHANICAL PLANS. PROVIDE FUSING PER NAMEPLATES.
2. CONNECT EXHAUST FAN AND INTERLOCK WITH KITCHEN HOOD CONTROL PANEL AND HVAC UNIT PER MECHANICAL PLANS. SEE MECHANICAL PLANS FOR ADDITIONAL INFORMATION.
3. CONNECT EXHAUST FAN AND INTERLOCK/ CONTROL PER MECHANICAL PLANS. SEE MECHANICAL PLANS FOR ADDITIONAL INFORMATION.
4. CONNECT HAVC UNIT AND INTERLOCK WITH KITCHEN HOOD CONTROL PANEL PER MECHANICAL PLANS. PROVIDE FUSING PER NAMEPLATES. SEE MECHANICAL PLANS FOR ADDITIONAL INFORMATION.
5. 1"C. 3#8, 1#10G.
6. 1 1/4"C. 3#3, 1#8G.
7. SOLAR PV PANEL ARRAY WITH (8) PANELS. SEE KEYNOTE "24", DETAIL 1/E1.7. MOUNT PER 3/E1.10 AND 3/S105.
8. 3/4"C. TO PV/BESS INVERTER WITH STRING CONDUCTORS. SEE FEEDER "P", DETAIL 1/E1.7.

FILE NO. 20-10 APPL. NO. 02-121093

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
ELECTRICAL ROOF PLAN

E5.3

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

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559.323.4995 tel
559.323.4928 fax

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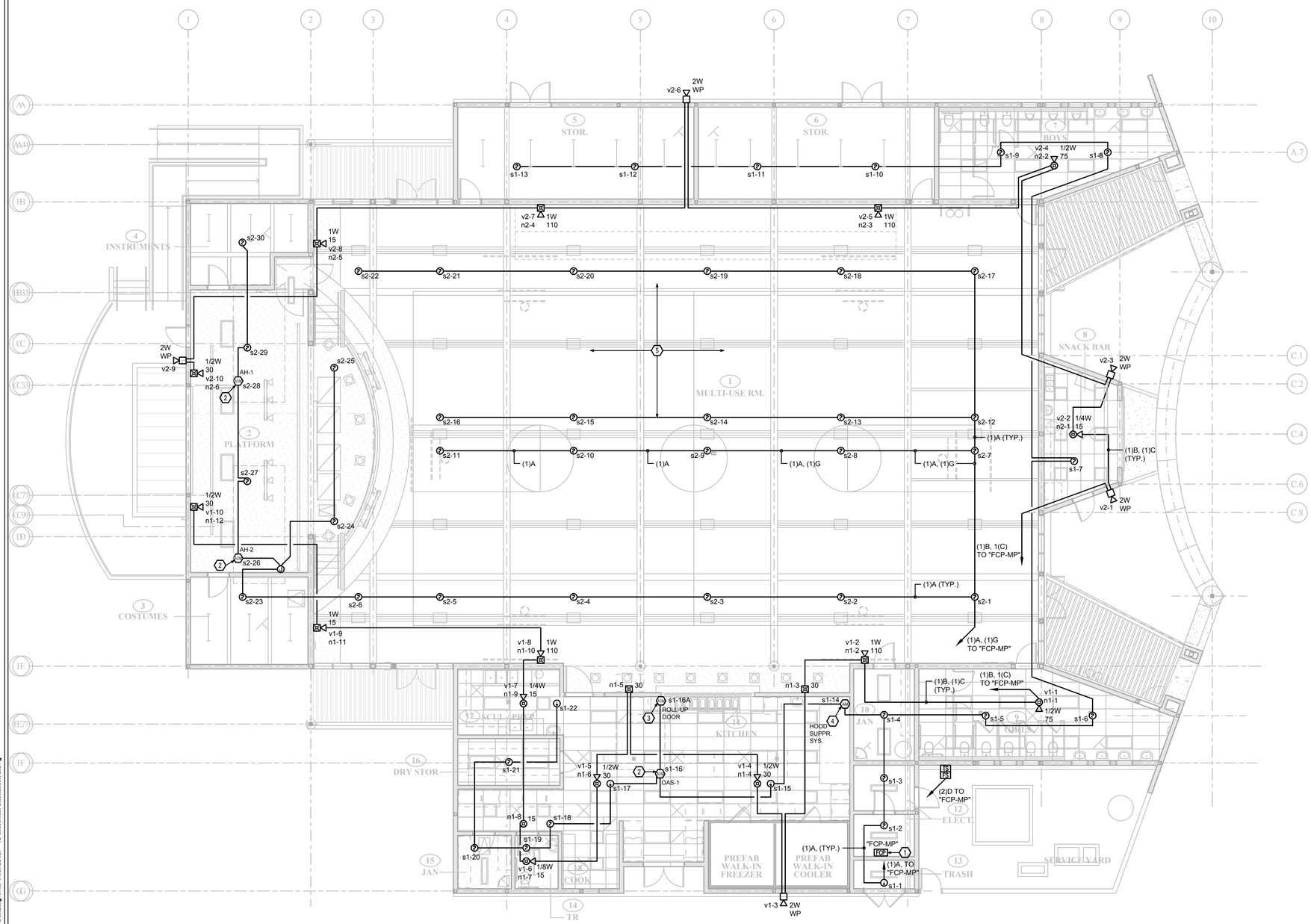
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backsheet 2.dwg

KEY NOTES ⬡

1. FIRE ALARM CONTROL PANEL. CONNECT FA PER FIRE ALARM SINGLE LINE DIAGRAM 2/E2.2.
2. CONNECT RELAY MODULE TO MECHANICAL UNIT SHUTDOWN TERMINALS.
3. CONNECT RELAY MODULE TO MOTORIZED ROLL-UP DOOR CONTROLS.
4. CONNECT MONITOR MODULE TO HOOD FIRE SUPPRESSION SYSTEM.
5. PROVIDE WIRE GUARD OVER ALL FIRE ALARM DEVICES IN THE MULTI-USE ROOM.



NORTH

FIRE ALARM PLAN

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

FILE NO. 20-10 APPL. NO. 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549

PROJECT NO: 2318

DATE: 4/12/2024

SHEET TITLE:
FIRE ALARM PLAN

E5.4

REGISTERED PROFESSIONAL ENGINEER
C. SCOTT DAVIDSON
E17850
ELECTRICAL
STATE OF CALIFORNIA

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356 Pollasky Ave. Suite 200
Clovis, CA 93612
559.323.4995 tel
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PLOTTED: 4/12/2024 6:22:27 PM
LOCATION: Z:\Clients\Gonzalez Architects\23129 - Fairmead ES Multi-Purpose Building\CAD Files\23129 - 03 Electrical Backsheet 2.dwg

Hydrant Flow Test Report

Test Date 12/04/2023 **Test Time** 13:00

Location

22852 RD 19-1/2 (Fairmead Headstart)
Fairmead, California

Tested by

MS Fire Protection: C-16 986234
Jacob Brawley
Kevin Sherbon

Witness: Jason Mitchell, Madera Co. Public Works

Notes

Hydrant #1 (Flow) 22852 Rd 19-1/2
Hydrant #2 (Pressure) Intersection RD 19-1/2 & AVE 22-3/4

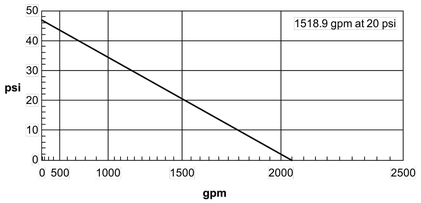
Read Hydrant

47 psi **static pressure**
39 psi **residual pressure**
2 ft **hydrant elevation**

Flow Hydrant(s)

Outlet	Elev	Size	C	Pitot Pressure	Flow
#1	2	2.5	.9	22	787 gpm

Flow Graph



MS FIRE PROTECTION

Flow Test Information Sheet

Please note: A two-hydrant test is recommended

1. Reason For Test: Design Base Ø Other O
2. Address of Property: 23914 Rd. 19½ Fairmead
3. Date & Time of Test: Date: 12-4-23 Time: 1:00pm
4. Test Conducted by: Jacob Brawley (Name) Super (Title) MS Fire Protection (Affiliation)
5. Test Witnessed By: Jason (Name) Mitchell (Title) Madera co. (Affiliation)
6. Source of Water Supply: Gravity O Pump O Other:
7. Name of Water District: M033W Fairmead
8. Fire District: Madera County Fire Protection District
9. Is the Supply provided with PRV STA's? Yes O No Ø
10. Area Map: Draw sketch showing property location; streets and names, north arrow, location of fire hydrants with identification numbers, proposed building, distances, etc.

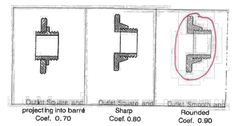
MAP

11. Flow Test Data 11. Date Gauges Last Calibrated:

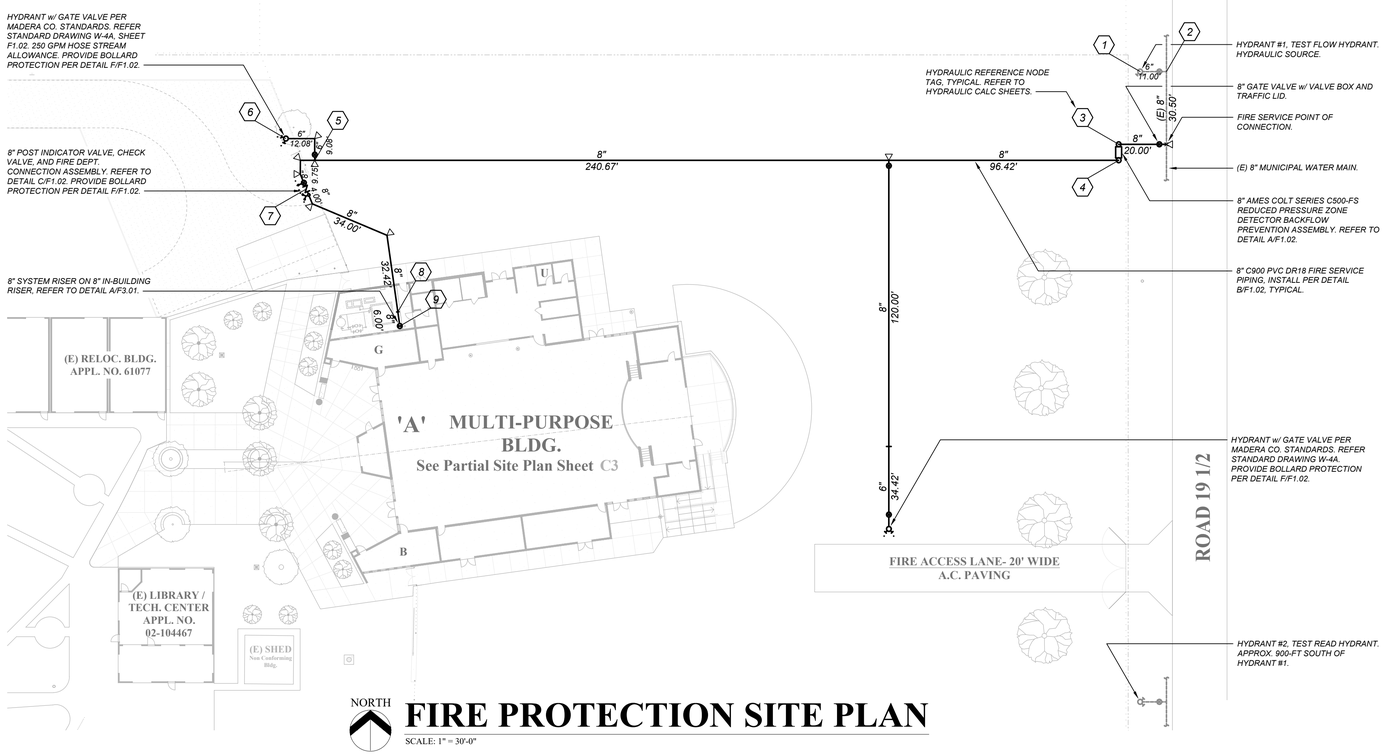
Flow at Hydrant Number	Static at Hydrant Number	Static PSIG	Residual PSIG	Outlet Size	Pitot PSI	Flow GPM	Outlet Coefficient	Adjusted GPM
#1				2½	22	875	0.90	787.5
	#2	47	39	2½			0.90	

Signed: [signature]

Witness: [signature]



At completion of test, hydrants were verified to be in the off position, and observed to drain down. Initials: [illegible]



NORTH

FIRE PROTECTION SITE PLAN

SCALE: 1" = 30'-0"

0 30'
SCALE: 1" = 30'

GENERAL NOTES

SPRINKLER SYSTEM DESIGNED IN ACCORDANCE WITH NFPA 13 (2022), CFC/CBC (2022), DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES, AND COUNTY OF MADERA STANDARDS. ALL WORK TO BE DONE IN ACCORDANCE WITH THESE PLANS AND ALL NATIONAL, STATE, AND LOCAL CODES.

THESE DRAWINGS ARE NOT COORDINATED PLANS (AMONGST THE TRADES). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE ACCEPTABLE WORKING INSTALLATION, WHETHER SHOWN OR NOT SHOWN, APPLICABLE TO ALL CITED CODES AND STANDARDS. IT SHALL BE THE RESPONSIBILITY OF THE SPRINKLER INSTALLATION CONTRACTOR TO COORDINATE WITH ALL TRADES.

CONTRACTOR TO REVIEW FOR BID, THE PLANS AS DESIGNED BY ENGINEER. ANY ALTERNATE PROPOSED DESIGN CHANGES OR REVISIONS BY CONTRACTOR, ARE TO BE SUBMITTED IN WRITTEN FORMAT, REVIEWED AND RESPONDED TO, BY ENGINEER PRIOR TO BIDDING. AFTER AWARD OF BID, ALL DEVIATIONS FROM THE ORIGINAL DESIGN INTENTION SHALL BE CLOUDED AND NOTED ON CONTRACTOR ISSUED SHOP DRAWINGS TO ENGINEER, WHICH HAVE BEEN COORDINATED AMONGST THE TRADES, FOR REVIEW AND APPROVAL BY ENGINEER. ALL CHANGES TO THE PLAN SHALL BE SUBMITTED TO DSA FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION.

GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR INSURING ALL SUB-CONTRACTOR'S COORDINATE SHOP DRAWINGS PRIOR TO ORDERING OR INSTALLATION OF ANY EQUIPMENT, DEVICE, MATERIAL, ETC. SUBMISSION OF SHOP DRAWINGS TO THE ENGINEER CONSTITUTES THAT THE DRAWINGS SUBMITTED HAVE BEEN COORDINATED AMONGST THE TRADES. FAILURE TO COORDINATE ALL SHOP DRAWINGS AMONGST THE TRADES, FOR REVIEW AND APPROVAL BY ENGINEER, WILL NOT CONSTITUTE A CHANGE ORDER TO THE OWNER, FOR UNIDENTIFIED FIELD COORDINATION ISSUES.

ANY REVISIONS OR DEVIATIONS THAT ARISE FROM COORDINATION AND CONSTRUCTION OF INSTALLATION METHODS AND MEANS AMONGST THE TRADES DURING CONSTRUCTION, SHALL BE PROVIDED TO THE ARCHITECT BY RFI, DETAILING COORDINATION ISSUE AND PROPOSED SOLUTION. ONCE REVIEWED AND APPROVED BY ENGINEER, THE DESIGN REVISIONS OR DEVIATIONS SHALL BE APPROVED BY THE DSA, THEN COORDINATED IN THE FIELD AMONGST THE IMPACTED TRADES, AND SHOWN ON THE AS-BUILT DRAWINGS. A COMPLETE, ACCURATE SET OF AS-BUILT DRAWINGS SHALL BE MAINTAINED ONSITE DURING CONSTRUCTION, AND ARE TO BE ISSUED TO ARCHITECT AND ENGINEER UPON COMPLETION, INSPECTION, AND TESTING OF INSTALLATION.

CONTRACTOR TO PROVIDE SIX (6) SETS OF THE FOLLOWING:

A. FULLY COORDINATED AMONGST THE TRADES INSTALLATION SHOP DRAWINGS, INCLUDING ALL PIPE CUT LENGTHS, FITTINGS, HANGERS, BRACES, SPRINKLERS WITH LEGEND, HYDRAULIC AND SEISMIC CALCULATIONS, AND PRODUCT SUBMITTAL.
B. BOUND SUBMITTAL TO INCLUDE COVER PAGE, PIPING, HARDWARE, AND MATERIALS (INCLUDING FIRE STOPPING). COVER PAGE TO INCLUDE PROJECT NAME, SPRINKLER CONTRACTOR, GENERAL CONTRACTOR, ARCHITECT, AND DATE SUBMITTED FOR REVIEW.

ALL ITEMS REQUIRED BY NFPA 13 (2022) CHAPTER 28 (FOR WORKING DRAWINGS) SHALL BE PROVIDED ON THE SHOP DRAWINGS. SUBMITTALS ARE IN ADDITION TO, AND NOT IN LIEU OF, THIS REQUIREMENT.

FINAL INSTALLATION SPACING FOR SPRINKLER SYSTEM PIPING AND SPRINKLERS, MAY VARY WITH FIELD COORDINATION ISSUES. ALL VARIANCES TO COMPLY WITH LISTING OF SPRINKLERS, NFPA 13 (2022), CFC/CBC (2022), DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES, AND COUNTY OF MADERA REQUIREMENTS.

ALL HANGERS, THREADED ROD, BRACING COMPONENTS AND HARDWARE, SHALL BE HOT DIPPED GALVANIZED - OR FACTORY COATED GALVANIZED - FOR ALL EQUIPMENT AND COMPONENTS IN EXTERIOR APPLICATIONS. ALL FASTENERS USED (IE BOLTS - NUTS / WASHERS) TO BE STAINLESS STEEL.

SPRINKLERS ARE TO BE LOCATED CENTER TILE (OR AS SHOWN) ACCORDING TO INDUSTRY STANDARDS AND PRACTICES.

LOCATION OF SEISMIC BRACING AND HANGERS ARE SCHEMATIC IN NATURE AND INTENDED TO SHOW APPROXIMATE LOCATIONS. SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR SHOWING THE EXACT LOCATION OF SEISMIC RESTRAINTS ON SUBMITTED COORDINATED AMONGST THE TRADES SHOP DRAWINGS, AND FINAL AS-BUILT DRAWINGS. SUBMITTED SHOP DRAWINGS SHALL DESIGNATE THE TYPE AND LOCATION OF EACH BRACE, HANGER OR RESTRAINT, AND SHALL BE ACCOMPANIED BY A DETAIL WITH LEGEND, AND CALULATIONS (IF APPLICABLE) IN ACCORDANCE WITH NFPA 13 (2022), CFC/CBC (2022), AND THE APPROPRIATE SEISMIC DESIGN CRITERIA FOR THE PROJECT.

ANY SUBSTITUTION OF "FLEXIBLE" TYPE PIPING IN LIEU OF "RIGID" PIPE, OR ANY CHANGES TO SIZE, MANUFACTURER, OR LENGTHS OF "FLEXIBLE" TYPE PIPING WILL REQUIRED RE-SUBMITTAL OF PIPING PLANS, PRODUCT DATA SHEETS, AND HYDRAULIC CALCULATIONS TO DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES (FIRE LIFE SAFETY) FOR REVIEW AND APPROVAL.

SHOP DRAWINGS THAT HAVE NOT BEEN COORDINATED AMONGST THE TRADES UTILIZING THE MOST CURRENT 2D/3D FILES, WILL NOT BE ACCEPTED FOR REVIEW.

ELECTRONIC (DIGITAL) SUBMITTAL IN PDF FORMAT IS ACCEPTABLE, IF PREPARED IN ACCORDANCE WITH SPECIFICATION 2105 00, SECTION (1-10, A.5). SUBMITTALS NOT CONFORMING TO THE SPECIFICATION WILL NOT BE REVIEWED.

SITE PIPING SPECIFICATIONS

PIPING TO BE AS FOLLOWS:

1. *UNDERGROUND SITE PIPING SHALL BE DR14 PVC UPSTREAM OF THE FIRE DEPARTMENT CONNECTION PER LOCAL AUTHORITY HAVING JURISDICTION REQUIREMENTS, AND SHALL BE DR14 PVC DOWNSTREAM OF THE FIRE DEPARTMENT CONNECTION.*
2. *UNDERGROUND PIPING INSTALLATION TO MEET REQUIREMENTS OF NFPA 13 (2022), NFPA 24 (2022), CBC/CFC (2022), DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES, AND MADERA COUNTY FIRE DEPT. REQUIREMENTS.*
3. *ALL PIPE TO BE INSTALLED WITH A 36" MIN. BURY, FROM TOP OF PIPE, OR AS APPLICABLE TO LOCATION, AS PER NFPA 13 (2022), NFPA 24 (2022), CBC/CFC (2022), DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES, AND MADERA COUNTY FIRE DEPT. REQUIREMENTS.*
4. *ALL THRUST BLOCKS & RESTRAINING GLANDS TO BE POURED IN PLACE AND SIZED IN ACCORDANCE TO NFPA 13 (2022), NFPA 24 (2019), CBC/CFC (2022), DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES, AND MADERA COUNTY FIRE DEPT. REQUIREMENTS.*
5. *UG PIPING RISING UP AT BASE OF RISER SHALL BE A STAINLESS STEEL, SINGLE PIECE IN-BUILDING RISER, LISTED FOR FIRE PROTECTION USE.*
6. *ALL MECHANICAL JOINT FITTINGS SHALL BE COATED WITH A NON-OXIDIZING, CORROSIVE PROHIBITING COATING, AND WRAPPED WITH 2 MIL POLY WRAP.*
7. *ALL UG PIPING, COATED / WRAPPED FITTINGS, VALVES, DETECTION WIRE LOCATION AND TYPE, ETC TO BE INSPECTED BY ONSITE IOR BEFORE BACKFILL.*
8. *PER NFPA 24 §6.2.9(1)(a), THE POST INDICATOR VALVE MINIMUM DISTANCE TO BUILDING SHALL NOT BE LESS THAN THE HEIGHT OF THE EXTERIOR WALL FACING THE POST INDICATOR VALVE.*

SITE UNDERGROUND PLAN NOTES

1. *UNDERGROUND FIRE PIPING INSTALLATION CONTRACTOR SHALL COORDINATE WITH PLUMBING, CIVIL, LANDSCAPE, AND MECHANICAL PIPING PLANS PRIOR TO INSTALLATION.*
2. *ALL UNDERGROUND PIPE LENGTHS INDICATED ON PLANS REFLECT TOTAL PIPE LENGTH (CENTER TO CENTER) WITH NO TAKEOUT FOR FITTINGS.*
3. *ALL UNDERGROUND PVC, C-900, OR OTHER PLASTIC PIPING UTILIZED SHALL BE EQUIPPED WITH A SUITABLE MAGNETIC LOCATION TAPE INSTALLED APPROPRIATELY TO THE TOP OF THE PIPING.*
4. *INSTALLING CONTRACTOR SHALL CALL 811 AND LOCATE EXISTING UTILITIES PRIOR TO CONDUCTING ANY TRENCHING.*

REGISTERED PROFESSIONAL ENGINEER
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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

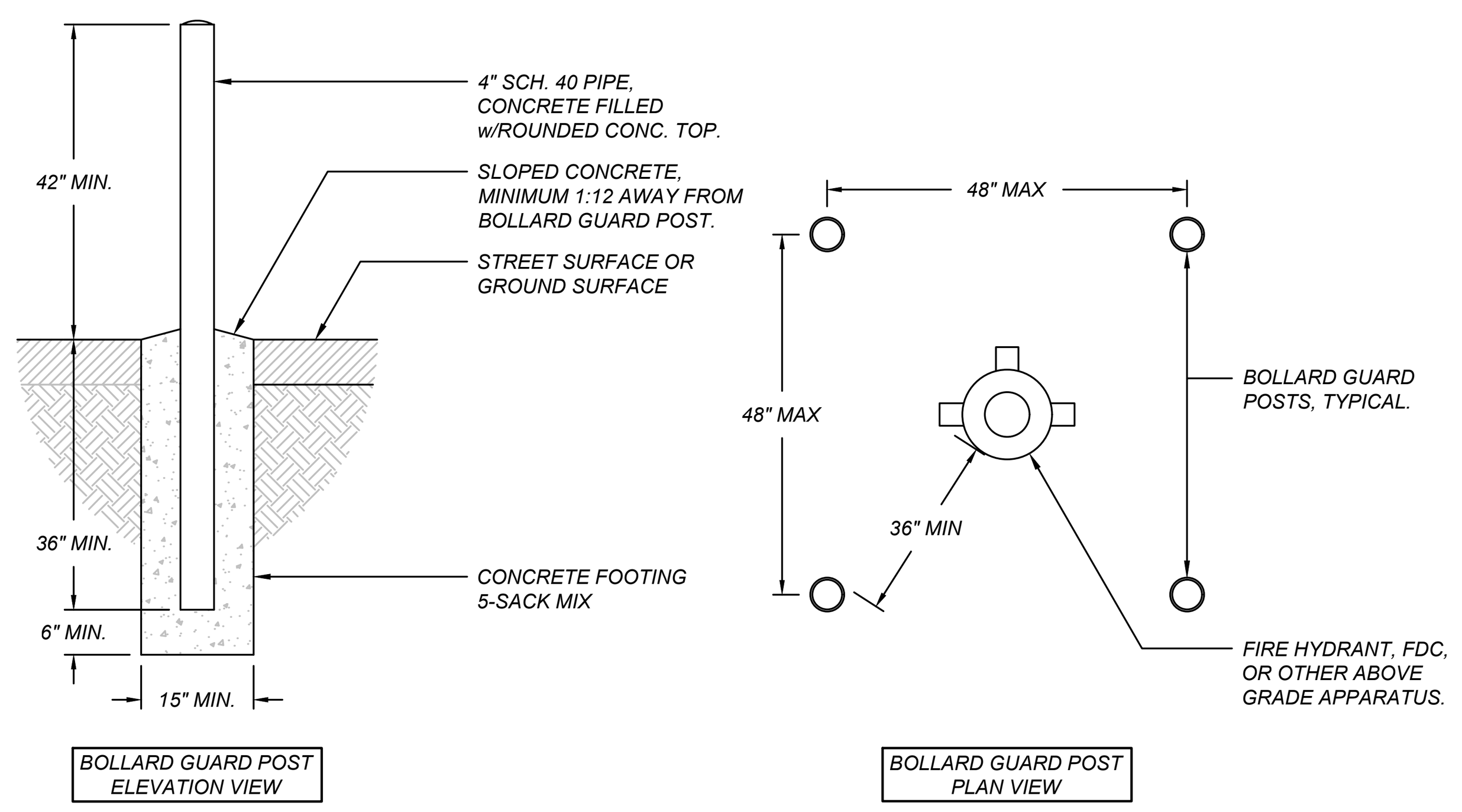
GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
FIRE PROTECTION SITE PLAN

F1.01



BOLLARD GUARD POST ELEVATION VIEW

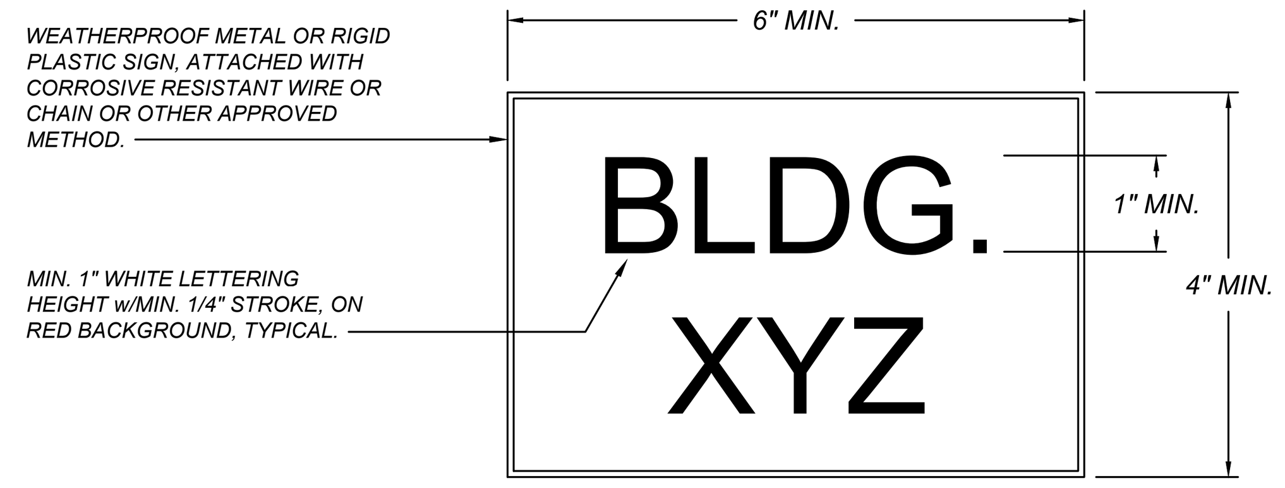
BOLLARD GUARD POST PLAN VIEW

INSTALLATION NOTES:

A. BOLLARD GUARD POSTS SHALL BE INSTALLED IN ACCORDANCE TO CFC 2022 §312.2. GUARD POSTS SHALL BE CONSTRUCTED OF STEEL NOT LESS THAN 4-INCHES IN DIAMETER AND CONCRETE FILLED.
B. STEEL POSTS SHALL BE PAINTED WITH A CORROSIVE PROTECTIVE ENAMEL PAINT FINISH. COLOR SHALL BE SPECIFIED BY THE ARCHITECT.

PIPE TRENCH DETAIL

SCALE: NONE — FSS101 — F / F1.02

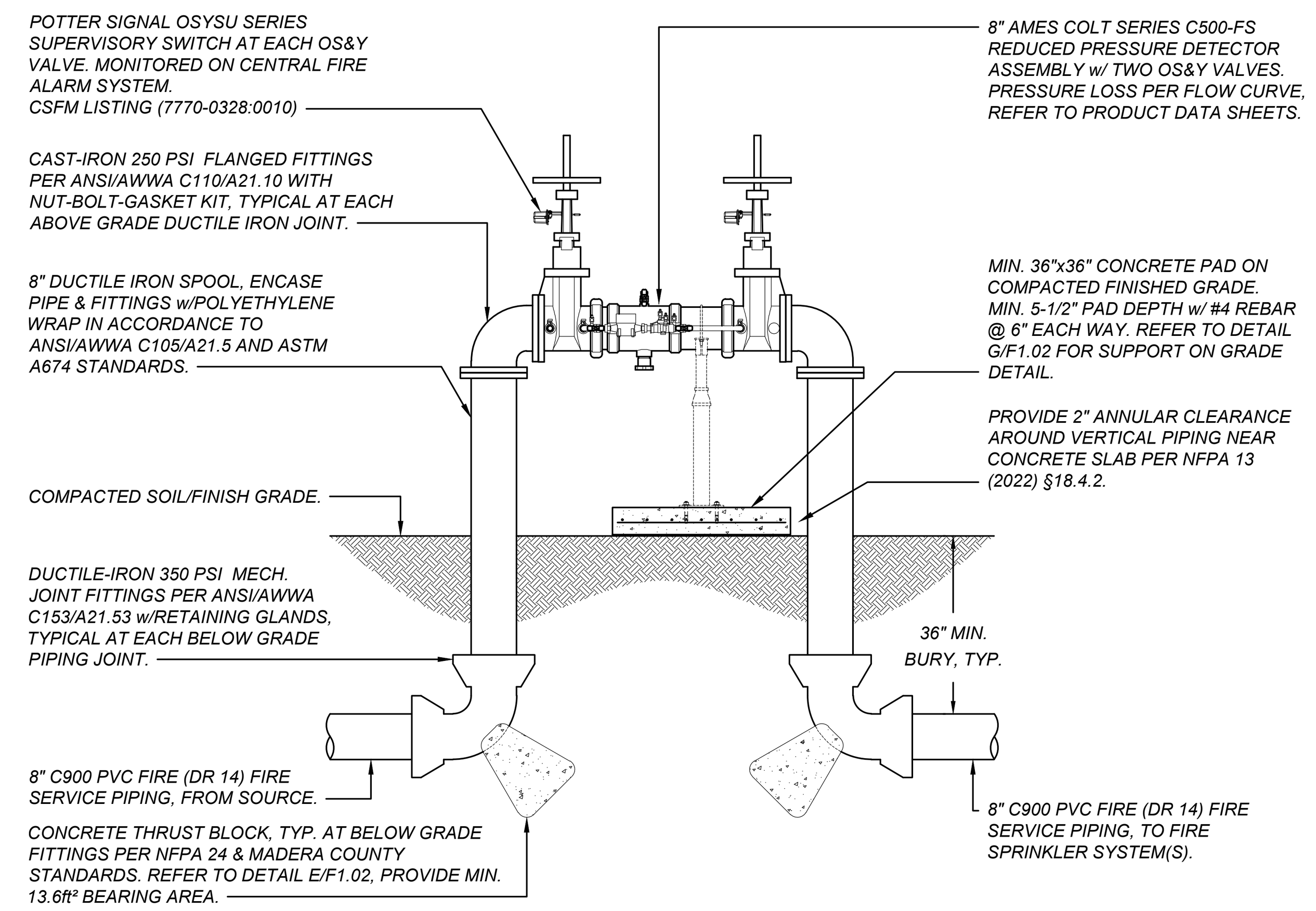


INSTALLATION NOTES:

A. PER NFPA 13 (2022) TABLE A.16.17 SPRINKLER SYSTEM SIGNAGE SUMMARY, SYSTEM CONTROL VALVES AND FIRE DEPARTMENT CONNECTIONS SHALL HAVE IDENTIFICATION SIGNAGE. IDENTIFICATION SIGNS SHALL BE INSTALLED AT A MINIMUM 18" ABOVE FINISH GRADE MEASURED FROM THE BOTTOM EDGE OF THE SIGN.
B. PER NFPA 13 (2022) §16.9.3.5 IDENTIFICATION SIGNS ON CONTROL VALVES SHALL BE PROVIDED AT EACH VALVE TO INDICATE ITS FUNCTION AND WHAT IT CONTROLS.
C. PER NFPA 13 (2022) §16.12.5.8.1 (CFC 2022 §912.5) EACH FIRE DEPARTMENT CONNECTION TO SPRINKLER SYSTEMS SHALL BE DESIGNATED BY A SIGN HAVING RAISED OR ENGRAVED LETTERS AT LEAST 1-INCH IN HEIGHT ON PLATE OR FITTING READING SERVICE DESIGN.
D. WHEN SYSTEM DEMANDS ARE GREATER THAN 150PSI, THE SIGN SHALL INDICATE THE PRESSURE REQUIRED AT THE INLETS TO DELIVER THE GREATEST SYSTEM DEMAND.
E. WHERE LOCAL JURISDICTION REQUIRES ADDRESS OR BUILDING IDENTIFICATION ON POST INDICATOR VALVES AND/OR FIRE DEPARTMENT CONNECTIONS, IDENTIFICATION MARKING CAN BE PAINTED DIRECTLY ON THE APPARATUS IN LIEU OF SIGNAGE. VERIFY REQUIREMENT WITH LOCAL JURISDICTION REGARDING MINIMUM LETTERING HEIGHT AND PAINT COLOR REQUIREMENTS.

SITE APPARATUS SIGNAGE

SCALE: NONE — FSS101 — D / F1.02



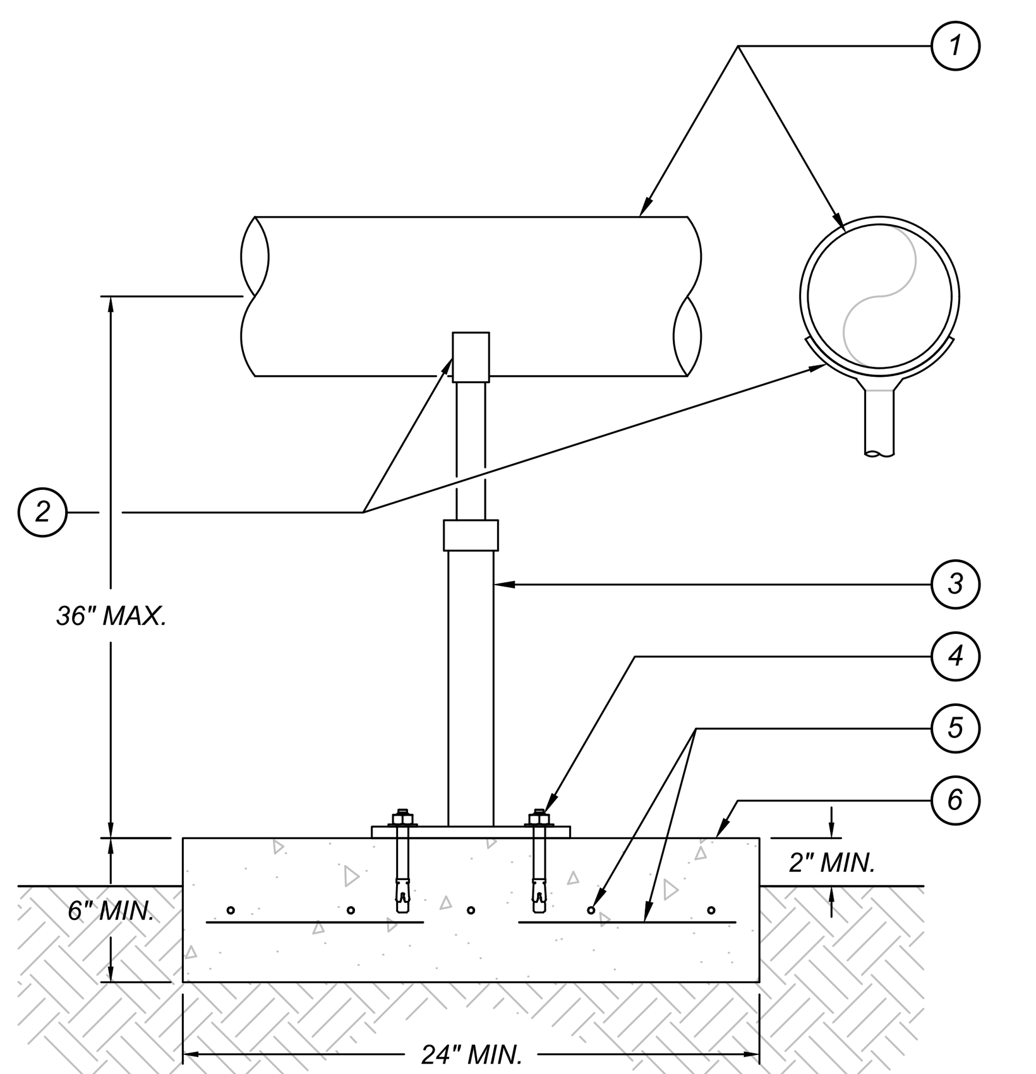
8" REDUCED PRESSURE DETECTOR ASSEMBLY AMES COLT SERIES C500-FS w/ OS&Y VALVES

SCALE: NONE — FSS101 — A / F1.02

SPRINKLER SYSTEM NOTES

SPRINKLER SYSTEM DESIGN CRITERIA:

1. SYSTEM SHALL BE DESIGNED TO CONFORM WITH NFPA 13 (2022 CALIFORNIA EDITION), CFC/CBC (2022), DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES, AND COUNTY OF MADERA STANDARDS.
2. SPRINKLER DISCHARGE DENSITY FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH NFPA 13 (2022) §19.2.3.1 WITH DESIGN DENSITY IN ACCORDANCE WITH TABLE §19.2.3.1.1.
   2.1. LIGHT HAZARD OCCUPANCY SHALL INCLUDE ALL OFFICE, CORRIDOR, DINING, CONCEALED ATTIC SPACES, RESTROOMS, AND SIMILAR AREAS. LIGHT HAZARD OCCUPANCY SHALL HAVE A DESIGN DENSITY OF 0.10 GPM/FT² OVER A MINIMUM REMOTE AREA OF 1500 FT². THE MAXIMUM ALLOWABLE PROTECTION AREA OF COVERAGE FOR A SPRINKLER SHALL BE IN ACCORDANCE WITH THE VALUE INDICATED IN TABLE 10.2.4.2.1(a) AND SHALL NOT EXCEED 225FT².
   2.2. ORDINARY HAZARD GROUP I (OH1) SHALL FOOD SERVICE AREAS, ELECTRICAL AND MECHANICAL EQUIPMENT ROOMS, PORTE COCHERES, AND SIMILAR AREAS INDICATED IN NFPA 13 (2022) §A.4.3.3.1 OH1 OCCUPANCY SHALL HAVE A DENSITY OF 0.15GPM/FT² OVER A MINIMUM REMOTE AREA 0F 1500FT². THE MAXIMUM ALLOWABLE PROTECTION AREA OF COVERAGE FOR A SPRINKLER SHALL BE IN ACCORDANCE WITH THE VALUE INDICATED IN TABLE 10.2.4.2.1(b) - 130FT².
   2.3. ORDINARY HAZARD GROUP II (OH2) SHALL INCLUDE AUTOMOTIVE WORKSHOP AREAS, SCIENCE LABORATORIES, STAGES, STORAGE ROOMS, SIMILAR AREAS INDICATED IN NFPA 13 (2022) §A.4.3.3.2 OH2 OCCUPANCY SHALL HAVE A DESIGN DENSITY OF 0.20GPM/FT² OVER A MINIMUM REMOTE AREA OF 1500FT². THE MAXIMUM ALLOWABLE PROTECTION AREA OF COVERAGE FOR A SPRINKLER SHALL BE IN ACCORDANCE WITH THE VALUE INDICATED IN TABLE 10.2.4.2.1(b) - 130FT².
3. MAXIMUM SPRINKLER SPACING SHALL NOT EXCEED 15'-0" ON CENTER, UNLESS SPECIFICALLY LISTED BY THE SPRINKLER MANUFACTURER.
4. HOSE STREAM ALLOWANCE GPM FLOW SHALL BE IN ACCORDANCE WITH THE VALUES INDICATED IN TABLE 19.2.3.1.2: LIGHT HAZARD - 100 GPM; ORD HAZARD - 250 GPM.
5. PER NFPA 13 (2022) §19.2.3.2.3.1, WHERE LISTED QUICK-RESPONSE SPRINKLERS ARE USED THROUGHOUT A SYSTEM OR PORTION OF A SYSTEM HAVING THE SAME HYDRAULIC DESIGN BASIS, THE SYSTEM AREA OF OPERATION SHALL BEPERMITTED TO BE REDUCED WITHOUT REVISING THE DENSITY AS INDICATED IN FIG. 19.2.3.2.3.1. NOTE: REMOTE AREA REDUCTION EXCLUDES EXTENDED COVERAGE SPRINKLER HEADS AND ONLY APPLICABLE TO LIGHT HAZARD OCCUPANCY ONLY.
6. PER NFPA 13 (2022) §19.2.3.2.4, THE SYSTEM REMOTE AREA SHALL BE INCREASED BY 30% WITHOUT REVISING THE DENSITY WHEN SPRAY SPRINKLERS AND CMSA SPRINKLERS ARE USED ON SLOPED CEILINGS WITH A PITCH EXCEEDING 1 IN 6 (A RISE OF 2 UNITS IN A RUN OF 12 UNITS) IN NON-STORAGE APPLICATIONS.
7. PER NFPA 13 (2022) §19.2.3.2.8.1, MULTIPLE ADJUSTMENTS CAN BE MADE TO THE REMOTE AREA WHEN BOTH QUICK RESPONSE SPRINKLER AREA REDUCTIONS AND SLOPED CEILING AREA INCREASE ARE APPLICABLE.
8. THE HYDRAULIC CALCULATION SOURCE SHALL BE TO THE FLOW TEST HYDRANT OR APPLICABLE STREET CONNECTION, ACCORDING TO LOCAL FIRE PREVENTION DISTRICT WATER CURVE DETERMINATIONS AND OR TESTING PROCEDURES. REFER TO SITE PLAN AND HYDRAULIC CALCULATIONS.
9. STORAGE HEIGHT SHALL NOT EXCEED 8-FEET.
10. MICROBIAL INDUCED CORROSION WILL NOT BE A FACTOR FOR THIS SYSTEM.
11. THE FIRE SPRINKLER ALARM SYSTEM SHALL BE DESIGNED, INSTALLED AND PERMITTED BY OTHERS, AND IS NOT IN THE SCOPE OF WORK. SUPERVISORY FLOW DETECTORS AND TAMPER RESISTANT VALVES INSTALLED ON THE OVERHEAD SPRINKLER SYSTEM PIPING WILL BE SUPPLIED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND WIRED BY ALARM CONTRACTOR.
12. PER PROJECT SPECIFICATIONS, IF DESIGN OR MATERIALS DIFFER FROM THAT SPECIFIED HEREIN, SUPPLEMENTAL ENGINEERING DESIGN, SUBMITTAL, AND REVIEW SHALL BE REQUIRED.



DETAIL KEYNOTES:

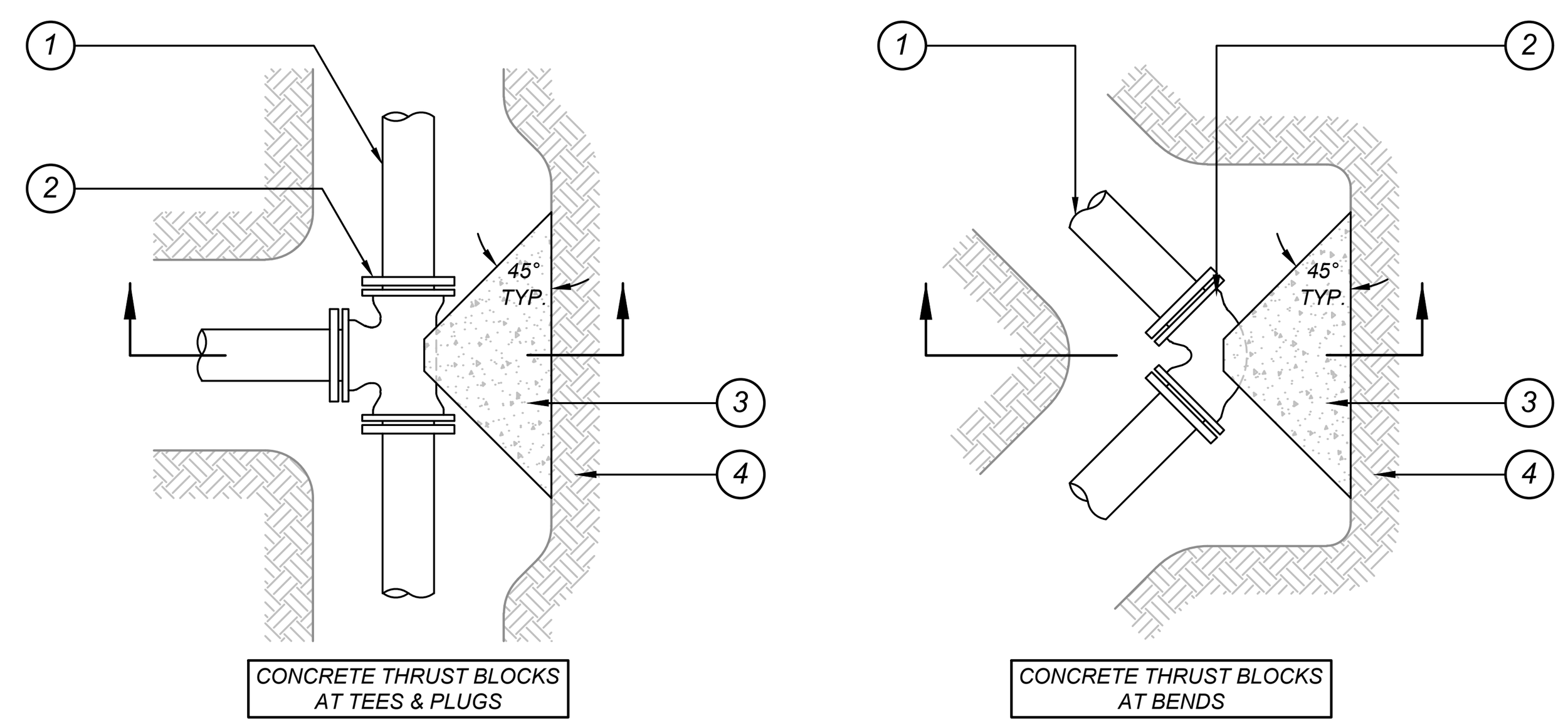
1. PIPE OR DOUBLE CHECK DETECTOR ASSEMBLY VALVE, 8" MAX. DIAMETER.
2. B3093-10 ADJUSTABLE PIPE SADDLE SUPPORT.
3. TOLCO B3088T-3 THREADED BASE STAND. MINIMUM DIAMETER 3".
4. (4) HILTI KWIK-BOLT TZ2 SS 304,1/2"x 4-1/2". MIN. 3-1/4" EMBEDMENT, ICC ESR-4266.
5. #4 REBAR @ 6" O.C. EACH WAY.
6. CONCRETE PAD, MIN. THICKNESS 6".

INSTALLATION NOTES:

A. ALL ANCHORS AND HARDWARE SHALL BE STAINLESS STEEL.
B. MAXIMUM SIZE OF SUPPORTED PIPE/BACKFLOW DEVICE, 10" DIA.
C. MAXIMUM SPACING BETWEEN PIPE STANDS, 6-FEET.

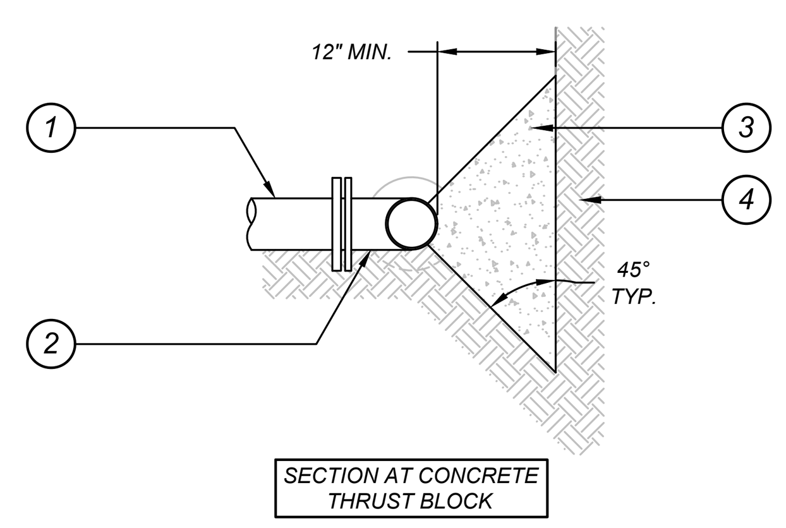
PIPE SUPPORT ON GRADE

SCALE: NONE — FSS101 — G / F1.02

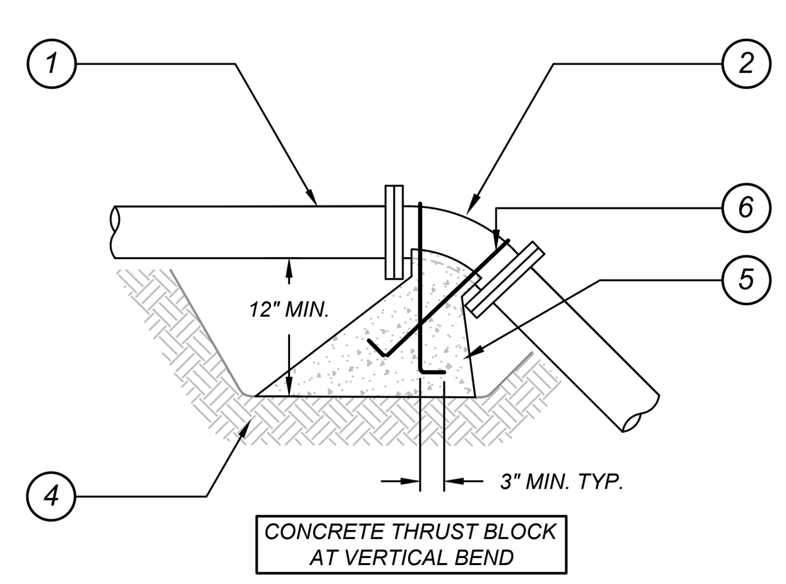


CONCRETE THRUST BLOCKS AT TEES & PLUGS

CONCRETE THRUST BLOCKS AT BENDS



SECTION AT CONCRETE THRUST BLOCK



CONCRETE THRUST BLOCK AT VERTICAL BEND

KEYNOTES:

1. UNDERGROUND FIRE SERVICE PIPING, REFER TO FIRE PROTECTION SITE PLAN.
2. UNDERGROUND FIRE SERVICE PIPE FITTING (TEE, BEND, OR PLUG).
3. CONCRETE THRUST BLOCK. PROVIDE MINIMUM BEARING SURFACE PER TABLE BELOW. NON-REINFORCED, 5-SACK MIX - MIN. 2500 PSI IN 28-DAYS.
4. UNDISTURBED EARTH. MINIMUM HORIZONTAL BEARING STRENGTH OF 1500 lb/ft².
5. CONCRETE ANCHOR THRUST BLOCK (FOR VERTICAL BEND). 5-SACK MIX - MIN. 2500 PSI IN 28-DAYS. CONCRETE ANCHOR BLOCK BASE WIDTH SHALL BE MIN. 2x NOMINAL DIAMETER OF PIPE, WITH A MIN. BLOCK HEIGHT OF 12", MEASURED FROM THE THE UNDISTURBED EARTH TO THE BOTTOM OF THE HORIZONTAL FIRE SERVICE PIPING.
6. NO. 5 REBAR ANCHORS (MIN. TWO). REBAR SHALL HAVE CORROSIVE RESISTANT FINISH.

INSTALLATION NOTES:

A. INSTALLATION OF UNDERGROUND FIRE SERVICE PIPING SHALL BE DONE IN ACCORDANCE TO NFPA 24 AND LOCAL STANDARD REQUIREMENTS.
B. CONCRETE THRUST BLOCKS SHALL BE INSTALLED AT ALL ELBOWS, TEES, CROSSES, AND PLUGS.
C. CONCRETE THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH. CONTACT WITH FITTINGS SHALL BE MADE ON THE BODY OF THE FITTING ONLY AND NOT ON THE BELL OR FLANGE ENDS.
D. WHERE THRUST BLOCKING MAY BE IMPRACTICAL DUE TO SITE CONDITIONS, IMPLEMENTATION OF A RESTRAINED JOIST SYSTEM AS LISTED IN NFPA 24 §10.6.2 MAY BE USED IN LIEU OF CONCRETE THRUST BLOCKS.
E. BACKFILL TRENCH PER DETAIL B/F1.02.

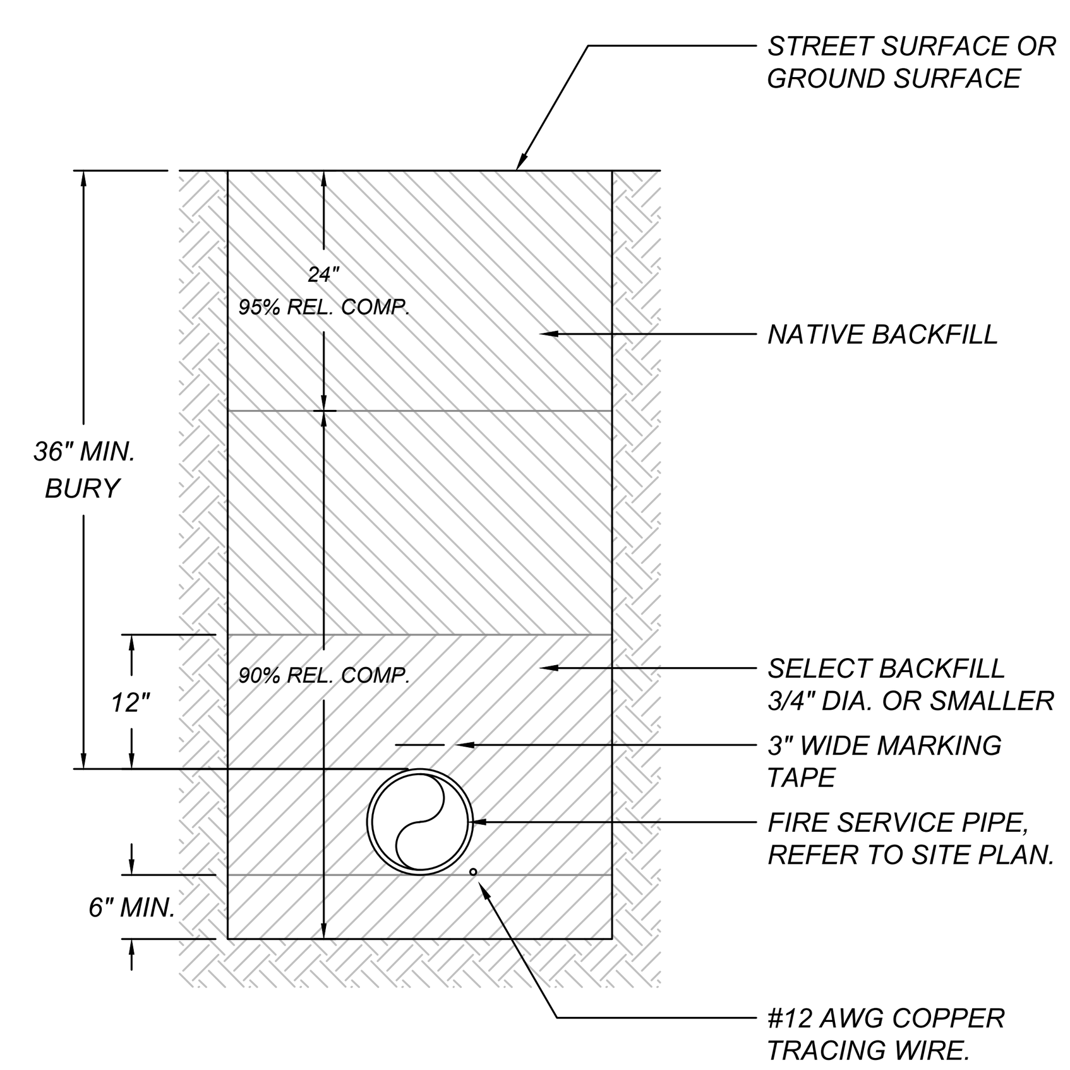
REQUIRED HORIZONTAL BEARING BLOCK AREA

PIPE DIA.	TEE/PLUGS	90°-BEND	45°-BEND	22½°-BEND	11¼°-BEND
3-INCH	2.6 ft²	2.6 ft²	1.4 ft²	0.7 ft²	0.4 ft²
4-INCH	3.8 ft²	3.8 ft²	2.1 ft²	1.0 ft²	0.5 ft²
6-INCH	7.9 ft²	7.9 ft²	4.3 ft²	2.2 ft²	1.1 ft²
8-INCH	13.6 ft²	13.6 ft²	7.4 ft²	3.8 ft²	1.9 ft²
10-INCH	20.5 ft²	20.5 ft²	11.1 ft²	5.7 ft²	2.8 ft²
12-INCH	29.0 ft²	29 ft²	15.7 ft²	8.0 ft²	4.0 ft²
14-INCH	39.0 ft²	39 ft²	21.1 ft²	10.8 ft²	5.4 ft²

INFORMATION ABOVE BASED ON NFPA 24 TABLE A.10.6.1(b) - MIN. HORIZONTAL BEARING LOAD: 1500lb/ft²

CONCRETE THRUST BLOCK DETAILS AND TABLE

SCALE: NONE — FSS101 — E / F1.02

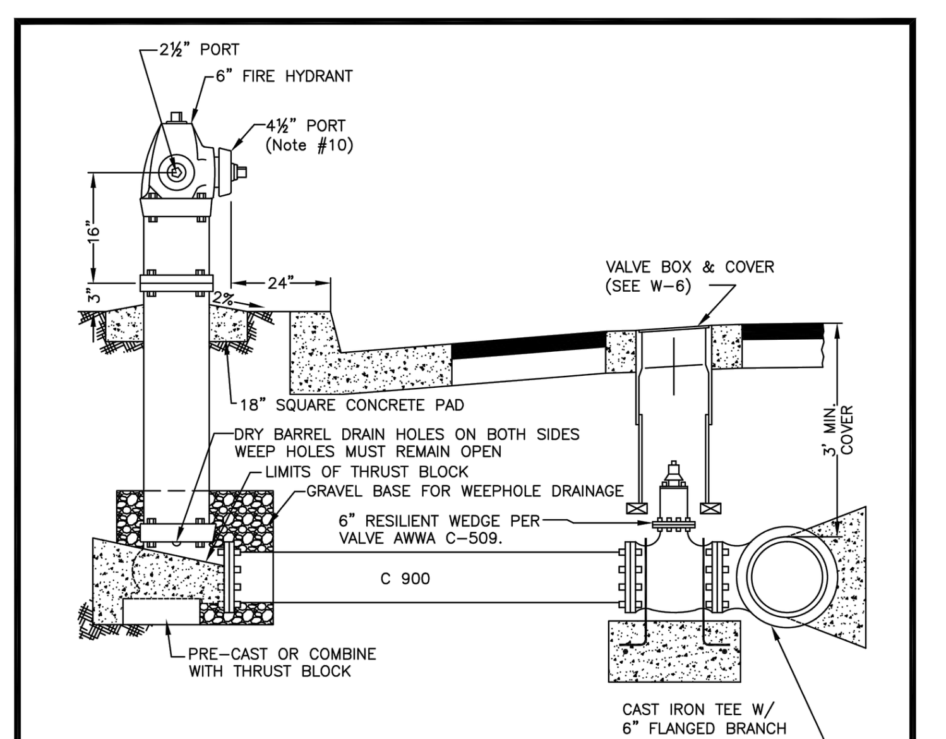


INSTALLATION NOTES:

1. TRACER WIRE SHALL BE #12 AWG, SINGLE STRAND, SOFT DRAWN, UN-INSULATED COPPER WIRE. THERE SHALL BE LAID ALONG THE BOTTOM OF THE TRENCH ADJACENT TO THE PIPE. ALL TRACER WIRE SHALL BE CONTINUOUS VALVE BOXES.
2. TRACER WIRE SHALL BE INSULATED ADJACENT TO VALVES OR FITTINGS. SPLICING OF TRACER WIRES SHALL BE ACCOMPLISHED BY WRAPPING THE BARE ENDS OF THE WIRE TOGETHER, SOLDERING THE CONNECTION AND WRAPPING THE SOLDERED CONNECTION WITH ELECTRICAL TAPE.
3. MINIMUM COVER SHALL BE 36" FROM TOP OF PIPE TO FINISHED GRADE. MAXIMUM COVER SHALL BE 42" FROM FINISHED GRADE UNLESS OTHERWISE APPROVED.
4. PIPES SHALL BE THROUGHOUT THEIR FULL LENGTH AND SHALL NOT BE SUPPORTED BY THE BELL ENDS ONLY OR BY BLOCKS.
5. BACKFILL SHALL NOT BE DROPPED DIRECTLY ON THE PIPE. BACKFILL PLACED WITHIN 6-INCHES OF THE PIPE SHALL BE FREE FROM HEAVY GRAVEL OR STONES GREATER THAN 3-INCHES.
6. THE PIPE SHALL NOT BE DISPLACED FROM ALIGNMENT DURING THE BACKFILLLING OPERATION.
7. BACKFILL SHALL BE PLACED AT APPROXIMATELY THE SAME ELEVATION ON BOTH SIDES OF THE PIPE.
8. MATERIALS USED FOR BACKFILL AND COMPACTION REQUIREMENTS SHALL BE AS SHOWN ON THE STANDARDS, REFER TO FRESNO COUNTY REQUIREMENTS.

PIPE TRENCH DETAIL

SCALE: NONE — FSS101 — B / F1.02



NOTES:

1. FIRE HYDRANTS SHALL BE 6" DRY BARREL, TRAFFIC-TYPE WITH LOW PROFILE DESIGN.
2. NOZZLE AND CAPS SHALL HAVE NATIONAL STANDARD THREADS.
3. PUBLIC RIGHT OF WAY HYDRANTS TO BE PAINTED YELLOW ENAMEL (RUSTOLEUM 7745). PRIVATE HYDRANTS SHALL BE PAINTED RED.
4. RUN FROM WATER MAIN TO HYDRANT ELL TO BE HORIZONTAL.
5. MAXIMUM DISTANCE BETWEEN HYDRANTS SHALL BE 500' IN RESIDENTIAL AND 300' IN COMMERCIAL DISTRICTS.
6. DEAD END HYDRANTS SHALL BE ON 8" SIZE MAINS.
7. HYDRANTS SHALL CONFORM TO LATEST ISSUE OF AWWA STANDARD C-502 FOR FIRE HYDRANTS. USE WATEROUS TYPE WB-67, MUELLER NO. A-432 OR APPROVED EQUAL.
8. CONC. THRUST BLOCK SHALL NOT COVER DRY BARREL DRAIN HOLES.
9. WATER MAINS SUPPLYING HYDRANTS SHALL HAVE A MINIMUM INSIDE DIA. OF 6" FOR RESIDENTIAL AREAS AND 8" FOR COMMERCIAL AND/OR INDUSTRIAL AREAS.
10. HYDRANTS SHALL BE INSTALLED WITH ONE 4½" DIA. PORT FACING THE STREET & TWO 2½" DIA. PORTS WITH 5¼" MINIMUM VALVE OPENING TO BE APPROVED BY MADERA COUNTY FIRE DEPARTMENT.
11. WATER SUPPLY PIPE FOR HYDRANTS SHALL BE C-900.
12. FIRE-PROTECTION EQUIPMENT AND FIRE HYDRANTS SHALL BE CLEARLY IDENTIFIED IN A MANNER APPROVED BY THE CHIEF TO PREVENT OBSTRUCTION BY PARKING AND OTHER OBSTRUCTIONS.
13. POUR CONCRETE THRUST BLOCK AGAINST UNDISTURBED SOIL (TYP.) OR PROVIDE THRUST RESTRAINT WHERE THRUST BLOCK IS NOT POSSIBLE.
14. REFLECTIVE FIRE HYDRANT MARKERS SHALL BE INSTALLED AT THE FIRE DEPARTMENT'S DIRECTIONS.
15. MARKERS SHOULD BE PLACED IN LINE WITH HYDRANT AND ABOUT 6" OFF CENTER ON HYDRANT SIDE AND NOT IN A LOW SPOT.
16. MARKERS SHALL BE BLUE "STIMSONITE 88" BI-DIRECTIONAL, OR EQUIVALENT APPROVED BY THE FIRE CHIEF.
17. WHEN A FIRE HYDRANT IS WITHIN 50' OF A CORNER, TWO MARKERS SHOULD BE PLACED ON EACH INTERSECTING STREET.

Spec's By	COUNTY OF MADERA	Date: 7-1-81
Drawn By J. SHIELDS	FIRE HYDRANT INSTALLATION	Scale: NONE
APPROVED BY		Drawing No. W-4A
REVISIONS 8/1/02	8/21/09	4/22/2011

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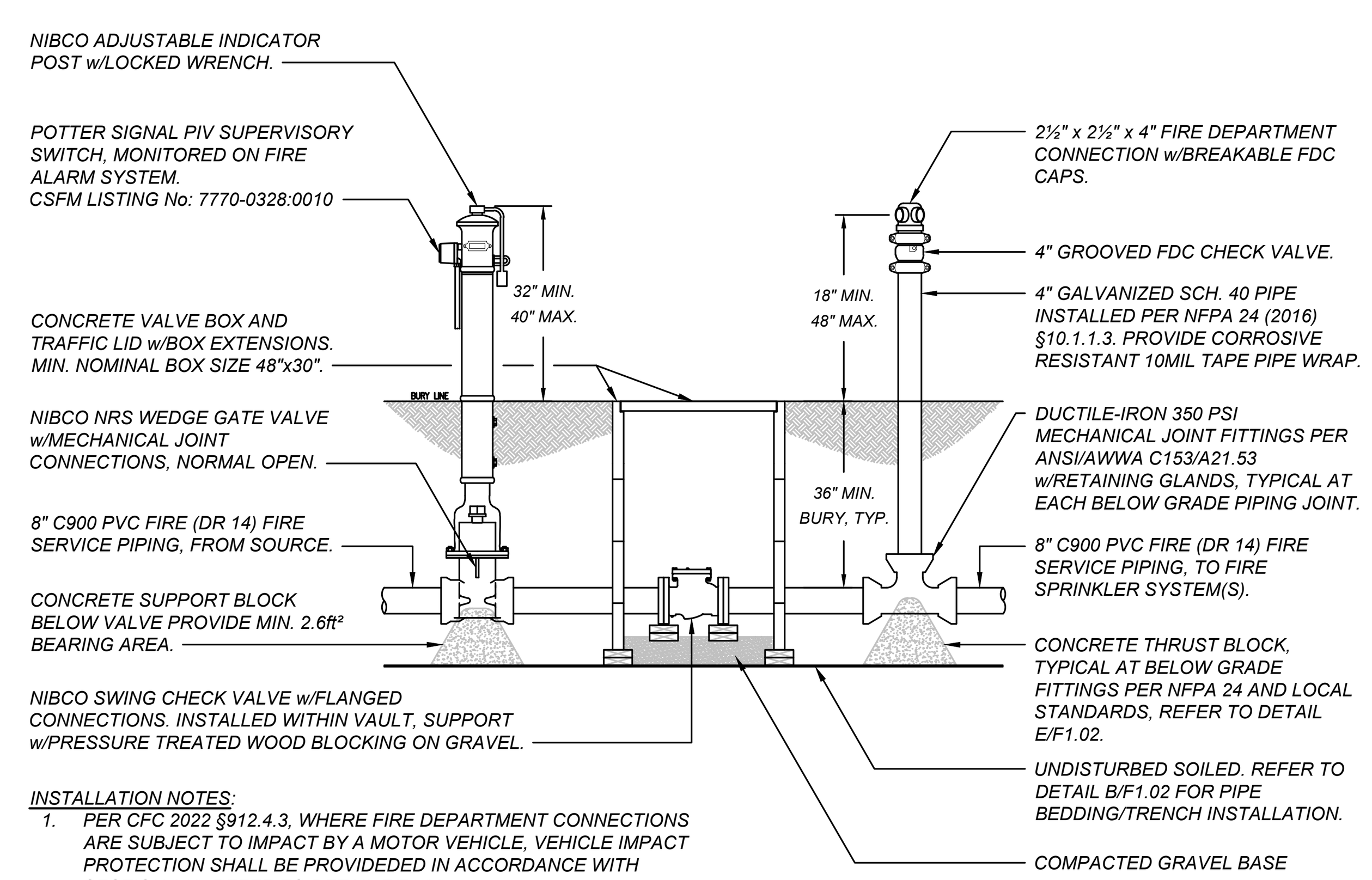

INSTALLATION NOTES:

1. PER CFC 2022 §912.4.3, WHERE FIRE DEPARTMENT CONNECTIONS ARE SUBJECT TO IMPACT BY A MOTOR VEHICLE, VEHICLE IMPACT PROTECTION SHALL BE PROVIDEDED IN ACCORDANCE WITH SECTION 312. REFER TO DETAIL F/F1.02.
2. PER NFPA 13 (2022) TABLE A.16.17 & CFC §912.5 SIGNAGE OF APPARATUS SHALL HAVE IDENTIFICATION SIGNAGE, REFER TO DETAIL D/F1.02.

POST INDICATOR - CHECK VALVE - FDC ASSEMBLY

SCALE: NONE — FSS101 — C / F1.02

REGISTERED PROFESSIONAL ENGINEER — MICHAEL D. CANTELMI — No. M23588 — Exp. 9-30-25 — MECHANICAL — STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 (559) 431-0101 — 23123 — Fresno, CA 93727 FAX (559) 431-1362

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203 — FRESNO CALIFORNIA 93711
TEL: 559-497-1542 — FAX: 559-497-1549
ARCHITECTURE PLANNING — JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318
DATE: 8/24/2023

SHEET TITLE: FIRE PROTECTION SITE PLAN DETAILS

F1.02

\\SERVER\Company\Gonzalez Architects\Educational\Chowchilla ESD\2318 Fairmead ES Multi-Purpose Bldg\2-Working Dwgs Phase\WD_2318_Fairmead Multi-Purpose.pln

Hydraulic Information	
Remote Area 1	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft²)	0.200 for 1500.00ft² (Actual 1530.47ft²)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	20
K-FACTOR	8
TOTAL WATER REQUIRED	777.64
TOTAL PRESSURE REQUIRED	34.131
BASE of RISER (gpm)	527.64
BASE of RISER (psi)	22.950
SAFETY MARGIN (psi)	+5.045 (12.9%)

Hydraulic Information	
Remote Area 2	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft²)	0.100 for 1950.00ft² (Actual 2025.65ft²)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	20
K-FACTOR	5.6
TOTAL WATER REQUIRED	557.95
TOTAL PRESSURE REQUIRED	36.080
BASE of RISER (gpm)	307.95
BASE of RISER (psi)	26.473
SAFETY MARGIN (psi)	+6.686 (15.6%)

REMOTE AREA INCREASED BY 30% PER NFPA 13 (2022) §19.2.3.2.4 DUE TO SLOPED CEILING CONDITIONS. THIS REMOTE AREA HAS BEEN ELONGATED TO CALCULATE THE "MOST REMOTE" CONDITION AS: 1) MORE SPRINKLERS ARE CALCULATED ON THE HIGHEST CENTER BRANCH LINE AND 2) TWO EXTRA SPRINKLERS ARE BEING CALCULATED ON THE ADJACENT BRANCH LINE (NODE TAGS 319 & 320)

Hydraulic Information	
Remote Area 3	
OCCUPANCY CLASSIFICATION	Ordinary Group I
DENSITY (gpm/ft²)	0.150 for 1500.00ft² (Actual 1564.86ft²)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	23
K-FACTOR	5.6
TOTAL WATER REQUIRED	709.07
TOTAL PRESSURE REQUIRED	31.835
BASE of RISER (gpm)	459.07
BASE of RISER (psi)	21.199
SAFETY MARGIN (psi)	+8.568 (21.2%)

SPRINKLER LEGEND	
SYMBOL	DESCRIPTION
	LATERAL SEISMIC BRACE (PERPENDICULAR)
	LONGITUDINAL SEISMIC BRACE (PARALLEL)
	4-WAY SEISMIC BRACE (PARALLEL/PERPENDICULAR)
	LINE RESTRAINT
	PIPE HANGERS
	PENDENT SPRINKLER ON 1" DROP
	UPRIGHT SPRINKLER ON BRANCH LINE
	SEISMIC SEPARATION ASSEMBLY
	HYDRAULIC NODE
	FIRE PIPING

REMOTE AREA 1
ORD. HAZARD 2 - 0.20 GPM/FT²

REMOTE AREA 2
LIGHT HAZARD - 0.10 GPM/FT²

REMOTE AREA 3
ORD. HAZARD 1 - 0.15 GPM/FT²

PENDENT SPRINKLERS TO BE OMITTED BELOW EXTERIOR NONCOMBUSTIBLE SOFFIT PER NFPA 13 (2022) §9.2.3.1., TYPICAL. NO STORAGE BELOW.

U-BOLT ATTACHMENT TO GRATING @ 5'-0" O.C., TYPICAL. REFER TO STRUCTURAL DETAIL 11/S606.

COORDINATE 2" AND 2½" PIPING LOCATIONS AT BARRELED ROOF WITH BEAM OPENINGS, TYPICAL. REFER TO DETAIL 8/S602.

PROVIDE FIRE RATED ASSEMBLIES WHERE PIPE PENETRATIONS OCCUR AT 1-HR FIRE RATED WALL, TYPICAL. REFER TO DETAIL F/F3.02.

DRY PENDENT SPRINKLERS. INSTALL PER DETAIL D/F3.02.

NO SPRINKLERS REQUIRED BELOW OVERHANG PER NFPA 13 (2022) §9.2.3.2(2). EXTERIOR CANOPY IS NONCOMBUSTIBLE w/ COMBUSTIBLE CONCEALED SPACES LIMITED TO 160-FT³ IN VOLUME. NO STORAGE BELOW.

AUTOMATIC AIR VENT ON HIGHEST ELEVATED BRANCH LINE PIPE PER NFPA 13 (2022) §8.1.5 & §16.7. AIR VENT TO DISCHARGE TO DRIP PAN. REFER TO DETAIL E/F3.01.

PENDENT SPRINKLERS TO BE OMITTED BELOW EXTERIOR NONCOMBUSTIBLE SOFFIT PER NFPA 13 (2022) §9.2.3.1., TYPICAL. NO STORAGE BELOW.

8" SYSTEM RISER ON 8" IN-BUILDING RISER. REFER TO DETAIL A/F3.01.

10" ALARM BELL (120 V AC) COORDINATE LOCATION IN FIELD.

8" C900 PVC FIRE SERVICE PIPING, REFER TO SHEET F1.01 FOR CONTINUATION AND CIVIL ENGINEERING PLANS.

Sprinkler Legend											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
	Victaulic	V2710	FL-QR/SW	64	5.6	Horizontal Sidewall	½	Quick	Chrome	175°F	w/ CAGE HEAD GUARD
	Victaulic	V2708	FL-QR	38	5.6	Pendent	½	Quick	Chrome	155°F	
	Victaulic	V3402	FL-QR	29	8	Upright	¾	Quick	Brass	175°F	
	Victaulic	V2710	FL-QR/SW	4	5.6	Horizontal Sidewall	½	Quick	Chrome	175°F	
	Victaulic	V3606	FL-QR/DRY	2	5.6	Pendent	1	Quick	Chrome	200°F	DRY PENDENT
	Victaulic	V3406	FL-QR	12	8	Pendent	¾	Quick	Chrome	155°F	
	Victaulic	V3802	FL-QR/C	6	5.6	Concealed Pendent	½	Quick	Brass	155°F	
				Total = 155							

NORTH

MULTI-PURPOSE SPRINKLER PLAN

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

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

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
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TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE: MULTI-PURPOSE SPRINKLER PLAN

F2.01

REGISTERED PROFESSIONAL ENGINEER — MICHAEL D. CANTELMI — No. M23588 — Exp. 9-30-25 — MECHANICAL — STATE OF CALIFORNIA

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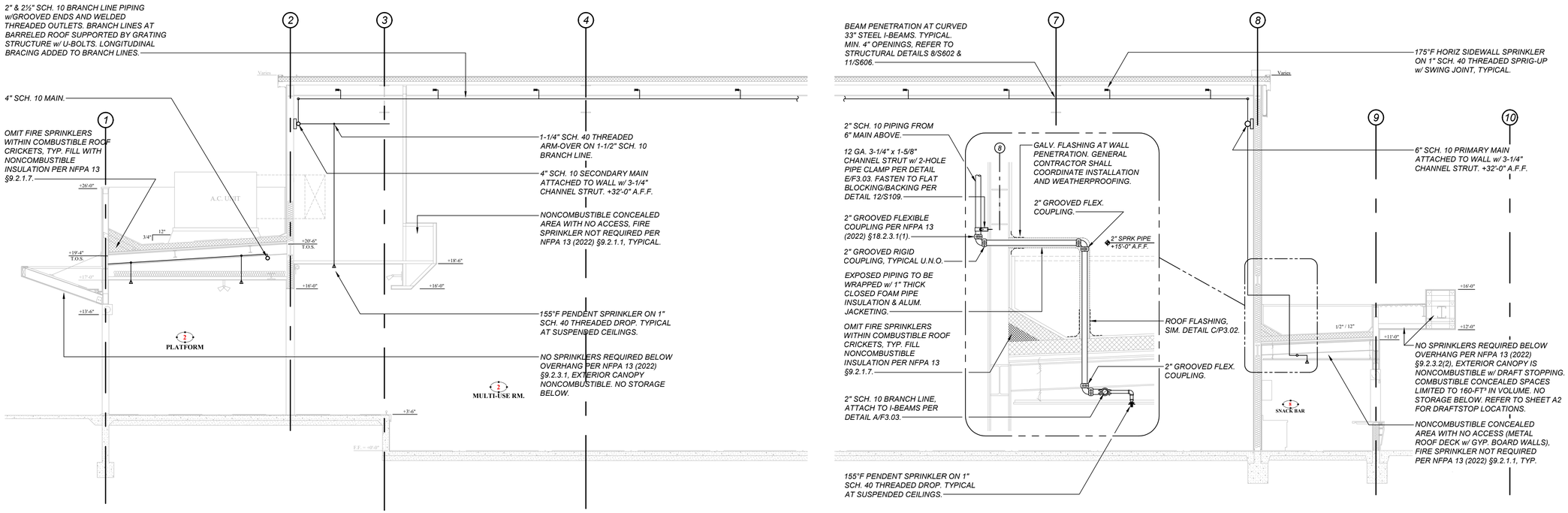
4910 E. Clinton Way, Suite 101 (559) 431-0101 23123 Fresno, CA 93727 FAX (559) 431-1362

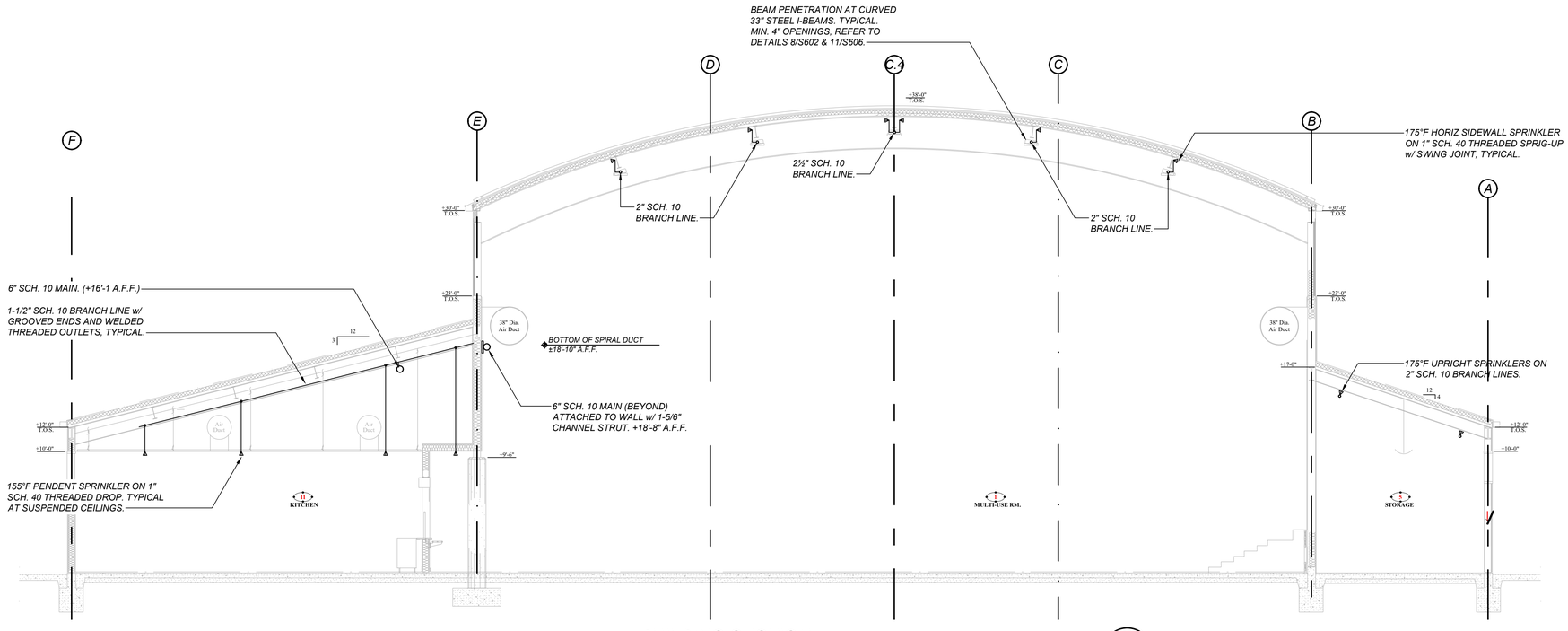


BUILDING SECTION

SCALE: 3/16" = 1'

FSS101

A
F2.02



BUILDING SECTION

SCALE: 3/16" = 1'

FSS101

B
F2.02

LAWRENCE ENGINEERING GROUP
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(559) 431-0101
23123
Fresno, CA 93727
FAX (559) 431-1362

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. CANTELMI
No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
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7545 N. DEL MAR AVENUE, SUITE 203
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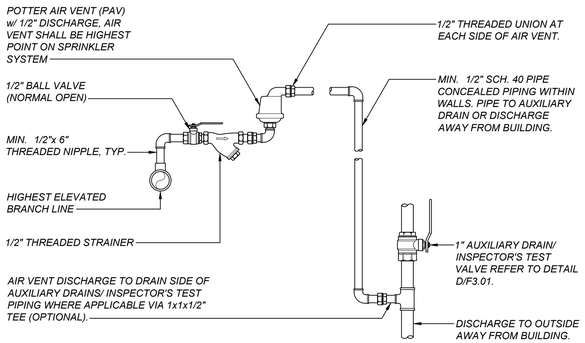
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
MULTI-PURPOSE SECTIONS

F2.02



INSTALLATION NOTES:

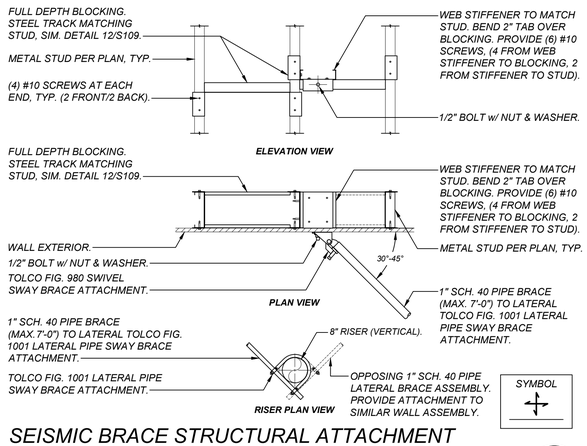
A. WHERE APPLICABLE, AIR VENT DISCHARGE PIPING (MIN. 1/2" DIA. PIPING/TUBING) MAY DRAIN INTO THE NEAREST PLUMBING AIR VENT.
B. WHERE IT IS NOT PRACTICAL TO PROVIDE A DRAIN, POTTER AUTOMATIC AIR RELEASE w/ DRIP PAN (PAAR-B) MAY BE USED IN LIEU OF POTTER MODEL (PAV).

POTTER AIR VENT

SCALE: NONE

FSSXXX

E F3.01

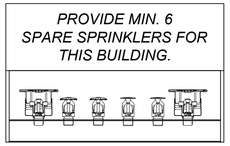


SEISMIC BRACE STRUCTURAL ATTACHMENT AT METAL STUD WALL & EXTERIOR 4-WAY BRACE

SCALE: NONE

FSS101

B F3.01



INSTALL INSIDE JANITOR'S ROOM. COORDINATE LOCATION w/ OWNER.

SPARE HEAD BOX NOTES:

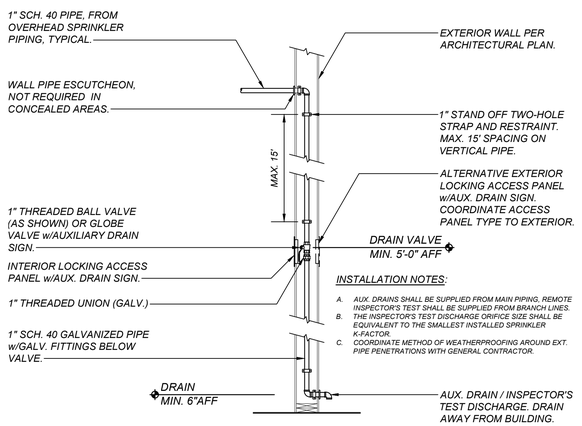
1. PER NFPA 13 (2022) §16.2.7.3 THE SPRINKLERS SHALL BE KEPT IN A CABINET LOCATED WHERE THE TEMPERATURE TO WHICH THEY ARE SUBJECTED WILL AT NO TIME EXCEED THE MAXIMUM CEILING TEMPERATURES SPECIFIED IN TABLE 6.2.5.1 FOR EACH OF THE SPRINKLERS WITHIN THE CABINET.
2. THE SPARE HEAD CABINET SHALL BE PLACED IN A SECURE LOCATION, PREFERABLY FASTENED TO A WALL ABOVE 6'-0" A.F.F. LOCATION SHALL BE COORDINATED BY THE OWNER.
3. PER NFPA 13 (2022) §16.2.7.5 THE STOCK OF SPARE SPRINKLERS SHALL INCLUDE ALL TYPES AND RATINGS INSTALLED AND SHALL BE AS FOLLOWS:
   - 3.1. FOR PROTECTED FACILITIES HAVING UNDER 300 SPRINKLERS — NO FEWER THAN SIX SPRINKLERS.
   - 3.2. FOR PROTECTED FACILITIES HAVING 300 TO 1000 SPRINKLERS — NO FEWER THAN 12 SPRINKLERS.
   - 3.3. FOR PROTECTED FACILITIES HAVING OVER 1000 SPRINKLERS — NO FEWER THAN 24 SPRINKLERS.
   - 3.4. A MINIMUM OF TWO SPRINKLERS OF EACH TYPE AND TEMPERATURE RATING SHOULD BE PROVIDED.
4. PER NFPA 13 (2022) §16.2.7.6 ONE SPRINKLER WRENCH AS SPECIFIED BY THE SPRINKLER MANUFACTURER SHALL BE PROVIDED IN THE CABINET FOR EACH TYPE OF SPRINKLER INSTALLED TO BE USED FOR THE REMOVAL AND INSTALLATION OF SPRINKLERS IN THE SYSTEM. ONE SPRINKLER WRENCH DESIGN CAN BE APPROPRIATE FOR MANY TYPES OF SPRINKLERS AND SHOULD NOT REQUIRE MULTIPLE WRENCHES OF THE SAME DESIGN.
5. PER NFPA 13 (2022) §16.2.7.7 A LIST OF THE SPRINKLERS INSTALLED IN THE PROPERTY SHALL BE POSTED IN THE SPRINKLER CABINET. THE LIST SHALL INCLUDE THE FOLLOWING:
   - 5.1. SPRINKLER IDENTIFICATION NUMBER (SIN) IF EQUIPPED; OR THE MANUFACTURER, MODEL, ORIFICE, DEFLECTOR TYPE, THERMAL SENSITIVITY, AND PRESSURE RATING.
   - 5.2. GENERAL DESCRIPTION.
   - 5.3. QUANTITY OF EACH TYPE TO BE CONTAINED IN THE CABINET.
   - 5.4. ISSUE OR REVISION DATE OF THE LIST.

SPARE HEAD BOX DETAIL

SCALE: NONE

FRM010

C F3.01



INSTALLATION NOTES:

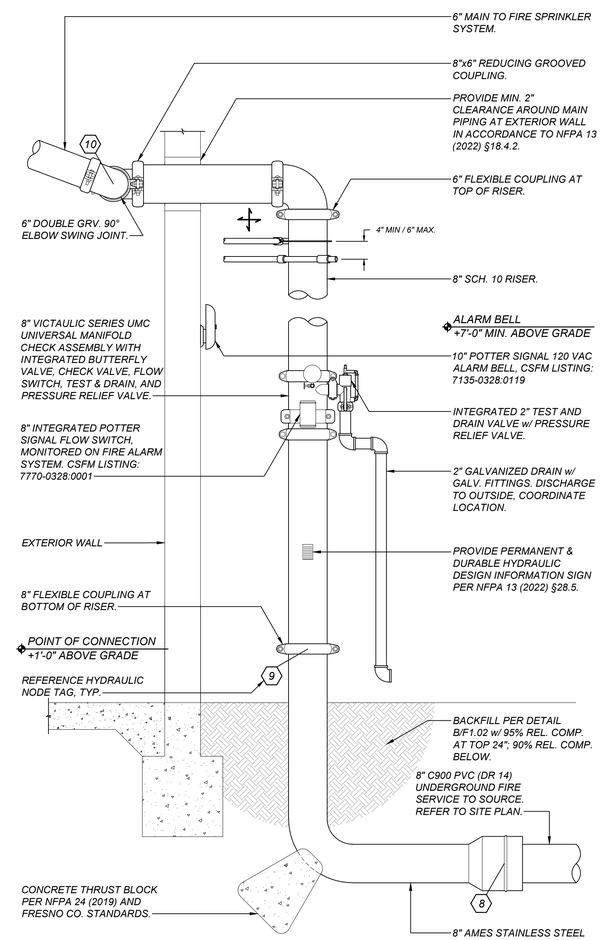
A. AUX. DRAINS SHALL BE SUPPLIED FROM MAIN PIPING, REMOTE INSPECTOR'S TEST SHALL BE SUPPLIED FROM BRANCH LINES.
B. THE INSPECTOR'S TEST DISCHARGE ORIFICE SIZE SHALL BE EQUIVALENT TO THE SMALLEST INSTALLED SPRINKLER K-FACTOR.
C. COORDINATE METHOD OF WEATHERPROOFING AROUND EXT. PIPE PENETRATIONS WITH GENERAL CONTRACTOR.

CONCEALED AUXILIARY DRAIN DETAIL/ REMOTE INSPECTOR'S TEST

SCALE: NONE

FRM010

D F3.01



TITLE 19 ARTICLE 906 (A). A LABEL OF THE SELF-ADHESIVE TYPE SHALL BE PLACED ON THE FIRE DEPARTMENT CONNECTION OR ON THE RISER FOR FIRE SPRINKLER SYSTEM WITH THE DATE OF SERVICE AND/OR DATE INSTALLATION WAS PERFORMED AND LICENSE NUMBER OF PERSON PERFORMING SERVICE WORK.

RISER NOTES:

1. RISER DETAIL IS A SCHEMATIC REPRESENTATION OF THE RISER. ORIENTATION OF FITTINGS, VALVES, GAUGES, AND OTHER DEVICES HAVE BEEN MODIFIED FOR ILLUSTRATION PURPOSES AND MAY VARY IN ACTUAL INSTALLATION.
2. PER NFPA 13 (2022) §18.2.3.1 - A FLEXIBLE COUPLING SHALL BE INSTALLED WITHIN 24" OF THE TOP AND BOTTOM OF ALL RISERS. RISERS LESS THAN 3 FT IN LENGTH MAY OMIT FLEX COUPLINGS. ONE FLEX COUPLING IS ADEQUATE FOR RISERS 3' TO 7' IN LENGTH.
3. PER NFPA 13 (2022) §18.5.8.3 - WHEN A FOUR-WAY BRACE AT THE TOP OF A RISER IS ATTACHED ON THE HORIZONTAL PIPING, IT SHALL BE WITHIN 24" OF THE CENTERLINE OF THE RISER AND THE LOADS FOR THAT BRACE SHALL INCLUDE BOTH THE VERTICAL AND HORIZONTAL PIPE.
4. PER NFPA 13 (2022) §29.4. - THE INSTALLING CONTRACTOR SHALL IDENTIFY A HYDRAULICALLY DESIGNED SPRINKLER SYSTEM WITH A PERMANENTLY MARKED WEATHERPROOF METAL OR RIGID PLASTIC SIGN SECURED WITH CORROSION RESISTANT WIRE, CHAIN, OR OTHER APPROVED MEANS.
5. PER NFPA 13 (2022) §29.4.1 - THE INSTALLING CONTRACTOR SHALL PROVIDE A GENERAL INFORMATION SIGN USED TO DETERMINE SYSTEM DESIGN BASIS AND INFORMATION RELEVANT TO THE INSPECTION, TESTING, AND MAINTENANCE REQUIREMENTS REQUIRED BY NFPA 25.
6. LOCATION OF 2" SYSTEM DRAIN TO BE COORDINATED WITH GENERAL CONTRACTOR. DRAIN PIPE AND FITTINGS SHALL BE GALV.
7. FIRE RISER ROOM SHALL COMPLY WITH CBC (2022) 901.3 PER CFC (2022) SECTION 509.1 FIRE EQUIPMENT ROOMS SHALL BE IDENTIFIED IN AN APPROVED MANNER. APPROVED SIGNS SHALL BE DURABLE, PERMANENT, AND VISIBLE.

RISER DETAIL: 8" SYSTEM RISER ON 8" IN-BUILDING RISER (EXT)

SCALE: NONE

FSSXXX

A F3.01

HYDRAULIC INFORMATION	
REMOTE AREA NO. 1	
LOCATION OF THE DESIGN AREA:	PLATFORM & ADJACENT ROOMS
OCCUPANCY CLASSIFICATION:	ORDINARY GROUP II
DENSITY	0.20 GPM / 1500 FT²
REQ'D FLOW & PRESSURE @ BASE OF RISER:	527.64 GPM @ 22.950 PSI
REQ'D FLOW & PRESSURE @ WATER SUPPLY SOURCE:	777.64 GPM @ 34.131 PSI
SAFETY MARGIN:	5.045 PSI (12.9%)
TYPE OF SPRINKLER INSTALLED:	3/4", V3406, QR, 155°F, PENDENT
SPRINKLER K-FACTOR:	8.0
TOTAL SPRINKLER HEADS FLOWING:	20
MINIMUM DISCHARGE FLOW & PRESSURE @ MOST DEMANDING SPRINKLER:	24.75 GPM @ 9.574 PSI
PROTECTION AREA PER SPRINKLER:	123.75 FT² (11'-3" x 11'-0")
SPRINKLER SYSTEM TYPE:	WET
HOSE ALLOWANCE	250 GPM

SYSTEM WAS DESIGNED PER NFPA 13, 2022 (CALIFORNIA EDITION)

HYDRAULIC INFORMATION	
REMOTE AREA NO. 2	
LOCATION OF THE DESIGN AREA:	MULTI-PURPOSE ROOM
OCCUPANCY CLASSIFICATION:	LIGHT HAZARD
DENSITY	0.10 GPM / 1,950 FT²
REQ'D FLOW & PRESSURE @ BASE OF RISER:	307.95 GPM @ 26.473 PSI
REQ'D FLOW & PRESSURE @ WATER SUPPLY SOURCE:	557.95 GPM @ 36.080 PSI
SAFETY MARGIN:	6.686 PSI (15.6%)
TYPE OF SPRINKLER INSTALLED:	1/2", V2710, QR, 175°F, HSW
SPRINKLER K-FACTOR:	5.6
TOTAL SPRINKLER HEADS FLOWING:	20
MINIMUM DISCHARGE FLOW & PRESSURE @ MOST DEMANDING SPRINKLER:	12.50 GPM @ 7.000 PSI
PROTECTION AREA PER SPRINKLER:	125 FT² (12'-6" x 10'-0")
SPRINKLER SYSTEM TYPE:	WET
HOSE ALLOWANCE	100 GPM (250 GPM CALCULATED)

SYSTEM WAS DESIGNED PER NFPA 13, 2022 (CALIFORNIA EDITION)

HYDRAULIC INFORMATION	
REMOTE AREA NO. 3	
LOCATION OF THE DESIGN AREA:	FOOD SERVICE AREAS
OCCUPANCY CLASSIFICATION:	ORDINARY GROUP I
DENSITY	0.15 GPM / 1500 FT²
REQ'D FLOW & PRESSURE @ BASE OF RISER:	459.07 GPM @ 21.199 PSI
REQ'D FLOW & PRESSURE @ WATER SUPPLY SOURCE:	709.07 GPM @ 31.835 PSI
SAFETY MARGIN:	8.568 PSI (21.2%)
TYPE OF SPRINKLER INSTALLED:	1/2", V2708, QR, 155°F. PENDENT; V3606 DRY BARREL, QR, 200°F
SPRINKLER K-FACTOR:	5.6
TOTAL SPRINKLER HEADS FLOWING:	23
MINIMUM DISCHARGE FLOW & PRESSURE @ MOST DEMANDING SPRINKLER:	18.00 GPM @ 10.332 PSI
PROTECTION AREA PER SPRINKLER:	120 FT² (12'-0" x 10'-0")
SPRINKLER SYSTEM TYPE:	WET
HOSE ALLOWANCE	250 GPM

SYSTEM WAS DESIGNED PER NFPA 13, 2022 (CALIFORNIA EDITION)

LAWRENCE ENGINEERING GROUP
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FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT — JUAN M. GONZALEZ — No. C-12865 — RENEWAL DATE 12/31/2023 — STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE: FIRE RISER DETAILS

F3.01

REGISTERED PROFESSIONAL ENGINEER — MICHAEL D. CANTELMI — No. M23588 Exp. 9-30-25 — MECHANICAL — STATE OF CALIFORNIA

SERIES AH2/AH2-CC VICTAULIC VICFLEX - FRICTION LOSS DATA (UL)									
LENGTH IN INCHES	OUTLET SIZE	1 - 90° BEND	2 - 90° BEND	3 - 90° BEND	4 - 90° BEND	5 - 90° BEND	6 - 90° BEND	7 - 90° BEND	8 - 90° BEND
31"	1/2"	11.0'	13.0'	15.0'	16.0'	N/A	N/A	N/A	N/A
	3/4"	12.0'	14.0'	19.0'	20.0'	N/A	N/A	N/A	N/A
36"	1/2"	14.0'	16.0'	18.0'	19.0'	21.0'	N/A	N/A	N/A
	3/4"	17.0'	19.0'	21.0'	22.0'	23.0'	N/A	N/A	N/A
48"	1/2"	18.0'	19.0'	21.0'	23.0'	25.0'	27.0'	30.0'	32.0'
	3/4"	21.0'	24.0'	26.0'	28.0'	31.0'	33.0'	35.0'	37.0'
60"	1/2"	21.0'	24.0'	27.0'	30.0'	32.0'	35.0'	37.0'	40.0'
	3/4"	23.0'	25.0'	27.0'	29.0'	32.0'	34.0'	37.0'	40.0'
72"	1/2"	27.0'	29.0'	31.0'	34.0'	37.0'	40.0'	43.0'	46.0'
	3/4"	26.0'	28.0'	30.0'	33.0'	37.0'	40.0'	44.0'	48.0'

INSTALLATION NOTES:

A. ALL VICTAULIC VICFLEX FLEXIBLE SPRINKLER HOSE FITTINGS AND ANCHORING COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER GUIDELINES.
B. PER NFPA 13 (2022) §17.4.1.3.3, THE MAXIMUM UNSUPPORTED LENGTH FOR FLEXIBLE HOSE SPRINKLER FITTINGS SHALL NOT EXCEED 6-FEET.
C. PER NFPA 13 (2022) §17.4.1.3.3.4, WHERE FLEXIBLE SPRINKLER HOSE FITTINGS ARE USED TO CONNECT SPRINKLERS TO BRANCH LINES IN SUSPENDED CEILINGS, A LABEL LIMITING RELOCATION OF THE SPRINKLER SHALL BE PROVIDED ON THE ANCHORING COMPONENT.

VICFLEX FLEXIBLE SPRINKLER DROP FRICTION LOSS DATA AND INSTALLATION NOTES

E F3.02

SCALE: NONE FSSXXX

NOTES:

1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOMINAL 2"x4" LUMBER SPACED 16" OC. STEEL STUDS TO BE MIN. 2-1/2" WIDE AND SPACED MAX. 24" OC. WHEN STEEL STUDS ARE USED AND THE DIAMETER OF OPENING EXCEEDS THE WIDTH OF STUD CAVITY, THE OPENING SHALL BE FRAMED ON ALL SIDES USING LENGTHS OF STEEL STUD INSTALLED BETWEEN THE VERTICAL STUDS AND SCREW-ATTACHED TO THE STEEL STUDS AT EACH END. THE FRAMED OPENING IN THE WALL SHALL BE 4"-6" WIDER AND 4"-6" HIGHER THAN THE DIAMETER OF THE PENETRATING ITEM SUCH THAT, WHEN THE PENETRATING ITEM IS INSTALLED IN THE OPENING, A 2"-3" CLEARANCE IS PRESENT BETWEEN THE PENETRATING ITEM AND THE FRAMING ON ALL FOUR SIDES.
   B. GYPSUM BOARD* - 5/8" THICK, 4' WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAMETER OF OPENING IS 32-1/4" FOR STEEL STUD WALLS. MAX. DIAMETER OF OPENING IS 14-1/2" FOR WOOD STUD WALLS. THE F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE FIRE RATING OF THE WALL ASSEMBLY.
2. THROUGH-PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN. 0" TO MAX 2-1/4" PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PIPE, CONDUIT OR TUBING MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45° FROM PERPENDICULAR. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE - NOMINAL 30"Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE - NOMINAL 30"Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT - NOMINAL 4"Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. DIAMETER STEEL CONDUIT.
   D. COPPER TUBING - NOMINAL 6"Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE - NOMINAL 6"Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. FILL, VOID OR CAVITY MATERIAL HILTI FS-ONE SEALANT - MIN. 5/8" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MIN. 1/2"Ø BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL.

PIPE CLEARANCE NOTES:

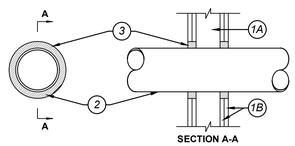
PER NFPA 13 (2022) §18.4.1 - CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING EXTENDING THROUGH WALLS, FLOORS, PLATFORMS, AND FOUNDATIONS, INCLUDING DRAINS, FIRE DEPARTMENT CONNECTIONS, AND OTHER AUXILIARY PIPING.

PER NFPA 13 (2022) §18.4.2 - WHERE PIPE PASSES THROUGH HOLES IN PLATFORMS, FOUNDATIONS, WALLS, OR FLOORS, THE HOLES SHALL BE SIZED SUCH THAT THE DIAMETER OF THE HOLES IS NOMINALLY 2" LARGER THAN THE PIPE FOR PIPE 1" NOMINAL TO 3-1/2" NOMINAL AND 4" LARGER THAN THE PIPE FOR PIPE 4" NOMINAL AND LARGER.

PER NFPA 13 (2022) §18.4.4 - NO CLEARANCE SHALL BE REQ'D FOR PIPING PASSING THROUGH GYPSUM BOARD OR EQUALLY FRANGIBLE CONSTRUCTION THAT IS NOT REQ'D TO HAVE A FIRE RESISTANCE RATING.

SYSTEM NO. W-L-1054

F RATINGS - 1 AND 2 HR (SEE ITEMS 1 AND 3)
T RATING - 0 HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
L RATING AT 400 F-4 CFM/SQ FT

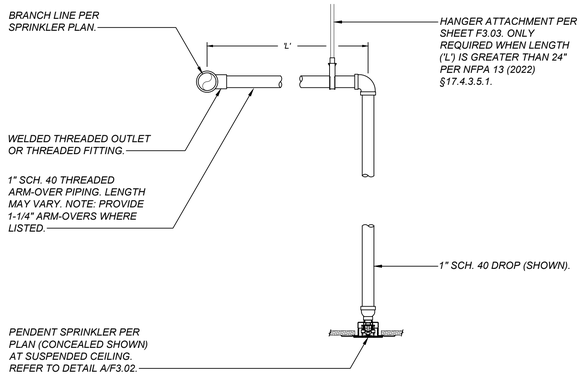


SECTION A-A

HILTI FS-ONE FIRE RATED PENETRATION

F F3.02

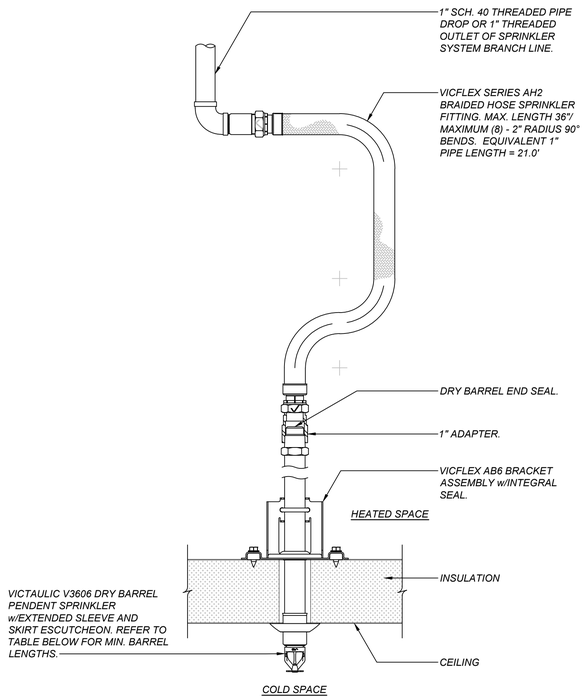
SCALE: NONE FSSXXX



1" ARM-OVER PIPING DETAIL

C F3.02

SCALE: NONE FSSXXX



DRY SPRINKLER BARREL LENGTH SELECTION		
AMBIENT TEMP. EXPOSED TO DISCHARGE END OF SPRINKLER	FREEZER CEILING OR WALL THICKNESS	ORDER LENGTH
DOWN TO 20°F	3"- 6"	12"
	7"- 12"	18"
19°F TO 0°F	3"- 6"	18"
	7"- 12"	24"
-1°F TO -20°F	3"- 6"	24"
	7"- 12"	30"
-31°F TO -40°F	3"- 6"	24"
	7"- 12"	30"

INSTALLATION NOTES:

A. INSTALLATION OF DRY PENDENT SPRINKLER ASSEMBLY SHALL BE IN ACCORDANCE TO MANUFACTURER INSTRUCTIONS AND NFPA 13 REQUIREMENTS.
B. MIN 1-1/2" / MAX. 2-1/4" HOLE REQUIRED FOR INSTALLATION OF PENDENT SPRINKLER. DE-BURR METAL EDGES ON BOTH SIDES PANEL.
C. TERMINATE 1" SCH. 40 DROP APPROX. 30" ABOVE INSULATED CEILING PANEL.

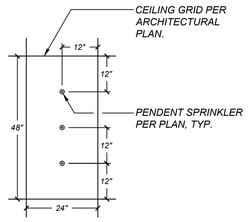
VICFLEX FLEXIBLE SPRINKLER DROP w/ VICTAULIC DRY BARREL PENDENT SPRINKLER

D F3.02

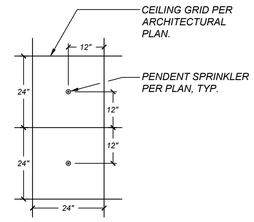
SCALE: NONE FSSXXX

INSTALLATION NOTES:

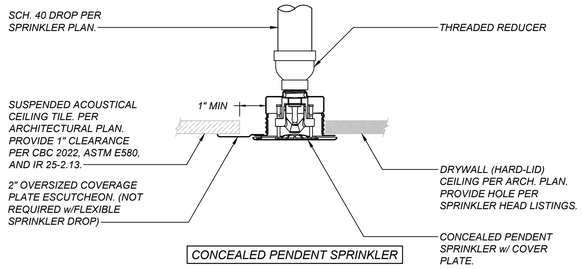
A. PENDENT SPRINKLER HEADS INSTALLED WITHIN SUSPENDED CEILING TILES SHALL BE POSITIONED "CENTER OF TILE" AS INDICATED PER PROJECT SPECIFICATIONS. HOWEVER, SPRINKLER SPACING SHALL NOT EXCEED THE MAXIMUM SPRINKLER SPACING PER NFPA 13 (2022) §10.2.5.1, §10.2.5.2, §10.2.5.2.3.1, §11.2.3.1, §11.2.3.2 AND FIRE SPRINKLER MANUFACTURER LISTINGS.
B. PENDENT SPRINKLER HEADS INSTALLED IN DRY-WALL CEILINGS SHALL BE POSITIONED PER PLAN, ALIGNED WITH LIGHTING, AUDIO, AND OTHER CEILING FEATURES. HOWEVER, SPRINKLER SPACING SHALL NOT EXCEED MAXIMUM NFPA 13 REQUIREMENTS AND FIRE SPRINKLER MANUFACTURER LISTINGS.



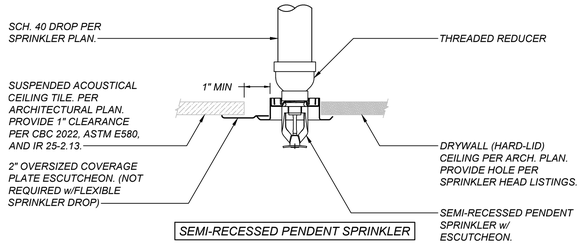
INSTALLATION AT 24"x48" CEILING TILES



INSTALLATION AT 24"x24" CEILING TILES



CONCEALED PENDENT SPRINKLER



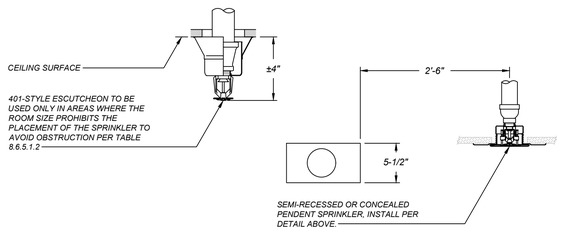
SEMI-RECESSED PENDENT SPRINKLER

SPRINKLER HEAD INSTALLATION DETAIL

A F3.02

SCALE: NONE FSSXXX

THIS DETAIL IS TO BE USED FOR AVOIDING OBSTRUCTIONS PRESENTED BY SURFACE MOUNTED LIGHTING IN GYPBOARD CEILINGS. SPRINKLER SPACING TO BE IN ACCORDANCE WITH NFPA 13 (2022) FOR PARTICULAR HAZARD, AND TYPE OF SPRINKLER WHERE OBSTRUCTION OCCURS. DETAIL AS SHOWN IS FOR STANDARD SPRAY PENDENT SPRINKLER, WITH PRESSURES FROM 15 PSI TO 100 PSI ONLY. IF EXTENDED COVERAGE OR SPECIAL LISTED SPRINKLERS ARE USED, REFER TO APPROPRIATE NFPA 13 (2022) TABLE FOR THE SPECIFIC REQUIREMENTS FOR EACH SPECIFIC TYPE OF SPRINKLER.



NFPA 13 (2022) TABLE 10.2.7.2(a) POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS TO DISCHARGE	
DISTANCE FROM SPRINKLERS TO SIDE OF OBSTRUCTION	MAX. ALLOWABLE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF OBSTRUCTION
2' TO LESS THAN 2'-6"	5-1/2"
COORDINATE ALL CONCEALED PENDENT SPRINKLERS W/ CURRENT LIGHT LAYOUT AND TYPES. AN AREAS W/ SURFACE MOUNTED LIGHT FIXTURES. UTILIZE OBSTRUCTION SPACING PER NFPA 13 (2022). IF SIZE OF ROOM PROHIBITS SPACING REQUIREMENTS TO BE MET, UTILIZE ST-1E 401 ESCUTCHEON W/ PENDENT SPRINKLER OF SAME TEMPERATURE, K-FACTOR, AND DESIGN CRITERIA.	

SPRINKLER HEAD OBSTRUCTION DETAIL

B F3.02

SCALE: NONE FSSXXX

FILE NO.: 20-10 APPL. NO.: 02-121993

LICENSED ARCHITECT
JUAN M. GONZALEZ
No. C-12865
RENEWAL DATE
12/31/2023
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER
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No. M23588
Exp. 9-30-25
MECHANICAL
STATE OF CALIFORNIA

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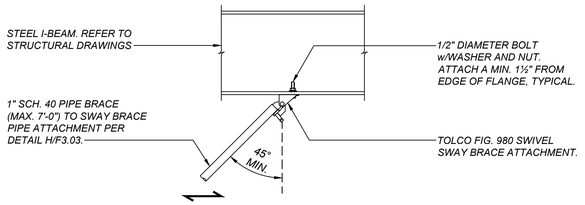
PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE: INSTALLATION DETAILS

F3.02

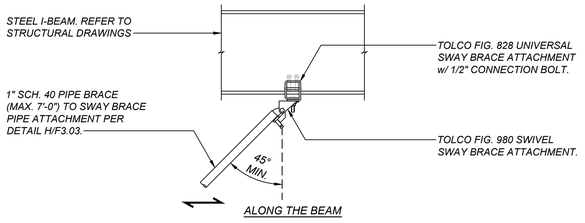


SWAY BRACE STRUCTURAL ATTACHMENT TO STEEL I-BEAM VIA DIRECT MACHINE BOLT

SCALE: NONE

FSS006

F F3.03

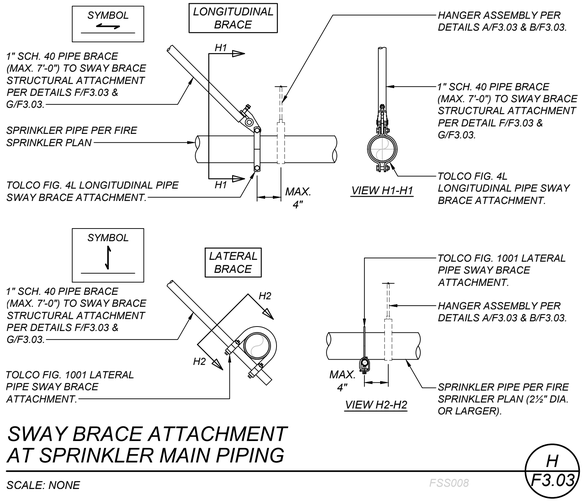


SWAY BRACE STRUCTURAL ATTACHMENT TO STEEL I-BEAM

SCALE: NONE

FSS007

G F3.03

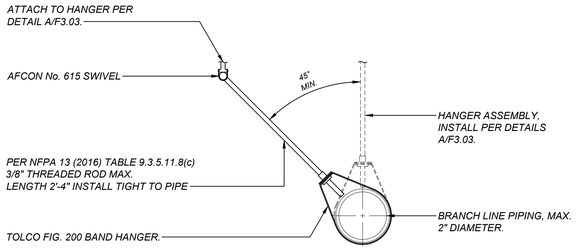


SWAY BRACE ATTACHMENT AT SPRINKLER MAIN PIPING

SCALE: NONE

FSS008

H F3.03



INSTALLATION NOTES:
PER NFPA 13 (2022) §18.6.5, BRANCH LINE RESTRAINTS ARE NOT REQUIRED WHERE BRANCH LINES ARE SUPPORTED BY RODS LESS THAN 6-INCHES LONG MEASURED BETWEEN THE TOP OF THE PIPE AND THE POINT OF ATTACHMENT TO THE BUILDING STRUCTURE.

MAXIMUM SPACING PER NFPA 13 (2022) TABLE 18.6.4(a)

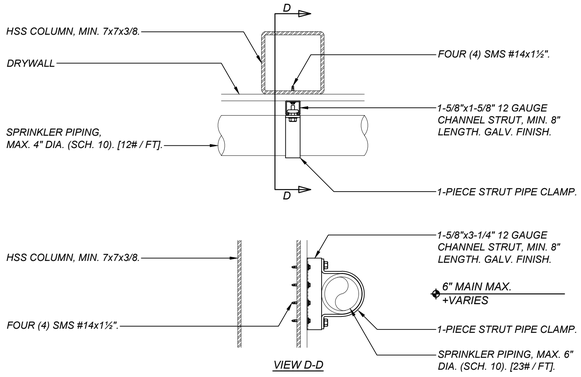
SYMBOL

BRANCH LINE RESTRAINT

SCALE: NONE

FSS102

C F3.03



10-FEET MAXIMUM HANGER SPACING

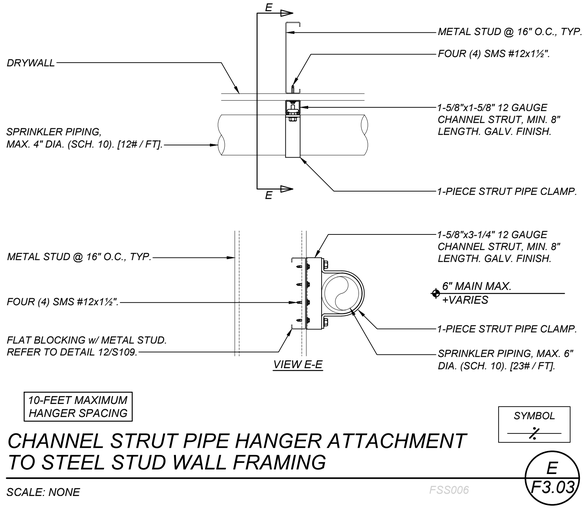
SYMBOL

CHANNEL STRUT PIPE HANGER AND SEISMIC RESTRAINT ATTACHMENT TO HSS COLUMN

SCALE: NONE

FSS006

D F3.03



10-FEET MAXIMUM HANGER SPACING

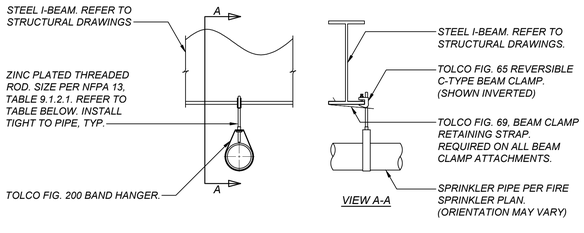
SYMBOL

CHANNEL STRUT PIPE HANGER ATTACHMENT TO STEEL STUD WALL FRAMING

SCALE: NONE

FSS006

E F3.03



HANGER ROD SIZES	
PIPE SIZE	DIA. OF ROD
≤ 4"	3/8"
5" - 8"	1/2"
NFPA 13 (2016) TABLE 9.1.2.1	

12-FEET MAXIMUM HANGER SPACING

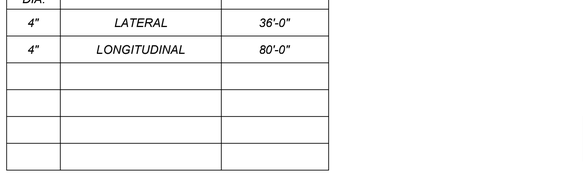
SYMBOL

SPRINKLER PIPE HANGER SUPPORT AT STEEL I-BEAM

SCALE: NONE

FSS101

A F3.03



HANGER ROD SIZES	
PIPE SIZE	DIA. OF ROD
≤ 4"	3/8"
5" - 8"	1/2"
NFPA 13 (2016) TABLE 9.1.2.1	

12-FEET MAXIMUM HANGER SPACING

SYMBOL

SPRINKLER PIPE HANGER SUPPORT AT SLOPED STEEL I-BEAM

SCALE: NONE

FSS102

B F3.03

HANGER AND SWAY BRACING INSTALLATION NOTES:

1. *INSTALLATION OF ALL HANGERS AND SWAY BRACING SHALL BE INSTALLED IN ACCORDANCE TO NFPA 13 (2022).*
2. *ALL HARDWARE AND METAL COMPONENTS SHALL HAVE NON-CORROSIVE PLATING OR FINISH.*
3. *SWAY BRACE MAXIMUM SPACING SHALL NOT EXCEED THOSE VALUES LISTED IN THE SEISMIC CALCULATIONS.*
4. *SCH. 40 PIPE BRACING SHALL BE LIMITED TO THOSE LENGTHS LISTED IN NFPA 13, TABLE 18.5.11.8(b) WITH I/r=200.*
   - 4.1. 1" DIA. SCH. 40 PIPE MAX. 7'-0" LENGTH.
   - 4.2. 1¼" DIA. SCH. 40 PIPE MAX. 9'-0" LENGTH.
   - 4.3. 1½" DIA. SCH. 40 PIPE MAX. 10'-4" LENGTH.
   - 4.4. 2" DIA. SCH. 40 PIPE MAX. 13'-1" LENGTH.
5. *PER NFPA 13 (2022) §18.6(5) A BRANCH LINE RESTRAINT SHALL CONSIST OF A HANGER NOT LESS THAN 45° FROM VERTICAL INSTALLED WITHIN 6-INCHES. OF THE VERTICAL HANGER ARRANGED FOR RESTRAINT AGAINST UPWARD MOVEMENT, PROVIDED IT IS UTILIZED SUCH THAT L/R DOES NOT EXCEED 400, WHERE THE ROD EXTENDS TO THE PIPE OR A SURGE CLIP HAS BEEN INSTALLED.*
6. *MAXIMUM BRANCH LINE RESTRAINT SHALL NOT EXCEED SPECIFIED DISTANCES INDICATED IN NFPA 13 (2022) TABLE 18.6.4(a).*
7. *PER NFPA 13 (2022) §18.6.5, BRANCH LINE RESTRAINTS ARE NOT REQUIRED WHERE BRANCH LINES ARE SUPPORTED BY RODS LESS THAN 6-INCHES LONG MEASURED BETWEEN THE TOP OF THE PIPE AND THE POINT OF ATTACHMENT TO THE BUILDING STRUCTURE.*

MAX. SPACING OF BRANCH LINE RESTRAINTS				
PIPE DIA. (INCHES)	SEISMIC COEFFICIENT - C_p			
	$C_p \leq 0.50$	$0.50 < C_p \leq 0.71$	$0.71 < C_p \leq 1.40$	$C_p \geq 1.40$
1	43-FT	36-FT	26-FT	22-FT
1¼	46-FT	39-FT	27-FT	24-FT
1½	49-FT	41-FT	29-FT	25-FT
2	53-FT	45-FT	31-FT	27-FT
NFPA 13 (2022) TABLE 18.6.4(a)				

MAXIMUM PIPE BRACE LENGTH NFPA 13, TABLE 18.5.11.8(b) WITH I/r=200	
BRACE PIPE DIA. (INCHES)	BRACE LENGTH
1	7'-0"
1¼	9'-0"
1½	10'-4"
2	13'-1"

MAXIMUM SWAY BRACE SPACING BASED ON DETAILS ON THIS SHEET ONLY		
PIPE DIA.	ORIENTATION OF BRACE	MAX. SPACING
4"	LATERAL	36'-0"
4"	LONGITUDINAL	80'-0"

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STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION

MULTI-PURPOSE BLDG. AT FAIRMEAD ELEMENTARY SCHOOL
CHOWCHILLA ELEMENTARY SCHOOL DISTRICT
CHOWCHILLA, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542 ARCHITECTURE PLANNING
FAX: 559-497-1549 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2318

DATE: 8/24/2023

SHEET TITLE:
STRUCTURAL DETAILS - STEEL

F3.03