

KELLY NELSON

OWNER
9306 Hot Springs Rd
Corona, CA 92883, USA
P: 000.000.0000

EVERETT SMITH DESIGNS

DESIGN TEAM

P: (951) 323 2187

J.A. RUSSO ENTERPRISES INC.

CONTRACTOR
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PREPARED BY:



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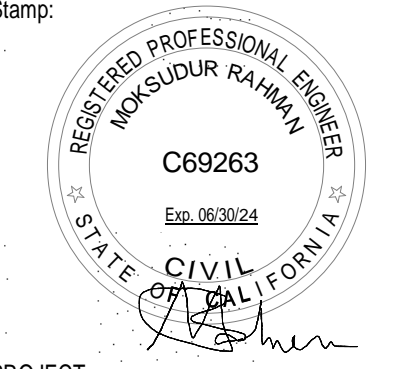
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ENGINEER OF RECORD:

**RAHMAN
ENGINEERING**

13611 12TH ST, SUITE-B,
CHINO, CA 91710
Tel: (213)-400-8078
MOKSUD.RAHMAN@GMAIL.COM

Stamp:



PROJECT:

PROJECT INFO

CLIENT INFO

- NAME: NELSON KELLY/ NELSON GLEN
- ADDRESS (HOUSE): 9306 Hot Springs Rd, Corona, CA 92883-7610

SITE INFO

- OCCUPANCY GROUP: R3/ U
- TYPE OF CONSTRUCTION: V-B
- SPRINKLERS: NO
- PARCEL# (APN): -
- LEGAL DESCRIPTION: -
- TOTAL BUILDINGS ON SITE: 2
- MAIN HOUSE: 1,227 SF
- SITE FEATURES: 0
- SWIMMING POOL: NONE

ADU INFO

- TYPE OF CONSTRUCTION: V-B
- SQUARE FOOTAGE: 1000 SF
- GARAGE: 511 SF

SOLAR: DEFERRED SUBMITTAL

SCOPE OF WORK

- SCOPE OF WORK IS A PROPOSED ADU ON THE SAME LOT AS AN (E) S.F.R.. THE ADU WILL HAVE A 2-CAR GARAGE.

NOTE: ALL PROJECT INFORMATION IS TAKEN FROM COUNTY RECORDS AND HAS NOT BEEN VERIFIED FOR ACCURACY AND IS AN APPROXIMATE.

PROJECT NOTES:

- PROJECT SHALL COMPLY WITH NPDES, SUSMP, AND BMP REQUIREMENTS.
- "CONTACT DIG ALERT"



ADU

GENERAL NOTES

- BATHROOM**
 - ROOMS CONTAINING BATHTUBS, SHOWERS, SPAS AND SIMILAR FIXTURES SHALL BE PROVIDED WITH AN EXHAUST FAN WITH A MINIMUM CAPACITY OF 50 CFM. DUCTLESS FANS ARE UNACCEPTABLE.
 - CLEARANCE FOR WATER CLOSET TO BE A MINIMUM OF 24-INCHES IN FRONT, AND 15-INCHES FROM ITS CENTER TO ANY SIDE WALL OR OBSTRUCTION. CPC 402.5
 - WALL COVERING OF SHOWERS OR TUBS WITH SHOWERS SHALL BE OF SMOOTH, NONABSORBENT SURFACE EXTENDED TO A HEIGHT NOT LESS THAN 6 FEET ABOVE THE FLOOR. CRC R307.2, CBC 1210.2.3
 - THE NET AREA OF THE SHOWER ENCLOSURE SHALL BE 1,024 SQ. INCHES (7.1 SQ. FEET) OR MORE IN CLEAR FLOOR AREA, AND SHALL ALSO BE CAPABLE OF ENCOMPASSING A 30-INCH DIAMETER CIRCLE. CPC 408.6
- KITCHEN** SHALL HAVE A CLEAR PASSAGEWAY OF NOT LESS THAN 3 FT. CBC 1208.1
 - PROVIDE LOCAL EXHAUST SYSTEM VENTED TO OUTDOORS WITH RATE = 100 CFM. CEC 150(9), ASHRAE STD. 62.2.
 - FAUCETS AT KITCHENS SHALL NOT EXCEED A WATER SUPPLY FLOW RATED OF 1.8 GALLONS PER MINUTE MEASURED AT 60 PSI. CDC 403.6
- SAFETY GLAZING** SHALL BE PROVIDED AT THE FOLLOWING HAZARDOUS LOCATIONS CRC R308.4 (CBC 2408.4):
 - WHEN LOCATED WITHIN 60-INCHES OF THE FLOOR SURFACE IN TUBS, SHOWERS, SAUNAS, OR STEAM ROOMS WHEN LOCATED WITHIN 60-INCHES OF THE FLOOR SURFACE IN TUBS, SHOWERS, SAUNAS, OR STEAM ROOMS.
 - WHERE GLAZING AREA IS MORE THAN 9 SQ. FT. IN AREA, WITH THE BOTTOM EDGE LESS THAN 18-INCHES ABOVE THE FLOOR AND TOP EDGE MORE THAN 36-INCHES ABOVE FLOOR.
- ELECTRICAL**
 - ALL RECEPTACLE OUTLETS IN BATHROOMS, ABOVE KITCHEN COUNTERTOP, CRAWL SPACES, GARAGE, ROOFTOPS, OUTDOOR OUTLETS, WITHIN 6-FEET OF WET BAR SINK/LAUNDRY SINK TO BE PROTECTED BY GROUND FAULT CIRCUIT INTERRUPTER (GFCI). CEC 210.8
 - ALL RECEPTACLE OUTLETS ARE REQUIRED TO BE LISTED TAMPER RESISTANT. (CEC 406.12 AND 210.52)
 - COMBINATION TYPE AFCI CIRCUIT BREAKERS ARE REQUIRED FOR ALL 120 VOLT SINGLE PHASE 15/20 AMP BRANCH CIRCUITS, EXCEPT FOR BATHROOMS, KITCHENS, GARAGES, OUTDOORS, AND LAUNDRY ROOMS. (CEC 210.12(B))
 - AT A MINIMUM, ONE DEDICATED 20 AMP CIRCUIT IS REQUIRED FOR A BATHROOM. (CEC 210.11(C)(2))
 - A GFCI PROTECTED RECEPTACLE IS REQUIRED WITHIN 3 FEET OF THE EDGE OF EACH BASIN IN A BATHROOM. (CEC 210.52(D))
 - RECEPTACLE OUTLETS ARE NOT ALLOWED WITHIN OR OVER A BATHTUB OR SHOWER STALL. (CEC 406.9 (C))
 - SUBPANELS ARE NOT ALLOWED TO BE LOCATED IN BATHROOMS OR CLOTHES CLOSETS. (CEC 240.24(D) AND 240.25(E))
 - CIRCUITS SHARING A GROUNDED CONDUCTOR (NEUTRAL) WITH TWO UNGROUNDED (HOT) CONDUCTORS MUST USE A TWO POLE CIRCUIT BREAKER OR AN IDENTIFIED HANDLE TIE. (CEC 210.4(B))
 - GROUP NON-CABLE CIRCUITS IN PANEL (CEC 210.4(D))
 - THE KITCHEN COUNTERTOP RECEPTACLES MUST HAVE A MIN. OF 2 DEDICATED 20 AMP CIRCUITS. (CEC 210.52(B))
 - THE RECEPTACLES IN THE DINING AREA, PANTRY, OR BREAKFAST NOOK MUST BE SUPPLIED BY DEDICATED 20 AMP CIRCUITS. (CEC 210.52(B))
 - KITCHEN COUNTERTOP 12 INCHES OR WIDER MUST HAVE A RECEPTACLE OUTLET. (CEC 210.52(C))
 - KITCHEN COUNTERTOP MUST HAVE RECEPTACLE OUTLETS SO NO POINT ALONG THE COUNTER WALLS IS MORE THAN 24 INCHES FROM A RECEPTACLE. (CEC 210.52(C))
 - ISLAND AND PENINSULAR COUNTERTOP MUST HAVE AT LEAST ONE RECEPTACLE. (CEC 210.52(C)(1) AND (2))
 - KITCHEN COUNTERTOP RECEPTACLES SHALL BE READILY ACCESSIBLE, AND LOCATED NO MORE THAN 20 INCHES ON OR ABOVE, OR MORE THAN 12 INCHES BELOW THE COUNTERTOP SURFACE. (CEC 210.52(C)(5))
 - THE SPACING FOR GENERAL RECEPTACLE OUTLETS MUST BE LOCATED SO THAT NO POINT ON ANY WALL OR FIXED GLASS IS OVER 6 FEET FROM A RECEPTACLE OUTLET. (CEC 210.52(A))
 - HALLWAY 10 FEET OR MORE MUST HAVE AT LEAST ONE RECEPTACLE OUTLET. (CEC 210.52(H))
 - LAUNDRY ROOMS MUST HAVE AT LEAST ONE DEDICATED 20 AMP RECEPTACLE CIRCUIT. (CEC 210.11 (C) (2))

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO STARTING WORK, AND SHALL NOTIFY THE DESIGNER OF DISCREPANCIES OR INCONSISTENCIES.
- THE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT REPRESENT THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, CONSTRUCTION LOADS OF MATERIALS, ETC. THE CONTRACTOR, AT NO EXPENSE TO THE OWNER, SHALL RETAIN QUALIFIED PROFESSIONALS TO DETERMINE FIELD LAYOUT OF THE BUILDING ELEMENTS, AND THE ADEQUACY OF ALL PROPOSED BRACING AND SHORING.
- OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE OBSERVATION OF SAFETY METHODS, BRACING OR SUPPORT.
- PLAN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS.
- NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND STANDARD DETAILS.
- CLARIFICATION SHALL BE REQUESTED FROM THE ENGINEER FOR ALL WORK INDICATED ON THE PLANS THAT IS NOT SPECIFICALLY DETAILED, AND IS NOT SIMILAR TO WORK THAT IS DETAILED.
- SEE EXISTING AND / OR OTHER PLANS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, SIZE AND LOCATION OF ALL NON-BEARING PARTITIONS, SIZE AND LOCATION OF ALL CURBS, DRAINS, DEPRESSED AREAS, SLOPES AND ELEVATION CHANGES, CHAMFERS, GROOVES, INSERTS, ALL FINISHES, AND SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS.
- SEE OTHER PLANS FOR ALL WATERPROOFING REQUIREMENTS. THE ENGINEER IS NOT RESPONSIBLE FOR WATERPROOFING DETAILS AND SPECIFICATIONS.
- MECHANICAL, PLUMBING, AND ELECTRICAL REPAIRS SHALL BE UNDER SEPARATE PERMIT AND SHALL BE PERFORMED BY A LICENSED CONTRACTOR LICENSED IN THE APPROPRIATE FIELD.
- MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOFS. LOADS SHALL NOT EXCEED DESIGN LOADING FOR SUPPORTING MEMBERS.
- UNLESS APPROVED BY THE LOCAL C.B.O. OR BUILDING DEPARTMENT (PER CPC SECTION 301.2.5.) PEX IS NOT AN APPROVED BUILDING MATERIAL.

DIMENSION NOTES

- ALL DIMENSIONS ARE TO FACE OF STRUCTURE (F.O.S.) UNLESS NOTED OTHERWISE.
- DO NOT SCALE FROM DRAWINGS.
- ANY INCONSISTENCIES OR UNFORESEEN CONDITIONS TO BE REVIEWED BY THE ARCHITECT PRIOR TO PROCEEDING WITH CONSTRUCTION.
- ALL DOORS AND WINDOWS DIMENSIONED TO CENTERLINE OF CLEAR OPENING UNLESS NOTED OTHERWISE.
- ALL NON-DIMENSIONED DOORS SHALL BE OFFSET FROM THE HINGE-SIDE WALL TO ALLOW FOR (2) 2X4 STUDS AT THE JAMB. (U.N.O.)
- ALL NON-DIMENSIONED WINDOWS TO BE FLUSH TO ADJOINING WALL OR CENTER IN TO ROOM UNLESS NOTED OTHERWISE.
- ALL CASEWORK DIMENSIONS TO FACE OF FINISH.

CALIFORNIA RESIDENTIAL CODE NOTES

- EXTERIOR DOORS MUST OPEN OVER A LANDING NOT MORE THAN 1/2" BELOW THE THRESHOLD. EXCEPTION: PROVIDING THE DOOR DOES NOT SWING OVER THE LANDING THE LANDING SHALL NOT BE MORE THAN 7-3/4" BELOW THE THRESHOLD.
- LANDINGS AT DOORS SHALL HAVE A LENGTH MEASURED IN DIRECTION OF TRAVEL OF NOT LESS THAN 36 INCHES. TYP. CRC R311.3
- STORAGE/CLOSET UNDER STAIR, PROVIDE ONE LAYER OF 5/8 TYPE "X" GYP. BD. AT WALL AND UNDERSIDE OF STAIR TO ACHIEVE 1HR OF FIRE PROTECTION
- GARAGE, PROVIDE 1 LAYER OF 5/8 TYPE "X" GYP. BD. AT GARAGE WALLS, CEILINGS, AND SUPPORTING STRUCTURAL MEMBERS SEPARATING THE GARAGE AND LIVING AREAS TO ACHIEVE 1HR OF FIRE PROTECTION

APPLICABLE STANDARDS:

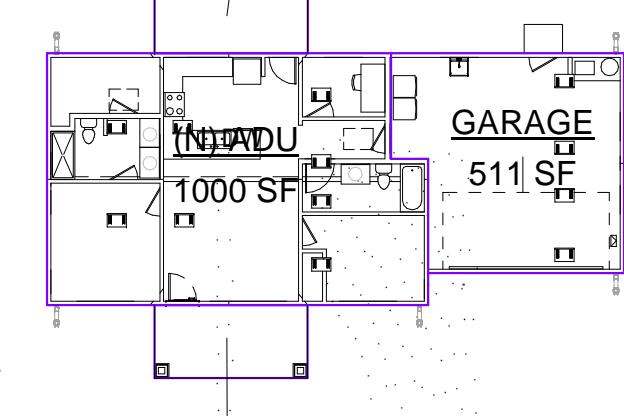
- 2019 CALIFORNIA RESIDENTIAL CODE (CRC)
- 2019 CALIFORNIA PLUMBING CODE (CPC)
- 2019 CALIFORNIA ELECTRICAL CODE (CEC)
- 2019 CALIFORNIA MECHANICAL CODE (CMC)
- 2019 PLUMBING CODE (CPC)
- 2019 CALIFORNIA ENERGY STANDARDS CODE (CESC)

ABBREVIATIONS

A/C	AIR CONDITIONER	L.V.L.	LAMINATED VENEER
A.F.F.	ABOVE FINISHED FLOOR	MAS.	MASONRY
A.F.G.	ABOVE FINISHED GRADE	MTL.	METAL
BOT.	BOTTOM	MIN.	MINIMUM
B.O.F.	BOTTOM OF FOOTING	N	NEW
B.O.W.	BOTTOM OF WALL	N.T.S.	NOT TO SCALE
C.C.	CENTER TO CENTER	O.C.	ON CENTER
CL.	CLOSET	O.D.	OUTSIDE DIAMETER
CLG.	CEILING	OPNG.	OPENING OR ROUGH OPENING
CMU	CONCRETE MASONRY UNIT	PCC	PORTLAND CEMENT CONCRETE
DEMO	DEMOLISH	PL.	PLASTER
D.S.	DOWNSPOUT	P.L.	PROPERTY LINE
DIA.	DIAMETER	PLYWD.	PLYWOOD
DIM.	DIMENSION	PTD.	PAINTED
DN.	DOWN	RC	REINFORCED CONCRETE
DP:	DAMP PROOFING	RD:	ROOF DRAIN
E	EXISTING	R.D.L.	ROOF DRAIN LEADER
E.F.	EXHAUST FAN	R.O.	ROUGH OPENING
EXC.	EXCAVATE	R.O.W.	RIGHT OF WAY
EXT.	EXTERIOR	REINF.	REINFORCED
F.A.U.	FORCED AIR UNIT	SAN.	SANITARY
F.D.	FLOOR DRAIN	S.D.	SMOKE DETECTOR SECTION
FIN.	FINISH	SHT.	SHEET
F.F.L.	FINISHED FLOOR LEVEL	SHT'G.	SHEATHING
GALV.	GALVANIZED	SQ. FT.	SQUARE FEET
G.C.	GENERAL CONTRACTOR	SQ. IN.	SQUARE INCHES
G.F.C.I.	GROUND FAULT CIRCUIT INTERRUPT	STD.	STANDARD
G.F.I.	GROUND FAULT INTERRUPT	STL.	STEEL
G.T.	GLAZED TILE	S.Y.	SQUARE YARD
GYP.	GYPSPUM	T&B:	TOP AND BOTTOM
H.V.A.C.	HEATING, VENTING AND AIR CONDITIONING	T.O.	TOP OF
H.W.	HOT WATER	UNO	UNLESS NOTED OTHERWISE
IN	INCH	V.B.	VAPOR BARRIER
INSUL.	INSULATION	W.C.	WATER STOP
INT.	INTERIOR	W.C. CLOSET)	WITHOUT
JST.	JOIST	WD.	WOOD
LFT.	LINEAR FEET	WDW.	WINDOW
LGT.	LIGHTING	W.I.C.	WALK-IN CLOSET
		WP.	WEATHERPROOF
		WS:	WEATHER-STRIPPING
		OR	WATER STOP
		W/O:	WITHOUT

REAR PATIO

121 SF

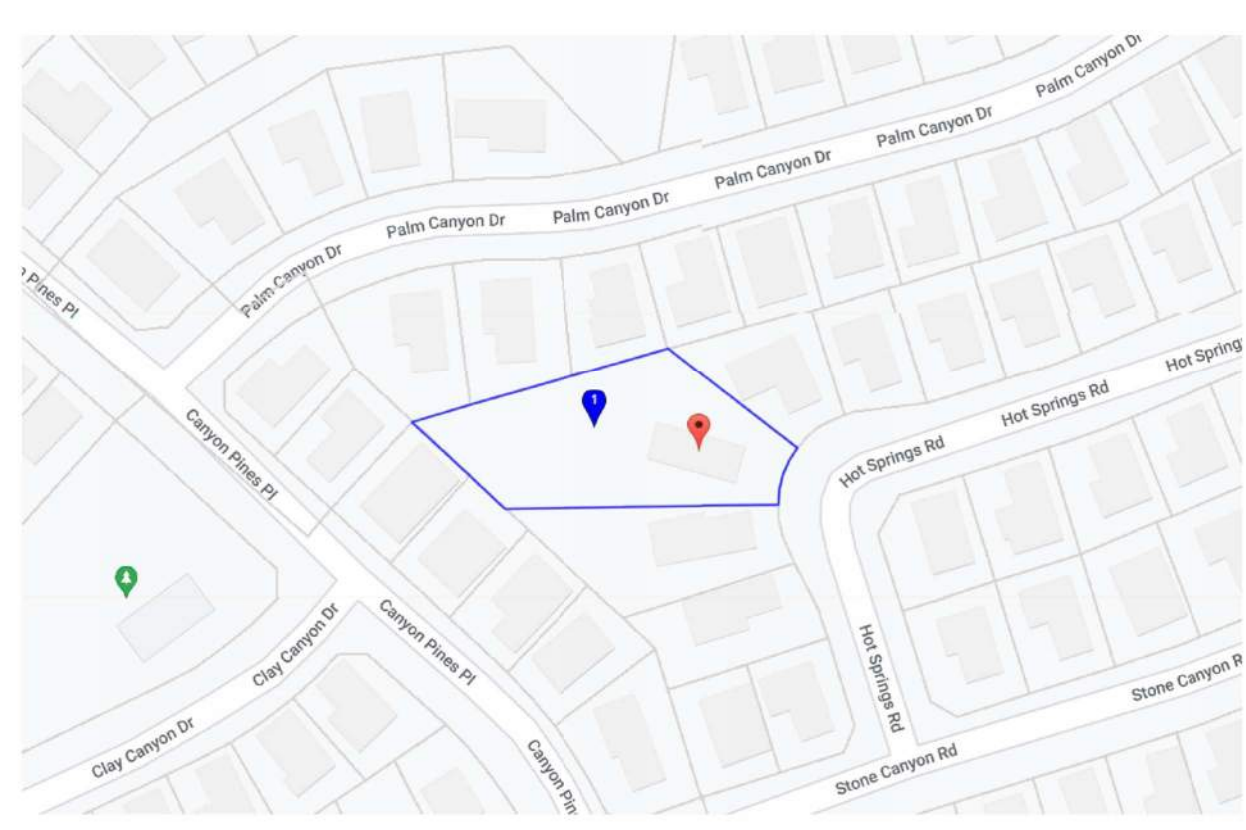


FRONT PATIO
121 SF

SQUARE FOOTAGE BREAKDOWN

SQFT BREAKDOWN	
Name	Area
REAR PATIO	121 SF
GARAGE	511 SF
FRONT PATIO	121 SF
(N) ADU	1000 SF
	1753 SF

VICINITY MAP



SHEET INDEX

SHEET NUMBER	SHEET NAME
A0	Cover
A1	Site Plan
A2	ADU Floor Plan
A3	ADU Roof Plan
A3.1	Roof Info
A4	Elevations
A5	Sections
A6	ADU Electrical
A-D1	Architectural Details
A-GRN-1	General Notes
A-GRN-2	General Notes
A-T24-1	Title-24
A-T24-2	Mandatory Measures
GN	General Notes
S1	Foundation Plan
S2	Framing Plan
SD1	Structural Details
SD2	Structural Details
SD3	Structural Details

SHEET INDEX

SHEET NUMBER	SHEET NAME
HFX-1	HARDY DETAILS
HFX-2	HARDY DETAILS
HFX-3	HARDY DETAILS

REVISIONS:

No.	Description	Date
1	Building Corrections	2022.11.10

PROJECT ADDRESS:

9306 Hot Springs Rd, Corona, CA 92883, USA

CLIENT NAME:

MURPHY & NELSON

Cover

Project number: 22-2157

Date: 11/29/2022 7:53:32 AM

Drawn by: ES

Checked by: ES

A0

Scale: 1" = 20'-0"

SITE PLAN LEGEND		SITE PLAN GENERAL NOTES	
	SCOPE OF WORK		PROPERTY LINE
	(E) LANDSCAPE		ROOF LINE
	(N) LANDSCAPE		CURB
	CONCRETE COURTYARD		FENCE
	OUTDOOR PAVERS		ROAD CENTER LINE
	(E) TREE/SHRUB		SITE DRAINAGE LINE
	(N) TREE/SHRUB		BUILDING SECTION
	ENTRY TO RESIDENCE		SPOT ELEVATION
	ELEVATION REFERENCE		

STORM WATER POLLUTION CONTROL REQUIREMENTS:
 THE FOLLOWING REPRESENT THE MINIMUM STANDARDS OF GOOD HOUSEKEEPING THAT MUST BE IMPLEMENTED ON ALL CONSTRUCTION SITES.

- ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
- STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
- FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
- NON-STORMWATER RUNOFF FROM EQUIPMENT AND VEHICLE WASHING AND ANY OTHER ACTIVITY SHALL BE CONTAINED AT THE PROJECT SITE.
- EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
- TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
- SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEEPED UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
- ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.

PREPARED BY:

EVERETT SMITH DESIGNS, INC
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PROJECT:

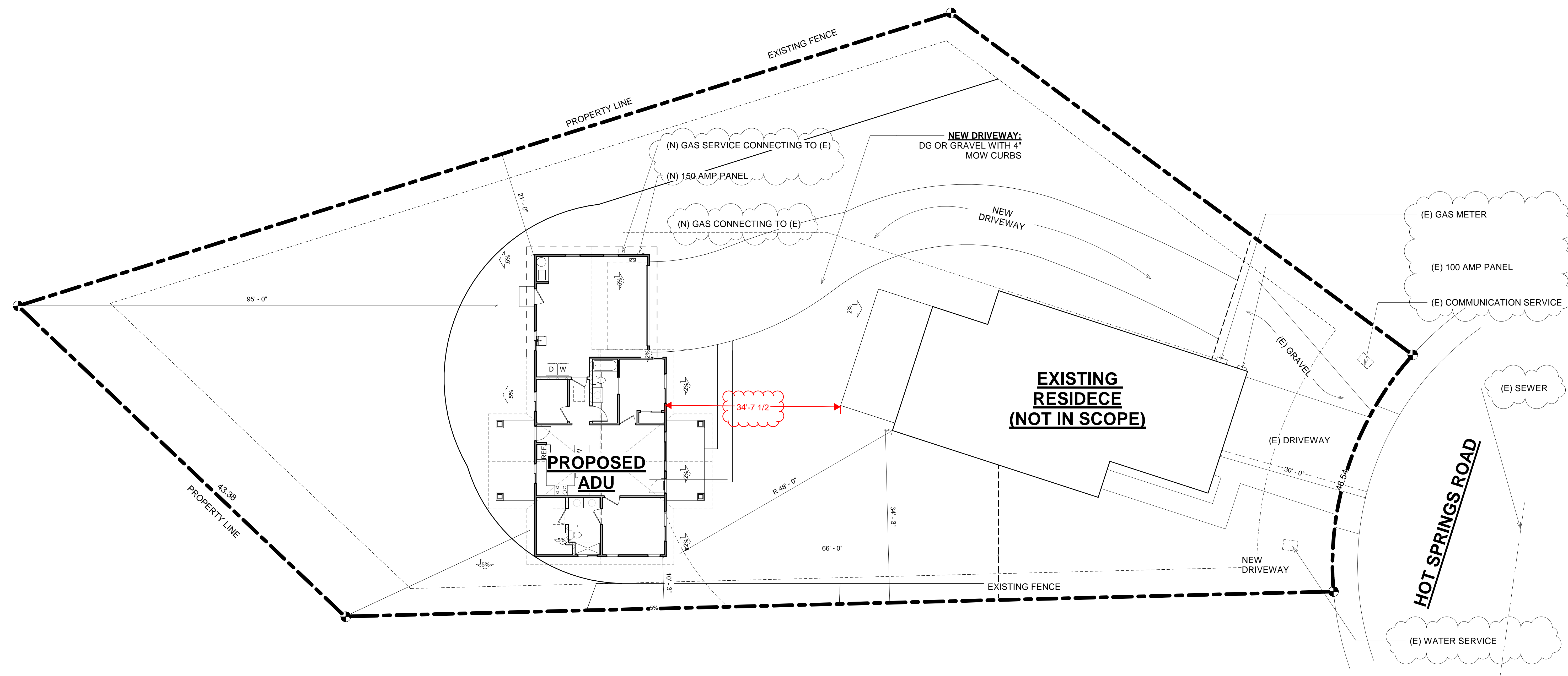
PROPOSED ADU AT REAR OF (E) S.F.R.

REVISIONS:

No.	Description	Date
1	Building Corrections	2022.11.10

PROJECT ADDRESS:
 9306 Hot Springs Rd, Corona, CA 92883, USA

CLIENT NAME:
 MURPHY & NELSON



LOT COVERAGE

TOTAL LOT SF 13,084

BUILDINGS	LOT
926 +2908SF /	13084SF = .2930 = 29%

SQFT BREAKDOWN

Name	Area
REAR PATIO	121 SF
GARAGE	511 SF
FRONT PATIO	121 SF
(N) ADU	1000 SF
	1753 SF

RIVERSIDE COUNTY PERMIT NUMBER: BRS2202532

RIVERSIDE COUNTY LAND USE DIVISION
 BY: Susana Ramirez
1/13/2023
 PLANS ACCEPTABLE FOR APPLICATION PURPOSES ONLY

Riverside County Building & Safety
 4080 Lemon St. 9th Floor,
 Riverside, CA 92502
APPROVED
 12/08/2022 4:21:22 PM
 REVIEWED BY: jduangan
Approval of these plans shall not be construed to be a permit for, or an approval of, any violations of any of the provisions of the state or county laws. This set of plans must be kept on the job until completion.

1 PROPOSED SITE
 1" = 10'-0"

Project number 22-2157
 Date 11/29/2022 7:53:32 AM
 Drawn by ES
 Checked by ES

A1

Scale As indicated

ROOF PLAN GENERAL NOTES

- ROOF MATERIAL - CLASS 'A' GAF ASPHALT SHINGLES ESR-1475 SEE A3.1 FOR 'I.C.C. REPORT NO. OR APPROVED EQUAL OVER ONE LAYER 30# ROOFING FELT (PROVIDE TWO LAYERS OF 30# ROOFING FELT ON LOWER ROOFS), INSTALL PER MANUFACTURER'S INSTRUCTION - ROOF TILE NOT TO EXCEED 1-BLS. PER SQUARE FOOT
- ROOF TILE NAILING SHALL BE PER THE MANUFACTURER'S SPECIFICATION WITH THE FOLLOWING MINIMUM REQUIREMENTS:
 - 11 GA. CORROSION RESISTANT NAILS WITH MINIMUM 3/4" PENETRATION INTO SHEATHING PER C.R.C. SECTION 905.3.6 AND IN ACCORDANCE WITH C.R.C. TABLE 905.3.7
 - HEADS OF ALL TILE SHALL BE NAILED
 - THE NOSES OF ALL EAVE COURSE TILE SHALL BE FASTENED WITH APPROVED CLIPS.
 - ALL TILES SHALL BE NAILED AS REQUIRED BY MANUFACTURER'S INSTRUCTIONS.
 - THE NOSES OF ALL RIDGE, HIP AND RAKE TILES SHALL BE SET IN A BEAD OF APPROVED ROOFER'S MASTIC.
- PROVIDE MINIMUM 26 GA. CORROSION RESISTANT METAL FLASHING AT ALL VALLEYS AND ROOF TO WALL CONDITIONS. PROVIDE DIVERTERS AT DOORS AS REQUIRED.
- PROVIDE A MINIMUM 22"x30" ACCESS OPENING IN ROOF SHEATHING TO OVER FRAMED ATTIC AREAS WITH 30" MINIMUM HEAD CLEARANCE - PROVIDE A 12"x12" OPENING IN ROOF SHEATHING TO OVER FRAMED ATTIC AREAS WITH LESS THAN 30" HEAD CLEARANCE FOR VENTILATION.
- ALL ROOF, WALL AND EAVE VENTS SHALL BE SCREENED WITH CORROSION RESISTANT, NON-COMBUSTIBLE WIRE MESH WITH 1/4" MAXIMUM MESH OPENINGS
- NET FREE AIR VALUES FOR VENTS USED IN OUR VENTILATION CALCULATIONS ARE BASED ON 'C & J METAL PRODUCTS INC.' AT WWW.CJMETALS.COM & BY 'OHAGIN'S INC' AT WWW.OHAGINVENT.COM THESE VALUES ARE SUBJECTED TO CHANGE WITHOUT NOTIFICATION AND MUST BE VERIFIED BY INSTALLER AT TIME OF INSTALLATION - APPROVED EQUAL PRODUCTS MUST PROVIDE THE NET FREE AIR VENTILATION TOTALS REQUIRED BY THE CALCULATIONS PROVIDED ON THESE ARCHITECTURAL DRAWINGS.
- RADIANT BARRIER WITH AN EMITTANCE OF 0.05 OR LESS REQUIRED AT UNDERSIDE OF ROOF SHEATHING & ATTIC SIDE OF GABLE END WALLS - REFER TO T-24 AND ENERGY CALCULATIONS.
- PROVIDE KICK OUT FLASHING AT ALL FASCIA TO WALL TERMINATIONS

ROOF PLAN NOTES

- PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. TOTAL NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED EXCEPT THAT REDUCTION OF THE TOTAL AREA TO 1/300 IS PERMITTED PROVIDED THAT AT LEAST 50 PERCENT AND NO MORE THAN 80 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE THE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. AS AN ALTERNATIVE, THE NET FREE CROSS-VENTILATION AREA MAY BE REDUCED TO 1/300 WHEN A CLASS I OR II VAPOR BARRIER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING PER CRC SECTION R806.2.
- RADIANT BARRIER REQUIRED PER TITLE 24 ENERGY COMPLIANCE SHEET. INSTALL RADIANT BARRIER ROOF SHEATHING WITH REFLECTIVE SIDE TOWARDS OPEN ATTIC. INSTALL RADIANT BARRIER MEMBRANE ON GABLE END ROOF CONDITIONS OVER TRUSS WEBS TOWARDS OPEN ATTIC. REFER TO APPENDIX 'D' OF THE 2008 RESIDENTIAL ACM MANUAL SECTION R4.2.1. RADIANT BARRIER INSTALLATION SHALL CONFORM TO ASTM C-1158 AND ASTM C-727.
- INSTALLATION OF ROOFING SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- EAGLE ROOFING PRODUCTS' TO REVIEW THE INSTALLATION FOR COMPLIANCE WITH ICC ESR-1900 & 2015 FOR CLOSE MANUFACTURER TOLERANCES OF THE FIELD TILE INSTALLATION.
- ALL GAPS/SPACES BETWEEN ROOFING TILES SHALL BE CONSTRUCTED TO PREVENT THE INTRUSION OF FLAMES AND EMBERS. BE FIRESTOPPED WITH APPROVED MATERIALS, OR HAVE ONE LAYER OF MINIMUM 72 POUND MINERAL-SURFACED NONPERFORATED CAP SHEET COMPLYING WITH ASTM D 3909 INSTALLED OVER THE COMBUSTIBLE DECKING.
- ALL VALLEYS MUST BE PROVIDED FLASHING NOT LESS THAN 0.019-INCH NO. 26 GAGE GALVANIZED SHEET CORROSION-RESISTANT METAL INSTALLED OVER NOT LESS THAN ONE LAYER OF MINIMUM 72-POUND MINERAL SURFACED NONPERFORATED CAP SHEET COMPLYING WITH ASTM D 3909, AT LEAST 36-INCH WIDE RUNNING THE FULL LENGTH OF THE VALLEY.
- COMPLYING WITH ASTM D 3909, AT LEAST 36-INCH WIDE RUNNING THE FULL LENGTH OF THE VALLEY.
- VALLEY NONPERFORATED CAP SHEET COMPLYING WITH ASTM D 3909, AT LEAST 36-INCH WIDE RUNNING THE FULL LENGTH OF THE RIDGE OR HIP APPLIED OVER THE COMBUSTIBLE DECKING.
- ROOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT THE ACCUMULATION OF LEAVES AND DEBRIS IN THE GUTTER. REQUIRED GUTTER SIZE, DOWNSPOUT SIZE, AND DOWNSPOUT SPACING/LOCATIONS TO BE CALCULATED AND VERIFIED BY INSTALLING SUBCONTRACTOR.

ROOF PLAN LEGEND

	ASPHALT SHINGLES		STANDING METAL SEAM
	SPANISH TILE ROOF		ROOF CRICKET
	BUILDING OUTLINE		

ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FACIA U.N.O.	BARGE U.N.O.	OVER HANG DIM. U.N.O.
GAF ESR-1475		2X6	2X6	1' 6"

ATTIC VENTILATION

ROOF AREA HOUSE
1417 SF / 150 = 9.445 SF x 144 = 1,360.32 SQ INCHES OF FREE TOTAL VENTILATION AREA REQUIRED.

1360 / 98 = 13.8 = 14 VENTS (A / OHAGINS)

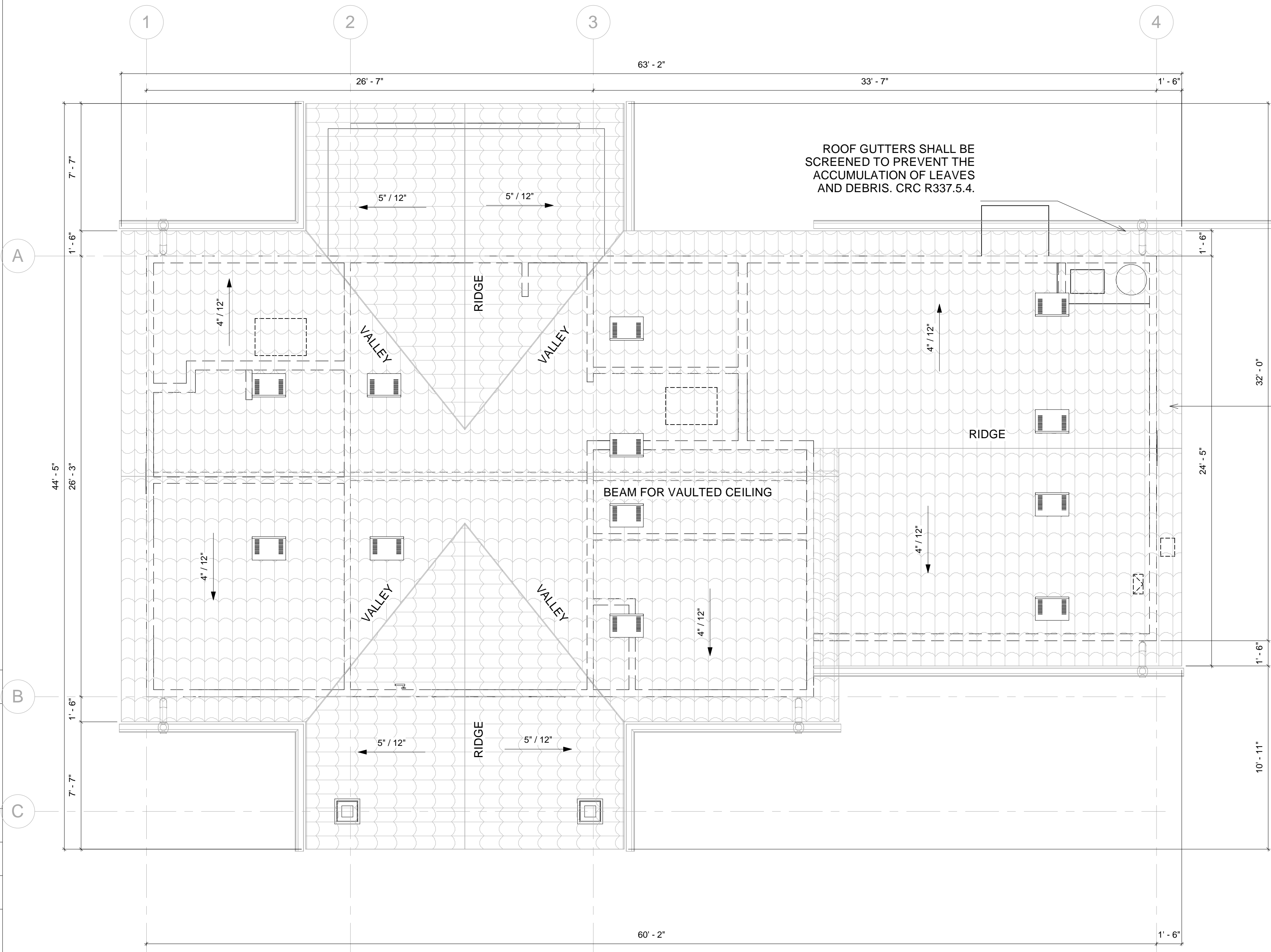
	OHAGINS CONCEALED ROOF VENT 98 S.I.		DORMER VENT 24"w=120 S.I.
	GABLE VENT 14x24=168 S.I.		GABLE VENT 14x18=126 S.I.

NOTE: GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCTS SELECTED AGAINST THOSE NOTED ABOVE. THE REQUIRE VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED BY THE BUILDING OFFICIAL.

ATTIC, OVERHANGS AND OTHER CONCEALED SPACES FORMED OF COMBUSTIBLE MATERIALS SHALL BE PROVIDED WITH DRAFT STOPS OF APPROVED MATERIALS AND SHALL COMPLY WITH SECTION C.B.C. 1505.3

WILDLIFE-URBAN INTERFACE ZONE NOTES:

- ROOF MATERIAL TO BE CLASS-A. CRC R337.5.1
- THE SCREENS COVERING THE VENTS SHALL HAVE A MAXIMUM MESH OF 1/8" AND SHALL BE OF CORROSION RESISTANT METAL. CRC R337.6.2
- VENTS SHALL NOT BE INSTALLED ON THE UNDERSIDE OF THE EAVES. CRC R337.6.3
- PROVIDE ONE LAYER OF ROOF UNDERLAYMENT OF MINIMUM 72-POUND MINERAL-SURFACED NON-PERFORATED CAP SHEET COMPLYING WITH ASTM D 3909. CRC 337.5.2
- WHERE VALLEY FLASHING IS INSTALLED, THE FLASHING SHALL NOT BE LESS THAN 0.019" NO 26-GAGE GALVANIZED SHEET CORROSION-RESISTANT METAL INSTALLED OVER NOT LESS THAN ONE LAYER OF MINIMUM 72-POUND MINERAL-SURFACED NON-PERFORATED CAP SHEET COMPLYING WITH ASTM D 3909. CRC 337.5.3
- NOTE ON PLANS: ROOF GUTTERS SHALL BE SCREENED TO PREVENT THE ACCUMULATION OF LEAVES AND DEBRIS. CRC R337.5.4
- FASTENERS FOR PRESERVATIVE TREATED AND FIRE TREATED WOOD SHALL BE OF HOT DIPPED ZINC COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER EXCEPT 3/8" Ø OR GREATER STEEL BOLT AND FASTENERS OTHER THAN NAILS AND TIMBER RIVETS SHALL BE PERMITTED TO BE MECHANICALLY DEPOSITED ZINC COATED STEEL ASTM B686 CLASS 55 MINIMUM. [CRC R317.3.1]



1 ROOF PLAN ADU MAIN DETACHED ADU
1/4" = 1'-0"

- ESR-2778 BORAL TILE**
- PROVIDE ONE LAYER OF ROOF UNDERLAYMENT OF MINIMUM 72-POUND MINERAL-SURFACED NON-PERFORATED CAP SHEET COMPLYING WITH ASTM D 3909. CRC 337.5.2
 - FASTENERS FOR PRESERVATIVE TREATED AND FIRE TREATED WOOD SHALL BE OF HOT DIPPED ZINC COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER EXCEPT 3/8" Ø OR GREATER STEEL BOLT AND FASTENERS OTHER THAN NAILS AND TIMBER RIVETS SHALL BE PERMITTED TO BE MECHANICALLY DEPOSITED ZINC COATED STEEL ASTM B686 CLASS 55 MINIMUM. [CRC R317.3.1]

PREPARED BY:



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PROJECT:

PROPOSED ADU AT REAR OF (E) S.F.R.

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

9306 Hot Springs Rd, Corona,
CA 92883, USA

CLIENT NAME:

MURPHY & NELSON

ADU Roof Plan

Project number 22-2157

Date 11/29/2022 7:53:33 AM

Drawn by Author

Checked by Checker

A3

Scale As indicated



ELEVATION GENERAL NOTES

- GENERAL**
- ALL KEYNOTES, DETAILS AND DIMENSIONS ARE TYPICAL TO THEIR CONDITION U.N.O. ON ELEVATION.
 - UNDER FLOOR ACCESS (R408.4). ACCESS SHALL BE PROVIDED TO ALL UNDER FLOOR SPACES. ACCESS OPENINGS THROUGH THE FLOOR SHALL BE A MINIMUM OF 18"X24". OPENINGS THROUGH PERIMETER WALL SHALL BE NOT LESS THAN 16"X24". WHEN ANY PORTION OF THE TROUGH WALL ACCESS BELOW GRADE, AN AREAWAY NOT LESS THAN 18"X24" SHALL BE PROVIDED. THE BOTTOM OF THE AREAWAY SHALL BE BELOW THE THRESHOLD OF THE ACCESS OPENING. THROUGH THE WALL ACCESS OPENING SHALL NOT BE LOCATED UNDER A DOOR TO THE RESIDENCE.
 - UNDER FLOOR VENTILATION: THE UNDER FLOOR SPACE BETWEEN THE BOTTOM OF THE FLOOR JOIST AND THE EARTH SHALL BE PROVIDED WITH VENTILATION OPENING THROUGH FOUNDATION OR EXTERIOR WALLS. ONE SUCH OPENING SHALL BE WITHIN 3' OF EACH CORNER OF THE BUILDING. MINIMUM NET AREA OF VENTILATION OPENING SHALL NOT BE LESS THAN 1/150 OF THE UNDER FLOOR SPACE AREA. OPENINGS SHALL ALSO NOT BE LESS THAN 1 S.F. FOR EACH 150 SQFT OF EXTERIOR WALL. OPENINGS SHALL BE COVERED WITH OPENINGS NOT EXCEEDING 1/4" (R408.1 CRC)
 - WALL AND CEILING FINISHES SHALL HAVE A FLAME SPREAD INDEX OF NOT GREATER THAN 200. (R302.5.1)
 - INSULATION FLAME SPREAD INDEX SHALL NOT EXCEED 25 WITH AND SMOKE-DEVELOPED INDEX NOT TO EXCEED 450. (R302.10.1)
 - MULTI-PANE ASSEMBLIES HAVING INDIVIDUAL PANES NOT EXCEEDING 1 SQFT IN EXPOSED AREA SHALL HAVE AT LEAST ONE PANE IN THE ASSEMBLY IDENTIFIED IN ACCORDANCE WITH SECTION (R308.1) ALL OTHER PANES IN THE ASSEMBLY SHALL BE LABELLED "CPSC 16 CFR" OR "ANSI Z97.1" AS APPROPRIATE.
- EXTERIOR FINISH**
- SIDING- 8" LAP SIDING OVER 2 LAYERS OF APPROVED BUILDING PAPER UNDER WHEN OVER WOOD SHEATHING (C.R.C 703.4)
 - STUCCO- PLASTER (3-COAT STUCCO)- 2 LAYERS OF GRADE "D" APPROVED BUILDING PAPER UNDER STUCCO WHEN OVER WOOD SHEATHING (C.R.C. 703.6.3) - PROVIDE HIGH RIB METAL LATH AT SOFFIT AND CEILINGS U.N.O.

PREPARED BY:



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PROJECT:

PROPOSED ADU AT REAR OF (E) S.F.R.

ELEVATION LEGEND

- | | | | |
|--|-------------------|--|----------------------|
| | STUCCO FINISH | | STONE VENEER |
| | SIDING FINISH | | BRICKS |
| | CONCRETE FINISH | | EXISTING FINISH |
| | SPANISH ROOF TILE | | ASPALT SHINGLES ROOF |
| | DOOR TAG | | STANDING METAL SEAM |
| | WINDOW TAG | | BUILDING SECTION |
| | WALL TAG | | SPOT ELEVATION |
| | | | ELEVATION REFERENCE |

KEYNOTES

- PAINTED ROOF FASCIA PAINTED PT-01
- STUCCO FINISH ON 2x4 STUDS SPACED @ 16" O.C
- EXTERIOR LIGHTING FIXTURE
- RADIANT ROOF BARRIER PER T24
- PROVIDE A MINIMUM ONE-HOUR FIRE-RESISTANCE RATING ON THE UNDERSIDE OF THE ROOF PROJECTION
- DRIP EDGE FLASHING USED AT THE FREE EDGES OF ROOFING MATERIALS SHALL BE NON-COMBUSTIBLE.
- STANDARD LOW-E WINDOWS
- GALVANIZED METAL WEEP SCREED
- GABLE TREATMENT, SHAKE / SHINGLE BY HARDIE.
- STONE TREATMENT @ 30" ABOVE GRADE
- TILE ROOF TO MATCH EXISTING HOME. **ESR-2778**

REVISIONS:

No.	Description	Date

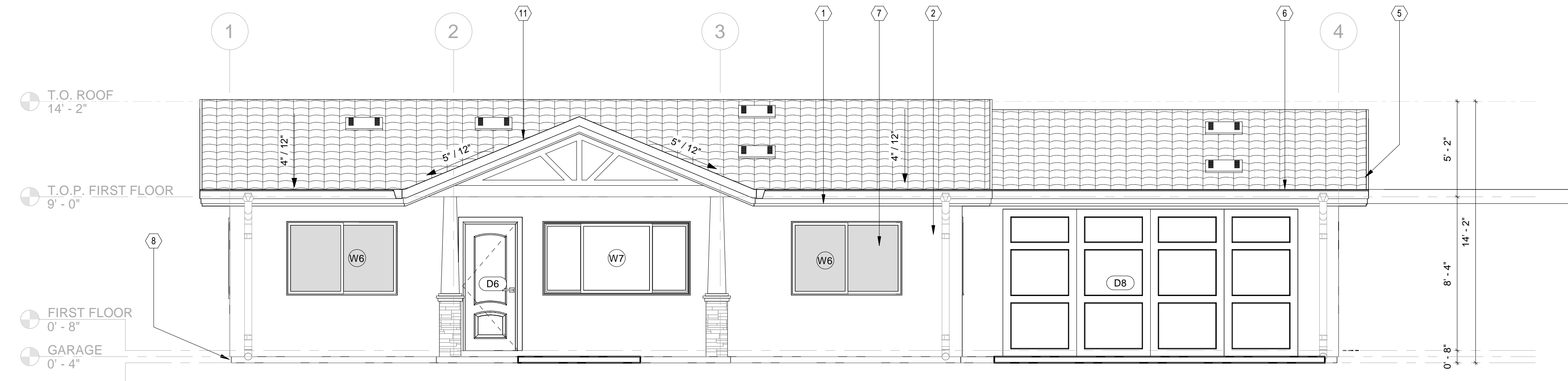
PROJECT ADDRESS:
9306 Hot Springs Rd, Corona,
CA 92883, USA

CLIENT NAME:
MURPHY & NELSON

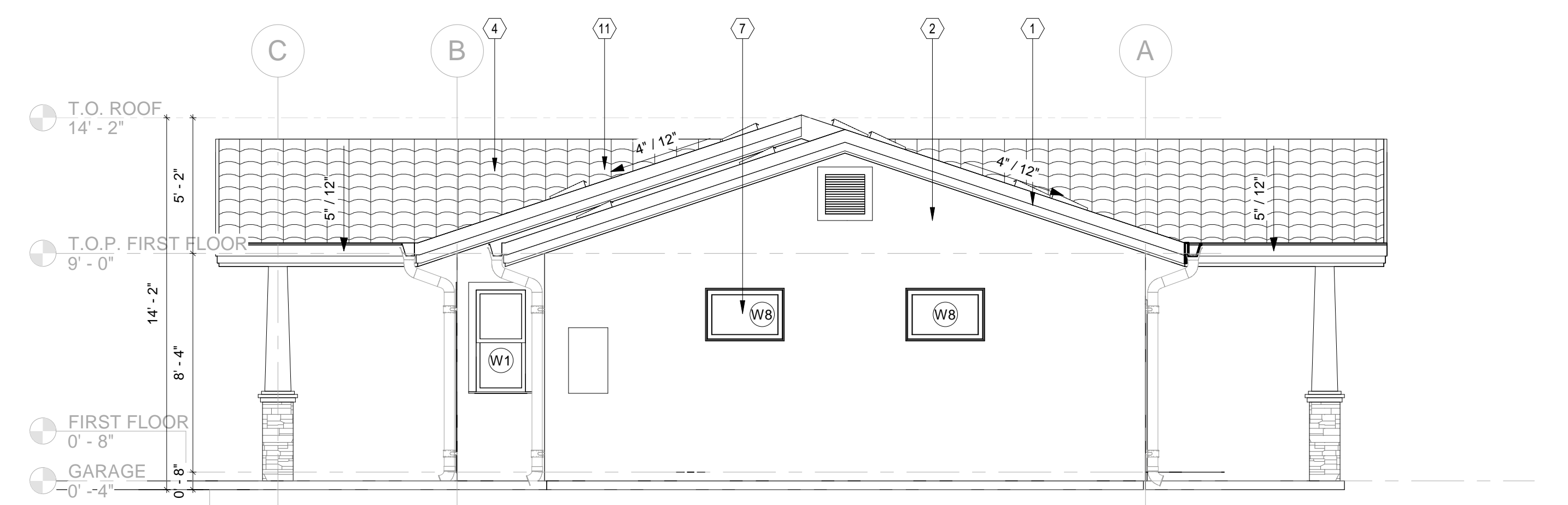
Elevations

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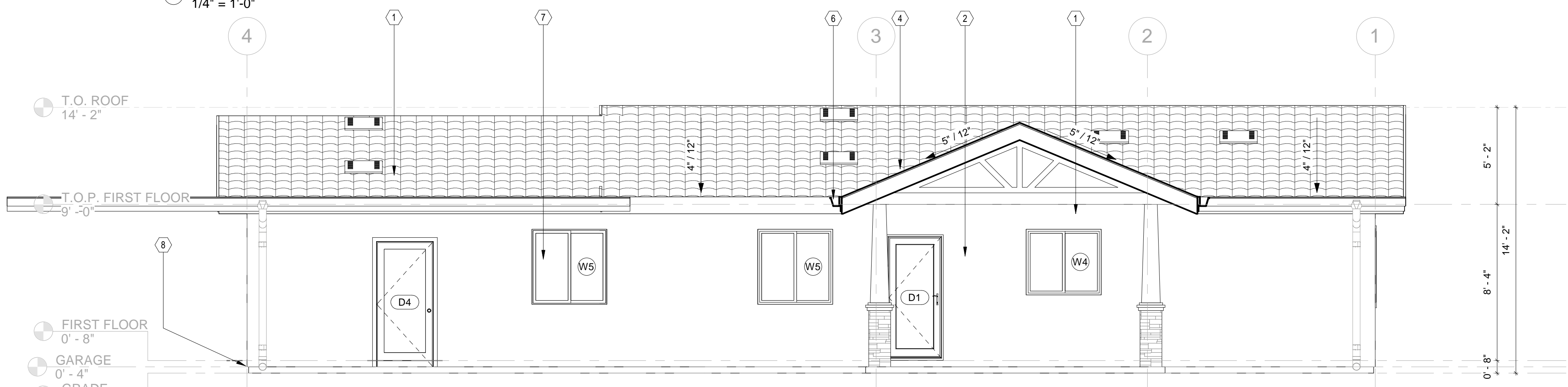
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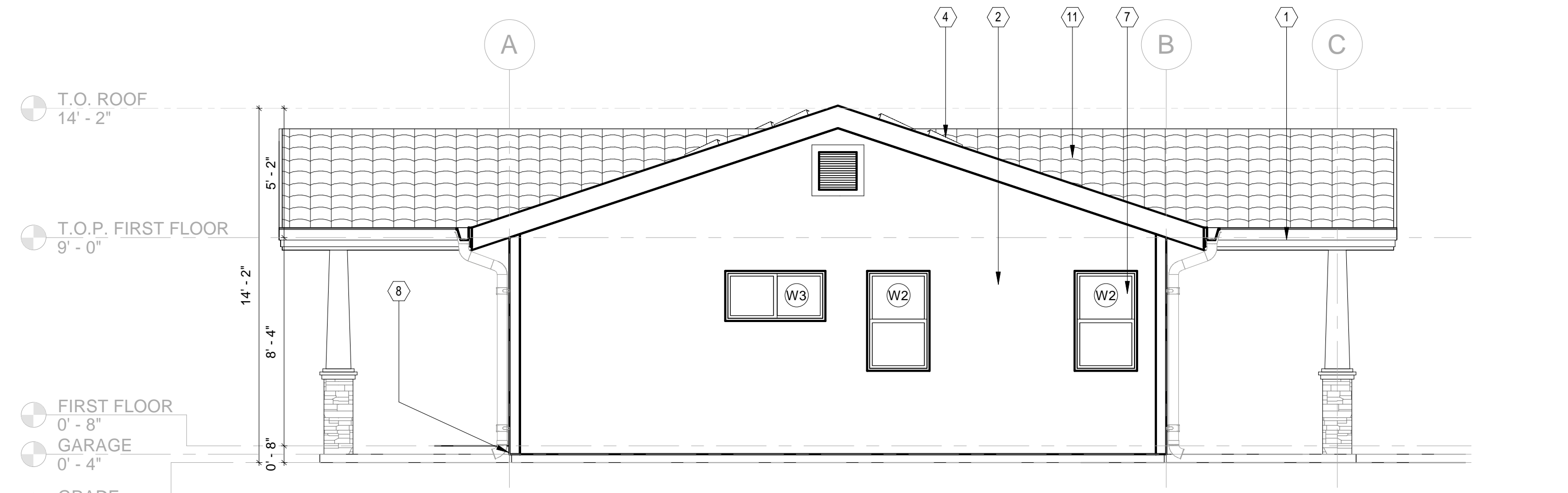
1 FRONT ELEVATION
1/4" = 1'-0"



2 LEFT ELEVATION
1/4" = 1'-0"



3 REAR ELEVATION
1/4" = 1'-0"

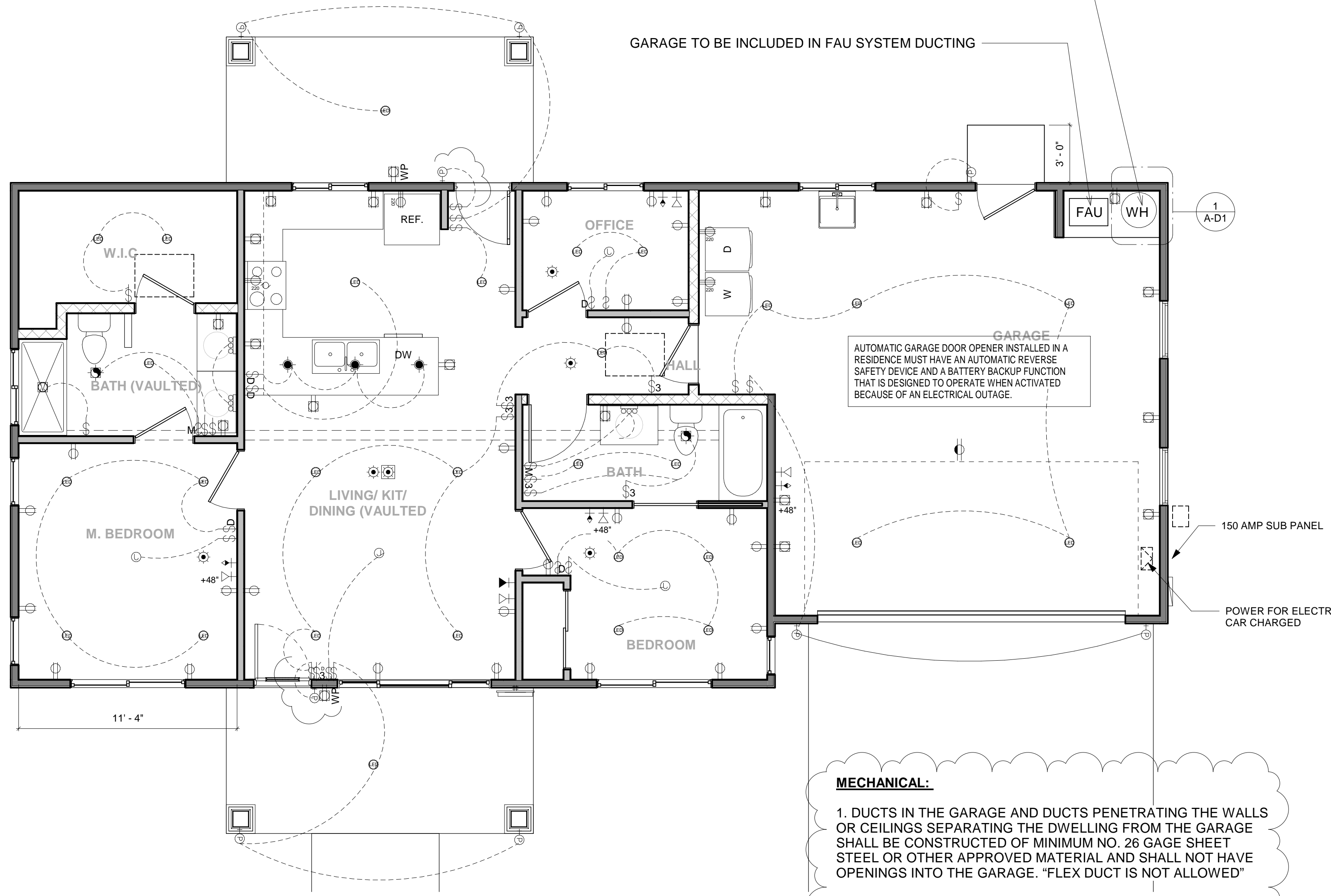


4 RIGHT ELEVATION
1/4" = 1'-0"

CONSTRUCTION REQUIREMENTS

- BATHROOM:**
 - ROOMS CONTAINING BATHTUBS, SHOWERS, SPAS AND SIMILAR FIXTURES SHALL BE PROVIDED WITH AN EXHAUST FAN WITH A MINIMUM CAPACITY OF 50 CFM. DUCTLESS FANS ARE UNACCEPTABLE. CRC R303.3, CBC 1203.4.2.1, CMC T-4-4
 - CLEARANCE FOR WATER CLOSET TO BE A MINIMUM OF 24-INCHES IN FRONT, AND 15-INCHES FROM ITS CENTER TO ANY SIDE WALL OR OBSTRUCTION. CPC 402.5
 - WATER CLOSET SHALL HAVE AN AVERAGE CONSUMPTION OF A MAXIMUM OF 1.28 GALLONS OF WATER PER FLUSH. CPC 403.2.1
 - RESIDENTIAL FAUCETS SHALL NOT EXCEED A WATER SUPPLY FLOW RATE OF 1.5 GALLONS PER MINUTE MEASURED AT 60 PSI. AND 0.8 GALLONS PER MINUTES AT 20 PSI.
 - SHOWER HEADS SHALL NOT EXCEED A WATER SUPPLY FLOW RATE CPC 403.7 OF 1.8 GALLONS OF WATER PER MINUTE AT 80 PSI. CPC 408.2
 - WALL COVERING OF SHOWERS OR TUBS WITH SHOWERS SHALL BE OF SMOOTH, NONABSORBENT SURFACE EXTENDED TO A HEIGHT NOT LESS THAN 6 FEET ABOVE THE FLOOR. CRC R307.2, CBC 1210.2.3
 - THE NET AREA OF THE SHOWER ENCLOSURE SHALL BE 1,024 SQ. INCHES (7.1 SQ. FEET) OR MORE IN CLEAR FLOOR AREA, AND SHALL ALSO BE CAPABLE OF ENCOMPASSING A 30-INCH DIAMETER CIRCLE. CPC 408.6
- KITCHEN:**
 - KITCHEN SHALL HAVE A CLEAR PASSAGEWAY OF NOT LESS THAN 3 FT. CBC 1208.1
 - PROVIDE LOCAL EXHAUST SYSTEM VENTED TO OUTDOORS WITH RATE = 100 CFM. CEC 150(i), ASHRAE STD. 62.2
 - FAUCETS AT KITCHENS SHALL NOT EXCEED A WATER SUPPLY FLOW RATED OF 1.8 GALLONS PER MINUTE MEASURED AT 60 PSI. CDC 403.6
- SAFETY GLAZING SHALL BE PROVIDED AT THE FOLLOWING HAZARDOUS LOCATIONS CRC R308.4 (CBC 2406.4):**
 - WHEN LOCATED WITHIN 60-INCHES OF THE FLOOR SURFACE IN TUBS, SHOWERS, SAUNAS, OR STEAM ROOMS WHEN LOCATED WITHIN 60-INCHES OF THE FLOOR SURFACE IN TUBS, SHOWERS, SAUNAS, OR STEAM ROOMS.
 - WHERE GLAZING AREA IS MORE THAN 9 SQ. FT. IN AREA, WITH THE BOTTOM EDGE LESS THAN 18-INCHES ABOVE THE FLOOR AND TOP EDGE MORE THAN 36-INCHES ABOVE FLOOR.
- ELECTRICAL:**
 - ALL RECEPTACLE OUTLETS IN BATHROOMS, ABOVE KITCHEN COUNTERTOP, CRAWL SPACES, GARAGE, ROOFTOPS, OUTDOOR OUTLETS, WITHIN 6-FEET OF WET BAR SINK/LAUNDRY SINK TO BE PROTECTED BY GROUND FAULT CIRCUIT INTERRUPTER (GFCI). CEC 210.8.
 - ALL RECEPTACLE OUTLETS ARE REQUIRED TO BE LISTED TAMPER RESISTANT. (CEC 406.12 AND 210.52)
 - DELETED
 - AT A MINIMUM, ONE DEDICATED 20 AMP CIRCUIT IS REQUIRED FOR A BATHROOM. (CEC 210.11(C)(2))
 - A GFCI PROTECTED RECEPTACLE IS REQUIRED WITHIN 3 FEET OF THE EDGE OF EACH BASIN IN A BATHROOM. (CEC 210.52(D))
 - RECEPTACLE OUTLETS ARE NOT ALLOWED WITHIN OR OVER A BATHTUB OR SHOWER STALL. (CEC 406.9 (C))
 - SUBPANELS ARE NOT ALLOWED TO BE LOCATED IN BATHROOMS OR CLOTHES CLOSETS. (CEC 240.24(D) AND 240.25(E))
 - CIRCUITS SHARING A GROUNDED CONDUCTOR (NEUTRAL) WITH TWO UNGROUNDED (HOT) CONDUCTORS MUST USE A TWO POLE CIRCUIT BREAKER OR AN IDENTIFIED HANDLE TIE. (CEC 210.4(B)) GROUP NON-CABLE CIRCUITS IN PANEL (CEC 210.4(D))
 - THE KITCHEN COUNTER TOP RECEPTACLES MUST HAVE A MIN. OF 2 DEDICATED 20 AMP CIRCUITS. (CEC 210.52(B))
 - THE RECEPTACLES IN THE DINING AREA, PANTRY, OR BREAKFAST NOOK MUST BE SUPPLIED BY DEDICATED 20 AMP CIRCUITS. (CEC 210.52(B))
 - KITCHEN COUNTER TOPS 12 INCHES OR WIDER MUST HAVE A RECEPTACLE OUTLET. (CEC 210.52(C))
 - KITCHEN COUNTER TOPS MUST HAVE RECEPTACLE OUTLETS SO NO POINT ALONG THE COUNTER WALLS IS MORE THAN 24 INCHES FROM A RECEPTACLE. (CEC 210.52(C))
 - ISLAND AND PENINSULAR COUNTER TOPS MUST HAVE AT LEAST ONE RECEPTACLE. (CEC 210.52(C)(1) AND (2))
 - KITCHEN COUNTERTOP RECEPTACLES SHALL BE READILY ACCESSIBLE, AND LOCATED NO MORE THAN 20 INCHES ON OR ABOVE, OR MORE THAN 12 INCHES BELOW THE COUNTERTOP SURFACE. (CEC 210.52(C)(5))
 - THE SPACING FOR GENERAL RECEPTACLE OUTLETS MUST BE LOCATED SO THAT NO POINT ON ANY WALL OR FIXED GLASS IS OVER 6 FEET FROM A RECEPTACLE OUTLET. (CEC 210.52(A))
 - HALLWAY 10 FEET OR MORE MUST HAVE AT LEAST ONE RECEPTACLE OUTLET. (CEC 210.52(H))
 - LAUNDRY ROOMS MUST HAVE AT LEAST ONE DEDICATED 20 AMP RECEPTACLE CIRCUIT. (CEC 210.11 (C) (2))
- SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS (R314.3):**
 - IN EACH SLEEPING ROOM.
 - OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
 - ON EACH ADDITIONAL STORY, INCLUDING BASEMENTS AND HABITABLE ATTICS.

SMOKE ALARMS SHALL BE HARDWIRED WITH BATTERY BACK-UP AND INTERCONNECTED UNLESS EXEMPTED IN ACCORDANCE WITH SECTIONS R314.4 & R314.5.
- CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS (R315.1.4):**
 - OUTSIDE OF EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S).
 - ON EVERY LEVEL OF THE DWELLING UNIT INCLUDING BASEMENTS.
- EMERGENCY EGRESS WINDOWS SHALL BE MIN. 5.7 SQ. FT, MIN. NET WIDTH 20" AND MIN. NET HEIGHT 24". BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44" ABOVE FINISHED FLOOR. (R310) WINDOWS ABOVE FIRST LEVEL AND HAVING SILL HEIGHT < 24" SHALL BE PROTECTED BY GUARDS (R312.2.1)**



1 PROPOSED ELECTRICAL PLAN
1/4" = 1'-0"



- PLUMBING NOTES:**
- WATER PIPING MATERIALS WITHIN A BUILDING SHALL BE IN ACCORDANCE WITH SEC. 604.1 OF THE CALIFORNIA PLUMBING CODE. PEX, CPVC AND OTHER PLASTIC WATER PIPING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SEC. 604 OF THE CPC. INSTALLATION STANDARDS OF APPENDIX (I) OF THE CPC AND MANUFACTURERS RECOMMENDED INSTALLATION STANDARDS. CPVC WATER PIPING REQUIRES A CERTIFICATION OF COMPLIANCE AS SPECIFIED IN SEC 604.1.(D) OF THE CPC PRIOR TO PERMIT ISSUANCE. NOTE PIPE MATERIAL ON PLANS.
- WATER CLOSETS SHALL HAVE AN AVERAGE WATER CONSUMPTION OF NOT MORE THAN 1.28 GALLONS PER FLUSH. (411.2 CPC) NOTE ON PLANS.
 - SHOWER HEADS SHALL HAVE A WATER FLOW NOT TO EXCEED 2.5 GALLONS PER MINUTE AT 80 PSI. (408.2 CPC) NOTE ON PLANS.
 - THE MAXIMUM FLOW RATE OF LAVATORY FAUCETS SHALL NOT EXCEED 1.5 GALLONS PER MINUTE AT 60 PSI. (403.7 CPC) NOTE ON PLANS.
- ELECTRICAL NOTES:**
- BATHROOM RECEPTACLES ARE TO BE SUPPLIED BY AT LEAST ONE 20-AMP BRANCH CIRCUIT. THIS CIRCUIT SHALL HAVE NO OTHER OUTLETS. CEC 210.11 (C)(3) & 210.52 (B & D)
 - AT LEAST ONE RECEPTACLE OUTLET READILY ACCESSIBLE FROM GRADE AND NOT MORE THAN 6'-6" ABOVE GRADE LEVEL SHALL BE INSTALLED AT THE FRONT AND BACK OF THE DWELLING. CEC 210.52 (E)(1 & 2)
 - ALL JAB COMPLAINT LIGHT SOURCES, EXCEPT THOSE IN CLOSETS LESS THAN 70 SQUARE FEET AND THOSE IN HALLWAYS, SHALL BE CONTROLLED BY DIMMERS OR VACANCY SENSORS (150)(K)(2) & TABLE 150.0-A CEC) JAB COMPLAINT LIGHT SOURCES INCLUDE LIGHT SOURCES IN CEILING RECESSED DOWNLIGHT LUMINAIRES AND GU-24 SOCKETS CONTAINING LED LIGHT SOURCES.
 - ALL RESIDENTIAL OUTDOOR LIGHTING PERMANENTLY MOUNTED TO THE RESIDENCE OR OTHER BUILDINGS ON THE SAME LOT BE HIGH-EFFICACY AND MEET THE FOLLOWING REQUIREMENTS (SHOW ON THE SHEET A-2.1) (150)(K)(3) CEC)
 - LIGHTS SHALL COMPLY WITH ONE OF THE TWO OPTIONS BELOW:
 - CONTROLLED BY A PHOTOCELL AND MOTION SENSOR. CONTROLS THAT OVERRIDE TO ON SHALL NOT BE ALLOWED UNLESS THE OVERRIDE AUTOMATICALLY REACTIVATES THE MOTION SENSOR WITHIN 6 HOURS.
 - CONTROLLED BY (1) PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL OR (2) ASTRONOMICAL TIME CLOCK OR (3) ENERGY MANAGEMENT CONTROL SYSTEM MEETING THE REQUIREMENTS OF 150(K)(3A).
 - LIGHTS SHALL BE CONTROLLED BY A MANUAL ON AND OFF SWITCH THAT DOES NOT OVERRIDE TO ON THE AUTOMATIC ACTIONS OF ITEM I OR ITEM II CHOSEN ABOVE.

WATER HEATER INSTALLED IN RESIDENTIAL GARAGES, SHALL BE INSTALLED SO THAT ALL THE BURNERS AND BURNER-IGNITION DEVICES ARE LOCATED NOT LESS THAN 18" ABOVE THE FLOOR UNLESS LISTED AS FLAMMABLE VAPOR IGNITION RESISTANT [CPC 507.13].

AUTOMATIC GARAGE DOOR OPENER INSTALLED IN A RESIDENCE MUST HAVE AN AUTOMATIC REVERSE SAFETY DEVICE AND A BATTERY BACKUP FUNCTION THAT IS DESIGNED TO OPERATE WHEN ACTIVATED BECAUSE OF AN ELECTRICAL OUTAGE.

MECHANICAL:

- DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF MINIMUM NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL NOT HAVE OPENINGS INTO THE GARAGE. "FLEX DUCT IS NOT ALLOWED"
- FIRE-BLOCKING IS REQUIRED AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES, AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION [CRC R302.11(4)].

- ELECTRICAL NOTES:**
- FOR ALL 125-VOLT, SINGLE PHASE, 15- AND 20-AMP RECEPTACLES, GFCI OUTLETS ARE REQUIRED FOR ALL KITCHEN RECEPTACLES THAT ARE DESIGNED TO SERVE COUNTERTOP SURFACES, BATHROOMS, UNDERFLOOR SPACES OR BELOW GRADE LEVEL, IN EXTERIOR OUTLETS, LAUNDRY AREAS, WITHIN 6' OF UTILITY/WET BAR SINKS, DISHWASHERS AND IN ALL GARAGE, INCLUDING OUTLETS DEDICATED TO A SINGLE DEVICE OR GARAGE DOOR OPENER [CEC 210.8 (A)].
 - FOR ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMP RECEPTACLES, AFCI OUTLETS ARE REQUIRED FOR KITCHEN, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY ANY OF THE MEANS DESCRIBED IN [CEC 210.12 (A)].
 - ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED OUTDOORS, GARAGES, ETC. SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL [CEC 210.8(A)(1)-(10)]. RECEPTACLES LOCATED OUTDOORS SHALL BE WEATHER RESISTANT, TAMPER RESISTANT, ENCLOSED IN AN APPROVED BUBBLE COVER [CEC 406.9, 406.12, 210.52(E)].

AT INSTALL VERIFY RECEPTACLES ARE IN ACCORDANCE WITH [CEC 210.52]:

- (A)(1) SPACING: RECEPTACLE OUTLETS TO BE INSTALLED, SO THAT NO POINT ALONG THE WALL IS FURTHER THAN 6' FROM AN OUTLET.
- (C)(2)&(3) KITCHEN: PROVIDE RECEPTACLES WITHIN 2FT OF KITCHEN SINK AND AT 4FT ON CENTER AT COUNTERS AND ISLANDS (12" OR MORE IN WIDTH)
- (C)(2)&(3) PROVIDE AT LEAST ONE OUTLET FOR ISLANDS OR PENINSULAR COUNTER SPACES

- Lightin**
- WALL MOUNTED INCANDESCENT MULTI-LIGHT FIXTURE
 - WALL MOUNTED FLUORESCENT LIGHT FIXTURE
 - WALL MOUNTED INCANDESCENT LIGHT FIXTURE
 - WALL MOUNTED FLUORESCENT LIGHT
 - WALL MOUNTED UP LIGHT @ 16" A.F.F. U.N.O
 - SURFACE MOUNTED FLUORESCENT CEILING LIGHT FIXTURE
 - SURFACE MOUNTED INCANDESCENT CEILING LIGHT FIXTURE
 - PENDANT LIGHT FIXTURE
 - 4" RECESSED FLUORESCENT LIGHT FIXTURE
 - 6" RECESSED LED LIGHT FIXTURE
 - 4" RECESSED INCANDESCENT LIGHT FIXTURE
 - 6" RECESSED INCANDESCENT LIGHT FIXTURE
 - 1" X 4" SURFACE MOUNTED FLUORESCENT CEILING LIGHT FIXTURE
 - 2" X 4" SURFACE MOUNTED FLUORESCENT CEILING LIGHT FIXTURE
 - SURFACE MOUNTED FLUORESCENT UNDER CABINET LIGHT FIXTURE
 - SURFACE MOUNTED FLUORESCENT SOFFIT LIGHT FIXTURE
 - RECESSED LIGHT FIXTURE ON PHOTOCELL
 - SURFACE MOUNTED LIGHT FIXTURE ON PHOTOCELL
 - VAPOR PROOF RECESSED LIGHT FIXTURE, UL LISTED
 - RECESSED WALL WASH INCANDESCENT MULTI-LIGHT FIXTURE
 - RECESSED WALL WASH INCANDESCENT LIGHT FIXTURE
 - RECESSED LIGHT-EMITTING DIODE FIXTURE
- Switche**
- SINGLE SWITCH
 - 3-WAY SWITCH
 - 4-WAY SWITCH
 - SWITCH W/ MANUAL-ON/ AUTOMATIC-OFF OCCUPANT MOTION SENSOR 30" MIN. NO MANUAL OVERRIDE
 - DIMMER SWITCH
 - 3-WAY DIMMER SWITCH
 - 4-WAY DIMMER SWITCH
 - DOOR JAMB SWITCH
- Outlets**
- 110V CONV ARC FAULT CIRCUIT INTERRUPTED DUPLEX OUTLET - UNDER CABINET
 - 110V CONV ARC FAULT CIRCUIT INTERRUPTED DUPLEX OUTLET - HALF HOT
 - 110V CONV ARC FAULT CIRCUIT INTERRUPTED DUPLEX CEILING OUTLET - HALF HOT
 - 220V OUTLET
 - GROUND FAULT INTERRUPTED DUPLEX OUTLET
 - WEATHERPROOF GROUND FAULT INTERRUPTED DUPLEX OUTLET
 - FLOOR OUTLET, ROUND W/ LOW VOLTAGE OUTLET
 - JUNCTION BOX
- General**
- DOOR CHIMES
 - PUSH-BUTTON
 - SMOKE DETECTOR/ ALARM HARD WIRED IN A SERIES (ALARMS SHALL BE INTERCONNECTED SEC 907.2.10) & W/ BATTERY BACK-UP
 - WALL MOUNTED SMOKE DETECTOR/ ALARM HARD WIRED IN A SERIES (ALARMS SHALL BE INTERCONNECTED SEC 907.2.10) & W/ BATTERY BACK-UP
 - SMOKE DETECTOR AND CARBON MONOXIDE ALARM COMBO HARD WIRED IN A SERIES (ALARMS SHALL BE INTERCONNECTED SEC 907.2.10) & W/ BATTERY BACK-UP
 - TELEPHONE JACK
 - CABLE TELEVISION JACK
 - COMPUTER DATA JACK
 - DISPOSAL
 - CENTRAL VACUUM SYSTEM
 - SECURITY SYSTEM PANEL
 - CABLE PANEL
 - ELECTRICAL PANEL (200AMP)
 - TELEPHONE PANEL
 - 13" X 4" ADDRESS SIGN ON PHOTO CELL
- Wate**
- HOSE BIB W/ NON-REMOVABLE BACK FLOW PREVENTER DEVICE
 - HOSE BIB W/ SHUT-OFF/ NON-REMOVABLE BACK FLOW PREVENTER DEVICE
 - COLD WATER STUB FOR ICE MAKER
 - TANKLESS WATER HEATER MOUNTED @ 18" MIN. A.F.F., PROVIDE GAS, WATER, AND POWER HOOK -UP
- Gas**
- FUEL GAS
 - FIREPLACE KEYSWITCH
 - GAS COMPANY RISER- 250 STANDARD SFD METER PER S.D.G.& E.
- Climate**
- THERMOSTAT
 - 220V CIRCUIT BREAKER FOR A.C. COMPRESSOR-30" CLR IN FRONT, 15" CLR. E.A. SIDE
 - SPLIT AIR CONDITIONING UNIT
- Exhaust**
- ENERGY STAR EXHAUST FAN 50 CFM, MIN. CONTROL BY A HUMIDISTAT CAPABLE OF BEING ADJUSTED BETWEEN RELATIVE HUMIDITY RANGE OF 50%-80%, VENTED TO OUTSIDE AIR
 - ENERGY STAR EXHAUST FAN AND FLUORESCENT LIGHT FIXTURE COMBO 50 CFM, MIN. CONTROL BY A HUMIDISTAT CAPABLE OF BEING ADJUSTED BETWEEN RELATIVE HUMIDITY RANGE OF 50%-80%, VENTED TO OUTSIDE AIR
 - IAQ FAN
 - OVER HEAD EXHAUST HOOD ABOVE COOK TOP VENTED DIRECTLY TO OUTSIDE AIR, PROVIDE 100 CFM, MIN.
 - DRYER EXHAUST DUCT 4" DIA. MIN. VENTED TO OUTSIDE W/ BACKDRAFT DAMPER, EXHAUST DUCT LENGTH IS LIMITED TO 14' WITH 2 ELBOWS MAX.

PREPARED BY:



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MOKSUD.RAHMAN@GMAIL.COM



PROJECT:

PROPOSED ADU AT REAR OF (E) S.F.R.

REVISIONS:

No.	Description	Date
1	Building Corrections	2022.11.10

PROJECT ADDRESS:
9306 Hot Springs Rd, Corona, CA 92883, USA

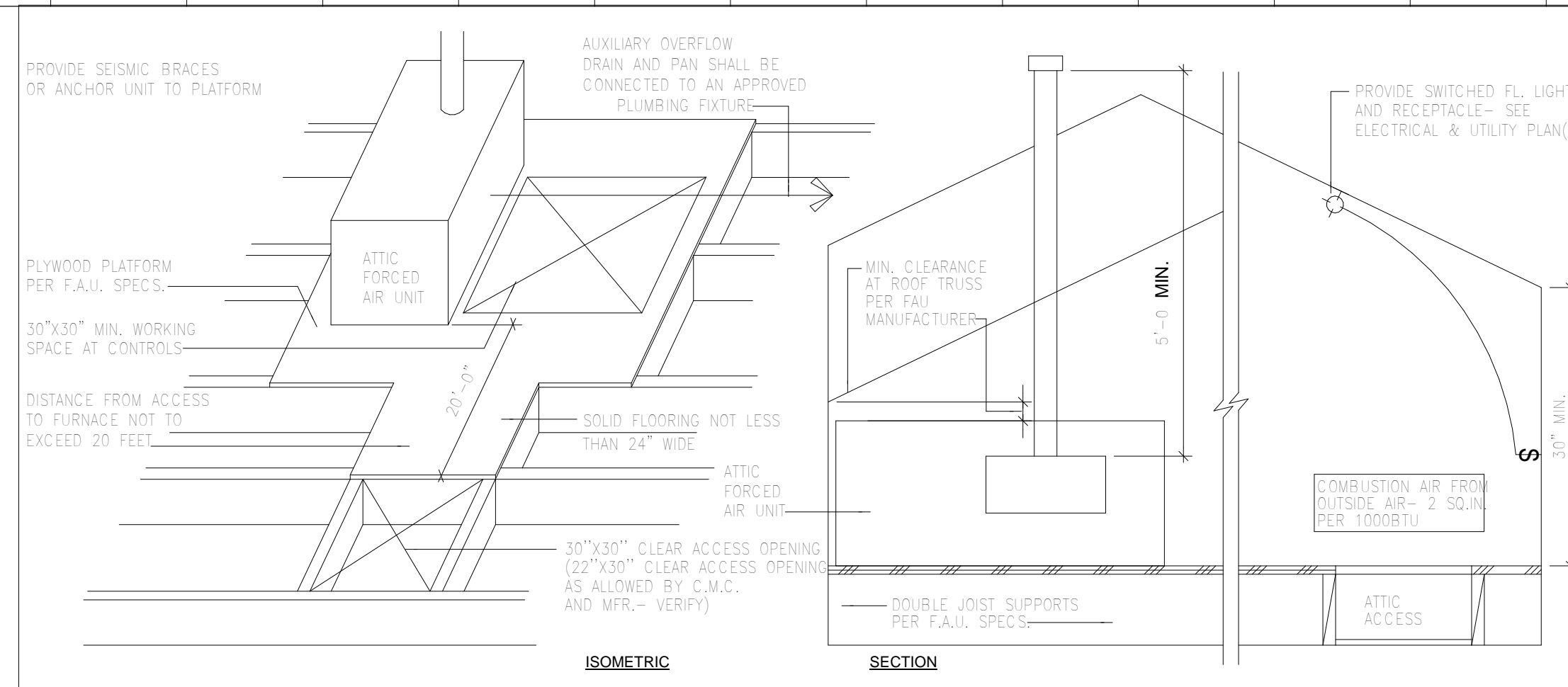
CLIENT NAME:
MURPHY & NELSON

ADU Electrical

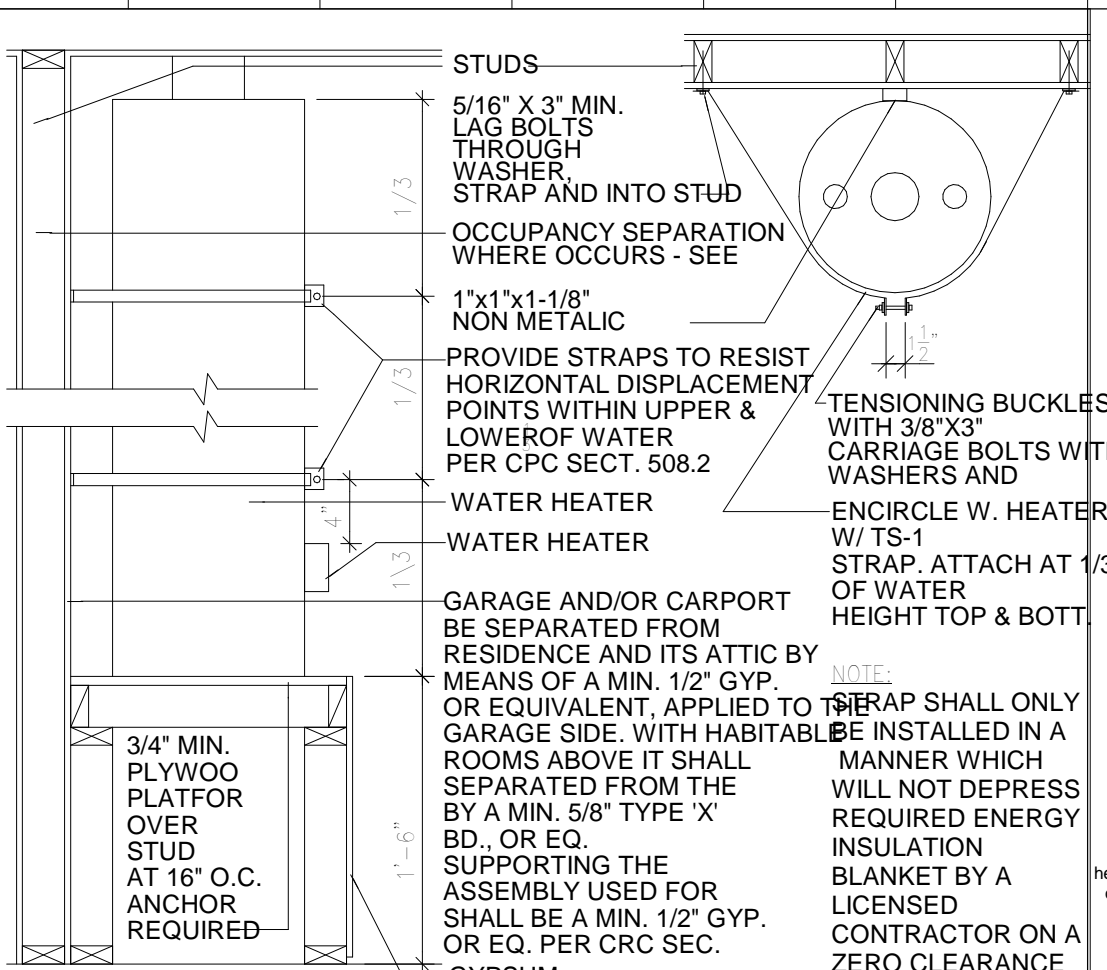
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Date	11/29/2022 7:53:38 AM
Drawn by	Author
Checked by	Checker

A6

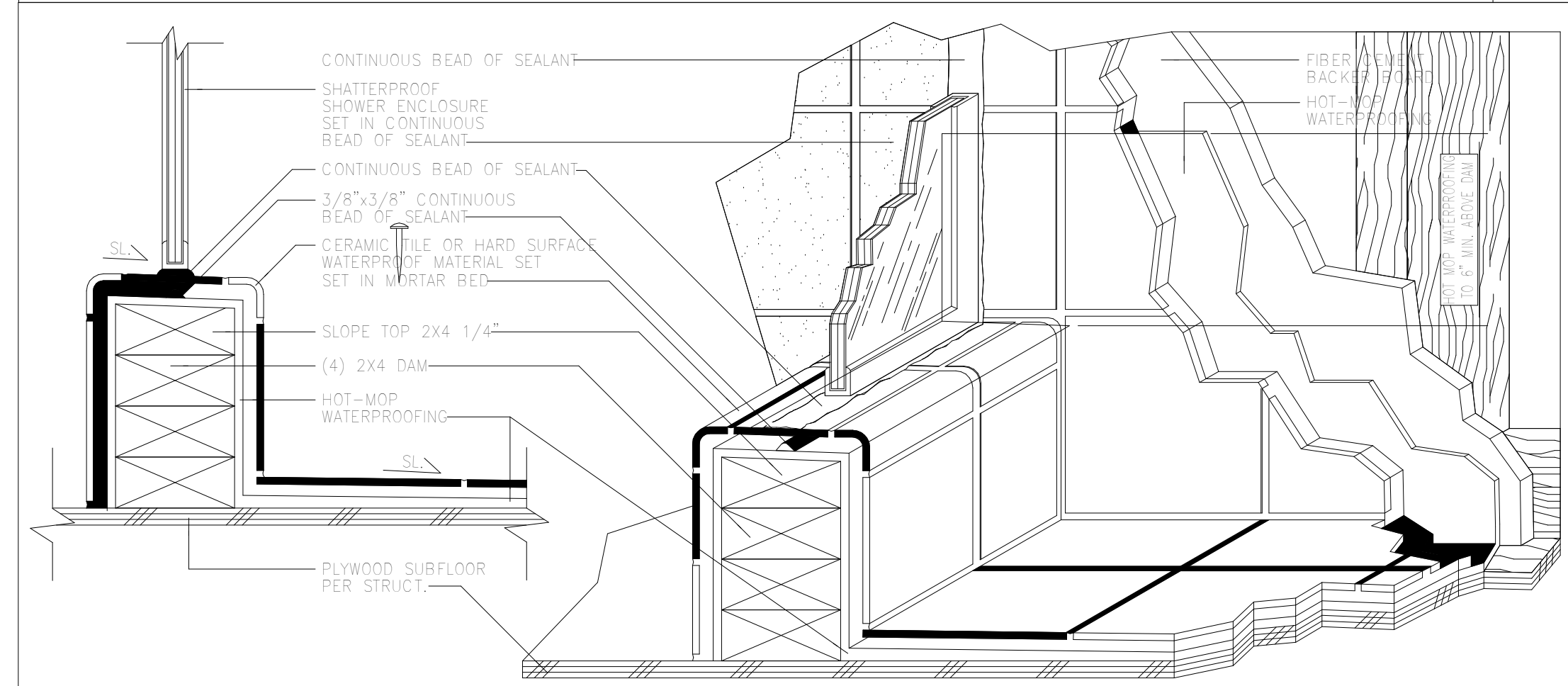
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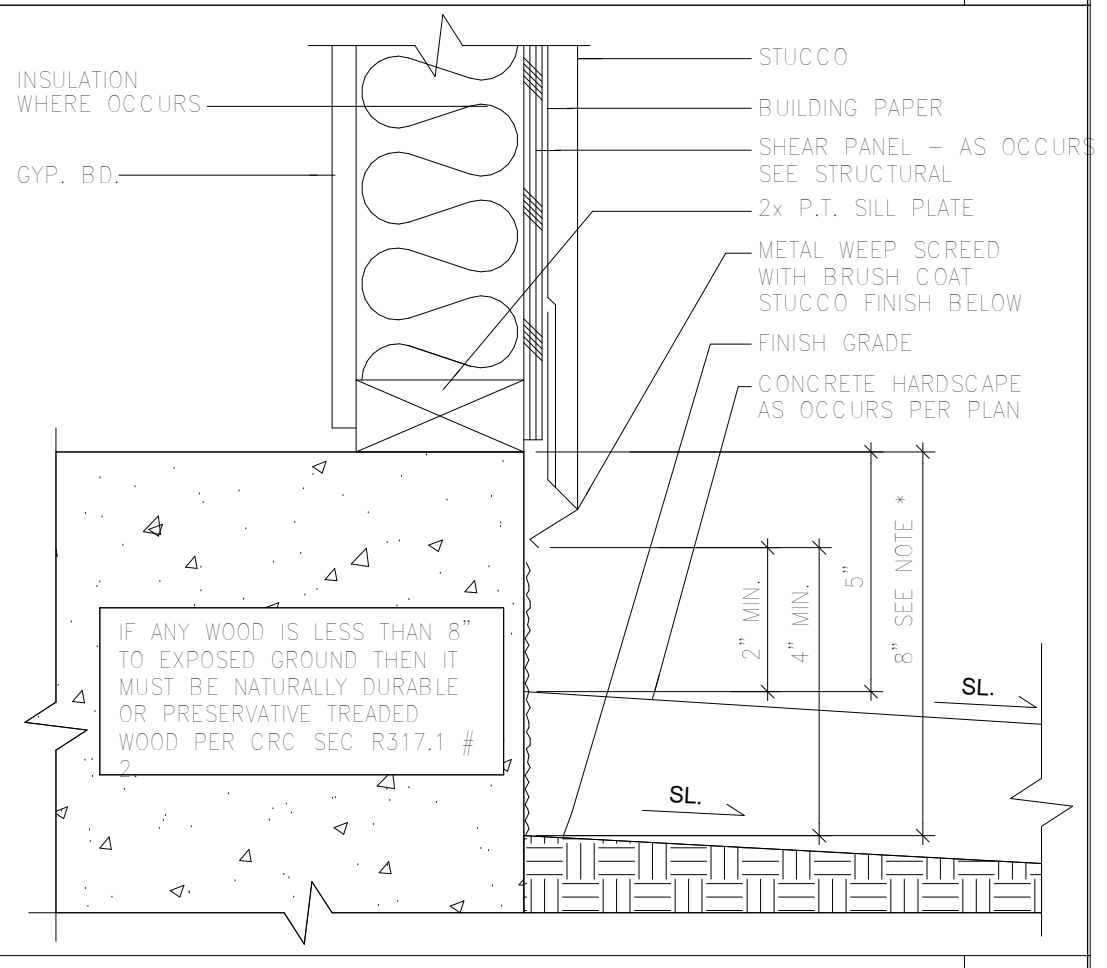
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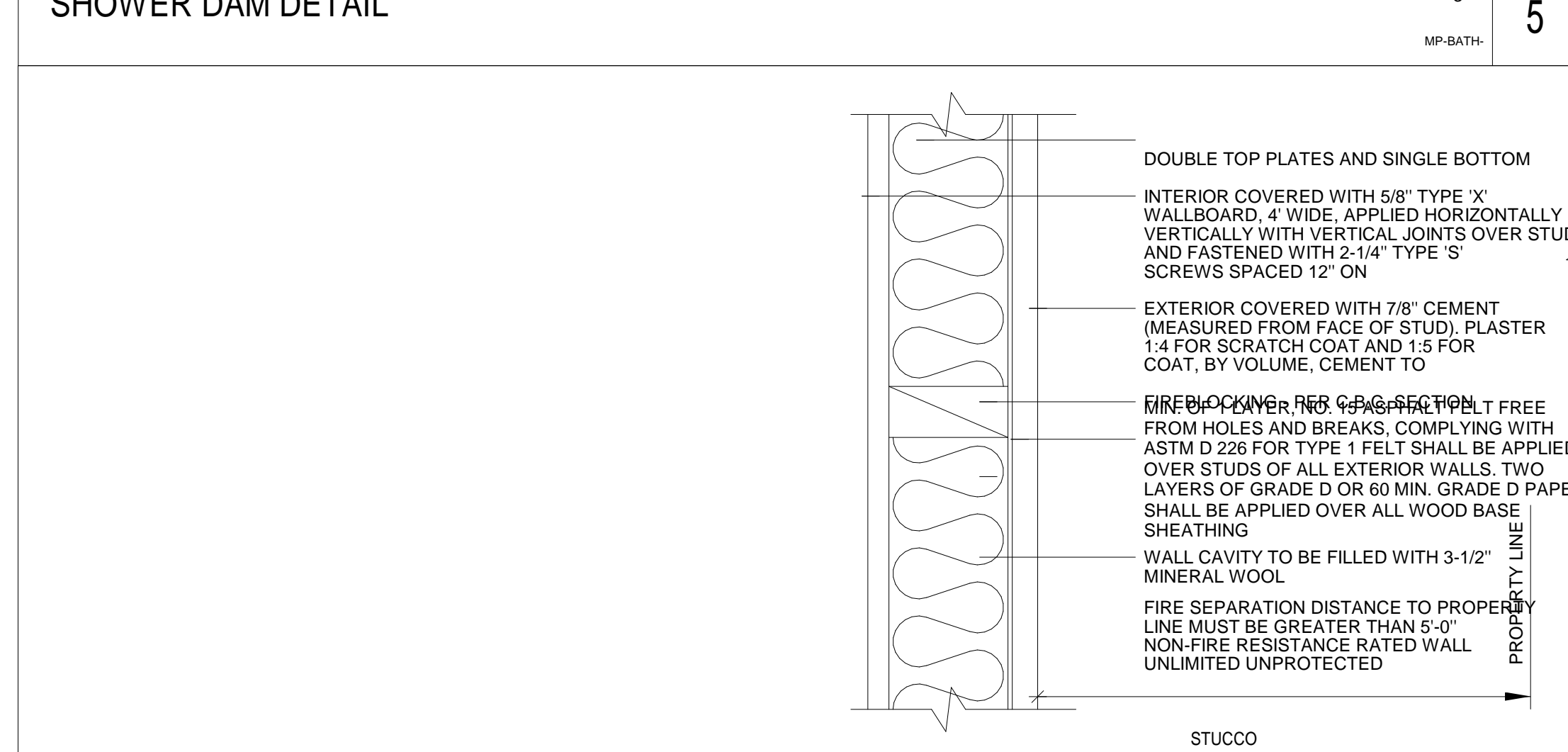
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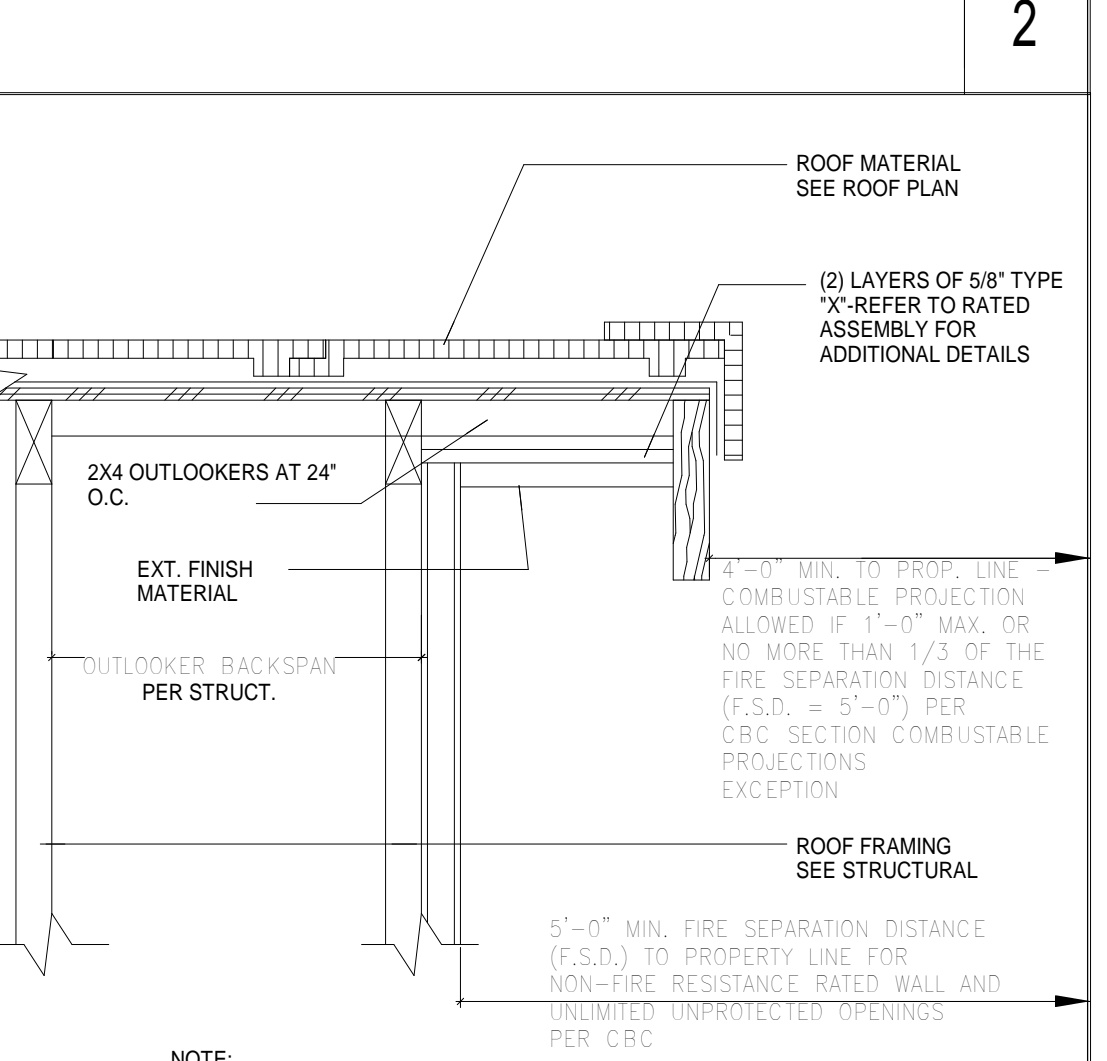
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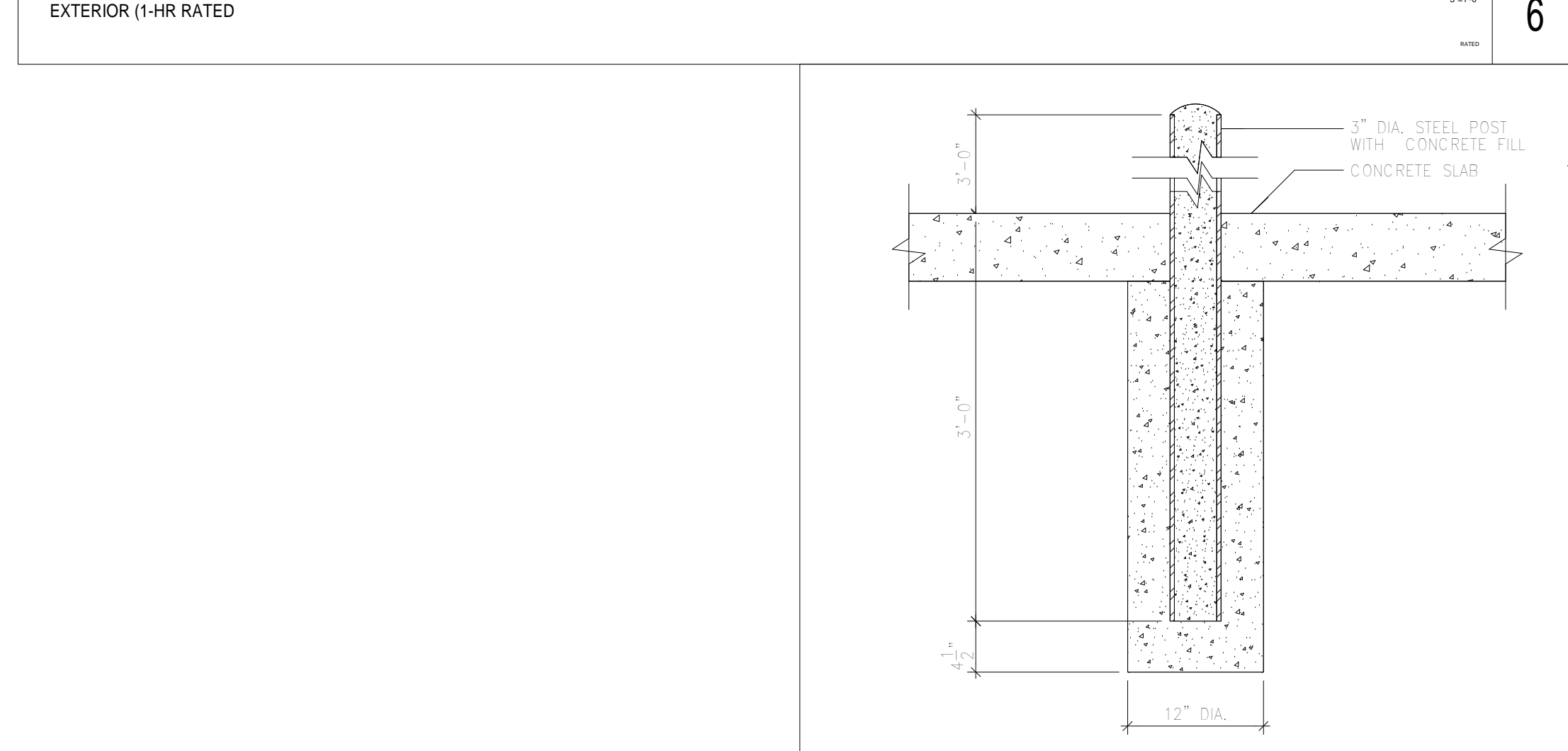
STUCCO SCREED 2 3' =



EXTERIOR (1-HR RATED) 6 5'-0" =



1 HOUR EAVE & RAKE 3 1-1/2" =



STEEL PIPE BOLLARD 7 1" =

PREPARED BY:

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Stamp:

PROJECT:

PROPOSED ADU AT REAR OF (E) S.F.R.

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:
9306 Hot Springs Rd, Corona,
CA 92883, USA

CLIENT NAME:
MURPHY & NELSON

Architectural Details

Project number: 22-2157
Date: 11/29/2022 7:53:39 AM
Drawn by: Author
Checked by: Checker

County of Riverside Building & Safety

4080 Lemon St. 9th Floor,
Riverside, CA 92502

APPROVED

12/08/2022 4:22:07 PM
REVIEWED BY: jhurigan

Approval of these plans shall not be construed to be a permit for, or an approval of, any violations of any of the provisions of the state or county laws. This set of plans must be kept on the job until completion.

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes August 2019 Supplement)

PREPARED BY:



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Stamp:



PROJECT:

PROPOSED ADU AT REAR OF (E) S.F.R.

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

9306 Hot Springs Rd, Corona,
CA 92883, USA

CLIENT NAME:

MURPHY & NELSON

General Notes

Project number: 22-2157

Date: 11/29/2022 7:53:39 AM

Drawn by: Author

Checked by: Checker

A-GRN-1

Scale

Y N/A RESPON PARTY = YES NOT APPLICABLE RESPONSIBLE PARTY (ie ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL

301.1 SCOPE Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

- ABBREVIATION DEFINITIONS:**
- HCD Department of Housing and Community Development
 - BSC California Building Standards Commission
 - DSA-SS Division of the State Architect, Structural Safety
 - OSHPD Office of Statewide Health Planning and Development
 - LR Low Rise
 - HR High Rise
 - AA Additions and Alterations
 - N New

CHAPTER 4 RESIDENTIAL MANDATORY MEASURES

DIVISION 4.1 PLANNING AND DESIGN

SECTION 4.102 DEFINITIONS

4.102.1 DEFINITIONS The following terms are defined in Chapter 2 and are included here for reference)

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLE. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT

4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by the use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1, 4.106.4.2, or 4.106.4.3 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.

- Exceptions:
1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
 - 1.1 Where there is no commercial power supply.
 - 1.2 Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than \$400.00 per dwelling unit.
 2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous, enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2 New multifamily dwellings. If residential parking is available, ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

- Notes:
1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
 2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.2.1 Electric vehicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. Where common use parking is provided at least one EV space shall be located in the common use parking area and shall be available for use by all residents.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.106.4.2.1.1 Electric Vehicle Charging Stations (EVCS) When EV chargers are installed, EV spaces required by Section 4.106.2.2, Item 3, shall comply with at least one of the following options:

1. The EV space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.
2. The EV space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.1.1 and Section 4.106.4.2.2, Item 3.

Note: Electric Vehicle charging stations serving public housing are required to comply with the California Building Code, Chapter 11B.

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).
 2. The minimum width of each EV space shall be 9 feet (2743 mm).
 3. One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).
- a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.3 Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.2.4 Multiple EV spaces required. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

4.106.4.3 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE. The construction documents shall identify the location of the EV spaces.

Notes:

1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.3.1 Number of required EV spaces. The number of required EV spaces shall be based on the total number of parking spaces provided for all types of parking facilities in accordance with Table 4.106.4.3.1. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED EV SPACES
0-9	0
10-25	1
26-50	2
51-75	4
76-100	5
101-150	7
151-200	10
201 and over	6 percent of total

4.106.4.3.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486mm).
2. The minimum width of each EV space shall be 9 feet (2743mm).

4.106.4.3.3 Single EV space required. When a single EV space is required, the EV space shall be designed in accordance with Section 4.106.4.2.3.

4.106.4.3.4 Multiple EV spaces required. When multiple EV spaces are required, the EV spaces shall be designed in accordance with Section 4.106.4.2.4.

4.106.4.3.5 Identification. The service panels or sub-panels shall be identified in accordance with Section 4.106.4.2.5.

4.106.4.3.6 Accessible EV spaces. In addition to the requirements in Section 4.106.4.3, EV spaces for hotels/motels and all EVSE, when installed, shall comply with the accessibility provisions for the EV charging stations in the California Building Code Chapter 11B.

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL 4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

4.303 INDOOR WATER USE

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.2 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code and shall meet the applicable standards referenced in Table 1701.1.1 of the California Plumbing Code.

4.304 OUTDOOR WATER USE

4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWEL0), whichever is more stringent.

NOTES: 1. The Model Water Efficient Landscape Ordinance (MWEL0) is located in the California Code Regulations, Title 23, Chapter 2.7, Division 2. MWEL0 and supporting documents, including water budget calculator, are available at: <https://www.water.ca.gov/>



DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING 4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4.

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION

4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
 - a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
 - b. Roof and yard drainage, including gutters and downspouts.
 - c. Space conditioning systems, including condensers and air filters.
 - d. Landscape irrigation systems.
 - e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifications required by the enforcing agency or this code.

4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq, are not required to comply with the organic waste portion of this section.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

4.501.1 SCOPE. The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS

5.102.1 DEFINITIONS The following terms are defined in Chapter 2 and are included here for reference)

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of Regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes August 2019 Supplement)

PREPARED BY:



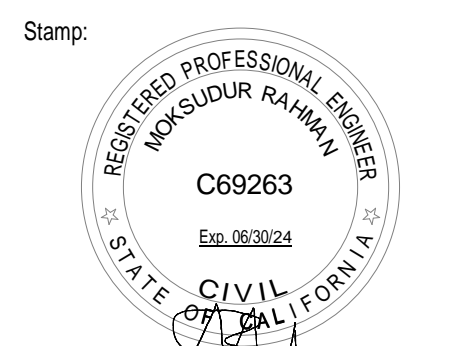
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PROJECT:

PROPOSED ADU AT REAR OF (E) S.F.R.

REVISIONS:		
No.	Description	Date

PROJECT ADDRESS:
9306 Hot Springs Rd, Corona,
CA 92883, USA

CLIENT NAME:
MURPHY & NELSON

General Notes

Project number	22-2157
Date	11/29/2022 7:53:40 AM
Drawn by	Author
Checked by	Checker

A-GRN-2

Scale

Y N/A RESPON. PARTY = YES RESPONSIBLE PARTY (ie ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)
= NOT APPLICABLE

CHAPTER 7 INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

- Notes:
1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
 2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

- Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.



TABLE 4.504.2 - SEALANT VOC LIMIT
(Less Water and Less Exempt Compounds in Grams per Liter)

SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS
(GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS)

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340
1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS	
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE	
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.	

TABLE 4.504.5 - FORMALDEHYDE LIMITS
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD	0.13
1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93124.	
2. THIS TABLE DOES NOT APPLY TO MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).	

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the testing and product requirements of at least one of the following:

1. Carpet and Rug Institute's Green Label Plus Program.
2. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" Version 1.1, February 2010 (also known as Specification 01350).
3. NSF/ANSI 140 at the Gold level.
4. Scientific Certifications Systems Indoor Advantage Gold.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed, at least 80% of floor area receiving resilient flooring shall comply with one or more of the following:

1. Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350), certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database.
2. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children & Schools program).
3. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program.
4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers", Version 1.1, February 2010 (also known as Specification 01350).

4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARE's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European EN 13986 standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL

4.505.1 General. Buildings shall meet or exceed the provisions of the California Building Standards Code

4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section.

4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other verified methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.
 - a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of adjustment.
 - b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)

Notes:
1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
2. Lighting integral to bathroom exhaust fans shall comply with the California Energy Code.

4.507 ENVIRONMENTAL COMFORT

4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment Selection), or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.

Y N/A RESPON. PARTY

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g) of ROG.
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

REACTIVE ORGANIC COMPOUND (ROC) Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503 FIREPLACES
4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL
4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, California Code of Regulations Title 17, commencing with section 94507.

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of California Code of Regulations Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.
2. Field verification of on-site product containers.

TABLE 4.504.1 - ADHESIVE VOC LIMIT
(Less Water and Less Exempt Compounds in Grams per Liter)

ARCHITECTURAL APPLICATIONS	VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1- IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.
2- ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

Y N/A RESPON. PARTY

Y N/A RESPON. PARTY

Y N/A RESPON. PARTY

CERTIFICATE OF COMPLIANCE CFIR-NCB-01-E
Prescriptive Newly Constructed Buildings (Page 1 of 8)
 Project Name: Hot Springs ADU - Date Prepared: 2022-09-19

A. General Information

01	Project Name	Hot Springs ADU	02	Date Prepared	2022-09-19/2022-09-19
03	Project Location	9306 Hot Springs Road	04	Building Front Orientation (deg or cardinal)	90
05	CA City	Corona	06	Number of Dwelling Units	1
07	Zip Code	92883	08	Fuel Type	Natural gas
09	Climate Zone	10	10	Total Conditioned Floor Area (ft ²)	1000
11	Building Type	Single Family	12	Slab Area (ft ²)	1000
13	Project Scope	Newly Constructed	14	Fenestration Exceptions	NA (do not allow other entries)

B. Opaque Surface Details - Framed Walls/ Framed Floors/ Concrete Raised Floors (Section 150.1(c)(1))

01	02	03	04	05	06	07	08	09	10	11	12
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity Insulation R-value	Continuous Insulation U-Factor	Appendix A4 Reference Table	U-Factor from Table 150.1(A) or B	Comments		
AS-Section	Wall	Wood	2x4	@ 16 in. O. C.	13	14	0.031	4.2.1	1A	0.048	

C. Opaque Surface Details - Non-Framed (Section 150.1(c)(1))
 This section does not apply to this project.

D. Opaque Surface Details - Mass Walls (Section 150.1(c)(1))
 This section does not apply to this project.

Registration Number: 222-N010186350A-000-000-0000000-0000
 Registration Date/Time: 2022-09-19 13:23:22
 HERS Provider: CalCERTS
 CA Building Energy Efficiency Standards - 2019 Residential Compliance
 Report Version: 2019.1.006
 Schema Version: rev 20200901
 Report Generated: 2022-09-19 13:21:58

CERTIFICATE OF COMPLIANCE CFIR-NCB-01-E
Prescriptive Newly Constructed Buildings (Page 4 of 8)

15	Total Proposed Fenestration Area	199
16	Maximum Allowed Fenestration Area	200
17	Compliance Statement	Design complies with the total allowed fenestration area
18	Total Proposed West-Facing Fenestration Area	0
19	Maximum Allowed West Facing Fenestration Area	0
20	Compliance Statement	Design complies with the total allowed west-facing fenestration area
21	Proposed Fenestration U-factor (Windows)	0.3
22	Required Fenestration U-factor (Windows)	0.30
23	Compliance Statement	Design complies with the maximum allowed fenestration U-value
24	Proposed Fenestration SHGC (Windows)	0.23
25	Required Fenestration SHGC (Windows)	0.23
26	Compliance Statement	Design complies with the maximum allowed fenestration SHGC
27	Proposed Fenestration U-factor (Skylights)	n/a
28	Required Fenestration U-factor (Skylights)	0.30
29	Compliance Statement	n/a
30	Proposed Fenestration SHGC (Skylights)	n/a
31	Required Fenestration SHGC (Skylights)	0.23
32	Compliance Statement	n/a

Registration Number: 222-N010186350A-000-000-0000000-0000
 Registration Date/Time: 2022-09-19 13:23:22
 HERS Provider: CalCERTS
 CA Building Energy Efficiency Standards - 2019 Residential Compliance
 Report Version: 2019.1.006
 Schema Version: rev 20200901
 Report Generated: 2022-09-19 13:21:58

CERTIFICATE OF COMPLIANCE CFIR-NCB-01-E
Prescriptive Newly Constructed Buildings (Page 7 of 8)

P. IAQ Fan Information

01	02	03
Fan Name	IAQ Type	Comments
Fan 1	Balanced	

Q. HERS Verification Summary
 The enforcement agency shall pay special attention to the HERS Measures specified in this checklist below. A registered Certificate of Verification for all the measures specified shall be submitted to the building inspector before final inspection.

Quality Insulation Installation - Section 150.1(c)(1)
 • The dwelling unit shall meet all of the requirements of Quality Insulation Installation (QII) as specified in Reference Appendix RA3.5 and be verified by a HERS rater.
 EXCEPTION: Multifamily dwelling units in Climate Zone 7.

Duct Leakage Verification-Section 150.1(m)(1)
 • Duct leakage testing is required (Residential Appendix RA3.1) in all climate zones for ducted heating and cooling systems.

Zonally Controlled Systems - Bypass Damper - Section 150.1(c)(1)
 • If system is zonally controlled, no bypass ducts are allowed, as confirmed by HERS verification (Residential Appendix RA 3.4.1.6)

Refrigerant Charge Verification Section 150.1(c)(7)
 • Refrigerant Charge Testing is required (Residential Appendix RA3.2) in climate zones 2 and 8-15 for all air-cooled air conditioners and air source heat pumps, including ducted split systems, ducted packaged systems, small duct high velocity systems, and mini-split systems.
 • Some exceptions apply to factory charged packaged systems.

Central System Air Handlers - Air Flow and Fan Efficacy Verification - Section 150.1(m)(13)
 • Airflow (minimum 350 cfm/ton) and Fan Efficacy (max 0.45 Watts/cfm for gas furnace air handlers / 0.58 Watts/cfm for air handlers that are not gas furnace) on systems with ducted air conditioning as field verified by a HERS rater or Return Duct and Filter System Design according to tables 150.0-C/D will be HERS verified.
 • Heat-only systems with Central Fan Integrated (CFI) ventilation are required to have less than 0.45 Watts/cfm as verified by a HERS rater.
 • Small duct high velocity systems: airflow (minimum 250 cfm/ton) and fan efficacy (max 0.62 W/cfm) as verified by a HERS rater.

Indoor Air Quality Mechanical Ventilation - Section 150.0(s)
 • Mechanical ventilation airflow rate according to ASHRAE 62.2 is required to be verified by a HERS rater (RA3.7)

Registration Number: 222-N010186350A-000-000-0000000-0000
 Registration Date/Time: 2022-09-19 13:23:22
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 Schema Version: rev 20200901
 Report Generated: 2022-09-19 13:21:58

CERTIFICATE OF COMPLIANCE CFIR-NCB-01-E
Prescriptive Newly Constructed Buildings (Page 2 of 8)

E. Slab Insulation (Table 150.1-A)
 This section does not apply to this project.

F. Ceiling/Roof Insulation (Section 150.1(c)(1A))

01	02	3	4	5	6	7	8
Option	Air Space Required?	Proposed Below Roof Deck R-value	Proposed Ceiling Insul. R-value	Required Below Roof Deck R-value	Required Ceiling Insul. R-value	Radiant Barrier Required?	Comment
Option C	No	0	30	n/a	R-30	Required	

Notes:
 • Cathedral ceilings cannot comply with prescriptive requirements. Performance compliance is required.
 • Option B requires below deck insulation in climate zones 4 and 8-16. An air space is required if below deck insulation is required.
 • Option C requires heating and cooling ducts to be located inside the conditioned space.

G. Roofing Products (Cool Roof) (Section 150.1(c)(1.1))

01	02	03	04	05	06	07	08	09	10	11	12	13
Tag/ID	Exception	Roof Pitch	Method of Compliance	Product Type	CRRC Product ID Number	Initial Solar Reflectance	Aged Solar Reflectance	Thermal Emittance	SRI (optional)	Aged Solar Reflectance	Thermal Emittance	SRI (optional)
A3	No	Roof pitch is < 2:12	Aged solar reflectance and thermal emittance	Clay roof tiles	0942-0069	n/a	0.89	0.14	n/a	n/a	.75	n/a

Notes:
 • Exception 1: Any roof area covered by building integrated photovoltaic panels and solar thermal panels are exempt from the above Cool Roof requirements
 • Exception 2: Roof construction with a weight of 25 lb/ft² are also exempt.
 • Liquid field applied coatings must comply with installation criteria from section 110.8(j)(4)

Registration Number: 222-N010186350A-000-000-0000000-0000
 Registration Date/Time: 2022-09-19 13:23:22
 HERS Provider: CalCERTS
 CA Building Energy Efficiency Standards - 2019 Residential Compliance
 Report Version: 2019.1.006
 Schema Version: rev 20200901
 Report Generated: 2022-09-19 13:21:58

CERTIFICATE OF COMPLIANCE CFIR-NCB-01-E
Prescriptive Newly Constructed Buildings (Page 5 of 8)

K. Space Conditioning (SC) Systems - Heating/Cooling/Ducts (Section 150.1(c)(7))

01	02	03	04	05	06	07	08	09	10	11	12
SC System Identification or Name	Heating System Type	Heating Efficiency Type	Proposed Heating Efficiency	Cooling System Type	Cooling Efficiency Type	Proposed Cooling Efficiency	Distribution System Type	Duct Location	Duct R-value	Thermostat Type	Comments
System 1	Central gas furnace	AFLUE	96	Central packaged AC	SEER	90	Ducted System	Conditioned space-entirely	R-6	Setback	

Notes:
 • Any gas heating, heat pump or cooling appliance sold in California will meet the minimum appliance efficiency standard. Models can be checked at https://cacertappliances.energy.ca.gov/.
 • The prescriptive requirements preclude the use of bypass ducts in association with zonally controlled systems. A HERS Rater shall verify that zonally controlled systems have no bypass ducts.

L. Ventilation Cooling in Climate Zones 8-14 (Section 150.1(c)(12))

01	02	03	04	05	06	07	08
Air Flow Rate (in CFM) for Certified Whole House Fan	Number of Fans	Total CFM	Directly Vented to Outside	ANSI F163 Vent Area (in ²)	Required Airflow Rate (CFM) (Total Airflow Rate x 0.192)	Minimum Attic Vent Free Area (in ²) (Total Airflow Rate x 0.192)	Location/Comments
1500	1	1500	Yes	1500	1500	288	

M. Water Heating Systems (Section 150.1(c)(8))
 List water heaters and boilers for both domestic hot water (DHW) heaters and hydronic space heating.

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Water Heating System ID or Name	Water Heating System Type	System Option (from)	# of Dwelling Units in System	# of Recirc. Loops	Water Heater Type	Volume	Fuel Type	# of Water Heaters/Compressors in System	Rated Input	Minimum Solar Savings Fraction	Additional PV Capacity	Tank Location	Distribution Type
WHS 1	Domestic Hot Water (DHW)	1	1	n/a	Consumer Instantaneous	n/a	Natural Gas	1	n/a	n/a	0	n/a	Standard Distribution System

Registration Number: 222-N010186350A-000-000-0000000-0000
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 CA Building Energy Efficiency Standards - 2019 Residential Compliance
 Report Version: 2019.1.006
 Schema Version: rev 20200901
 Report Generated: 2022-09-19 13:21:58

CERTIFICATE OF COMPLIANCE CFIR-NCB-01-E
Prescriptive Newly Constructed Buildings (Page 8 of 8)

Documentation Author's Declaration Statement

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Everett Smith
 Signature Date: 2022-09-19 13:23:22
 Address: 3437 Potomac Ct, Perris CA 92570
 Phone: 951-323-2187

Documentation Author Signature: *Everett Smith*
 Signature Date: 2022-09-19 13:23:22
 Address: 3437 Potomac Ct, Perris CA 92570
 Phone: 951-323-2187

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. That 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 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. 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.

Responsible Designer Name: Everett Smith
 Responsible Designer Signature: *Everett Smith*
 Date Signed: 2022-09-19 13:23:22
 Address: 3437 Potomac Ct, Perris CA 92570
 Phone: 951-323-2187

Easy to Verify at CalCERTS.com

Registration Number: 222-N010186350A-000-000-0000000-0000
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 Report Version: 2019.1.006
 Schema Version: rev 20200901
 Report Generated: 2022-09-19 13:21:58

CERTIFICATE OF COMPLIANCE CFIR-NCB-01-E
Prescriptive Newly Constructed Buildings (Page 3 of 8)

H. Opaque Swinging Doors to Exterior (Section 150.1(c)(5))
 This section does not apply to this project.

I. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.1(c)(3))

01	02	03	04	05	06	07
Maximum Allowed Fenestration Area For All Orientation (ft ²)	Maximum Allowed West-Facing Fenestration Area Only (ft ²)	Maximum Allowed U-Factor (Windows)	Maximum Allowed U-Factor (Skylight)	Maximum Allowed SHGC (Windows)	Maximum Allowed SHGC (Skylight)	Comments
200	50	0.30	0.30	0.23	0.23	

Note:
 • If the selected water heating system option is 2 (Table M, column 02) the maximum weighted average fenestration U-factor is 0.24 or less (windows and skylights).

J. Fenestration Proposed Areas and Efficiencies
 Note: If meeting Exception 1 to 150.1(c)(3A), installing <= 3 ft² glass in door, it is assumed to meet the minimum required U-factor (0.30) and SHGC (0.23).
 If meeting Exception 1 to 150.1(c)(3A), installing <= 3 ft² tubular skylight, it is assumed to meet the minimum required U-factor (0.55) and SHGC (0.30). Doors with greater than or equal to 25 percent glazing are considered glazed doors and are treated as a fenestration product.

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Tag/ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, E	# of Panes	Proposed Fenestration Area (ft ²)	Proposed West Facing Fenestration Area (ft ²)	Proposed U-Factor	Proposed U-Factor Source	Proposed SHGC	Proposed SHGC Source	Exterior Shading Device	Combined SHGC From CFIR-ENV-03
NORTH-(2)W8, W1	Operable window	Non-metal	None	North	Double pane	24	n/a	0.3	NFRC	0.23	NFRC	None	n/a
EAST-(2)W6, W7	Operable window	Non-metal	None	East	Double pane	80	n/a	0.3	NFRC	0.23	NFRC	None	n/a
SOUTH-(2)W2, W3	Operable window	Non-metal	None	South	Double pane	26	n/a	0.3	NFRC	0.23	NFRC	None	n/a
WEST-(2)W4, W5	Operable window	Non-metal	None	North	Double pane	69	n/a	0.3	NFRC	0.23	NFRC	None	n/a

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 Report Version: 2019.1.006
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 Report Generated: 2022-09-19 13:21:58

CERTIFICATE OF COMPLIANCE CFIR-NCB-01-E
Prescriptive Newly Constructed Buildings (Page 6 of 8)

M. Water Heating Systems (Section 150.1(c)(8))
 List water heaters and boilers for both domestic hot water (DHW) heaters and hydronic space heating.

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Water Heating System ID or Name	Water Heating System Type	System Option (from)	# of Dwelling Units in System	# of Recirc. Loops	Water Heater Type	Volume	Fuel Type	# of Water Heaters/Compressors in System	Rated Input	Minimum Solar Savings Fraction	Additional PV Capacity	Tank Location	Distribution Type

Options:
 Single Family Bump; Multifamily with Individual Water Heaters
 1. Gas or propane instantaneous
 2. 55 gallons or less storage tank with 75,000 Btu or less rated input. Distribution either compact hot water distribution (HERS) or drain water heat recovery (HERS).
 3. Greater than 55 gallons with 75,000 Btu or less rated input.
 4. Heat pump water heater installed in conditioned space or garage with either:
 A. Compact hot water distribution basic and drain water heat recovery (HERS) or
 B. If climate zone 8-15, a PV system 0.3 kWdc larger than system required by Table O below, or if climate zone 1 or 16, a PV system 1.1 kWdc larger than system required by Table below
 5. Tank water heater (as rated by Northwest Energy Efficiency Alliance (NEEA)) installed in conditioned space or garage. If climate zone is 1 or 16 either:
 A. A PV system that is 0.3kWdc larger than Table O below or
 B. Compact hot water distribution basic

Multifamily with Central Water Heating
 A. Gas or propane water heating system, a recirculation system, and a minimum solar savings fraction of 0.20 in climate zones 1 through 9, or a minimum solar savings fraction of 0.30 in climate zones 10 through 16.
 B. Gas or propane water heating system, a recirculation system, a minimum solar savings fraction of 0.15 in climate zones 1 through 9, or a minimum solar savings fraction of 0.30 in climate zones 10 through 16, and drain water heat recovery system.
 C. 150.1(c)(8) prescriptive Compliance Option - Heat pump water heater (For climate zone 16; at least 2 inches of pipe insulation is required for recirculation loop)
 1. A minimum solar savings fraction of 0.20 in Climate Zones 1 through 9 or a minimum solar savings fraction of 0.30 in Climate Zones 10 through 16.
 2. 0.3kWdc per dwelling unit in excess of the prescriptive requirement of 150.1(c)(14)

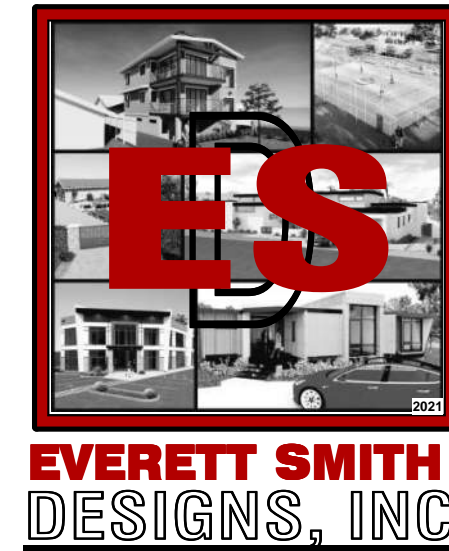
N. Multifamily Space Conditioning Systems and Water Heating Systems
 This section does not apply to this project.

O. Photovoltaic Requirements (Section 150.1(c)(14))

01	02	03	04	05	06	07
PV Array ID or Name	Value A from Table 150.1-C	Value B from Table 150.1-C	Minimum PV Size	Water Heating Adjustment	Adjusted Minimum PV Size	Comments
Array 1	1	3.41	2.04	0	2.04	

Registration Number: 222-N010186350A-000-000-0000000-0000
 Registration Date/Time: 2022-09-19 13:23:22
 HERS Provider: CalCERTS
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PREPARED BY:

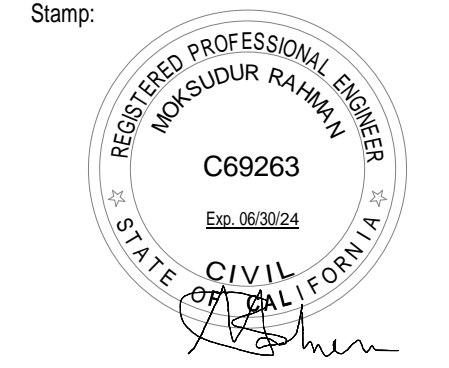


Everett Smith
 Email: everett@everettmthdesigns.com
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ENGINEER OF RECORD:

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 13611 12TH ST, SUITE-B,
 CHINO, CA 91710
 Tel: (213)-400-8078
 MOKSUD.RAHMAN@GMAIL.COM

Stamp:



PROJECT:

PROPOSED ADU AT REAR OF (E) S.F.R.

REVISIONS:

No.	Description	Date
1	Building Corrections	2022.11.10

PROJECT ADDRESS:

9306 Hot Springs Rd, Corona,
 CA 92883, USA

CLIENT NAME:

MURPHY & NELSON

Title-24

Project number: 22-2157

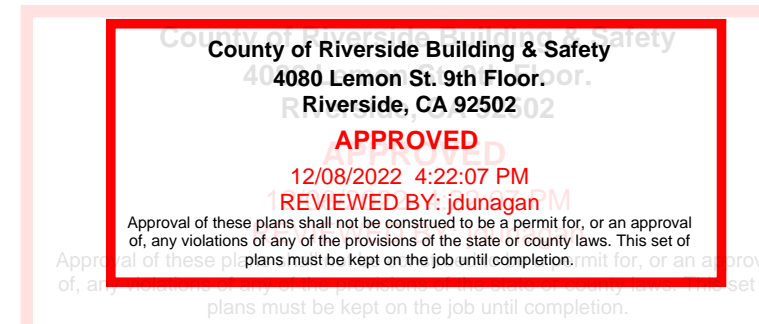
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Drawn by: EDS

Checked by: HZ

A-T24-1

Scale:



2019 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. *Exceptions may apply.

Table with 2 columns: Measure ID and Description. Includes sections for Building Envelope Measures, Fireplaces, Decorative Gas Appliances, and Space Conditioning.

2019 Low-Rise Residential Mandatory Measures Summary

Table with 2 columns: Measure ID and Description. Includes sections for Clearances, Liquid Line Drier, Storage Tank Insulation, Water Piping, and Insulation Protection.

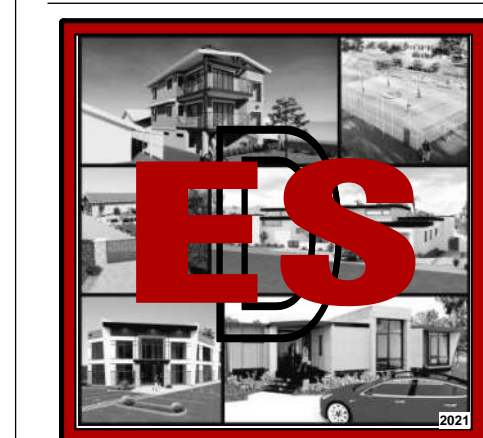
2019 Low-Rise Residential Mandatory Measures Summary

Table with 2 columns: Measure ID and Description. Includes sections for Requirements for Ventilation and Indoor Air Quality, Pool and Spa Systems, and Lighting Measures.

2019 Low-Rise Residential Mandatory Measures Summary

Table with 2 columns: Measure ID and Description. Includes sections for Interior Switches and Controls, Residential Outdoor Lighting, and Solar Ready Buildings.

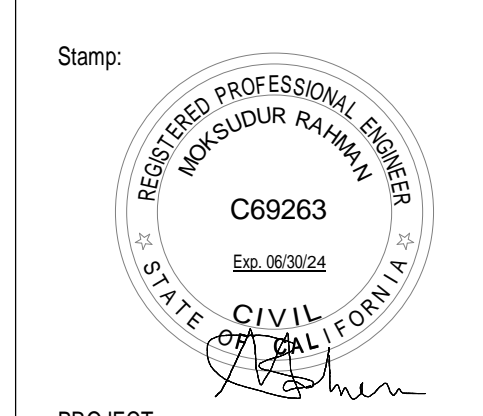
PREPARED BY:



EVERETT SMITH DESIGNS, INC. RIVERSIDE COUNTY, CA TEL: 951-323-2187

ENGINEER OF RECORD:

RAHMAN ENGINEERING 13611 12TH ST, SUITE-B, CHINO, CA 91710



PROJECT:

PROPOSED ADU AT REAR OF (E) S.F.R. (Vertical text)

Table with 3 columns: No., Description, Date. For REVISIONS.

PROJECT ADDRESS: 9306 Hot Springs Rd, Corona, CA 92883, USA

CLIENT NAME: MURPHY & NELSON

Mandatory Measures

Project number 22-2157 Date 11/29/2022 7:53:42 AM

Checked by Author Checker

A-T24-2 Scale



GENERAL NOTES

WOOD NOTES (cont.)

STRUCTURAL STEEL NOTES

MASONRY NOTES

- 1. ALL CONSTRUCTION, INCLUDING MATERIAL AND WORKMANSHIP, SHALL CONFORM TO THE PROVISIONS OF THE 2019 EDITION OF THE "CALIFORNIA BUILDING CODE" (CBC) WITH THE GOVERNING AGENCY AMENDMENTS, AND STANDARDS REFERENCED THEREIN. WHERE EVER CODE OR CALIFORNIA BUILDING CODE (CBC) IS REFERENCED IN THE FOLLOWING GENERAL NOTES OR OTHER NOTE SECTIONS, IT SHALL IMPLY THE CBC CODE WITH GOVERNING AGENCY AMENDMENTS.

- 14. DIAPHRAGM NAILING SHALL CONFORM TO CBC TABLE 2306.4.1 (1) AND 2306.3.1 (2) WITH NOMENCLATURE DEFINED AS FOLLOWS: BN = NAILING AT DIAPHRAGM BOUNDARIES, CONTINUOUS PANEL EDGES, AND AT EDGES OF OPENING. EN = EDGE NAILING FN = FIELD NAILING

- 1. THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH AISC 360 (14TH EDITION).
- 2. ALL STRUCTURAL STEEL TO BE THE FOLLOWING: W SHAPES: ASTM A992, Fy= 50ksi HSS SHAPES (RECTANGULAR) ASTM A500 GRADE B, Fy= 46ksi HSS SHAPES (ROUND) ASTM A500, GRADE B, Fy= 42ksi PIPE SHAPES: ASTM A53, GRADE B, Fy= 35ksi ALL OTHER STEEL: ASTM A36, Fy = 36 ksi

- 1. MASONRY UNITS SHALL CONFORM TO ASTM C90 HOLLOW CORE, NORMAL WEIGHT, fm= 1500 psi (U.N.O.). ALL UNITS SHALL BE SAMPLED AND TESTED IN ACCORDANCE WITH ASTM C140.
- 2. MORTAR SHALL BE TYPE 'S' AND CONFORM TO ASTM C270 AND TABLE SC-1 AND SC-2 OF TMS 402-16 / ACI 530-15 / ASCE 5-15. THE MINIMUM STRENGTH SHALL BE 1,800 psi AT 28 DAYS. THE BED JOINTS SHALL NOT EXCEED 1" THICK.
- 3. GROUT SHALL CONFORM WITH ARTICLE 2.2 OF TMS 402-16 / ACI 530-13 / ASCE 5-13. THE COMPRESSIVE STRENGTH OF GROUT SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C1019. WHEN THE GROUT CONFORMS TO ASTM C476, THE GROUT SHALL BE SPECIFIED BY PROPORTION REQUIREMENTS OR PROPERTY REQUIREMENTS. THE MINIMUM STRENGTH SHALL BE 2,000 psi AT 28 DAYS.

- 3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE DESIGNER AND STRUCTURAL ENGINEER SHALL IMMEDIATELY BE NOTIFIED, IN WRITING, OF ANY DISCREPANCIES.
- 4. ALL OMISSIONS AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE FIELD INSPECTOR, AND A SOLUTION GIVEN BY THE DESIGNER AND STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH ANY WORK AFFECTED BY THE CONFLICT OR OMISSION.

- 19. PROVIDE DOUBLE STUD TO SUPPORT ALL BEAMS UNLESS POSTS ARE SPECIFIED.
- 20. DOUBLE BLOCK UNDER ALL POSTS.
- 21. DOUBLE JOIST UNDER ALL PARALLEL PARTITIONS U.N.O.
- 22. TOP PLATES OF ALL WOOD STUD WALLS SHALL BE 2-2 x 4 (SAME WIDTH AS STUDS), LAP 48" (MIN.), WITH AT LEAST 36-16G NAILS AT EACH SIDE OF LAP AND NOT MORE THAN 12" BETWEEN.

REINFORCING STEEL NOTES

- 1. BAR REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615. THE FOLLOWING GRADES SHALL BE USED: GRADE 40 - # 4 AND SMALLER GRADE 60 - # 5 AND LARGER
- 2. DETAILS OF REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-14 CH. 7 AND OTHER SECTIONS ACCORDING TO APPLIC. INSPECTION: THE PLYWOOD ON THE OTHER SIDE MUST BE INSTALLED AND INSPECTED PRIOR TO INSTALLATION OF WALL SURFACE COVERING.

CONCRETE NOTES

- 1. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-14 CHAPTER 5. THE MINIMUM 28-DAY CYLINDER STRENGTH SHALL BE AS FOLLOWS: CONVENTIONAL FOUNDATIONS: STRENGTH: SLAB ON GRADE 2500 PSI SLAB ON GRADE-GARAGE 2500 PSI FOOTINGS 2500 PSI GRADE BEAM / CAISSON 2500 PSI
- 2. WHERE CONCRETE STRENGTH IS GREATER THAN 3000 PSI, CYLINDER TESTS ARE REQUIRED PER ACI 318-14 5.6.3.3.
- 3. PORTLAND CEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C150, TYPE II.
- 4. AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C33 FOR NORMAL WEIGHT CONCRETE AND ASTM C330 FOR LIGHTWEIGHT CONCRETE.

- 5. IN CASE OF CONFLICT, NOTES AND DETAILS OF THESE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE "GENERAL NOTES" AND/OR "STANDARD DETAILS". TYPICAL DETAILS SHALL BE USED WHENEVER APPLICABLE.
- 6. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.

- 23. CUTTING, NOTCHING, OR DRILLING OF BEAMS OR JOISTS SHALL BE PERMITTED ONLY AS DETAILED OR APPROVED BY THE ENGINEER.
- 24. MOISTURE CONTENT OF WOOD AT TIME OF PLACEMENT SHALL NOT EXCEED 19%.
- 25. PROVIDE "MSTC2B" STRAPS ACROSS ALL DISCONTINUOUS TOP PLATES.
- 26. THE NUMBER AND SIZE OF FASTENERS CONNECTING WOOD MEMBERS SHALL NOT BE LESS THAN THE FOLLOWING TABLE.

Table with 4 columns: BAR SIZE, TOP BARS (CLASS B), OTHER THAN TOP BARS (CLASS B), and values for fc = 2500 and fc = 3000.

- 5. SLEEVES, PIPES, OR CONDUITS SHALL NOT BE PLACED THROUGH CONTINUOUS OR SPREAD FOOTINGS, GRADE BEAMS, PILE CAPS, OR THE BEAMS, UNLESS SPECIFICALLY DETAILED BY THE ENGINEER.
- 6. CONDUIT SHALL NOT BE PLACED IN ANY CONCRETE SLAB LESS THAN 3-1/2 INCHES THICK. IF CONDUIT IS PLACED IN CONCRETE SLAB, ITS OUTSIDE DIAMETER SHALL NOT BE GREATER THAN 1/3 OF THE SLAB THICKNESS. THE MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE 3 INCHES.

- 7. PIPES, DUCTS, SLEEVES, OPENINGS, POCKETS, CHASES, BLOCK-OUTS, ETC., SHALL NOT BE PLACED IN SLABS, BEAMS, ORDERS, COLUMNS, WALLS, FOUNDATIONS, ETC., NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR SUCH ITEMS, UNLESS SPECIFICALLY DETAILED ON THESE STRUCTURAL DRAWINGS. (IF ANY PIPES, DUCTS, ETC., DO OCCUR, THAT ARE NOT SHOWN ON THESE STRUCTURAL DRAWINGS, THE DESIGNER AND STRUCTURAL ENGINEER SHALL BE NOTIFIED) SEE PARAGRAPH 4, ABOVE.

FASTENING SCHEDULE (TABLE 2304.10.1)

- 1. JOIST TO SILL OR ORDER ----- 3- 8d COMMON TOE NAIL
- 2. BRIDGING TO JOIST ----- 2- 8d TOE NAIL EA. END
- 3. SUBFLOOR 1x6 OR LESS TO EA. JOIST - 2- 8d FACE NAIL
- 4. SOLE PLATE TO JOIST OR BULKHEAD ----- 16d @ 16" O.C. TYP. FACE NAIL
- 5. SOLE PLATE TO JOIST OR BULKHEAD AT BRACED WALL PANEL ----- 3- 16d PER 16" BRACED WALL PANEL
- 6. TOP PLATE TO STUD ----- 2- 16d COMMON END NAIL
- 7. STUD TO SOLE PLATE ----- 4- 8d COMMON OR 2- 16d COMMON E.N.
- 8. DOUBLE STUDS ----- 16d @ 24" O.C. F.N.
- 9. DOUBLE TOP PLATES ----- 16d @ 16" O.C. TYP. FACE NAIL
- 10. DOUBLE TOP PLATES LAP SPICE ----- 8- 16d
- 11. BULK. BETWEEN JOISTS OR RAFTERS ----- 8d COMMON TOE NAIL TO TOP PLATE ----- 3- 8d COMMON TOE NAIL



WOOD NOTES

- 1. SAWN WOOD MEMBERS SHALL BE DOUGLAS FIR-LARCH (U.N.O.), CONFORM TO THE "CALIFORNIA BUILDING CODE" (CBC) SEC. 2303, AND NDS 2018 AND SHALL BE MARKED BY AN ACCREDITATION BODY THAT COMPLIES WITH DOC PS 20 OR EQUIVALENT.

- 12. CALCULATIONS MAY HAVE TO BE PREPARED, THE DETAILS MAY HAVE TO BE ALTERED, AND NEW DRAWINGS MAY HAVE TO BE SUBMITTED TO THE BUILDING DEPARTMENT. THE CONTRACTOR SHALL PAY THE STRUCTURAL ENGINEER'S FEES TO ALTER THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO PROCESS THE REVISED PLANS REFLECTING ALL SUBSTITUTIONS THROUGH THE APPROPRIATE OFFICE OF ALL GOVERNING AGENCIES.

Table with 2 columns: WALLS and CONSTRUCTION, listing various wall types and their construction details.

- 3. ALL WOOD THAT REST ON EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 3" FROM EXPOSED EARTH, ALL WOOD ATTACHED DIRECTLY TO EXTERIOR OR EXTERIOR MASONRY OR CONCRETE WALLS BELOW GRADE, AND ALL WOOD SLEEPERS AND SILLS ON CONCRETE THAT IS IN DIRECT CONTACT WITH EARTH SHALL BE PRESERVATIVE-TREATED DOUGLAS FIR.

- 12. CALCULATIONS MAY HAVE TO BE PREPARED, THE DETAILS MAY HAVE TO BE ALTERED, AND NEW DRAWINGS MAY HAVE TO BE SUBMITTED TO THE BUILDING DEPARTMENT. THE CONTRACTOR SHALL PAY THE STRUCTURAL ENGINEER'S FEES TO ALTER THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO PROCESS THE REVISED PLANS REFLECTING ALL SUBSTITUTIONS THROUGH THE APPROPRIATE OFFICE OF ALL GOVERNING AGENCIES.

- 4. ALL SILLS OR PLATES BEARING ON CONCRETE OR MASONRY SHALL HAVE ANCHOR BOLTS: A. NOT LESS THAN 5/8" DIA B. EMBEDDED AT LEAST 7" INTO CONCRETE OR MASONRY. C. SPACED NOT MORE THAN 6" APART. D. PLACED A MIN. OF 4" AND A MAX. OF 12" FROM EACH END. E. A MINIMUM OF TWO BOLTS PER PIECE. F. SIZE AND SPACING AS SHOWN ON THE DRAWINGS.

- 29. INTERIOR PANELING 1/4" ----- 44 - PANEL SUPPORTS @ 16" (20" IF STRONG AXIS IN THE LONG DIRECTION OF THE PANEL UNLESS OTHERWISE MARKED. CASING OR FINISH NAILS SPACED 6" ON PANEL EDGES, 12" @ INTERMEDIATE SUPPORTS

- 5. WOOD STRUCTURAL PANELS SHALL CONFORM TO THE "CALIFORNIA BUILDING CODE" (CBC) SEC. 2303, AND SHALL CONFORM TO THE REQUIREMENTS FOR THEIR TYPE IN DOC PS 1 OR PS2. EACH PANEL SHALL BE IDENTIFIED FOR GRADE AND GLUE TYPE BY THE TRADEMARKS OF AN APPROVED TESTING AND GRADING AGENCY. WOOD STRUCTURAL PANELS THAT ARE PERMANENTLY EXPOSED IN OUTDOOR APPLICATIONS SHALL BE OF EXTERIOR TYPE (U.N.O.). ALL WOOD STRUCTURAL PANELS SHALL BE OF THE FOLLOWING GRADES AND PANEL IDENTIFICATION INDEXES (U.N.O. ON DRAWINGS):

Table with 3 columns: USE, GRADE, IDENTIFICATION INDEX, listing various wood products and their specifications.

- 7. FRAMING ANCHORS, POST CAPS, COLUMN BASES, AND OTHER CONNECTORS SPECIFIED ON DRAWINGS SHALL BE AS MANUFACTURED BY "SIMPSON COMPANY" OR AN ENGINEER- APPROVED EQUAL.

ABBREVIATIONS

- 8. BARS, PLATES, UNHEADED BOLTS, WASHERS AND DRIFT BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
- 9. BOLTS SHALL CONFORM TO ASTM A307. BOLTS IN PRESSURE TREATED WOOD SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL PER ASTM A 153 OR MECHANICALLY DEPOSITED ZINC COATING WITH WEIGHTS PER ASTM B 695, CLASS 55.
- 10. NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A563, 10. GRADE A.
- 11. ALL BOLT HEADS, NUTS, AND LAG SCREWS BEARING ON WOOD SHALL HAVE CUT WASHERS UNLESS NOTED.
- 12. BOLT HOLES SHALL BE DRILLED A MAXIMUM OF 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER. BOLT HOLES SHALL BE ACCURATELY ALIGNED AND NOT FORCIBLY DRIVEN.
- 13. SPECIAL CONNECTORS FOR CONNECTING WOOD OR GLUE LAMINATED TIMBER SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A36. WELDS SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1 - 15.

DESIGN CRITERIA

Table with 2 columns: VERTICAL and SEISMIC, listing design criteria and values for various structural elements.

SPECIAL INSPECTION LIST

Table with 2 columns: CHECKED ITEMS and YES/NO, listing items to be inspected during construction.

SHEET INDEX:

Table with 2 columns: GN, GENERAL STRUCTURAL NOTES, listing sheet numbers and titles.

SHEARWALL SCHEDULE - CBC 2019 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, & 12)

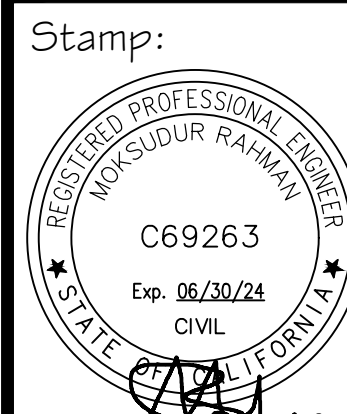
Table with 6 columns: SYMBOL, MAX DESIGN SHEAR LOAD CAP. (PLF), MATERIAL AND NAILING DESCRIPTION, ANCHOR BOLT SCHED & SILL PLATE SIZE, BOTTOM PLATE SIZE & NAILING, SHEAR TRANSFER RIM JOIST/BLOCKING.

SHEAR WALL SCHEDULE NOTES

- 1. SHEAR PANELS SHALL BE APPLIED DIRECTLY TO STUD FRAMING.
- 2. PLYWOOD MAY BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY.
- 3. ALL PLYWOOD PANEL EDGES SHALL BE BLOCKED W/ 2x BLOCKING MIN.
- 4. SHEAR WALLS MORE THAN ONE VERTICAL PANEL IN HEIGHT SHALL HAVE EITHER VERTICAL OR HORIZONTAL STAGGERED SPLICED JOINTS.
- 5. PROVIDE 1 1/2" MIN. EDGE DISTANCE FOR ALL PLYWOOD EDGE NAILING.
- 6. ONLY COMMON NAILS ARE TO BE USED FOR ALL PLYWOOD SHEATHING ATTACHMENT.
- 7. NAIL GUNS USING "CLIPPED HEAD" OR "SINKER" NAILS ARE NOT ACCEPTABLE.
- 8. ALL BOLT HOLES TO BE DRILLED 1/32" MIN. TO 1/16" MAX. OVERSIZED.
- 9. USE DOUGLAS FIR # 2 PRESSURE TREATED SILL PLATES. ALL NAILS & ANCHOR BOLTS IN PRESSURE TREATED SILL PLATES SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL PER ASTM A 153. ANCHOR BOLTS MAY HAVE A MECHANICALLY DEPOSITED ZINC COATING WITH WEIGHTS PER ASTM B 696, CLASS 55.
- 10. ANCHOR BOLTS MUST BE EMBEDDED 7" MIN. INTO NEW CONCRETE. WHERE SHEAR WALLS ARE TO BE ATTACHED TO EXISTING FOOTINGS, EPOXY 5/8" DIA THREADED ROD ANCHORS WITH 5" MIN. EMBEDMENT USING SIMPSON 'SET-XP' HIGH STRENGTH ADHESIVE (ESR-2508) WITH SPECIAL INSPECTION (OR) 3/8" DIA x 6" LONG SIMPSON 'TITEN HD' ANCHORS (ESR-2713) INSTALLED AT THE SPACING INDICATED IN THE SHEAR WALL SCHEDULE.
- 11. FOUNDATION ANCHOR BOLTS IN ALL SHEAR WALLS SHALL HAVE A MINIMUM 3" x 3" x 1/2" THICK PLATE WASHERS BETWEEN THE SILL PLATE AND NUT. THE NUTS SHALL BE TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
- 12. STUCCO AND/OR EXTERIOR VENEER OVER A PLYWOOD SHEARWALL SHALL BE WATERPROOFED W/ A MIN. OF (2) LAYERS OF # 15LB. FELT PAPER.
- 13. ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL BE 3-INCH NOMINAL OR THICKER. ALL EDGE NAILING SHALL BE STAGGERED.
- 14. WHERE PLYWOOD PANELS ARE APPLIED ON BOTH FACES OF A WALL, USE A 3x6 BOT./SILL PLATE, 3x6 STUDS @ 16"o.c., AND 3x6 @ # 2 DOUBLE TOP PLATES. ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL BE 4-INCH NOMINAL OR THICKER. ALL EDGE NAILING SHALL BE STAGGERED AND BOTH VERTICAL AND HORIZONTAL INTERIOR PANEL JOINTS ON OPPOSITE SIDES OF THE WALL SHALL BE STAGGERED. SEE WOOD NOTES # 18 FOR ADDITIONAL REQUIREMENTS.
- 15. WHEN 'LTP4' IS INSTALLED OVER PLYWOOD, USE USE 8d COMMON NAILS.
- 16. WHERE BOTTOM PLATE NAILING GOES THROUGH FLOOR SHEATHING THICKER THAN 3/4", USE 20d NAILS AT SAME SPACING AS INDICATED OR SIMPSON SDS25412 SCREWS AT TWICE THE SPACING AS INDICATED.
- 17. HOLDOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION
- 18. IN SEISMIC CATEGORY "D", ALL EXTERIOR WALLS TO BE CONTINUOUSLY SHEATHED WITH A MIN. 3/8" THICK PLY/WOOD STRUCTURAL PANEL.

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REVISIONS:

Table with 3 columns: MARK, DATE, DES./BY, for tracking revisions.

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DS. BY: MR

CHK BY: M.R.

DATE: 10/06/22

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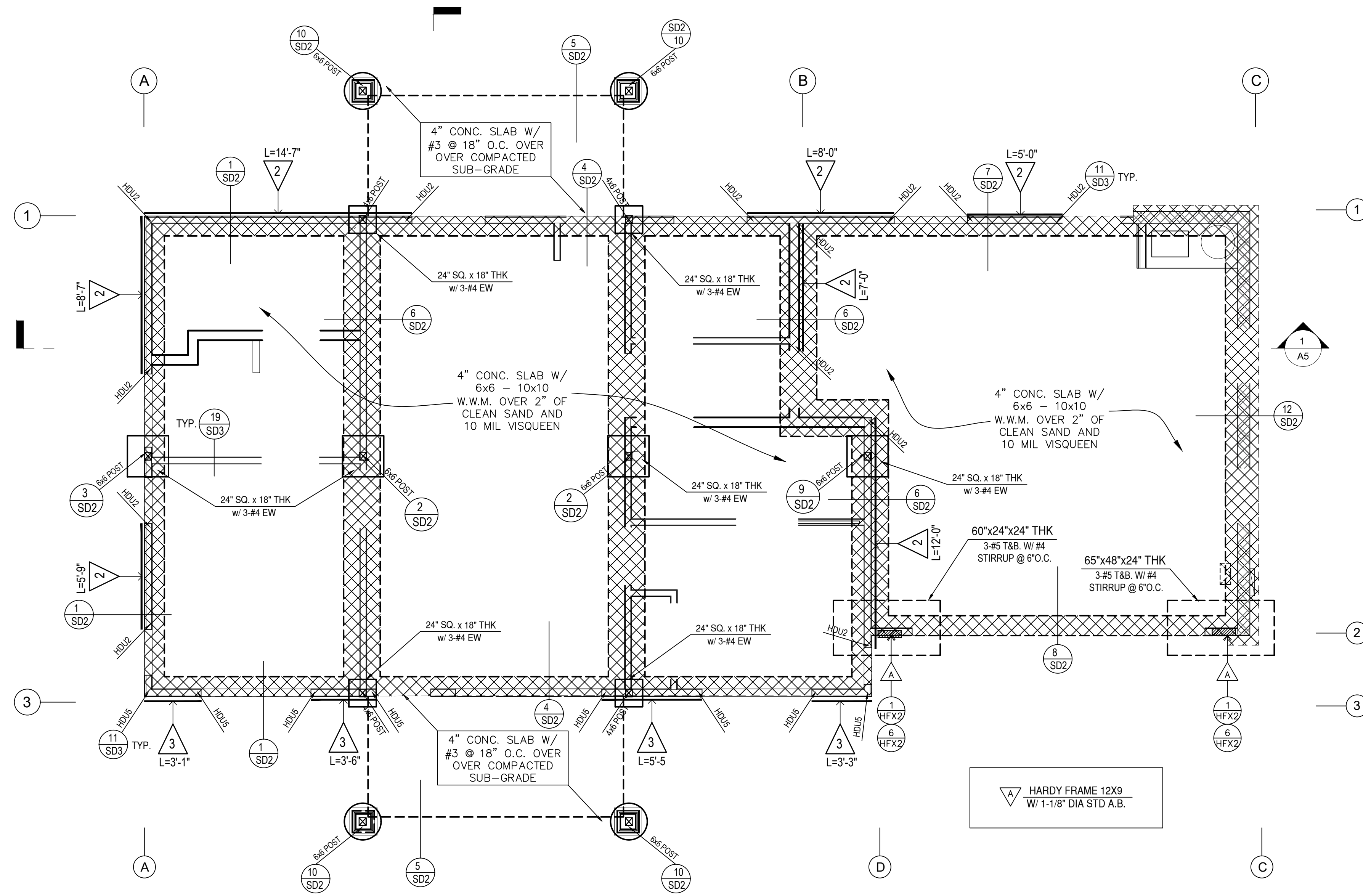
GENERAL NOTES

PAGE NO:



FOUNDATION NOTES

- 1 CONTRACTOR SHALL VERIFY FOUNDATION DIMENSIONS WITH FLOOR PLAN DIMENSIONS AND REPORT ANY DISCREPANCIES TO ARCHITECT PRIOR TO START OF CONSTRUCTION.
- 2 CONTRACTOR SHALL COORDINATE WITH OTHER TRADES ALL REQUIREMENTS FOR THEIR MATERIALS TO BE INSTALLED UNDER/IN SLAB.
- 3 VERIFY LOCATIONS OF ALL HOLDDOWNS WITH FRAMING PLANS & FRAMING CONTRACTOR PRIOR TO INSTALLATION.
- 4 MATERIAL SUBSTITUTION NOTE
NO MATERIALS SHALL BE SUBSTITUTED WITHOUT THE ARCHITECT'S WRITTEN APPROVAL.
- 5 CONTRACTOR TO HAVE A COPY OF THE APPROVED SOILS REPORT AT JOB SITE AT ALL TIMES. CONTRACTOR IS RESPONSIBLE FOR THE CONTENTS OF THE REPORT AND IS TO REVIEW THE RECOMMENDATIONS AND IS TO INCORPORATE THOSE RECOMMENDATIONS INTO THE PROJECT. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF CONSTRUCTION. VERIFY BUT NOT LIMITED TO, TYPE OF CONCRETE, FOOTING DEPTH AND PENETRATION, STEEL RECOMMENDATIONS AND PRESATURIZATION REQUIREMENTS.
- 6 ELECTRICAL GROUND NOTE:
NOTE: PROVIDE UFER OR OTHER APPROVED ELECTRICAL GROUND SYSTEM PER NEC, ARTICLE 250-81
- 7 A CONCRETE ENCASED GROUND ELECTRODE (UFER) IS REQUIRED. THE ELECTRODE SHALL BE EITHER 20' MAXIMUM OF NO. 4 REBAR, NO. 4 BARE SOLID COPPER WIRE, OR 3/4" RIGID GALVANIZED CONDUIT INSTALLED THREE (3") INCHES OFF THE BOTTOM OF THE FOOTING AND ENCASED IN THREE INCHES (3") MINIMUM OF CONCRETE. ALTERNATE METHODS MUST BE APPROVED BY THE LOCAL BUILDING DEPARTMENT.
- 8 IT IS RECOMMENDED BY THE ARCHITECT TO RUN ALL WATER LINES ABOVE SLAB (BOTH HOT AND COLD LINES). SEE DETAIL.
- 9 PLUMBING AND ELECTRICAL TRENCHES UNDER THE SLAB SHALL BE BACKFILLED WITH SAND AND COMPACTED BY MECHANICAL TAMPING.
- 10 N/A
- 11 N/A
- 12 N/A
- 13 IT IS ARCHITECT RECOMMENDATION FOR THE ENTIRE SOIL AREA TO BE COVERED BY FOOTINGS AND SLABS, INCLUDING ALL LANDSCAPE WALKS AND DECKS, SHALL BE STERILIZED WITH AN APPROVED RESIDUE FOR TERMITES AND INSECT CONTROL.
- 14 SOIL PRESATURATION NOTE:
PRIOR TO PLACING CONCRETE, SUBGRADE SOILS BELOW ALL CONCRETE FLOOR SLABS SHALL BE PRESATURATED TO ACHIEVE A MOISTURE CONTENT THAT IS 110% TO 120% OF OPTIMUM MOISTURE CONTENT CONDITION TO A DEPTH OF 18" IMMEDIATELY PRIOR TO PLACEMENT OF THE MOISTURE BARRIER OR POURING OF CONCRETE.
- 15 SOIL BEARING VALUE AT 1500 PSF CODE MIN.
- 16 FOUNDATION CONSTRUCTION NOTE:
FOUNDATION CONSTRUCTION MAY BE OF TWO-POUR CONFIGURATION, HOWEVER, IF CONTRACTOR OPTS TO UTILIZE A TWO-POUR FIGURATION THE FOUNDATION SHALL BE FORMED SO AS TO CREATE A "CURB" CONDITION @ ALL PERIMETER AND STEP BREAK LOCATIONS THEREBY ASSURING A MONOLITHIC CONDITION FOR HOLDDOWNS, STRAPS AND ANCHOR BOLTS.
- 17 ALL BAR REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 (Y=60ksi) U.O.N. BENDING AND PLACING SHALL BE IN ACCORDANCE WITH CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE" LATEST EDITION.
- 18 ALL HARDWARE (ANCHOR BOLTS, HOLDDOWNS, STRAPS, ETC.) SHALL BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION. ARCHITECT SHALL BE NOTIFIED AND MUST INSPECT PLACEMENT PRIOR TO POURING FOUNDATION OR SLAB.
- 19 FOUNDATION PLATE BOLTING: PROVIDE 5/8" x 1/4" A307 ANCHOR BOLTS, EMBEDDED 5" MINIMUM INTO CONCRETE. THERE SHALL BE A MINIMUM OF TWO (2) BOLTS PER PLATE, WITH ONE (1) BOLT LOCATED WITHIN 1/4" OF END, AND SPACED 6" O.C. UNLESS OTHERWISE NOTED.
- 20 ANCHOR BOLT NOTE:
PROVIDE 3"x3"x1/4" THICK WASHER PLATES AT ALL ANCHOR BOLTS
- 21 VAPOR BARRIER MATERIAL SHALL BE POLYETHYLENE FILM (VISQUEEN OR EQUIVALENT) AND SHALL BE PLACED UNDER ALL HOUSE SLABS AND UNDER GARAGE SLABS. THESE NOTES ON PLANS WITH SIX INCH (6") MINIMUM SEALED LAP SPLICES.
- 22 ALL SLABS, STEPS, ETC. SHALL BE STEEL TROWELED AND PROTECTED FROM HARM DURING CONSTRUCTION. SLAB FINISH SHALL HAVE A MAXIMUM FINISHED TOLERANCE OF ONE-EIGHT INCH IN TEN FEET (1/8" IN 10'-0").
- 23 POSTS ON CONCRETE FLOORS EXPOSED TO WEATHER OR IN BASEMENTS SHALL BE SUPPORTED BY CONCRETE PIERS OR METAL PRECASTS AT LEAST 6" ABOVE GROUND OR 1" ABOVE FLOOR.
- 24 WHERE FRAMING LUMBER IS IN CONTACT WITH, OR LESS THAN 1 1/2" FROM CONCRETE, USE FOUNDATION GRADE REDWOOD OR PRESSURE TREATED DOUGLAS FIR.
- 25 PROVIDE 1/16" THICK (MINIMUM) METAL CORROSION-RESISTANT BASE PLATE FOR UNTREATED WOOD POSTS IN CONTACT WITH ALL CONCRETE.
- 26 ALL ANCHOR BOLTS & NAILS IN PRESSURE TREATED SILL PLATES SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL PER ASTM A 153. ANCHOR BOLTS MAY HAVE A MECHANICALLY DEPOSITED ZINC COATING WITH WEIGHTS PER ASTM B 695, CLASS 55.
- 27 PROVIDE STUCCO BASE SCREED (SEC. 4706.1)



FOUNDATION PLAN

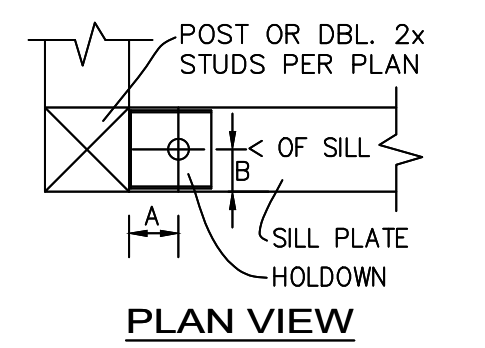
SCALE: 1/4" = 1'



SW SCH - CBC 19	
(REFER TO SHEET GN FOR COMPLETE SHEARWALL SCHEDULE & NOTES)	
SYMBOL	ANCHOR BOLT SCHED. & SILL PLATE SIZE
1	2x SILL PLATE W/ 1/2" A.B. @ 36" o.c.
2	3x SILL PLATE W/ 5/8" A.B. @ 24" o.c.
3	3x SILL PLATE W/ 5/8" A.B. @ 24" o.c.
4	3x SILL PLATE W/ 5/8" A.B. @ 20" o.c.
5	3x SILL PLATE W/ 5/8" A.B. @ 18" o.c.
6	3x SILL PLATE W/ 5/8" A.B. @ 16" o.c.
7	3x SILL PLATE W/ 5/8" A.B. @ 12" o.c.
8	2x SILL PLATE W/ 1/2" ANCHOR BOLTS @ 36" o.c. (NOT USED AS SHEARWALL)

HOLDDOWN SCHEDULE

HOLDDOWN	ASTM F 1554 G36 (U.N.O.)		
	ANCHOR	EDGE (MIN.)	LOADS
1	DBL. 2x STUDS W/ HDU2	SSTB16 (128" EMB.)	2 1/2" 3075#
2	DBL. 2x STUDS W/ HDU4	SSTB20 (168" EMB.)	2 1/2" 4565#
3	4x6 POST W/ HDU5	SSTB24 (208" EMB.)	2 1/2" 5645#
4	4x6 POST W/ HDU8	SSTB28 (248" EMB.)	2 1/2" 7870#
5	6x6 POST W/ HDQ8	SSTB28 (248" EMB.)	2 1/2" 9230#
6	6x6 POST W/ HDU14	SBIx30 (248" EMB.)	2 1/2" 17080#
7	PREFAB. SHEARWALL	PER PLAN	



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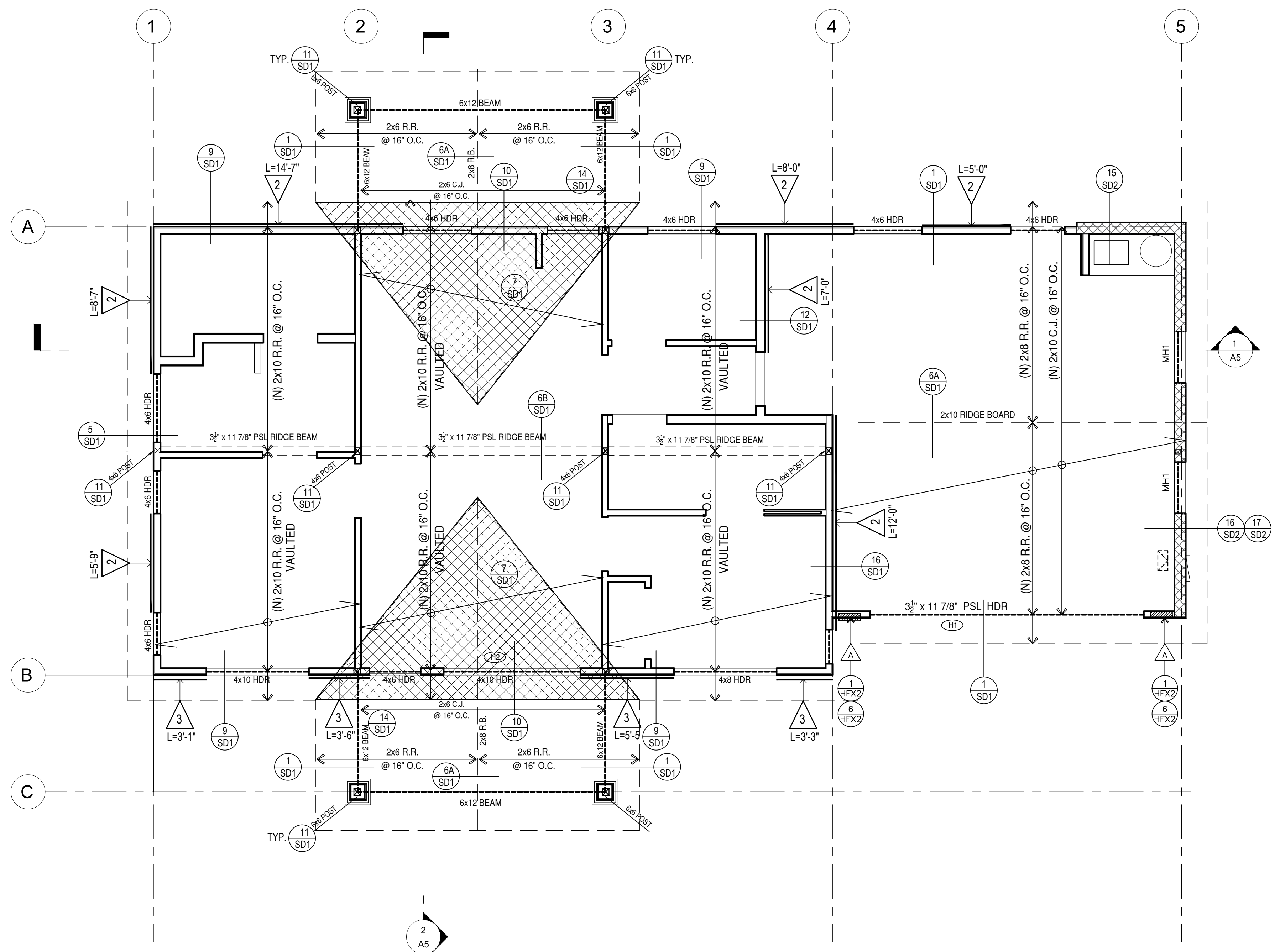
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ROOF FRAMING PLAN

SCALE: 1/4" = 1'

- ### FRAMING NOTES
- ROOF SHEATHING SHALL BE:
3/4" APA PLYWOOD OR ORIENTED STRAND BOARDS WITH 24"/16" SPAN RATING.
UNBLOCKED = 8d COMMON NAILS @ 6" o.c. AT ALL EDGES, 1/2" OC FIELD
MINIMUM PENETRATION IS 1 1/2" INTO FRAMING
B.N. APPLIES TO ALL SUPPORTED PLYWOOD EDGES AT:
PLYWOOD EDGES, PERIMETER WALLS, & SHEARWALLS
 - FLOOR SHEATHING SHALL BE:
3/4" APA RATED STURDI-FLOOR, T&G, 24" o.c. SPAN RATING,
EXPOSURE 1
 - 10d COMMON NAILS @ 6" o.c. B.N.,
10d COMMON NAILS @ 12" o.c. F.N.
B.N. APPLIES TO ALL SUPPORTED PLYWOOD EDGES AT:
PLYWOOD EDGES, PERIMETER WALLS, & SHEARWALLS
 - DECK SHEATHING SHALL BE:
3/4" APA RATED STURDI-FLOOR, T&G, 24" o.c. SPAN RATING,
EXPOSURE 1
10d COMMON NAILS @ 6" o.c. B.N.,
10d COMMON NAILS @ 12" o.c. F.N.
B.N. APPLIES TO ALL SUPPORTED PLYWOOD EDGES AT:
PLYWOOD EDGES, PERIMETER WALLS, & SHEARWALLS
 - TJI JOISTS (ESR-1153), TIMBERSTRANDS, AND PARALLAMS (ESR-1387)
MANUFACTURER SHALL BE "TRUSS JOIST MACMILLAN" OR EQUIVALENT.
 - A CERTIFICATE OF CONFORMANCE IS REQUIRED PRIOR TO FRAMING INSPECTION FOR ALL PARALLEL STRANDED LUMBER.
 - DO NOT CUT, NOTCH, DRILL, BORE, SHAVE, TAPER OR FOR ANY REASONS MODIFY PRE-ENGINEERED / MANUFACTURED STRUCTURAL ELEMENTS SUCH AS GLUED-LAMINATED MEMBERS, PARALLAMS, MICROLAMS, I-JOISTS, LIGHT GAUGE METAL MEMBERS AND OTHER SIMILAR TIMBER OR STEEL PRODUCTS UNLESS SUCH MODIFICATIONS ARE WITHIN THE WRITTEN PARAMETERS SET FORTH BY THE MANUFACTURER OF THAT PRODUCT OR A LETTER OF CERTIFICATION FROM THE MANUFACTURER'S ENGINEER WITH DETAIL SIGNED AND STAMPED IS ISSUED AND AUTHORIZED BY THE PROJECT ENGINEER OF RECORD AND APPROVED BY THE CITY OF GOVERNING BUILDING OFFICIAL.
 - USE SIMPSON "LU" HANGERS TYPICALLY FOR ALL DECK JOIST & OTHER DIMENSIONAL LUMBER, U.N.O.
 - USE SIMPSON "IUS" HANGERS WHERE TJI FLOOR JOIST ARE UTILIZED, U.N.O.
 - BEAMS BEARING ON TOP PLATES SHALL HAVE A SIMPSON "A34" EACH SIDE (U.N.O.). ALIGN DBL 2x STUDS (U.N.O.) BELOW. NAIL TOGETHER WITH 16d @ 16" o.c.
 - ALL POSTS TO TOP PLATE AND SILL PLATE CONNECTIONS SHALL BE SIMPSON "A34" U.N.O.
 - PROVIDE "MSTC28" STRAP ACROSS ALL DISCONTINUOUS DBL. TOP PLATES.
 - PROVIDE DOUBLE JOISTS @ SIDES & ENDS OF ALL OPENINGS. (U.N.O.) NAIL TOGETHER WITH 16d @ 12" o.c. (TYP.)
 - PROVIDE DBL. JOISTS BELOW ALL INTERIOR WALLS 8'-0" OR GREATER IN LENGTH. PROVIDE BLOCKING @ 1/3 SPANS.
 - ALL SHEAR PANEL SHALL BE APPLIED DIRECTLY TO STUDS PRIOR TO INSTALLATION OF DECORATIVE POP-OUTS AND TRIM.
 - FRAMING MEMBERS OR BLOCKING SHALL BE PROVIDED AT THE EDGES OF ALL SHEETS IN PLYWOOD SHEARWALLS.
 - ALL PLYWOOD EDGES OF FLOOR/DECK DIAPHRAGMS SHALL BE SUPPORTED BY 2x OR WIDER FRAMING ELEMENTS.
 - PROVIDE MULTIPLE STUDS UNDER BEAMS OR TRUSSES TO MATCH WIDTH OF SUPPORTED MEMBER, TYP. STUDS SHALL BE CONTINUED IN LOWER FLOORS AND/OR CRAWL SPACE TO FOOTING, TYP.
 - PROVIDE SOLID BLOCKING UNDER POSTS AND MULTIPLE STUDS TO TRANSFER LOADS TO POSTS/STUDS BELOW.
 - SHADED AREA INDICATES OVER FRAMING, PER 15/SD.
a) CONTRACTOR PROVIDED STICK FRAMING AS FOLLOWS:
2x6 RAFTERS SUPPORTED BY 2x6 @ 24" O.C. CRIPPLE WALL WITH DOUBLE BOTTM PLATES. THE RAFTER AND THE CRIPPLE WALL SHALL BE REPEATED @ 24" O.C.
b) ROOF STRUCTURAL SHEATHING SHALL BE CONTINUOUS OVER THE MAIN FRAMING MEMBERS. A SECOND LAYER OF STRUCTURAL SHEATHING SHALL BE APPLIED OVER THE ROOF OVERBUILD AREAS UNLESS DETAILED OTHERWISE ON PLANS.
 - NOTE:
ANY PLUMBING DRAINPIPE OR VENT PIPE CUT THROUGH A STUD WALL SHALL BE 2x6 STUD WALL OR TWO 2x4 WALLS WITH PLYWOOD SHEAR PANEL ON NON-PLUMBING WALL.

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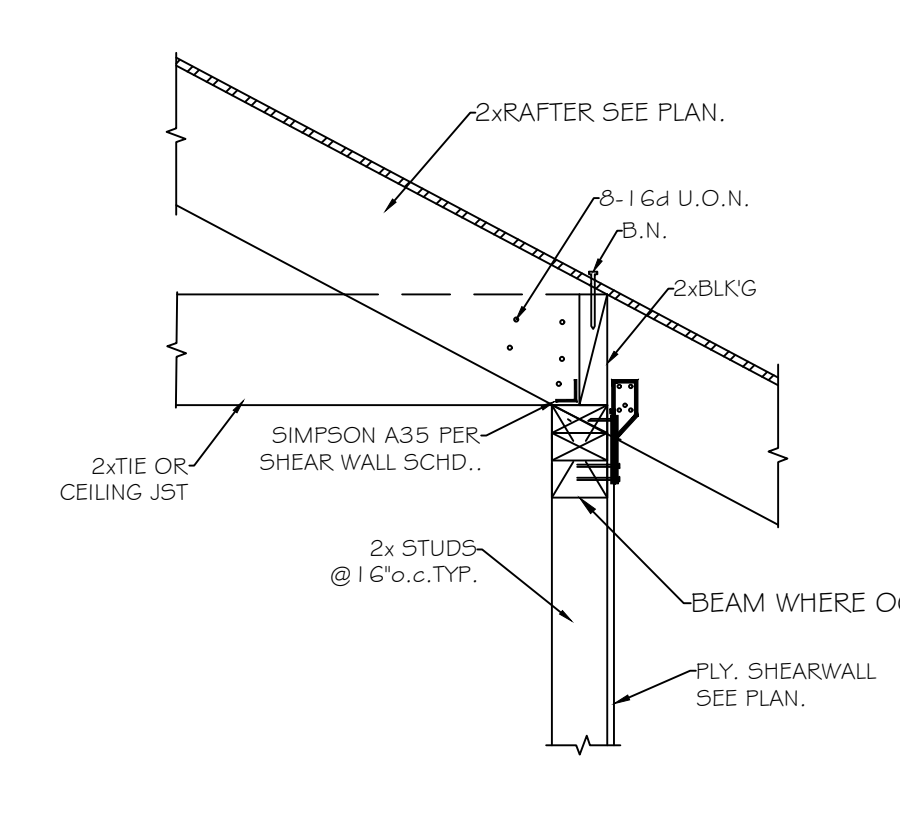
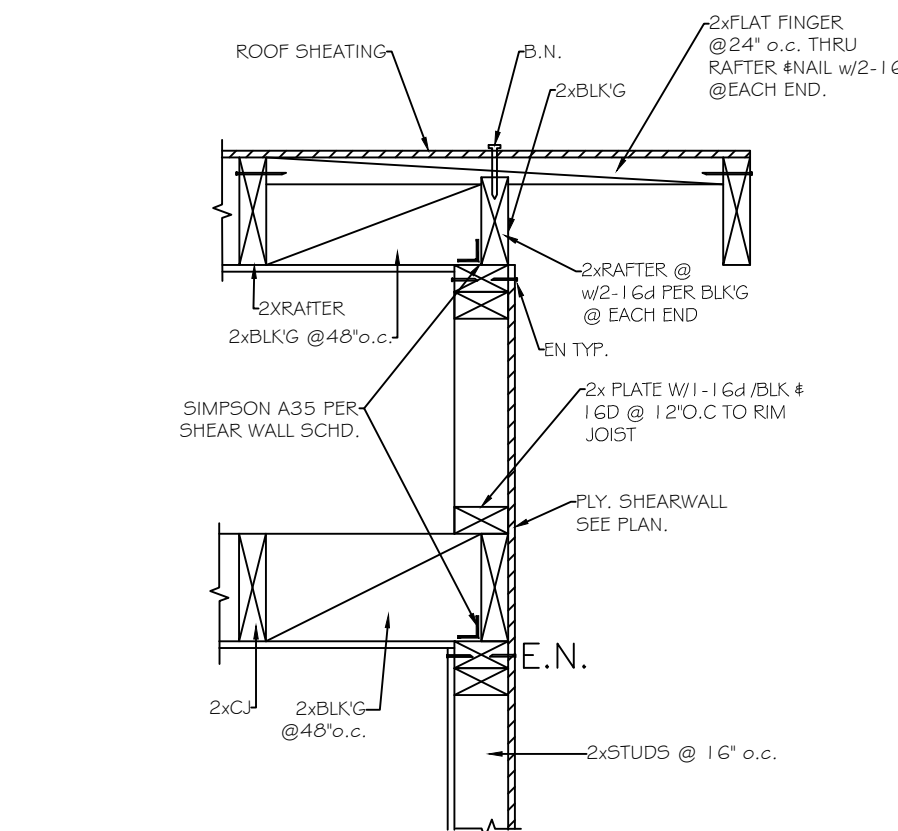
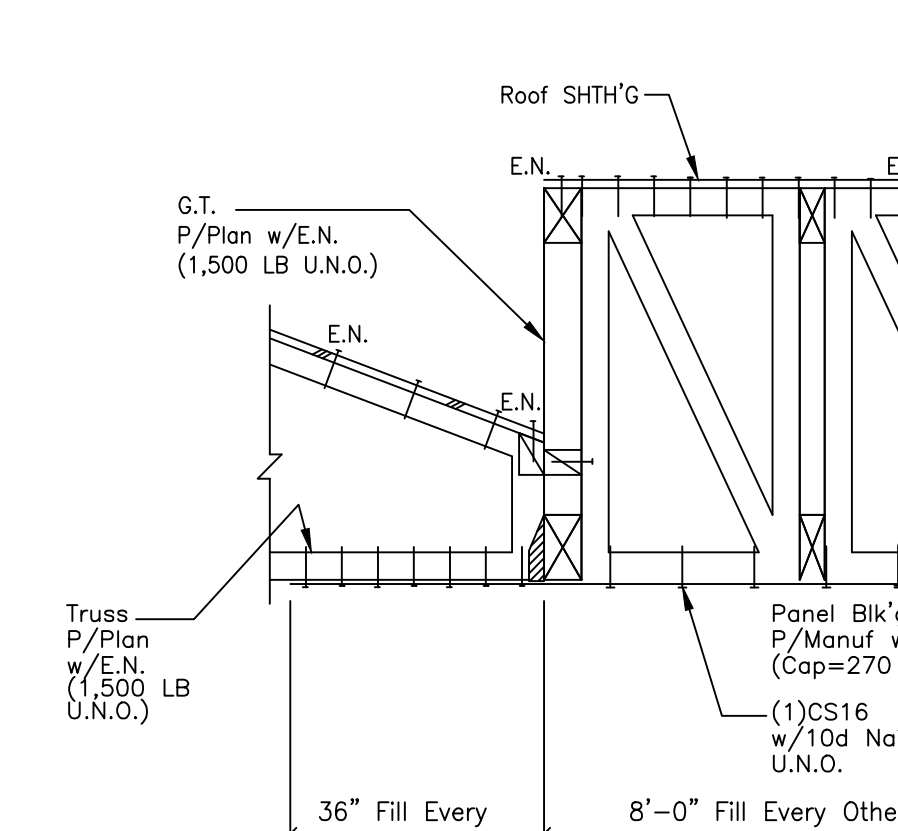
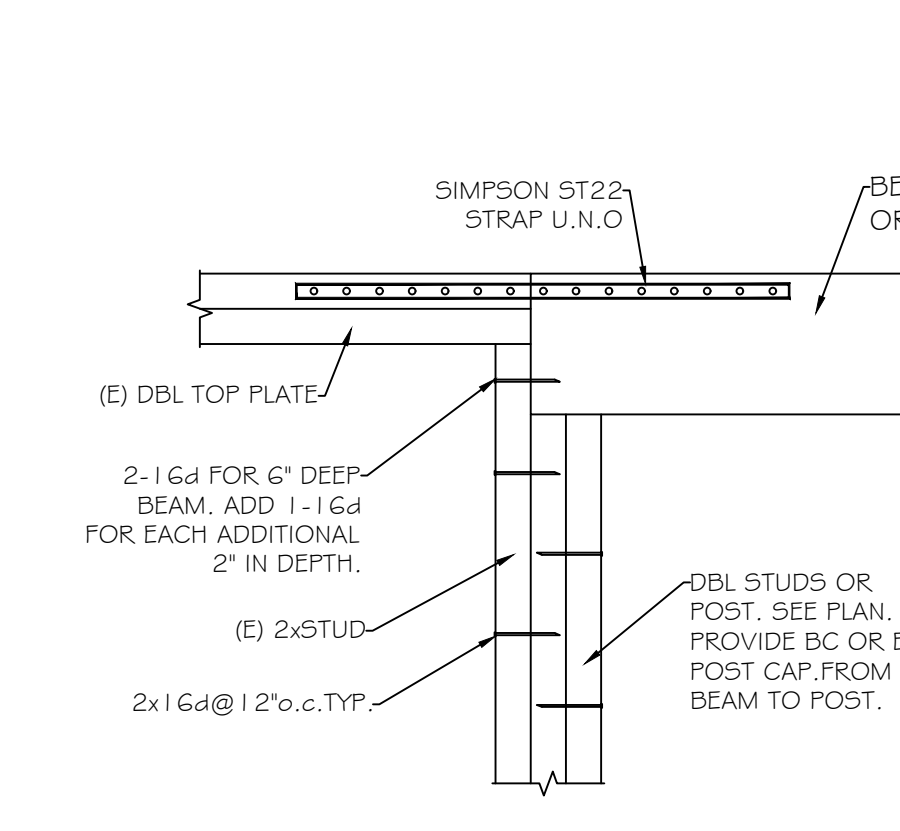
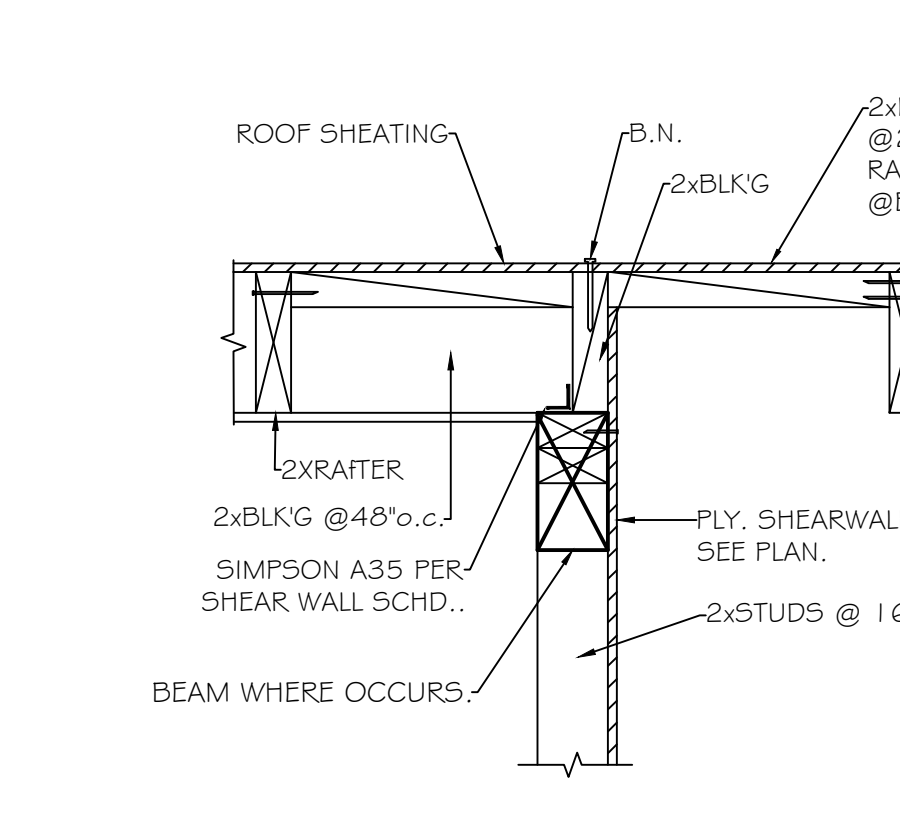
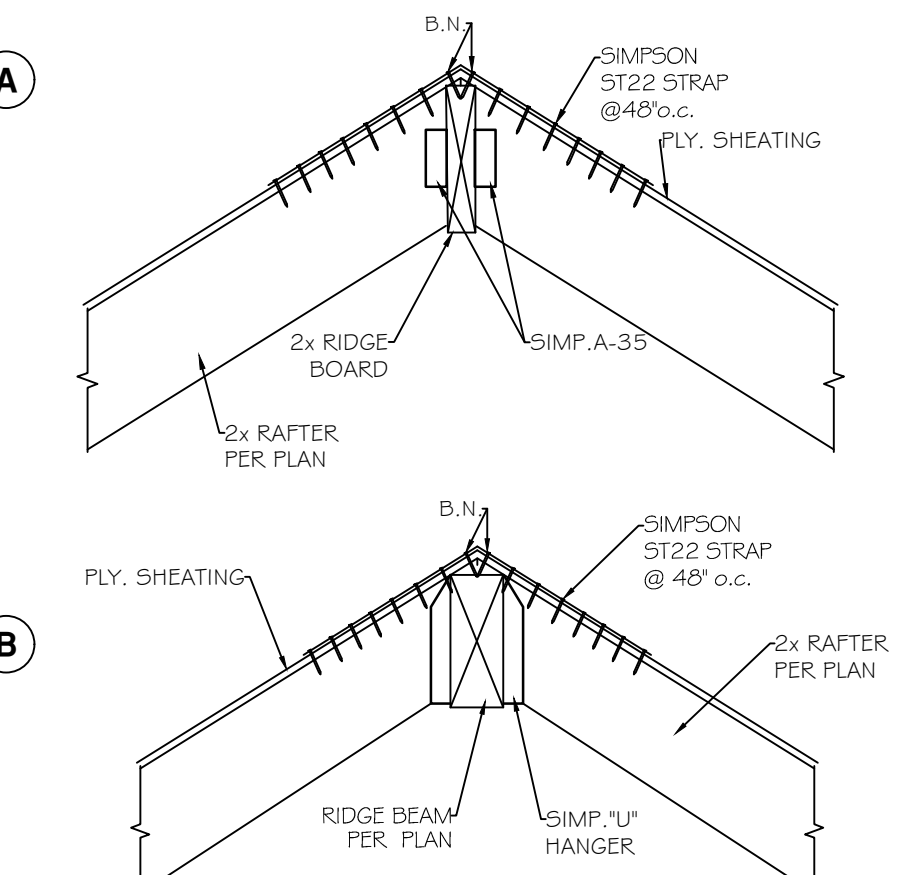
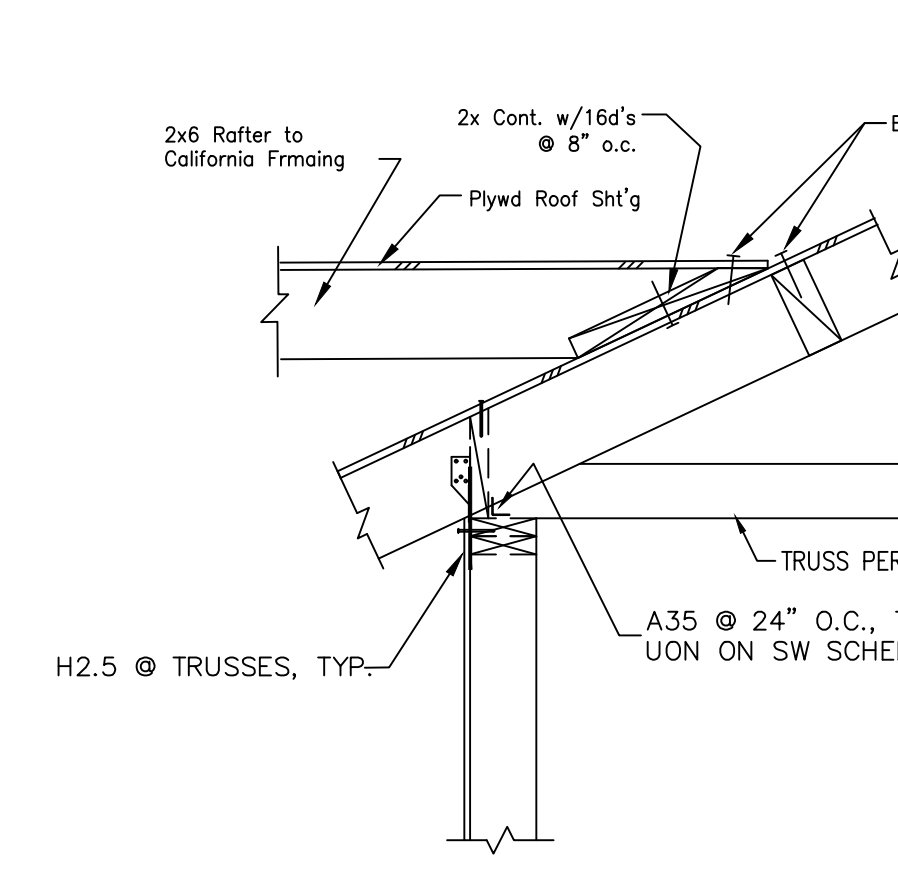
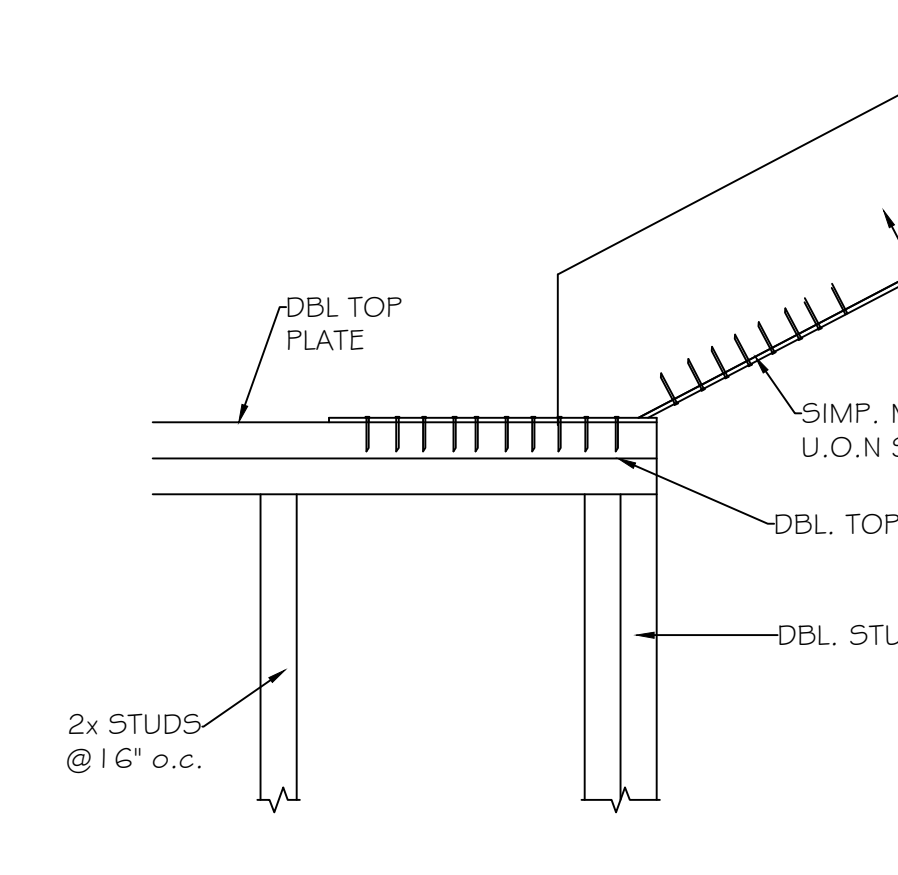
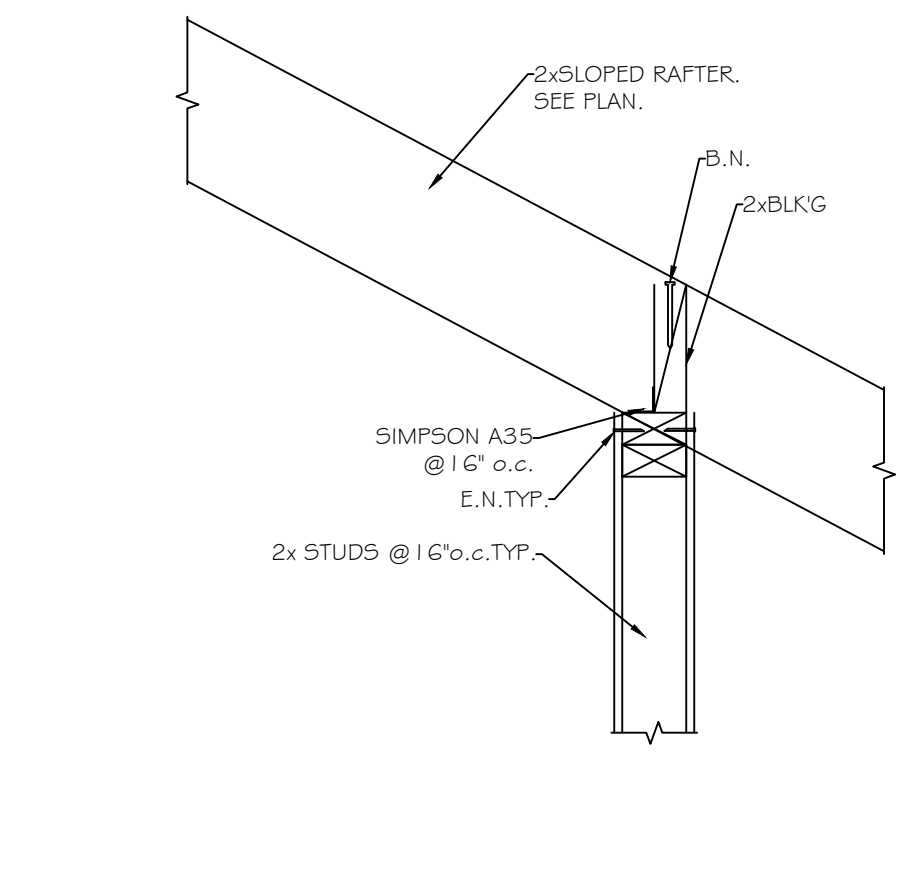
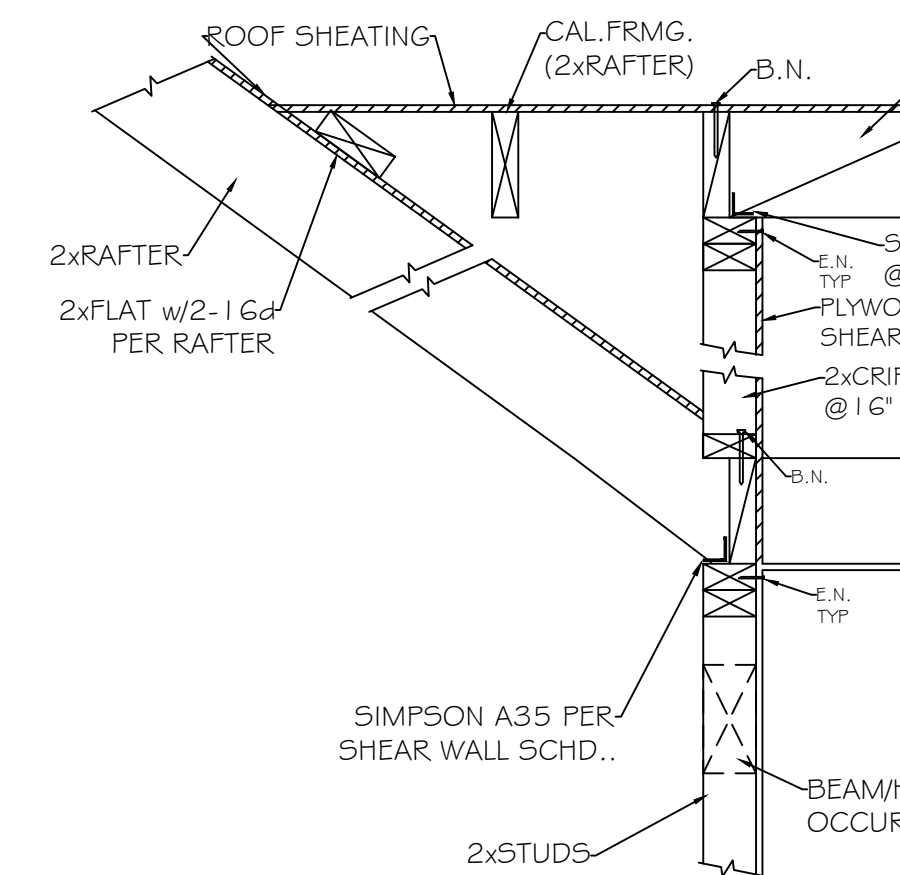
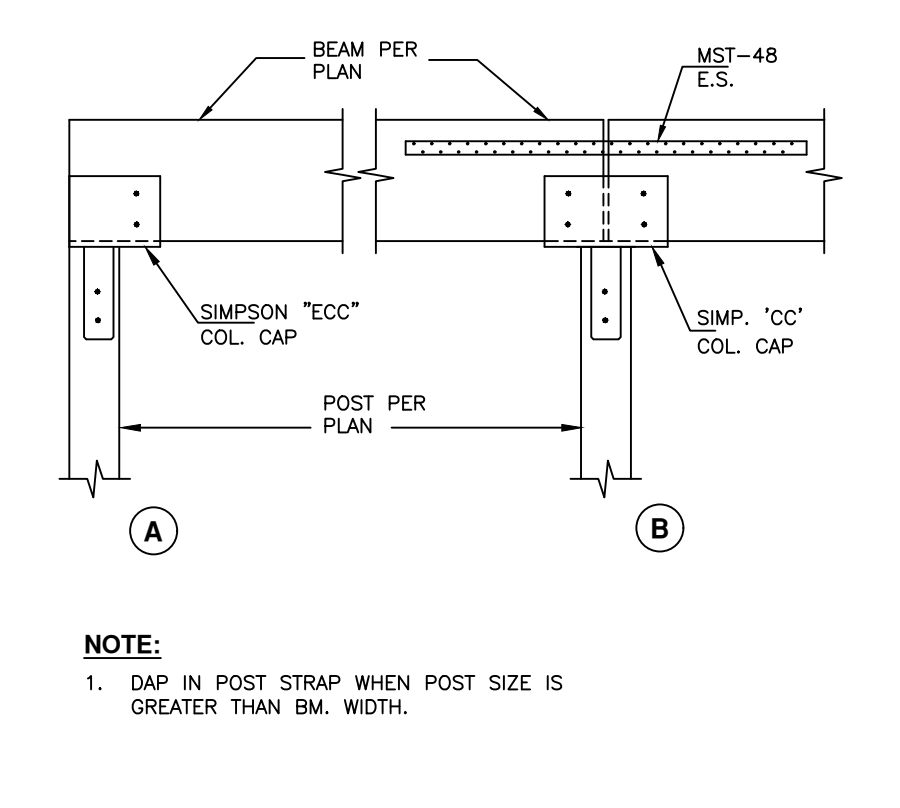
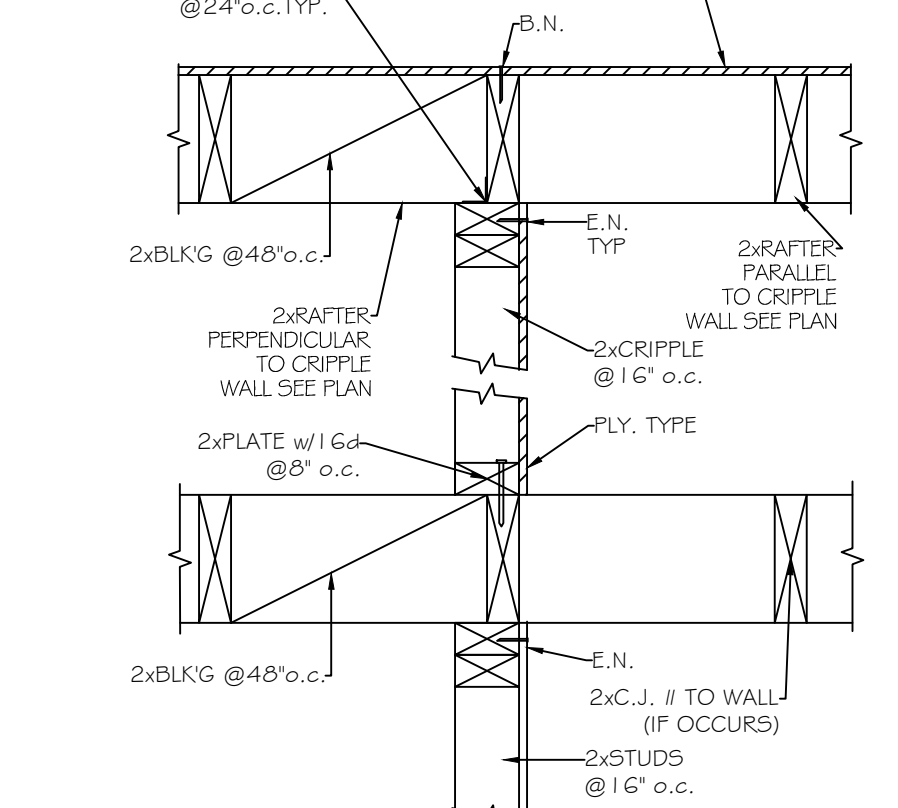
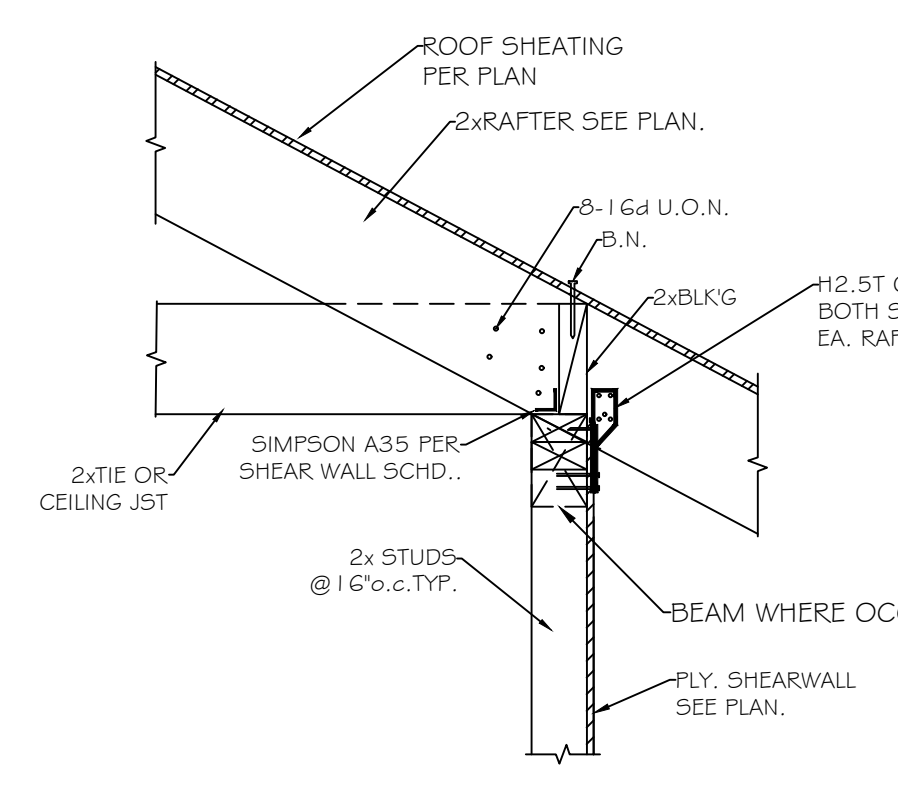
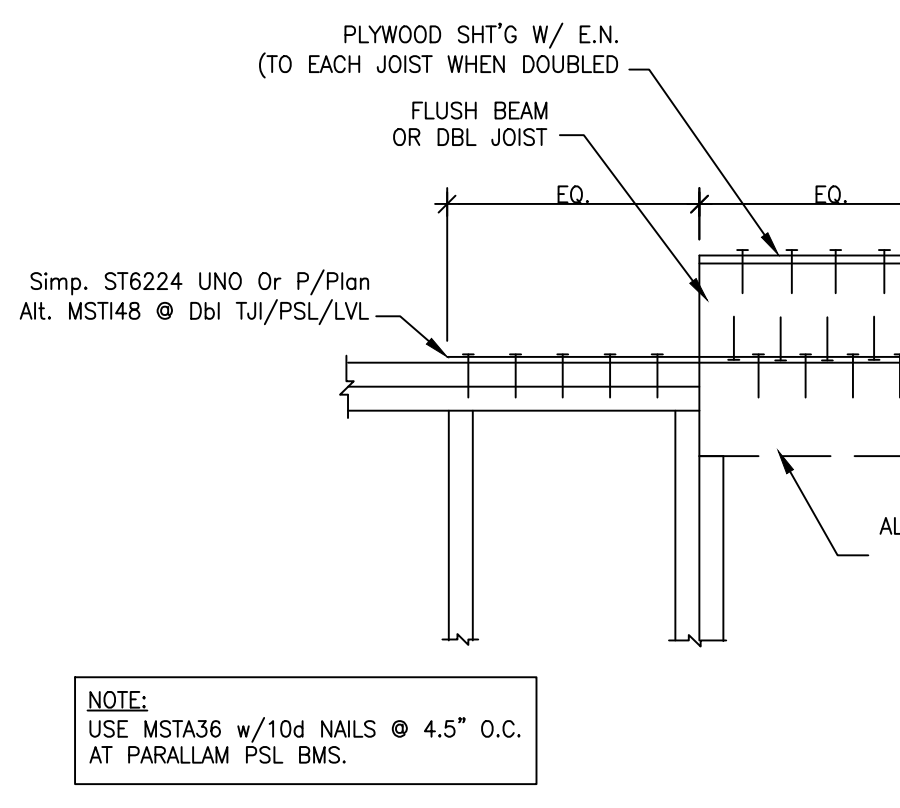
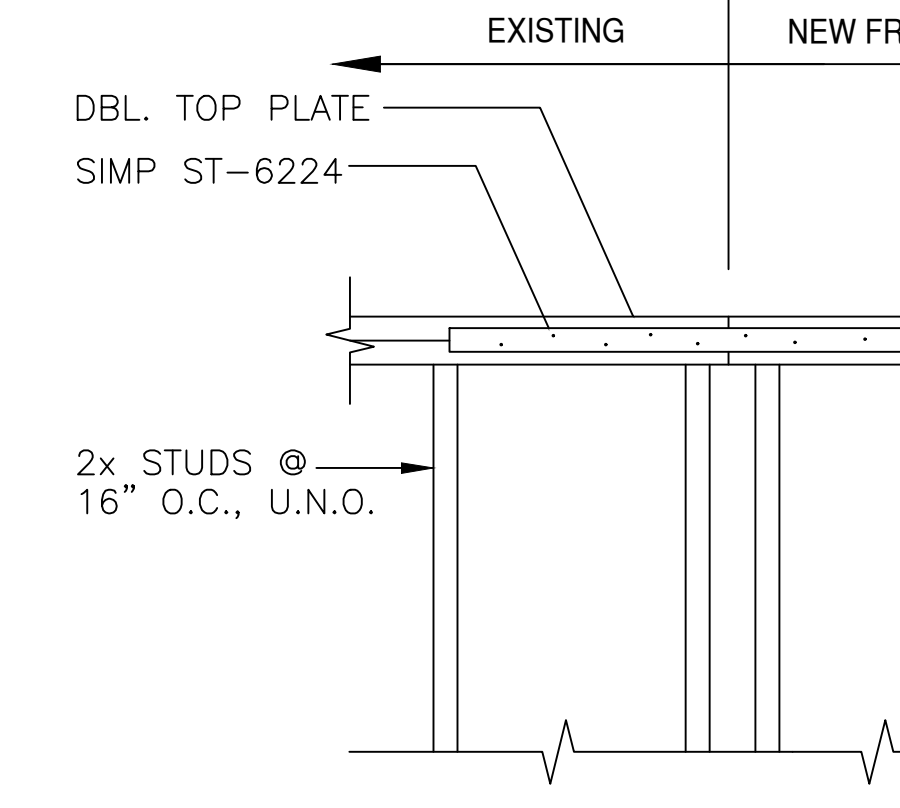
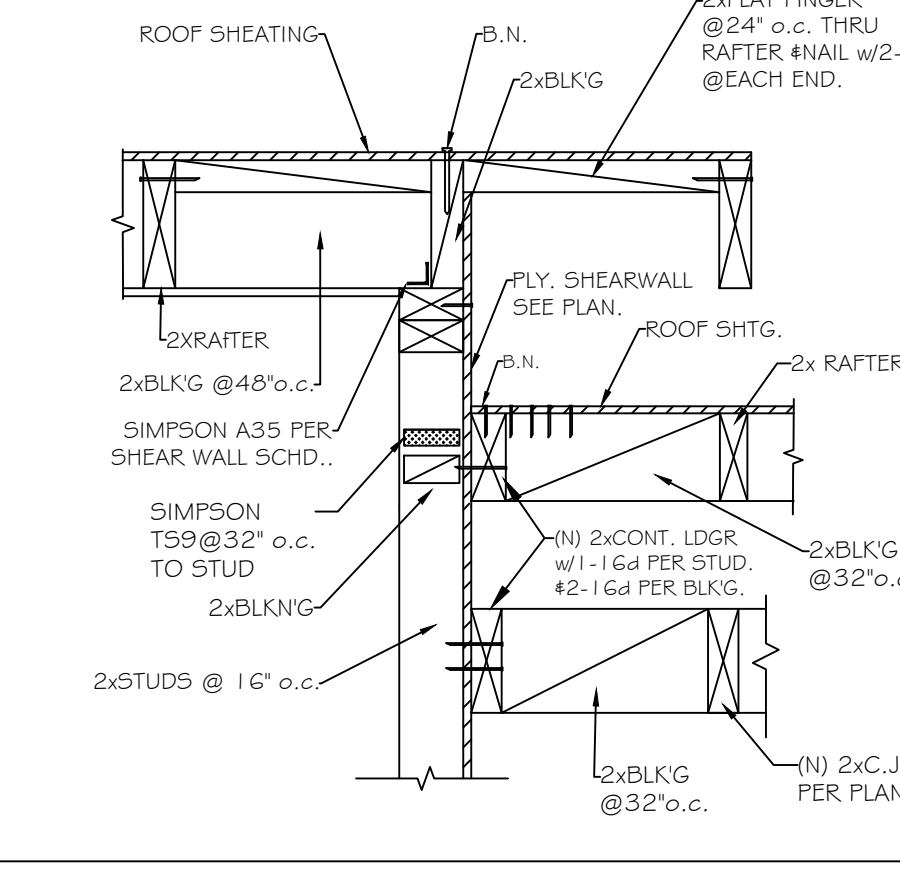

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DATE: 10/06/22

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FRAMING PLAN

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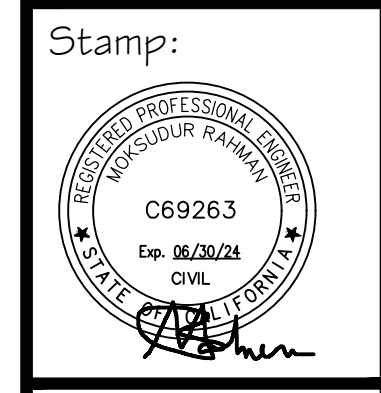
County of Riverside Building & Safety
4080 Lemon St. 9th Floor
Riverside, CA 92502
APPROVED
12/08/2022 4:22:08 PM
REVIEWED BY: jlungan
Approval of these plans shall not be construed to be a permit for, or an approval of, any violations of any of the provisions of the state or county laws. This set of plans must be kept on the job until completion.

				
<p>ROOF CONNECTION AT WALL</p>	<p>ROOF AT GABLE END</p>	<p>ROOF DRAG AT TRUSS</p>	<p>(N) WALL TO (N) BEAM - DRAG CONNECTION</p>	<p>GABLE CONNECTION</p>
				
<p>RIDGE CONNECTION</p>	<p>CALIFORNIA FRAMING DETAIL</p>	<p>ROOF DRAG AT WALL</p>	<p>VAULTED ROOF RAFTER</p>	<p>CALIFORNIA FRAMING TO ROOF</p>
				
<p>POST - BEAM CONNECTION</p>	<p>INTERIOR SHEAR DETAIL</p>	<p>SHEAR TRANSFER AT INT WALL</p>	<p>DRAG CONNECTION</p>	<p>(N) TO (E) FRAMING CONNECTION</p>
				
<p>STEP-ROOF CONNECTION AT GABLE-END</p>				

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 CHK BY: M.R.
 DATE: 9/18/22

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CONTINUOUS FOOTING AT EXTERNAL WALL	INT. WOOD POST PAD FOOTING	POST PAD FOOTING AT EXTERNAL WALL	PORCH DETAIL	TURN-DOWN SLAB
HOUSE TO GARAGE FOOTING	EXT. GARAGE FOOTING	TYPICAL GARAGE FTG AT DOOR	POST PAD FOOTING AT GARAGE FOOTING	CANT. POST FOOTING
NEW TO EXISTING FOUNDATION	CONTRACTION JOINT (MAX. 32 FEET)	CONTRACTION JOINT (MAX. 32 FEET)	MASONRY WALL CONTROL JOINT	
MASONRY WALL CONTROL JOINT	MASONRY WALL CONTROL JOINT	MASONRY WALL CONTROL JOINT	MASONRY WALL CONTROL JOINT	

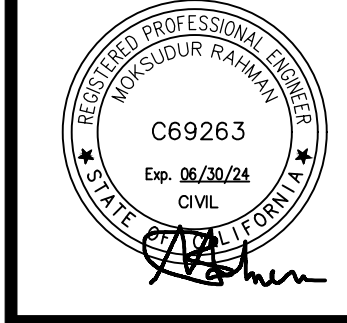
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 Corona, CA 92883, USA

Owner:

Stamp:



REVISIONS:
 MARK DATE DES./BY:

DRAWN BY: MR

DS. BY: MR

CHK BY: M.R.

DATE: 10/06/22

TITLE:
 TYPICAL DETAIL

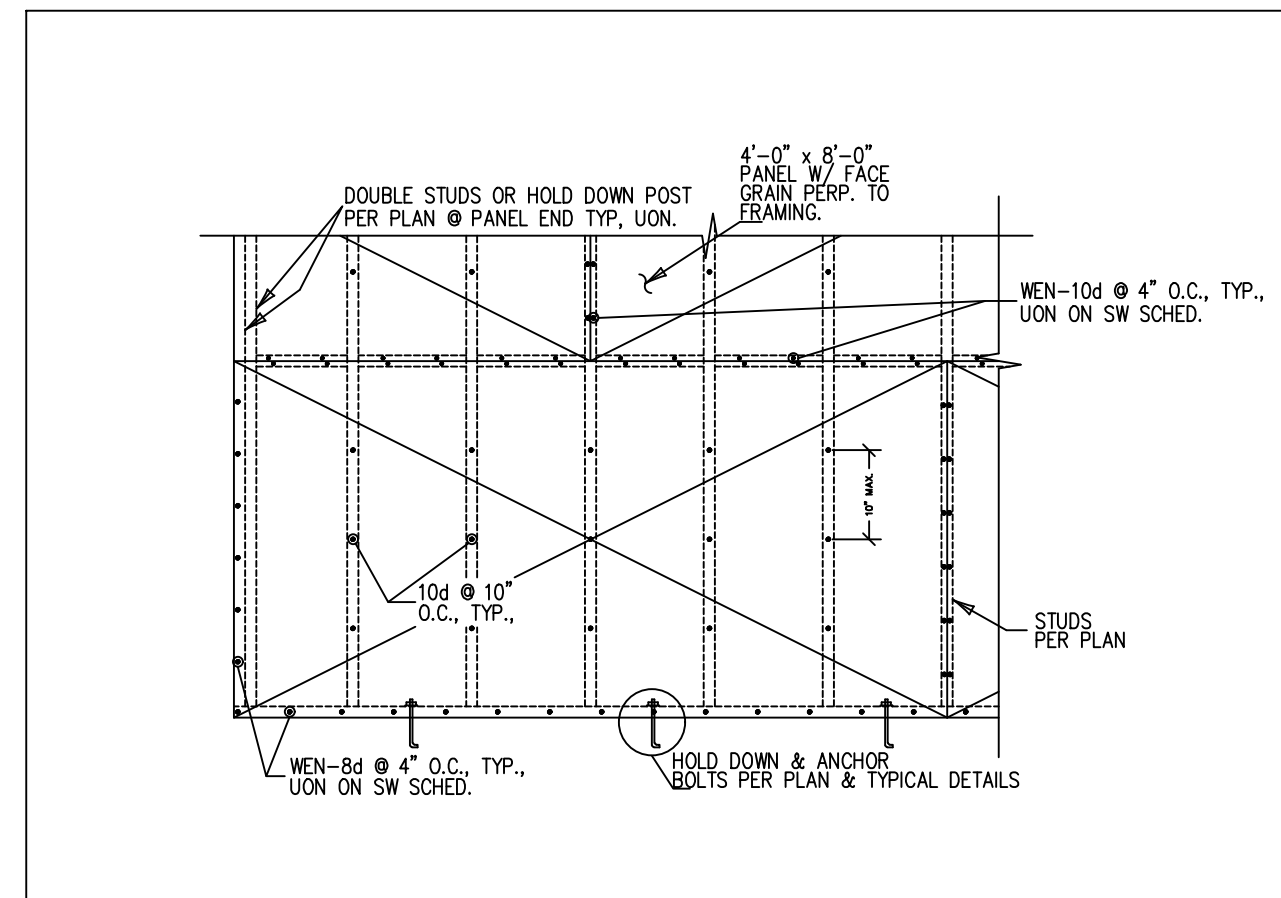
PAGE NO:

SD2

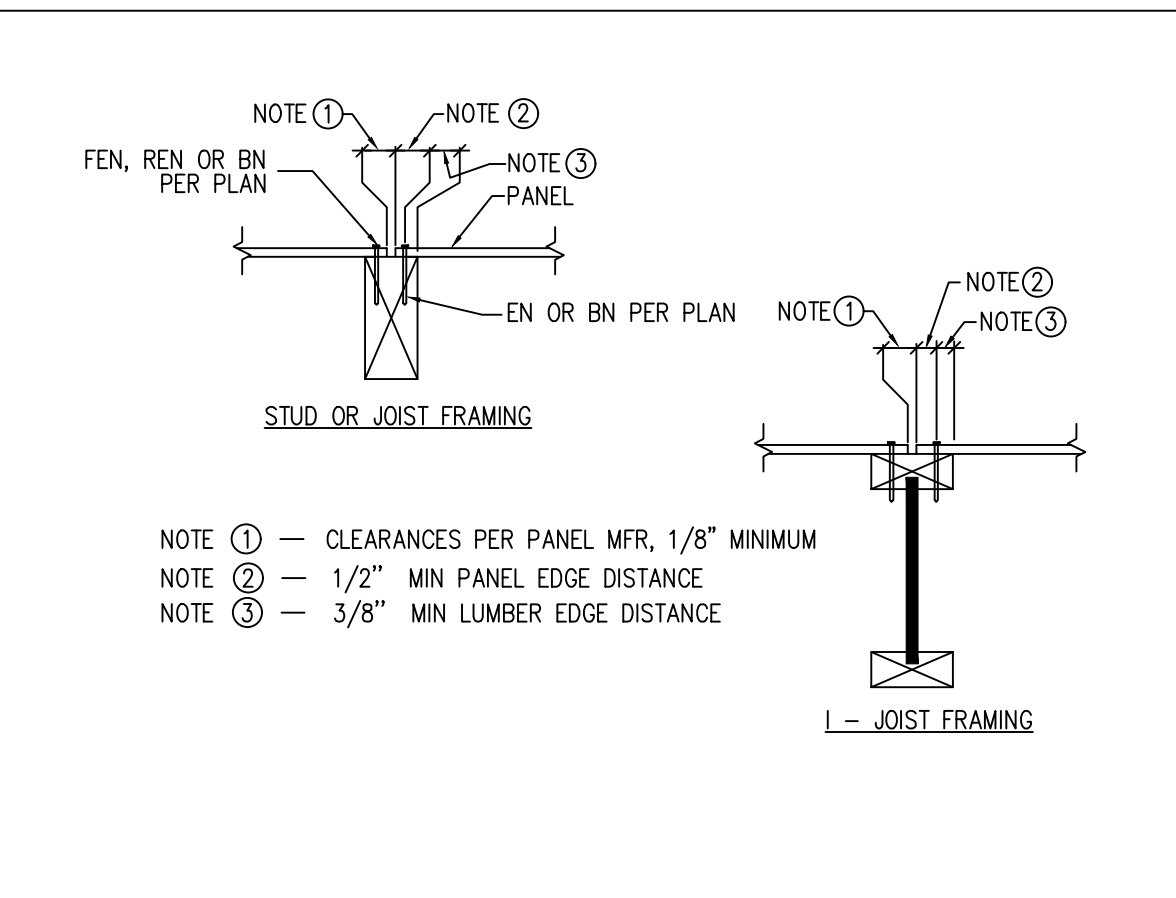
MARK	SIZE	BOTTOM BARS	TOP BARS	STIRRUPS
MH1	8x16	2 - #5	2 - #5	#3 @ 16" O.C.

NOTE:
 1. REFER TO 9/SD1 FOR ADDITIONAL REINFORCEMENT AROUND OPENING
 2. REFER TO 9/SD1 FOR HEADER DETAILS.

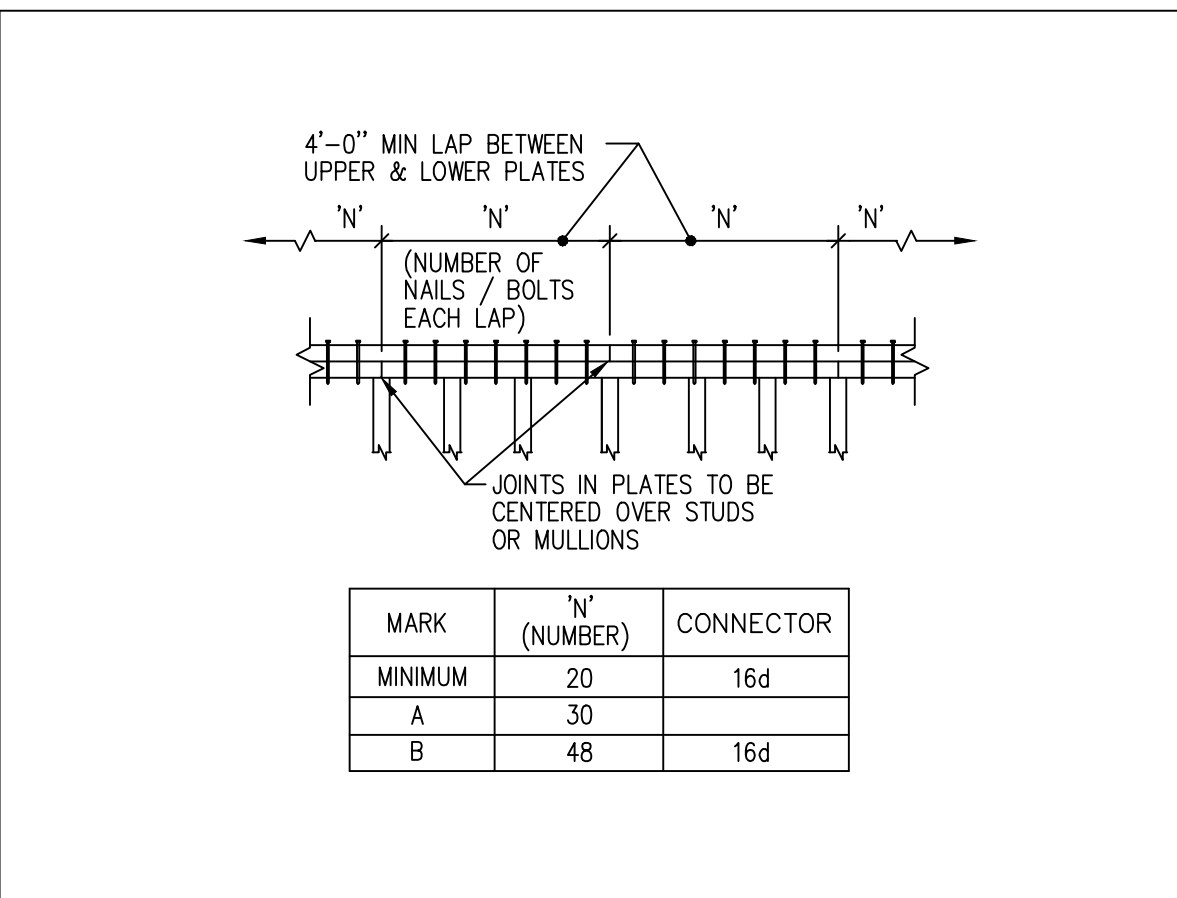




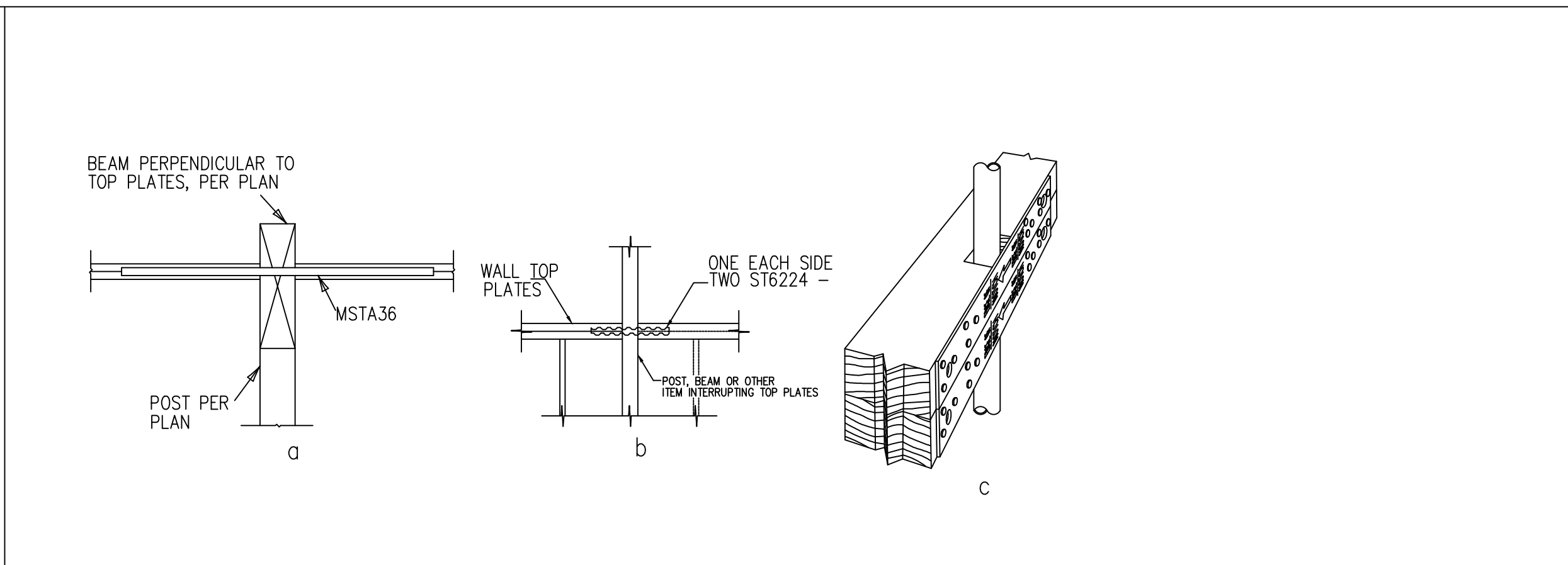
TYPICAL SHEAR WALL ELEVATION, UON 1



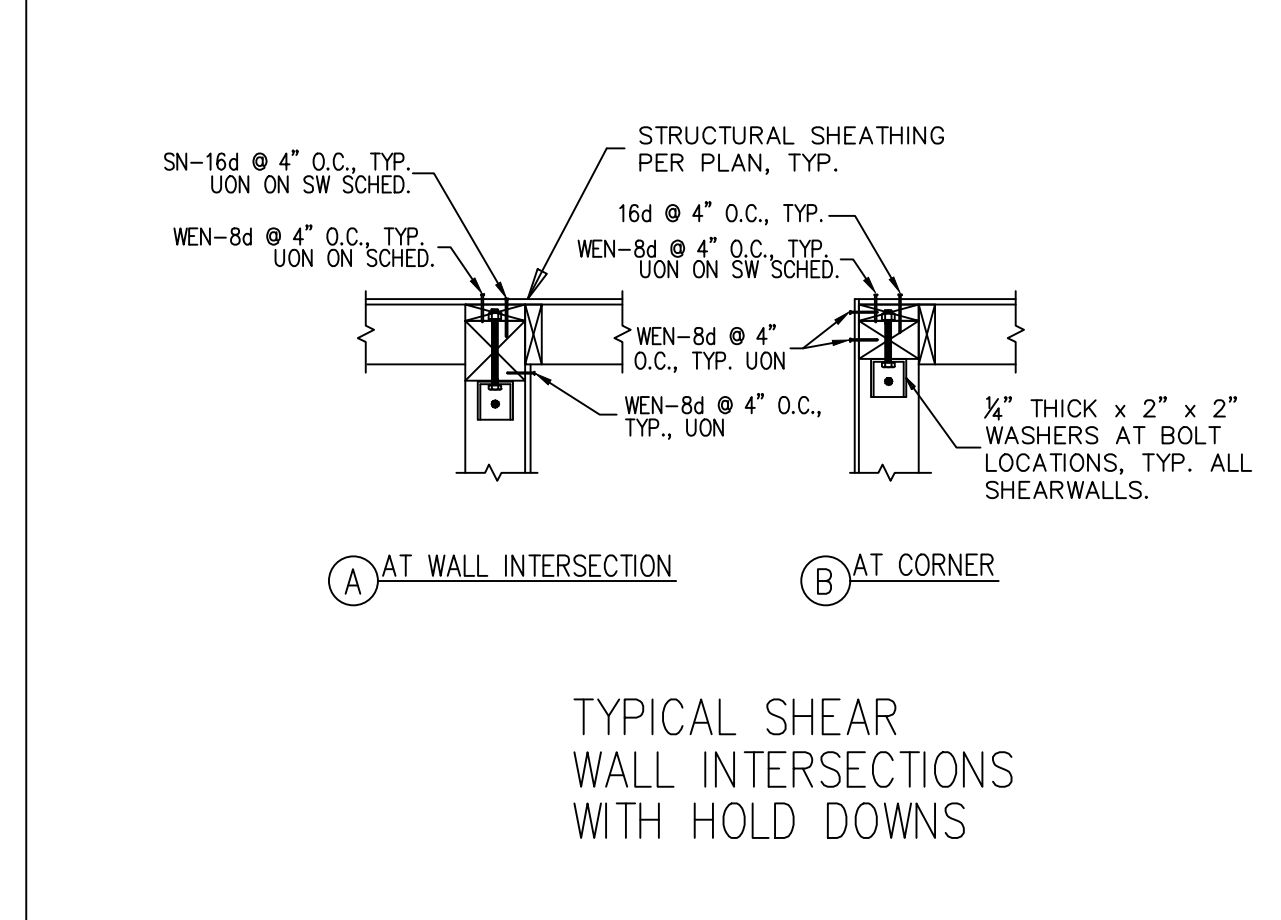
PANEL NAILING FOR WALL, FLOOR AND ROOF 2



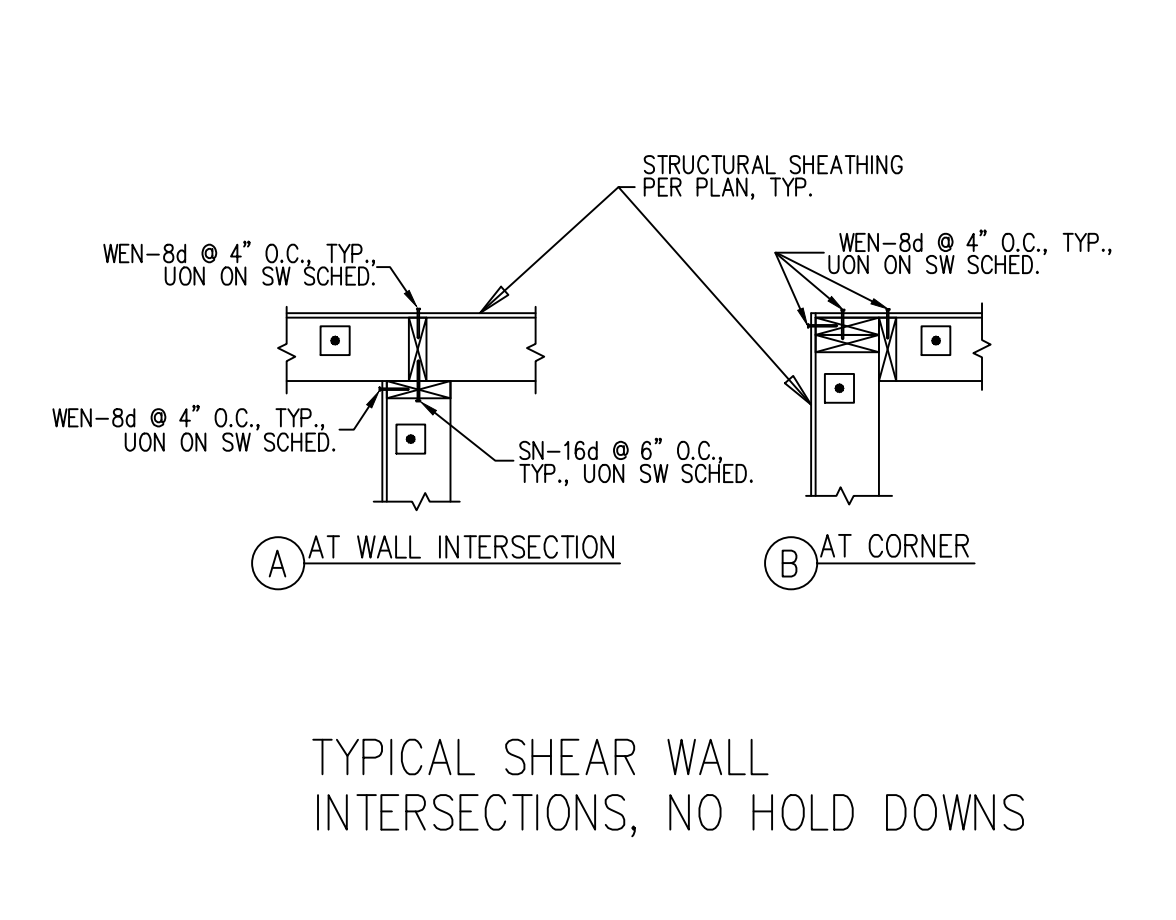
TYPICAL TOP PLATE SPLICE DETAILS, UON 3



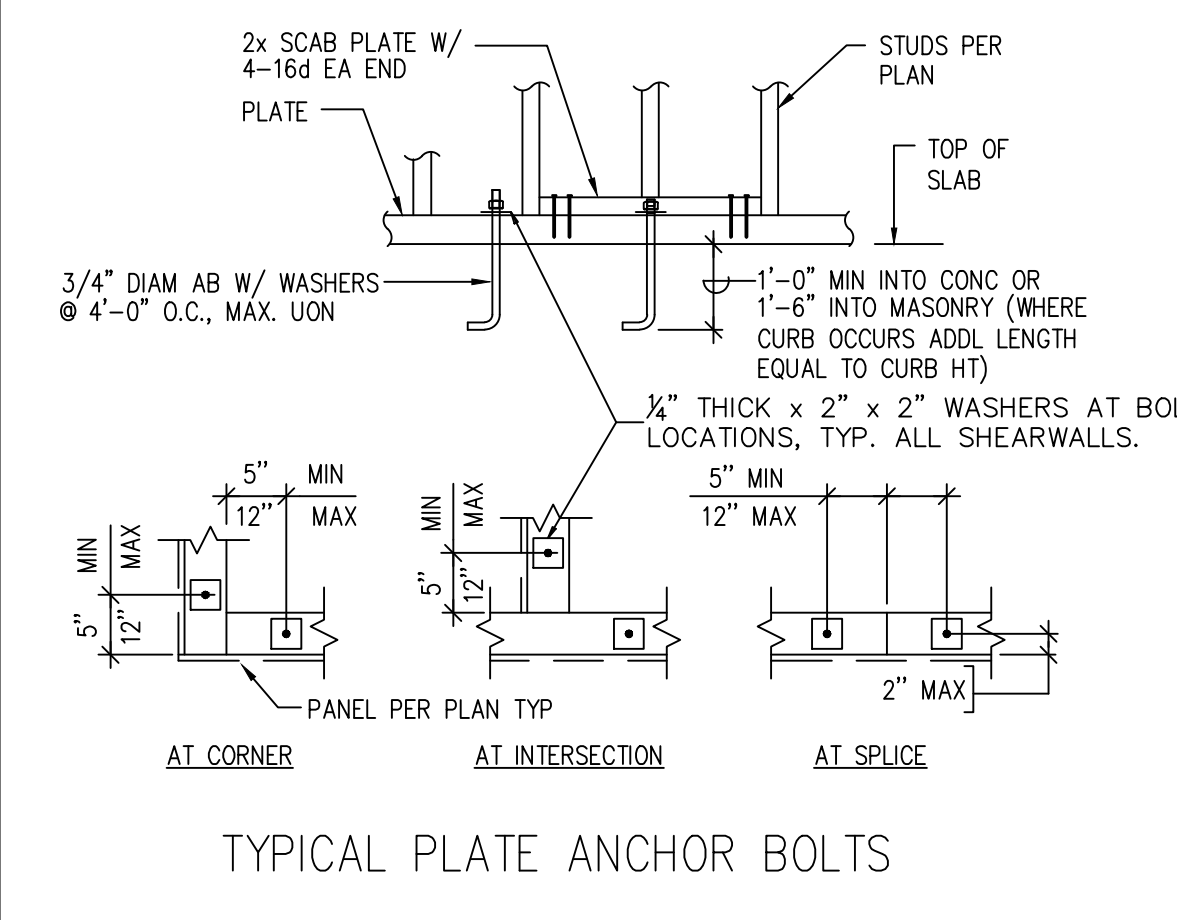
TOP PLATE REINFORCEMENT AT DISCONTINUITIES 5



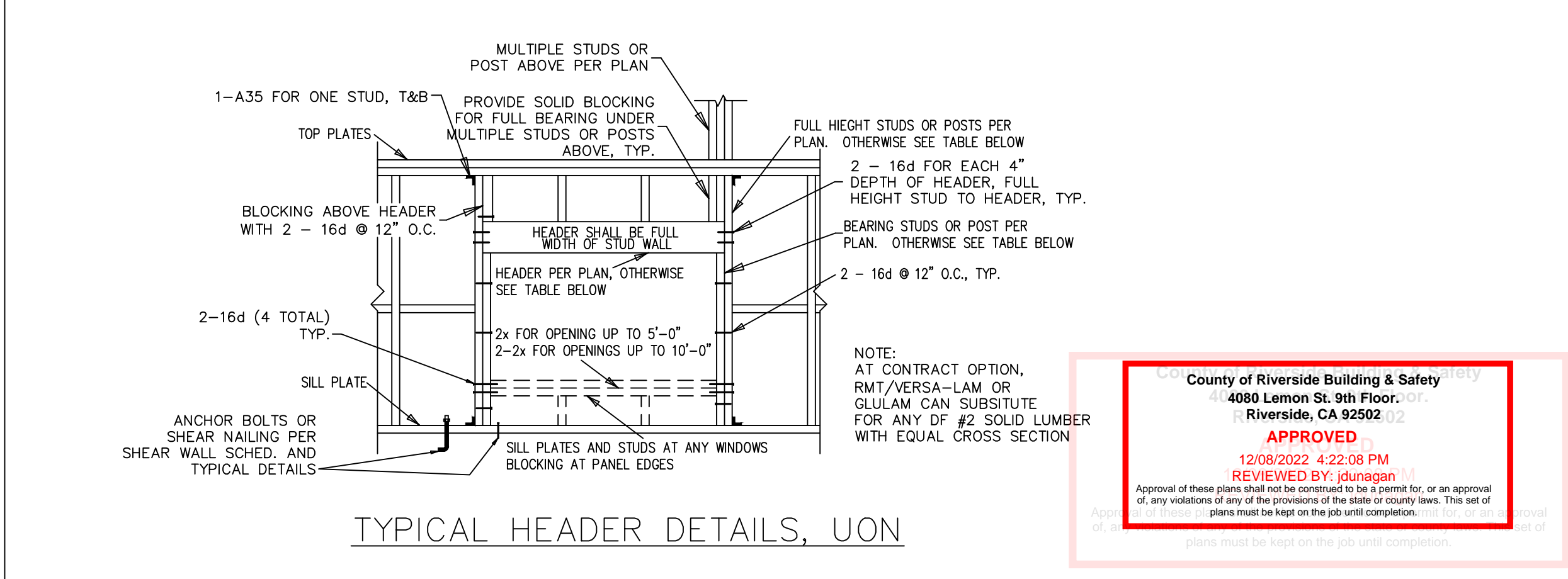
TYPICAL SHEAR WALL INTERSECTIONS WITH HOLD DOWNS 6



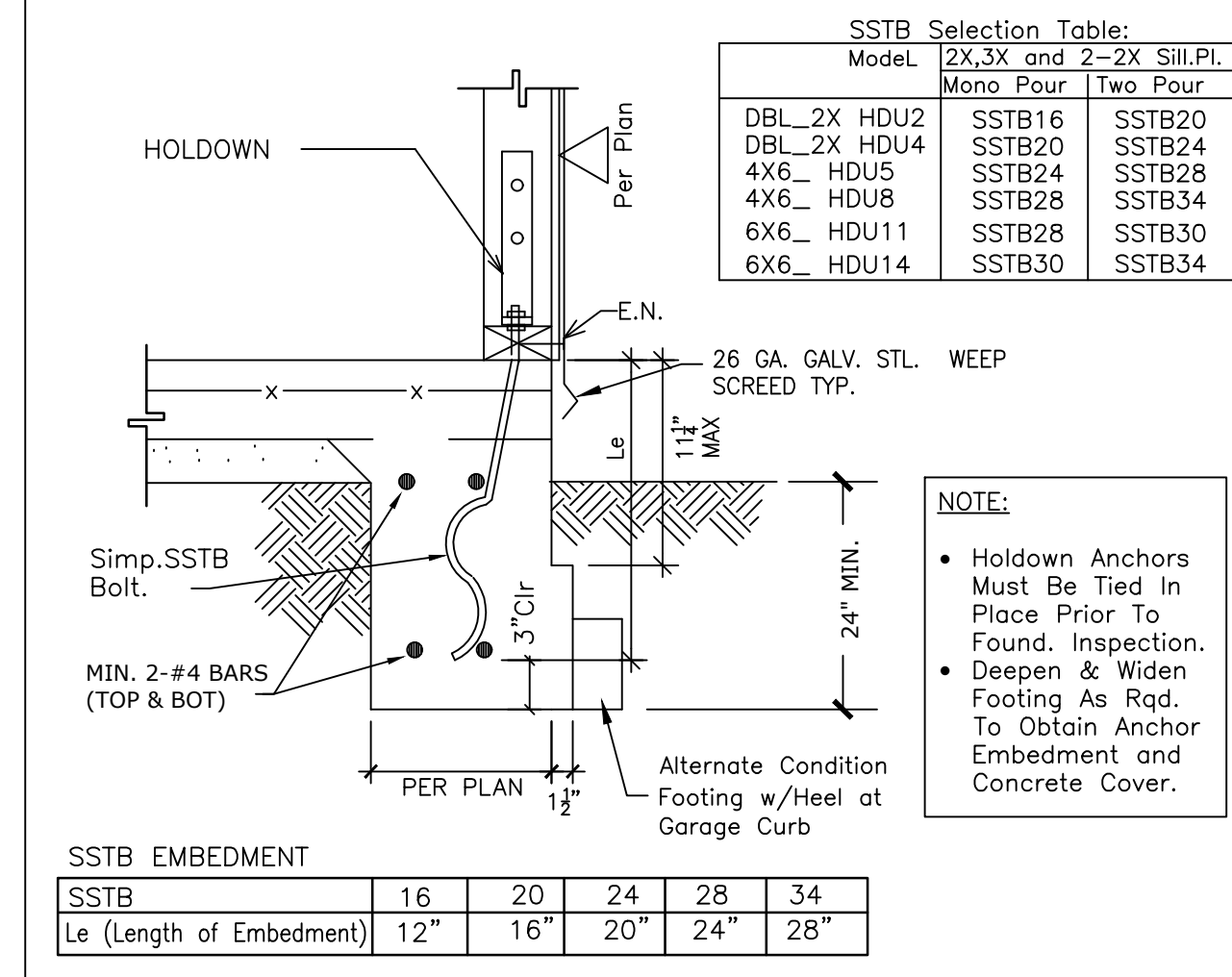
TYPICAL SHEAR WALL INTERSECTIONS, NO HOLD DOWNS 7



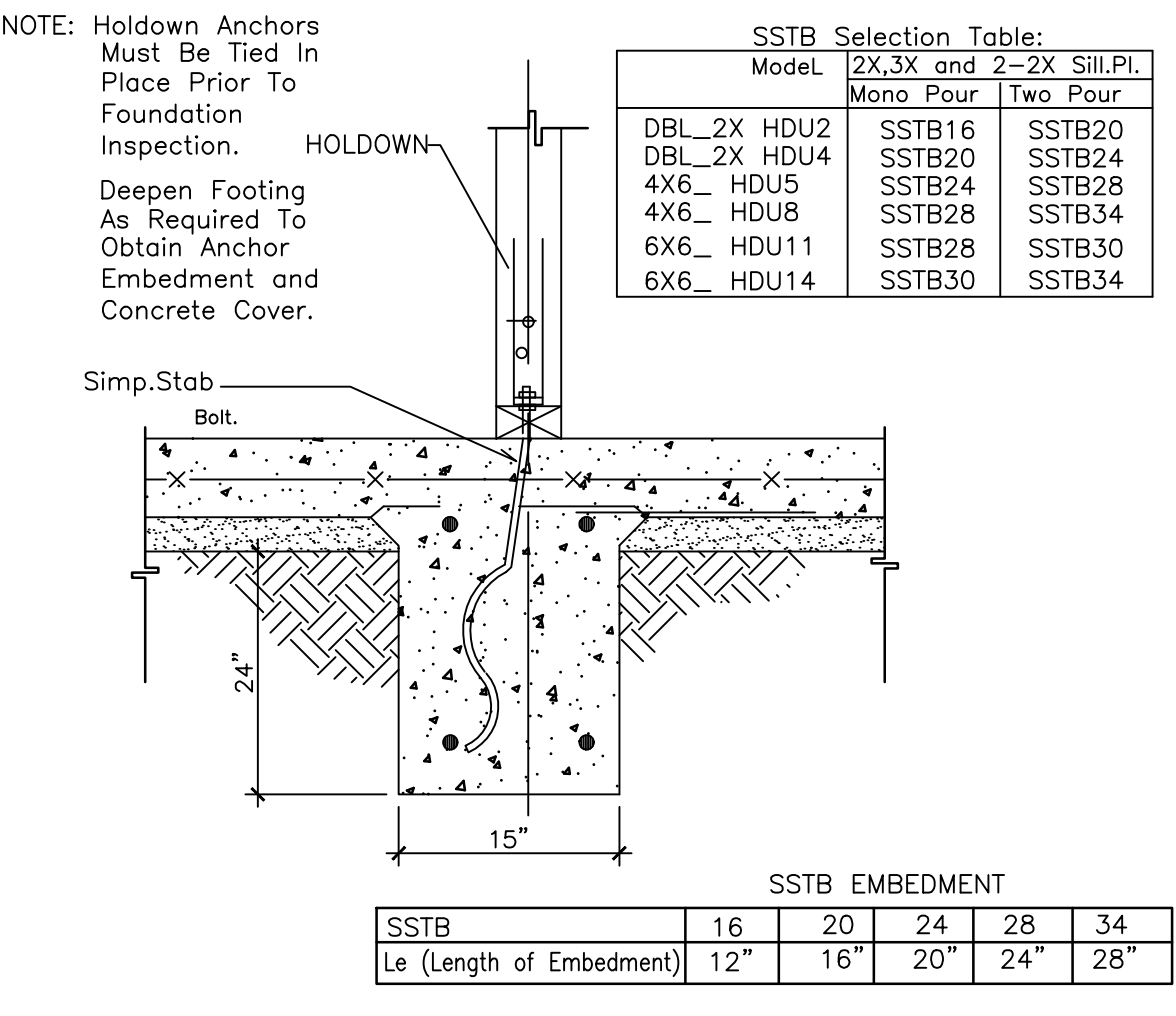
TYPICAL PLATE ANCHOR BOLTS 8



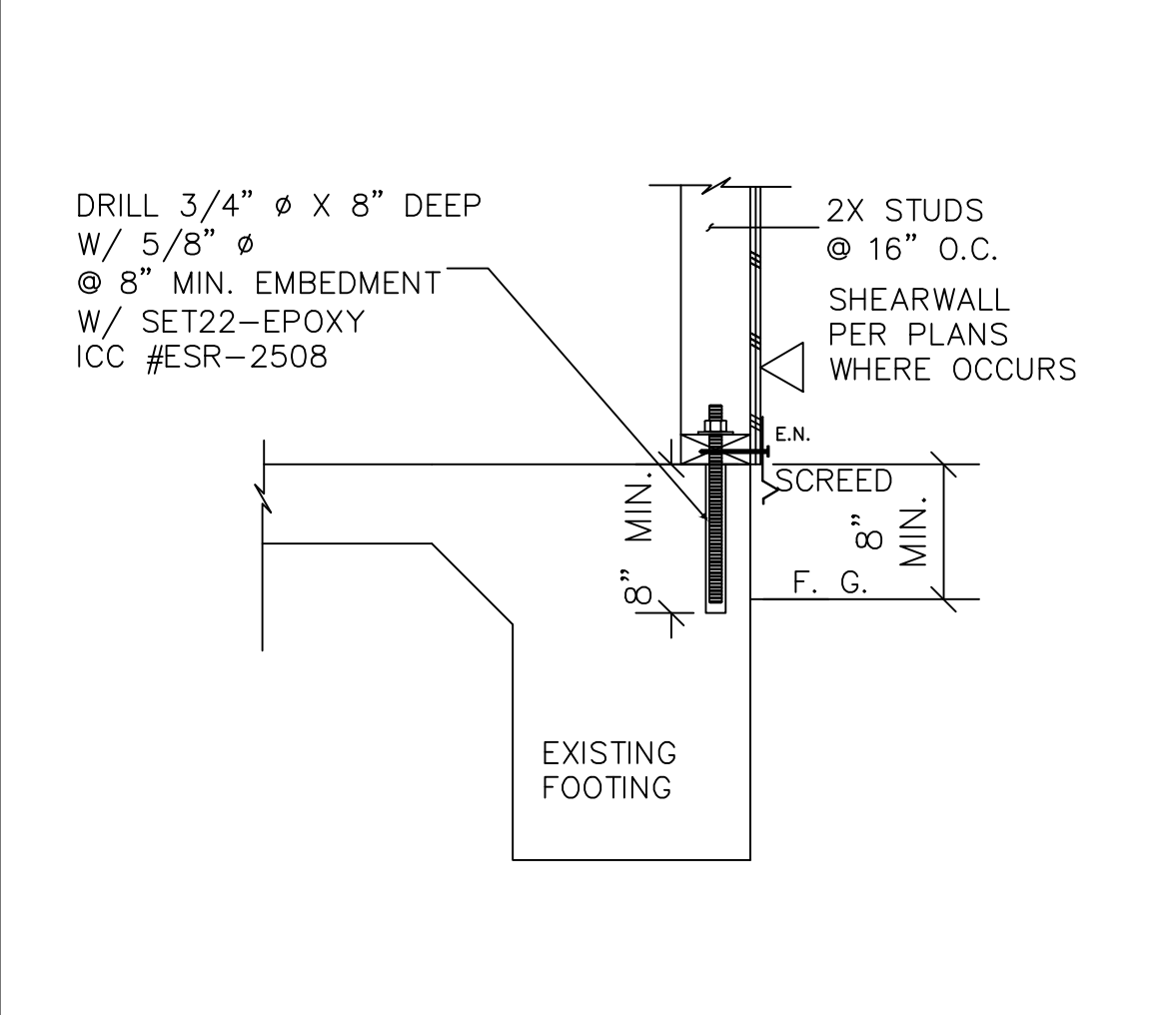
TYPICAL HEADER DETAILS, UON 10



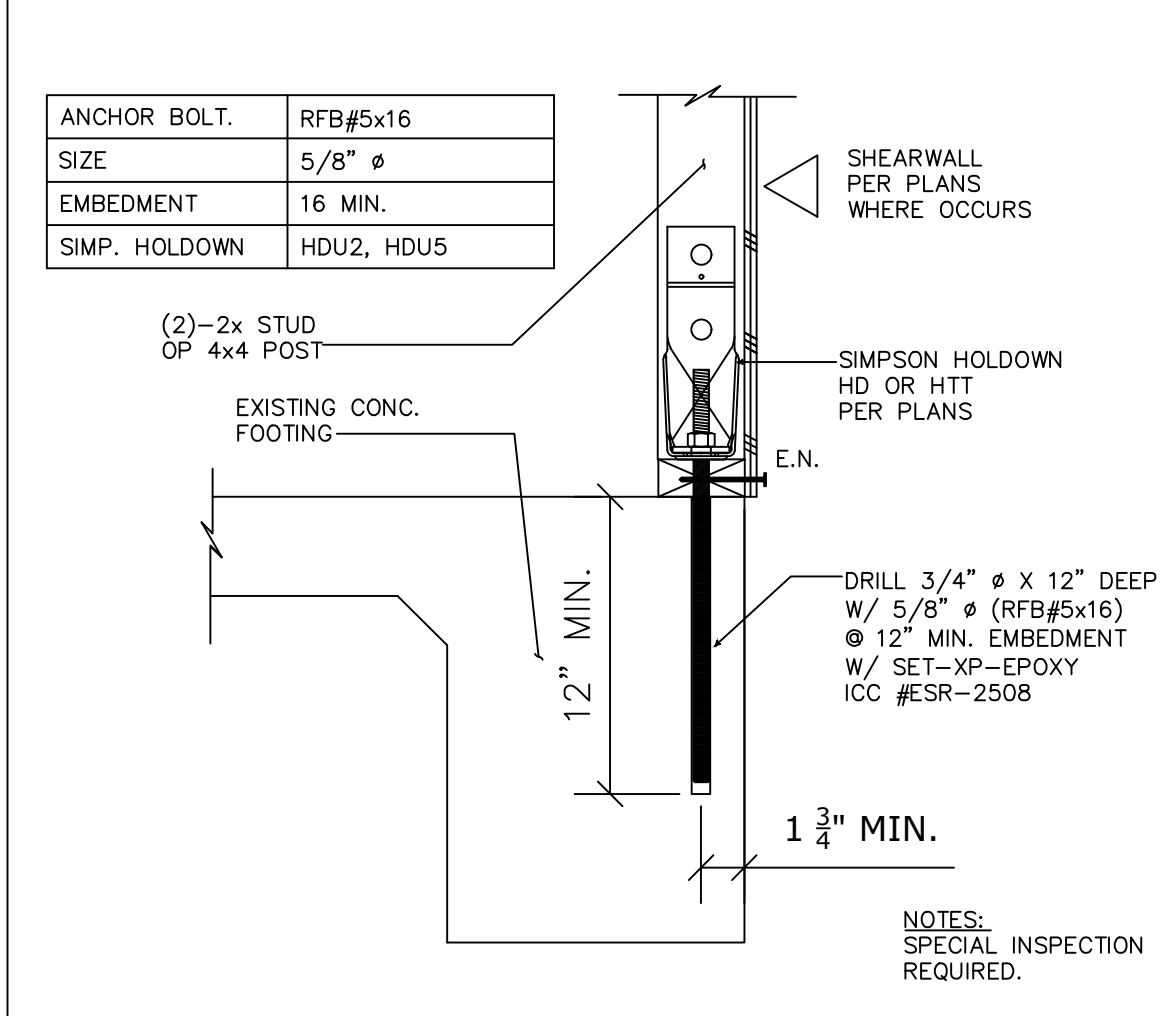
HOLDOWN @ EXTERNAL CONT. FOOTING 11



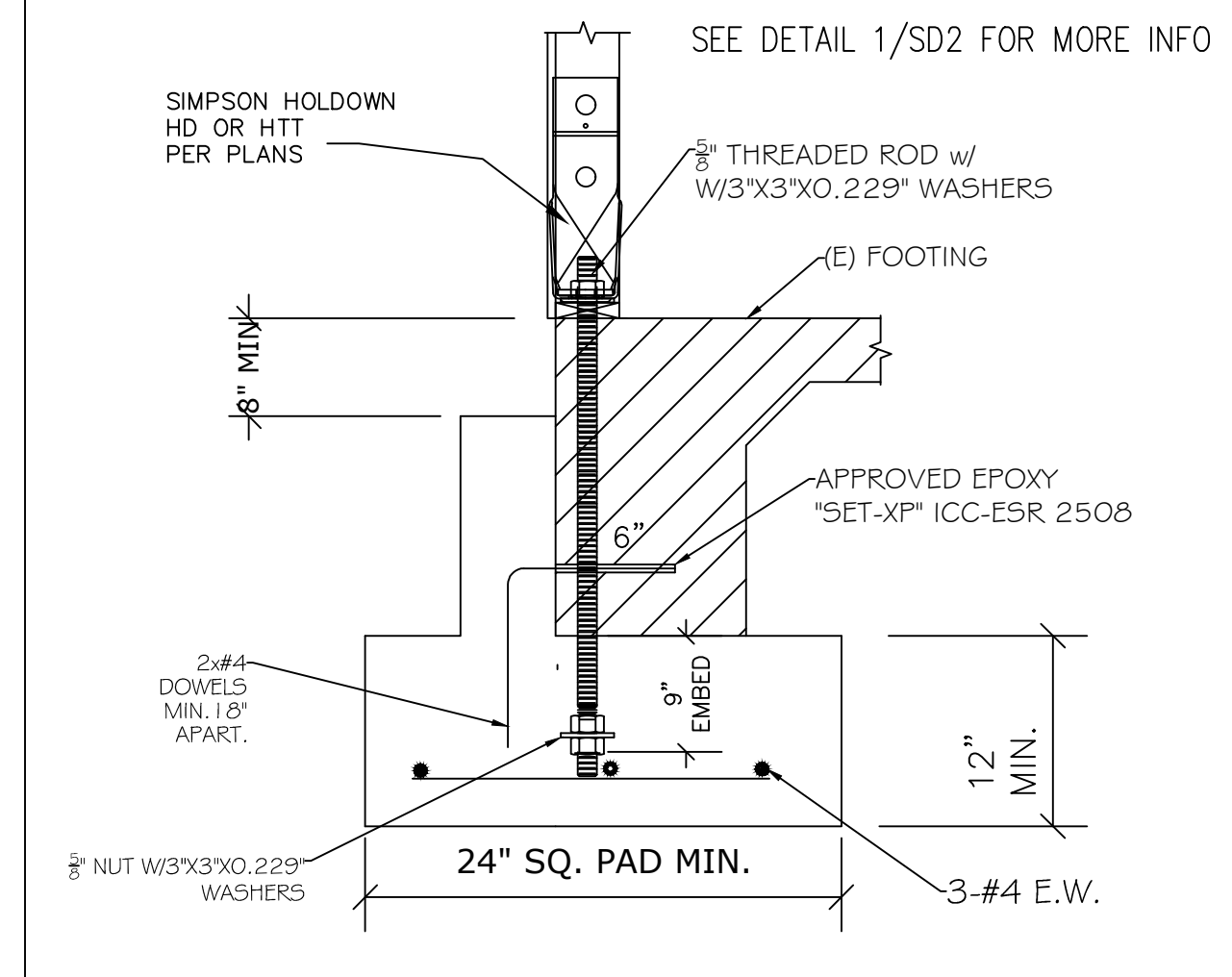
HOLDOWN @ INTERNAL CONT. FOOTING 12



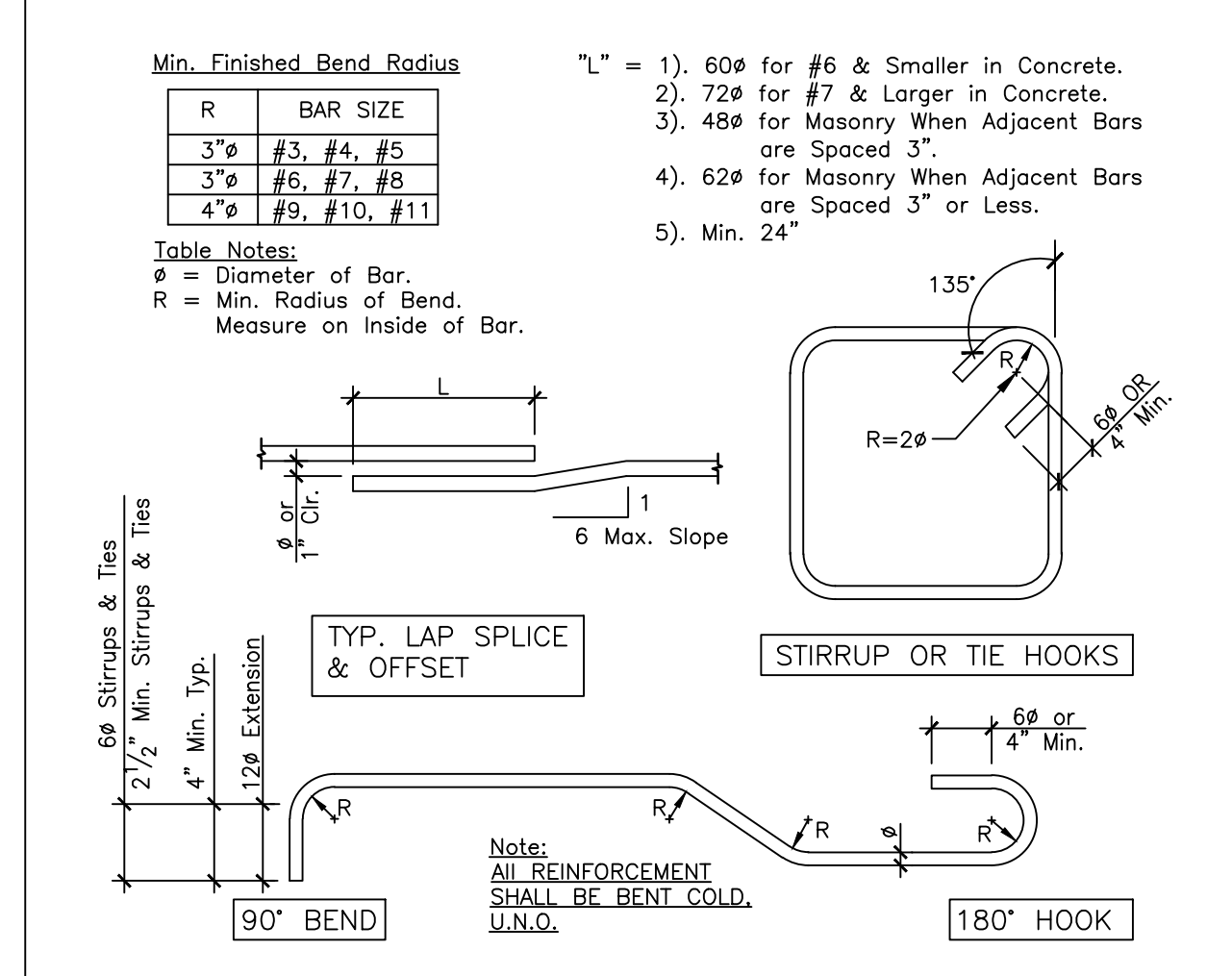
MISSING A.B. RETROFITS 13



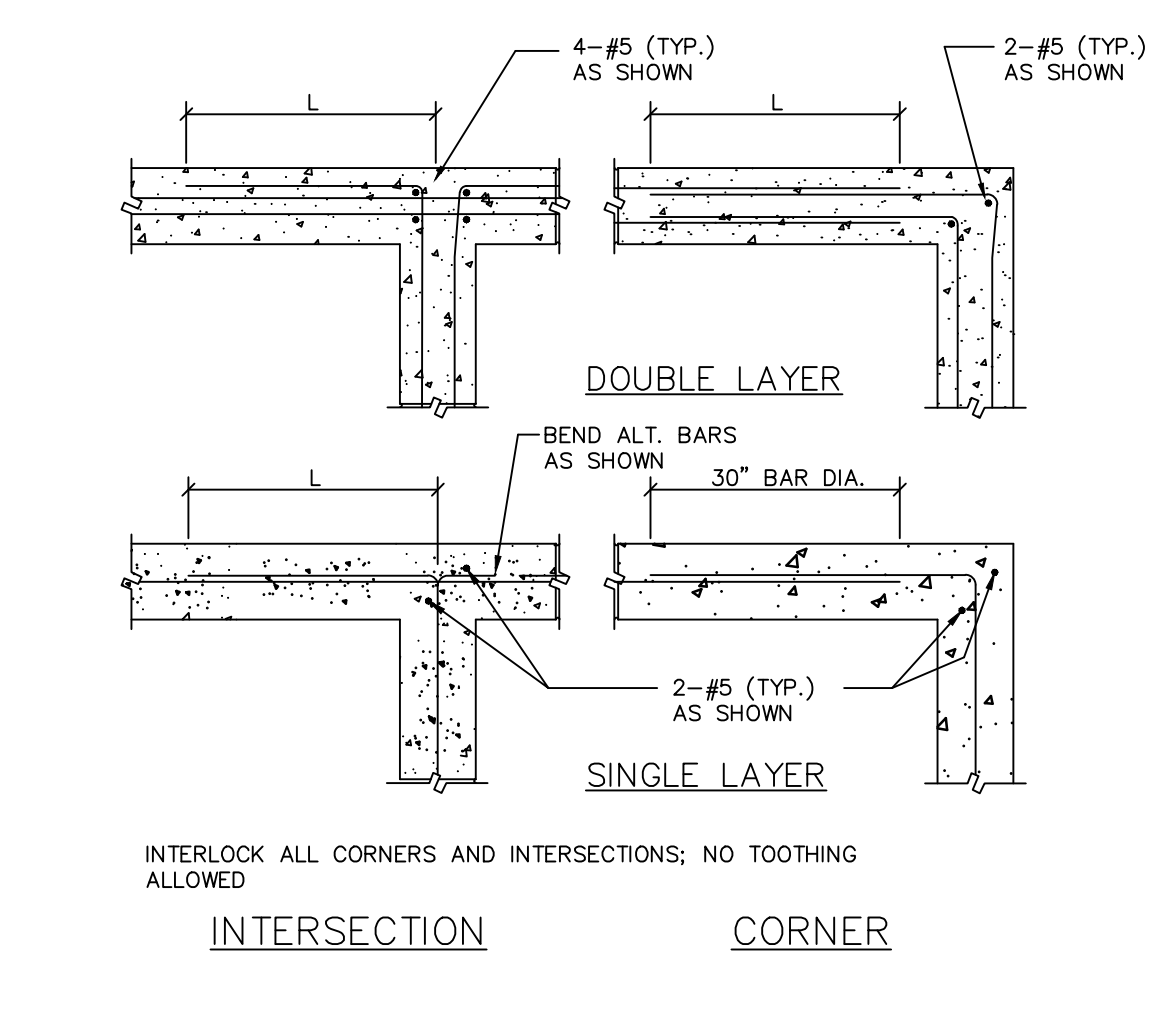
HD RETROFIT (HDU2, HDU5) 14



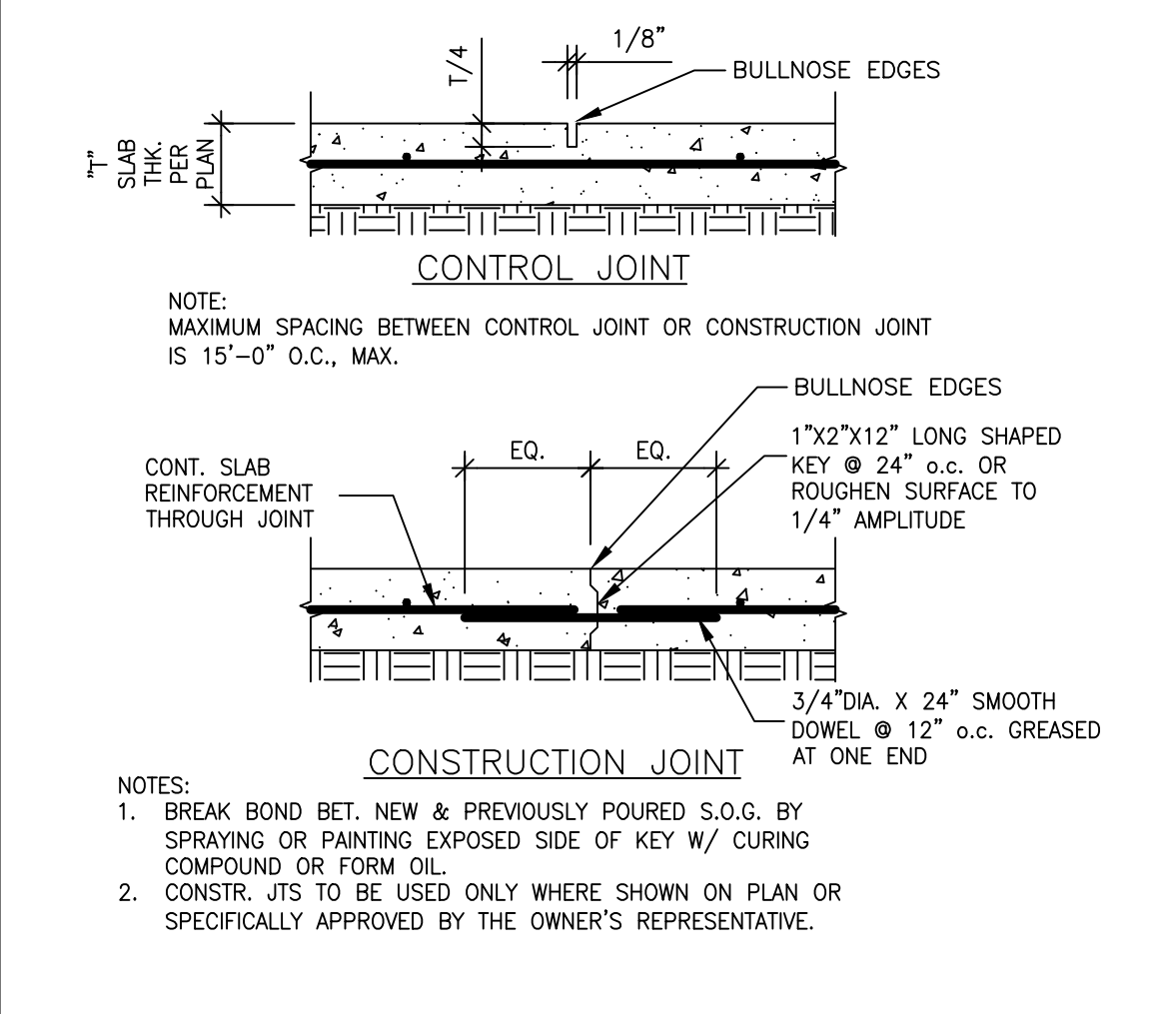
HD RETROFIT (HDU8, HDU11, HDU14) 15



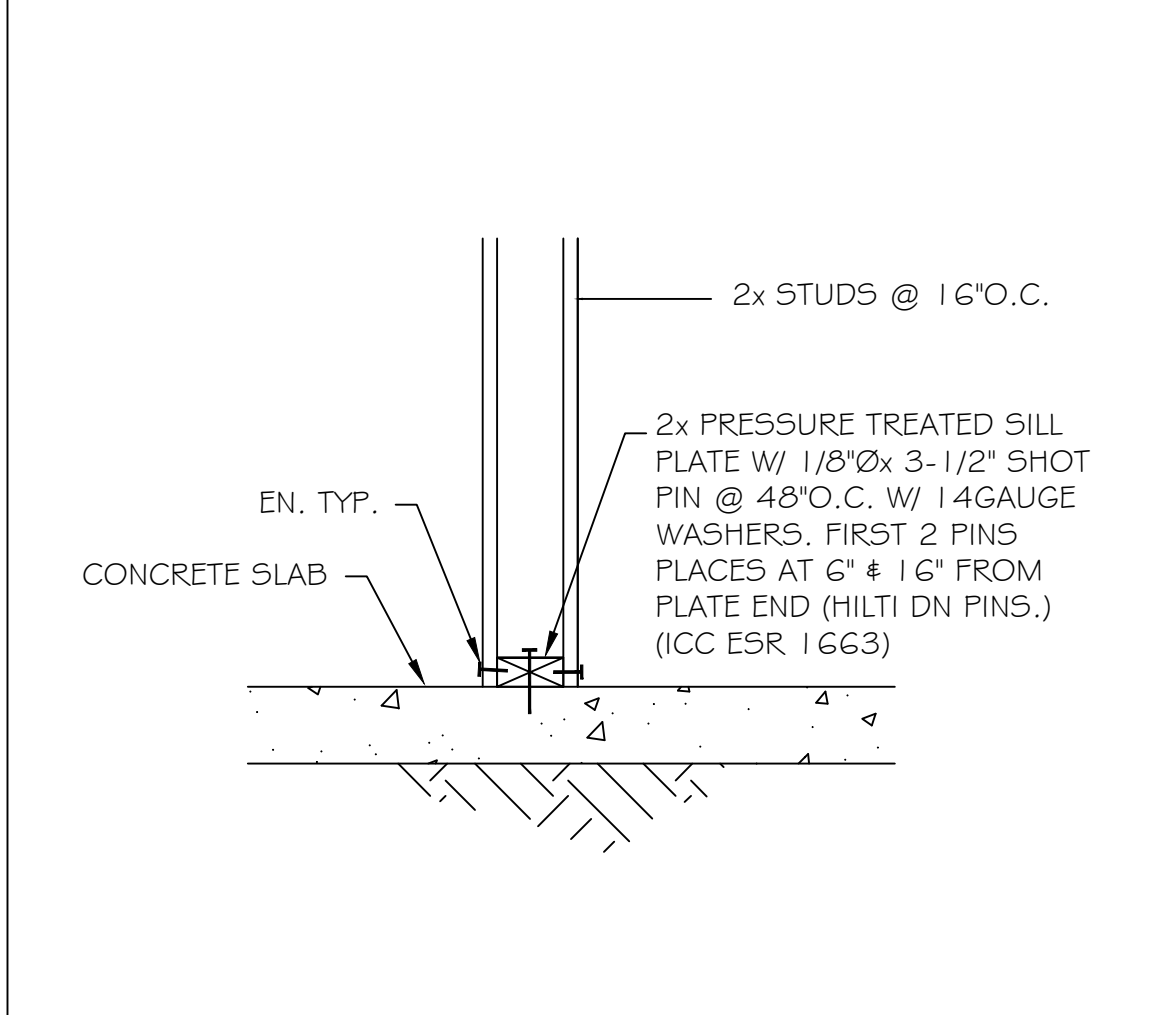
BAR BENDING 16



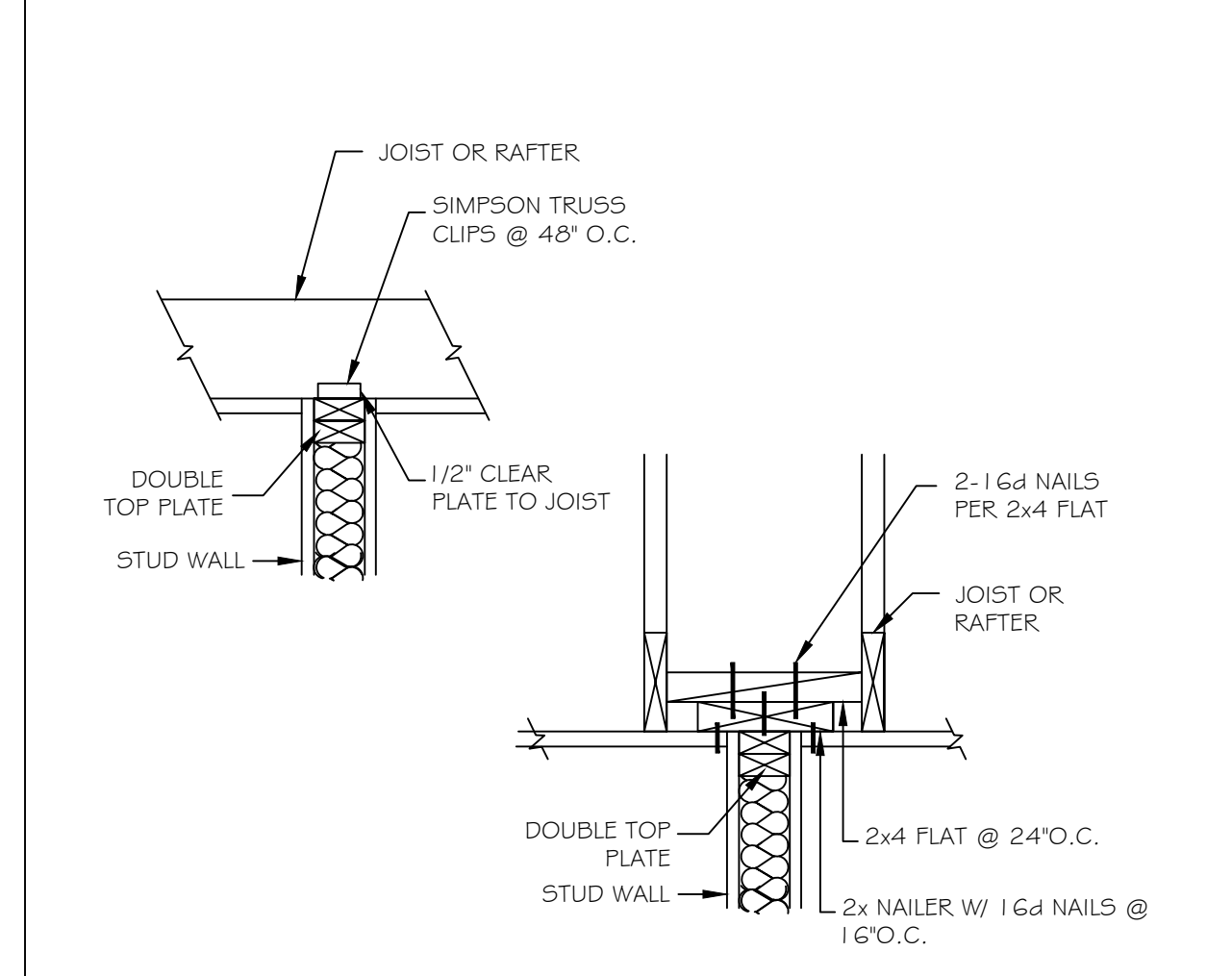
FOOTING DETAIL AT CORNER 17



CONTROL JOINT 18



NON-LOAD BEARING WALL 19

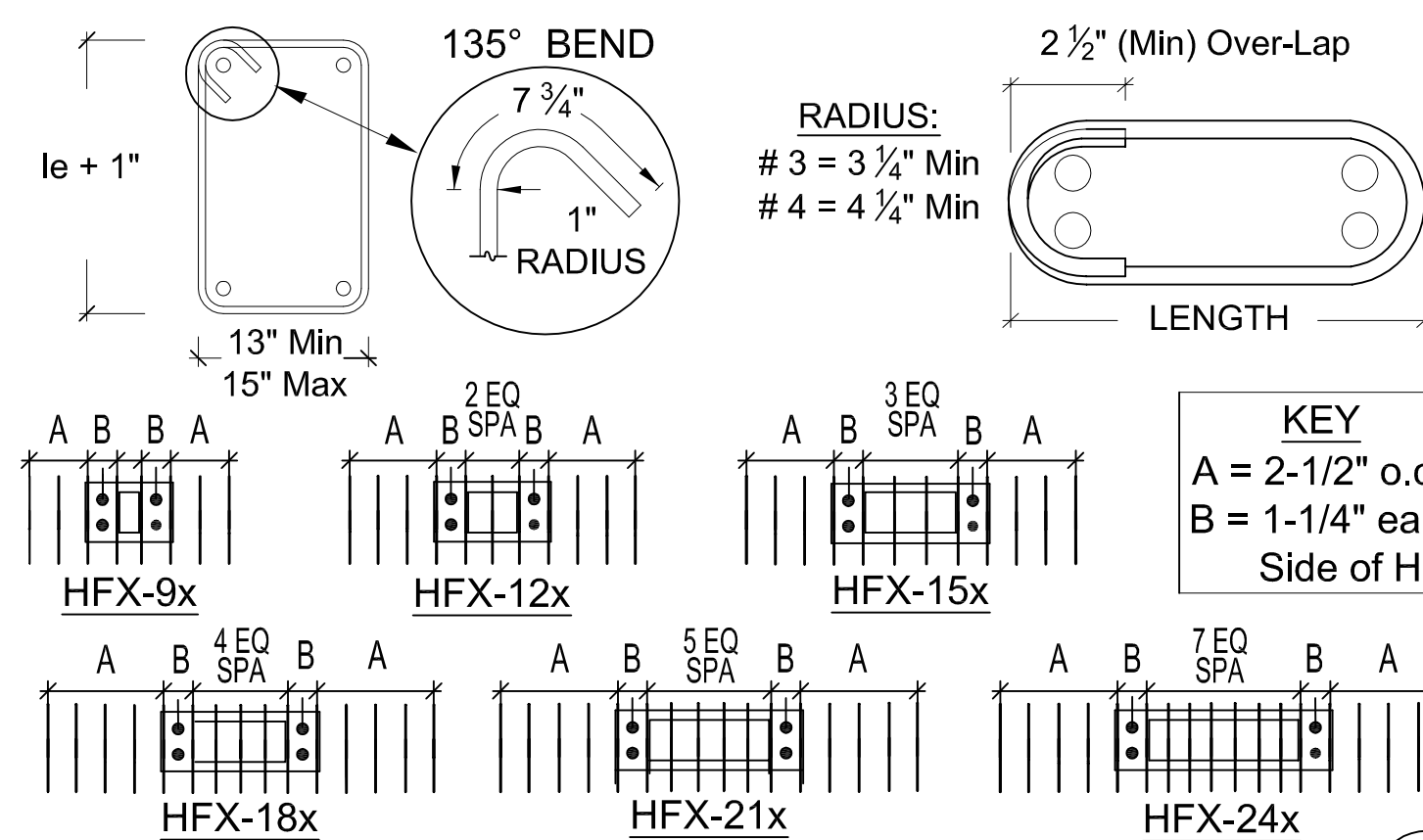
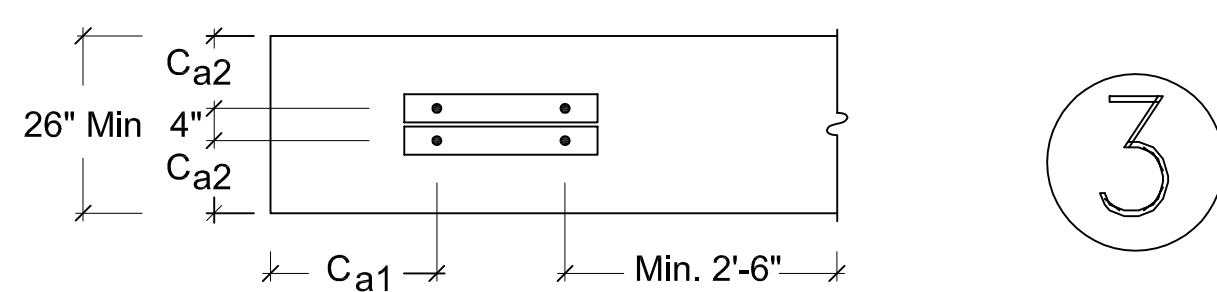
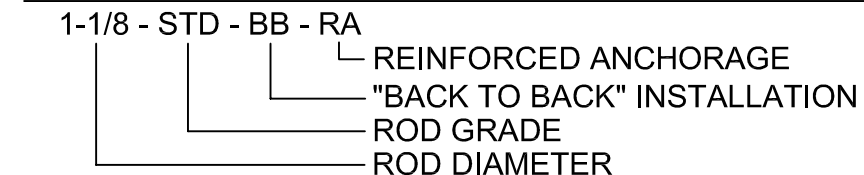


NON-LOAD BEARING WALL 20

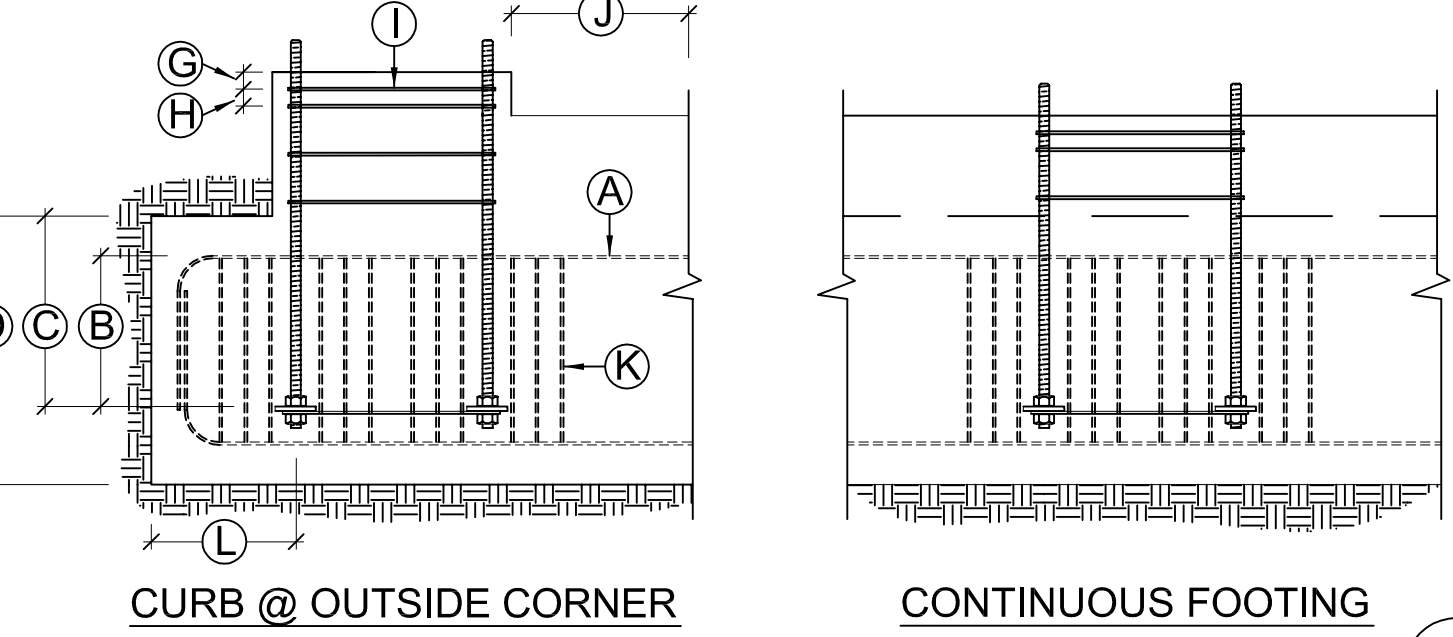
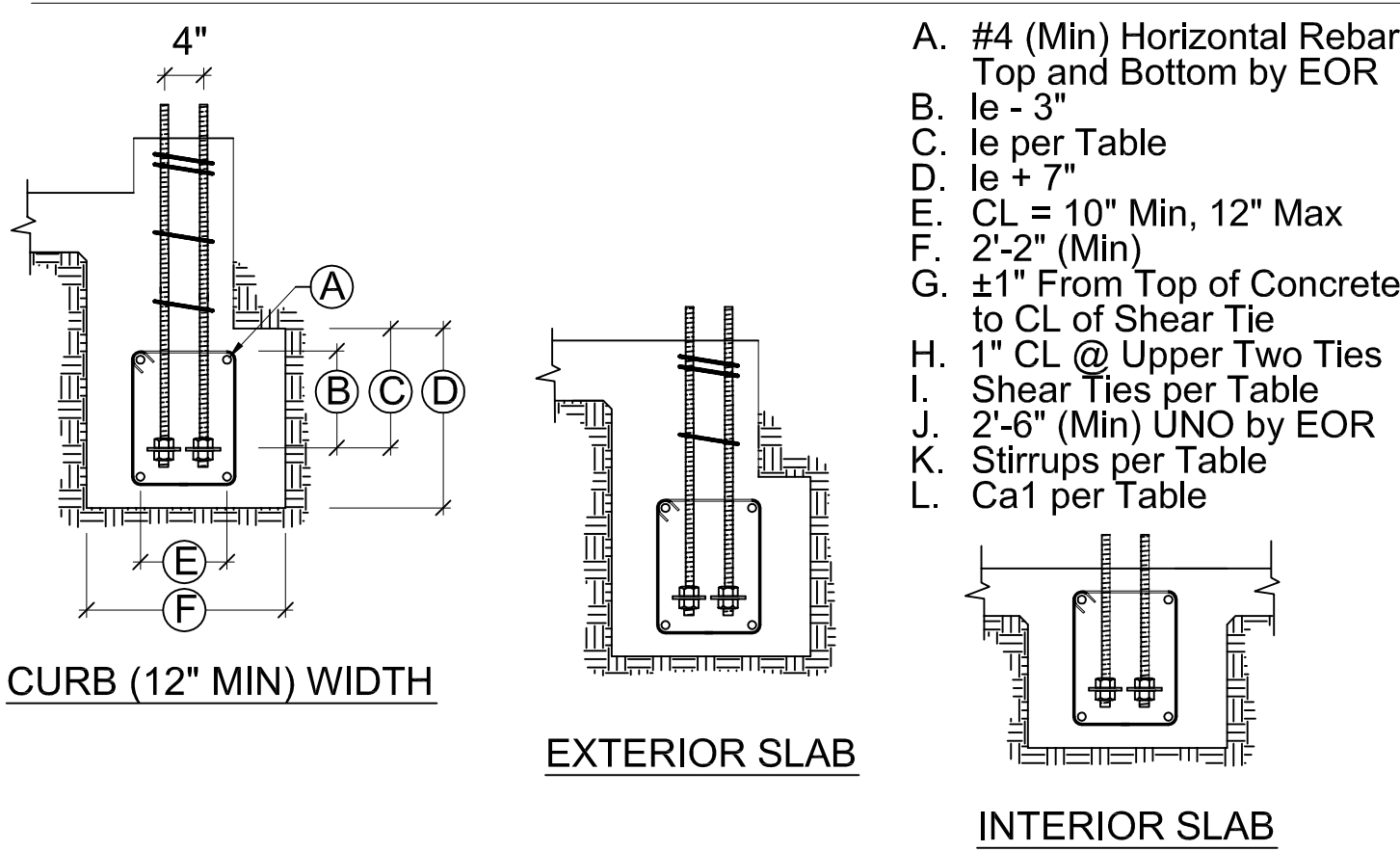
BACK TO BACK REINFORCED ANCHORAGE (BB-RA)

Model	Panel Width (in)	Anchorage ¹	Rod Dia (in)	Rod 2,3 Grade	BB-RA			Stirrups ⁹ (in)	Shear ⁷ Ties
					le ⁴ (in)	Ca1 ⁵ (in)	Ca2 ⁶ (in)		
HFX-9x	9	1-1/8-STD-BB-RA	1-1/8	STD	13	19-3/4	8 - # 4	# 3 (min) @ 3-3/4" OC	
HFX-12x	12	1-1/8-STD-BB-RA 1-1/8-HS-BB-RA		STD HS	18				
HFX-15x	15	1-1/8-STD-BB-RA 1-1/8-HS-BB-RA	STD HS	20	20-5/8	11	12 - # 4	# 3 (min) @ 4" OC	
HFX-18x	18	1-1/8-STD-BB-RA 1-1/8-HS-BB-RA	STD HS	23					
HFX-21x	21	1-1/8-STD-BB-RA 1-1/8-HS-BB-RA	STD HS	26	20-5/8	11	15 - # 4	# 4 (min) @ 4" OC	
HFX-24x	24	1-1/8-STD-BB-RA 1-1/8-HS-BB-RA	STD HS						26

BACK TO BACK REINFORCED ANCHORAGE NOMENCLATURE



BB-RA SHEAR TIES & STIRRUPS

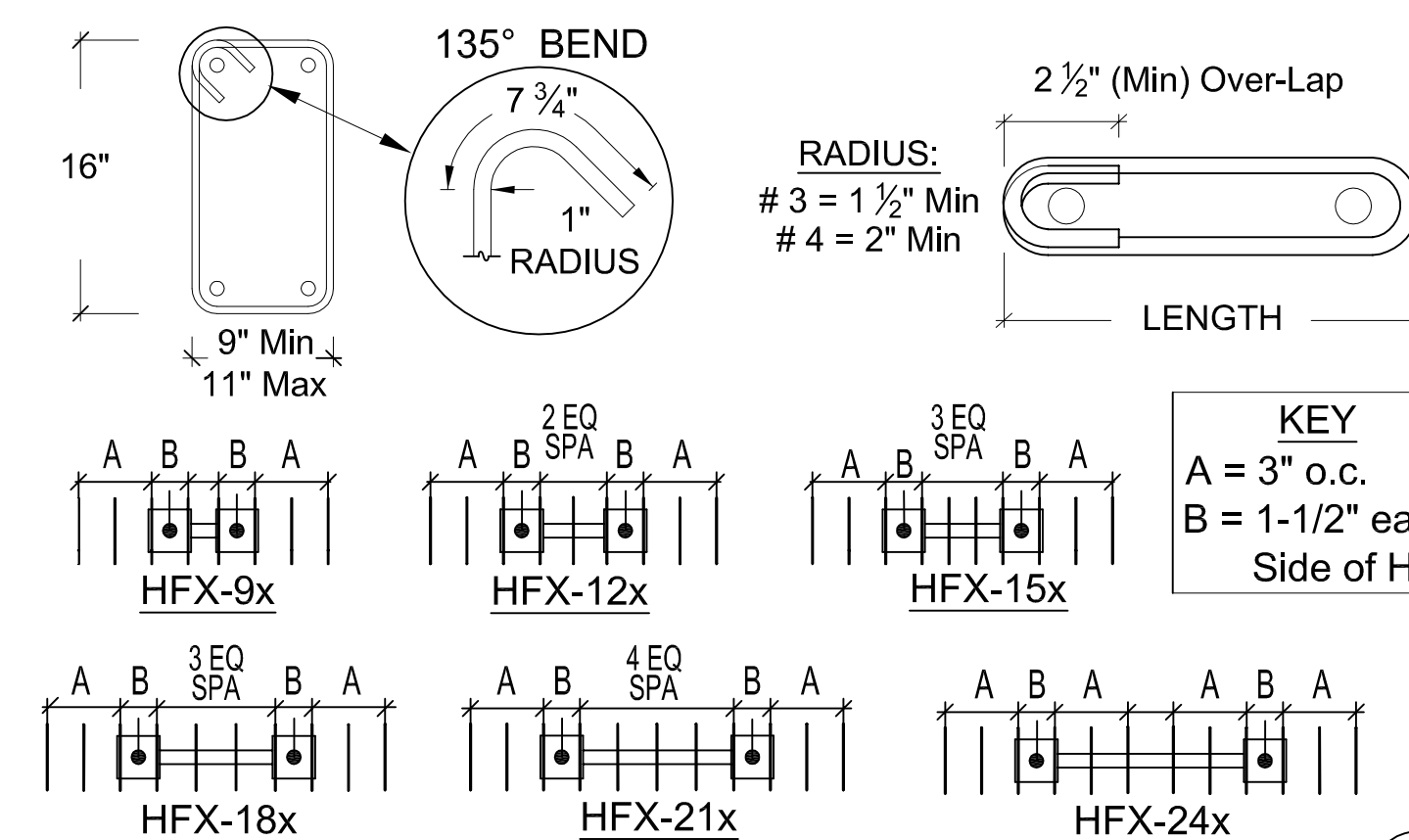
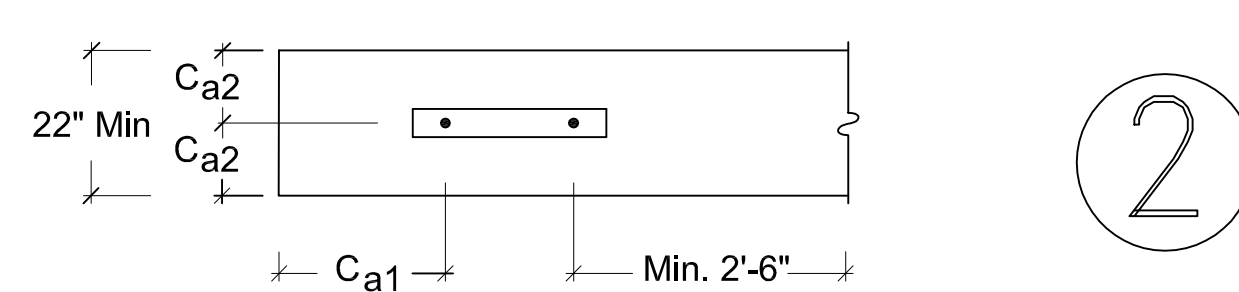


BB-RA SECTIONS & ELEVATIONS

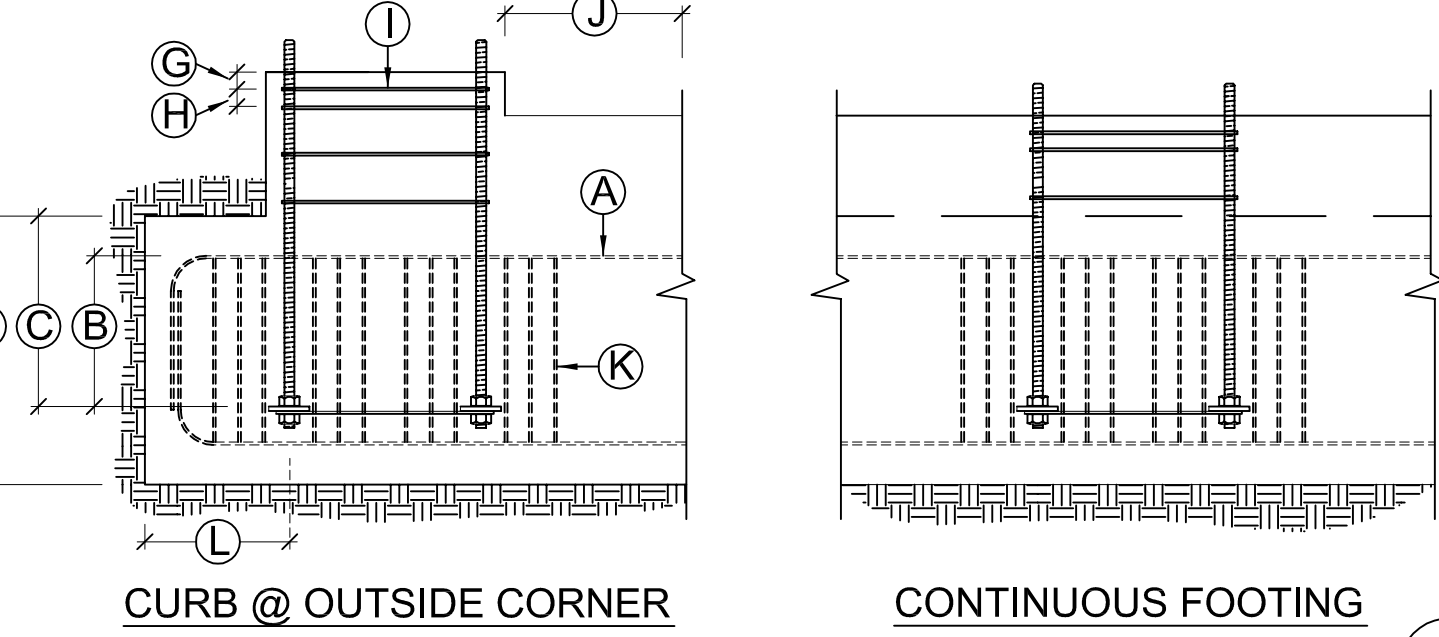
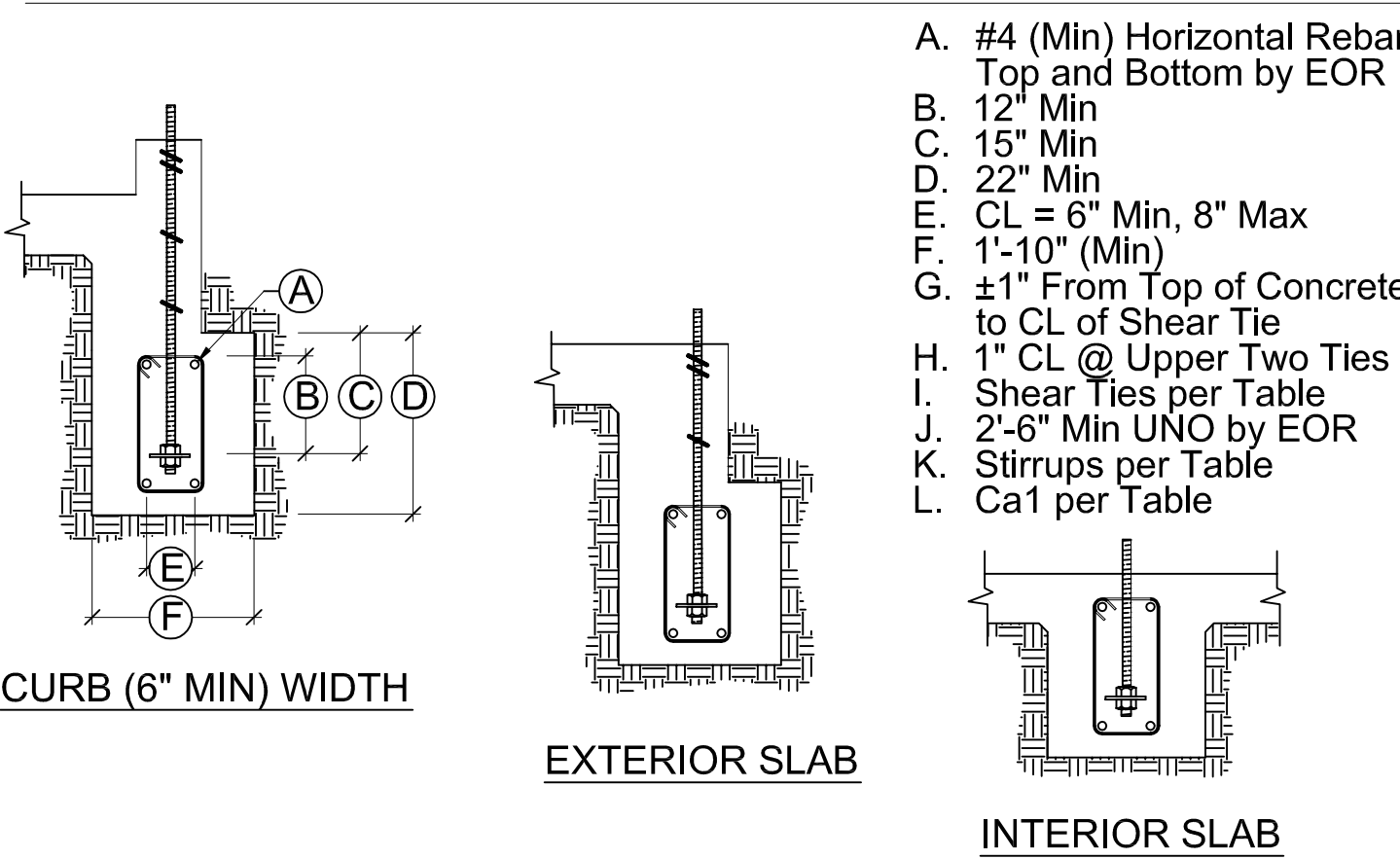
REINFORCED ANCHORAGE (RA)

Model	Panel Width (in)	Anchorage ¹	Rod Dia (in)	Rod 2,3 Grade	RA			Stirrups ⁹ (in)	Shear ⁷ Ties
					le ⁴ (in)	Ca1 ⁵ (in)	Ca2 ⁶ (in)		
HFX-9x	9	1-1/8-STD-RA	1-1/8	STD	19-3/4	11	8 - # 4	# 3 (min) @ 3-3/4" OC	
HFX-12x	12	1-1/8-STD-RA 1-1/8-HS-RA		STD HS					
HFX-15x	15	1-1/8-STD-RA 1-1/8-HS-RA	STD HS	20	20-5/8	11	9 - # 4	# 3 (min) @ 4" OC	
HFX-18x	18	1-1/8-STD-RA 1-1/8-HS-RA	STD HS	23					
HFX-21x	21	1-1/8-STD-RA 1-1/8-HS-RA	STD HS	26	20-5/8	11	10 - # 4	# 4 (min) @ 4" OC	
HFX-24x	24	1-1/8-STD-RA 1-1/8-HS-RA	STD HS						26

REINFORCED ANCHORAGE NOMENCLATURE



RA SHEAR TIES & STIRRUPS

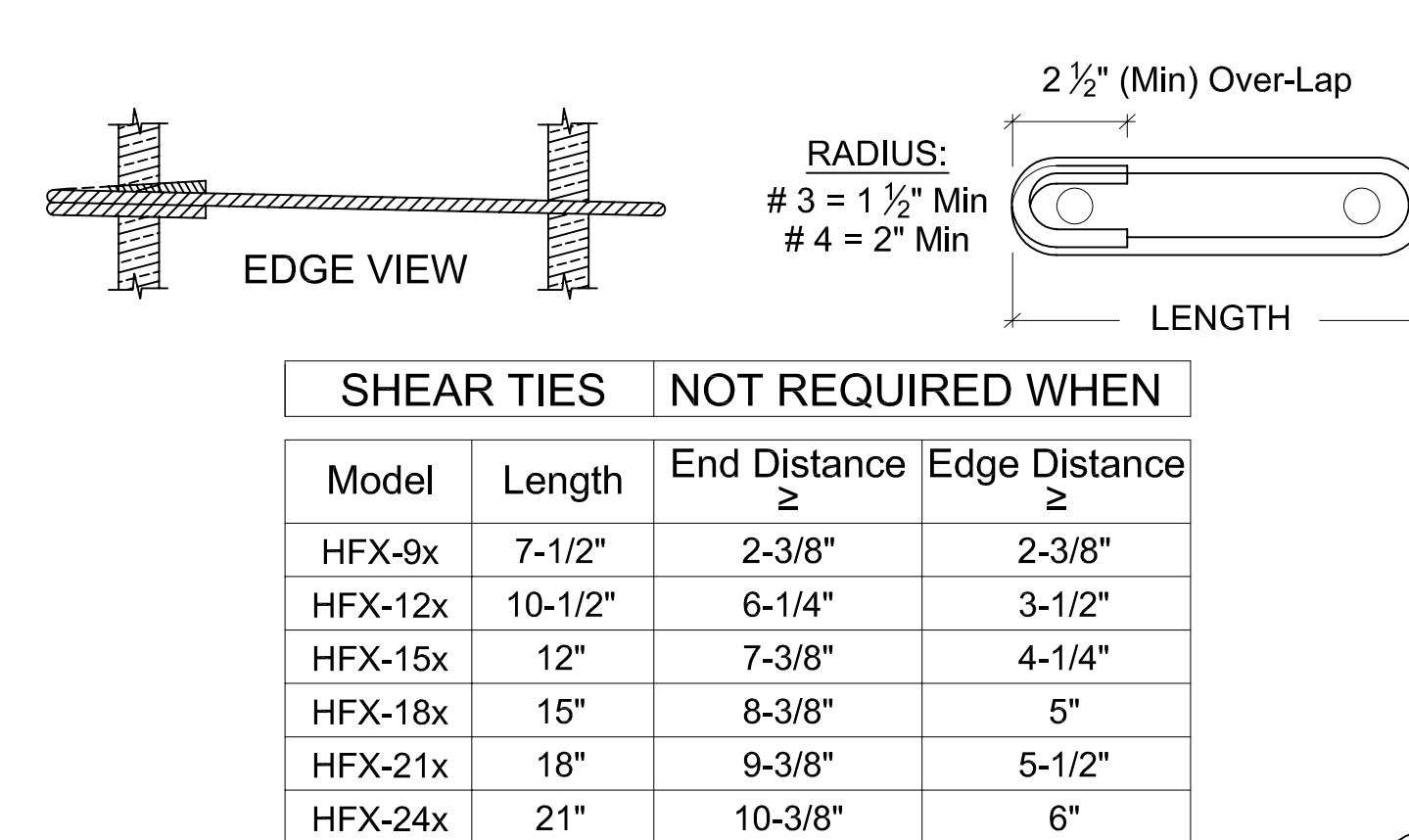
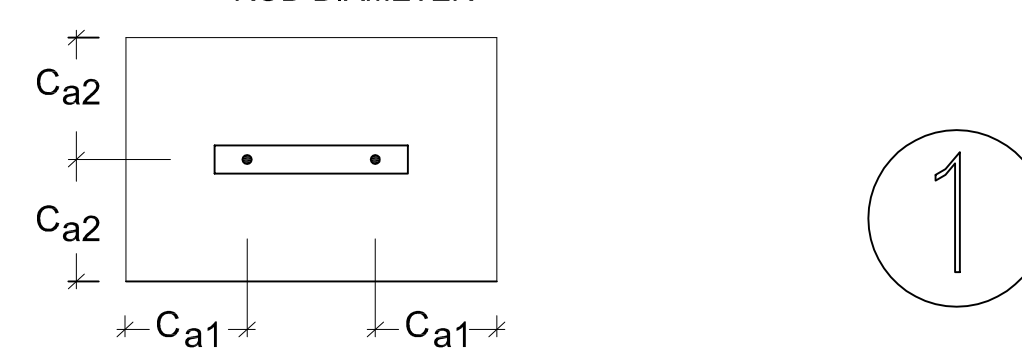
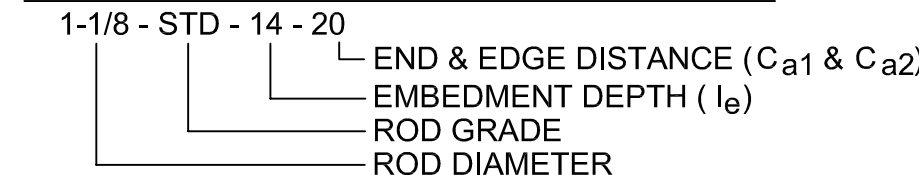


RA SECTIONS & ELEVATIONS

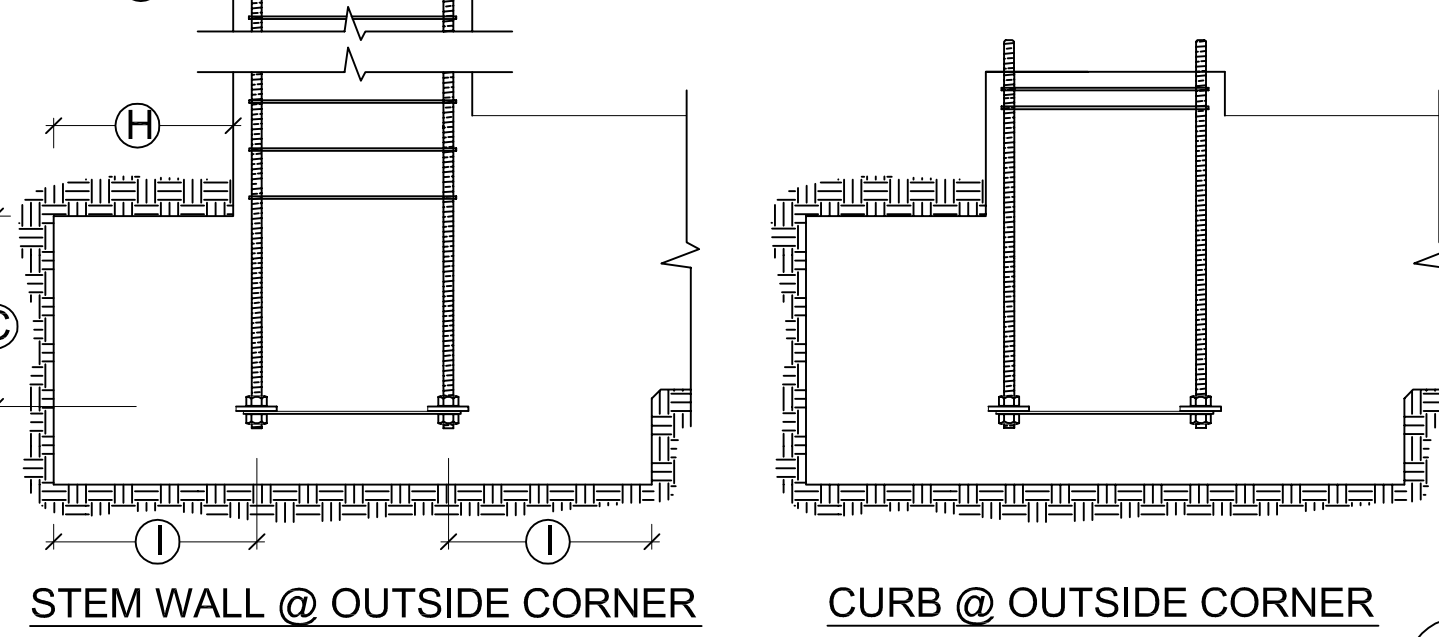
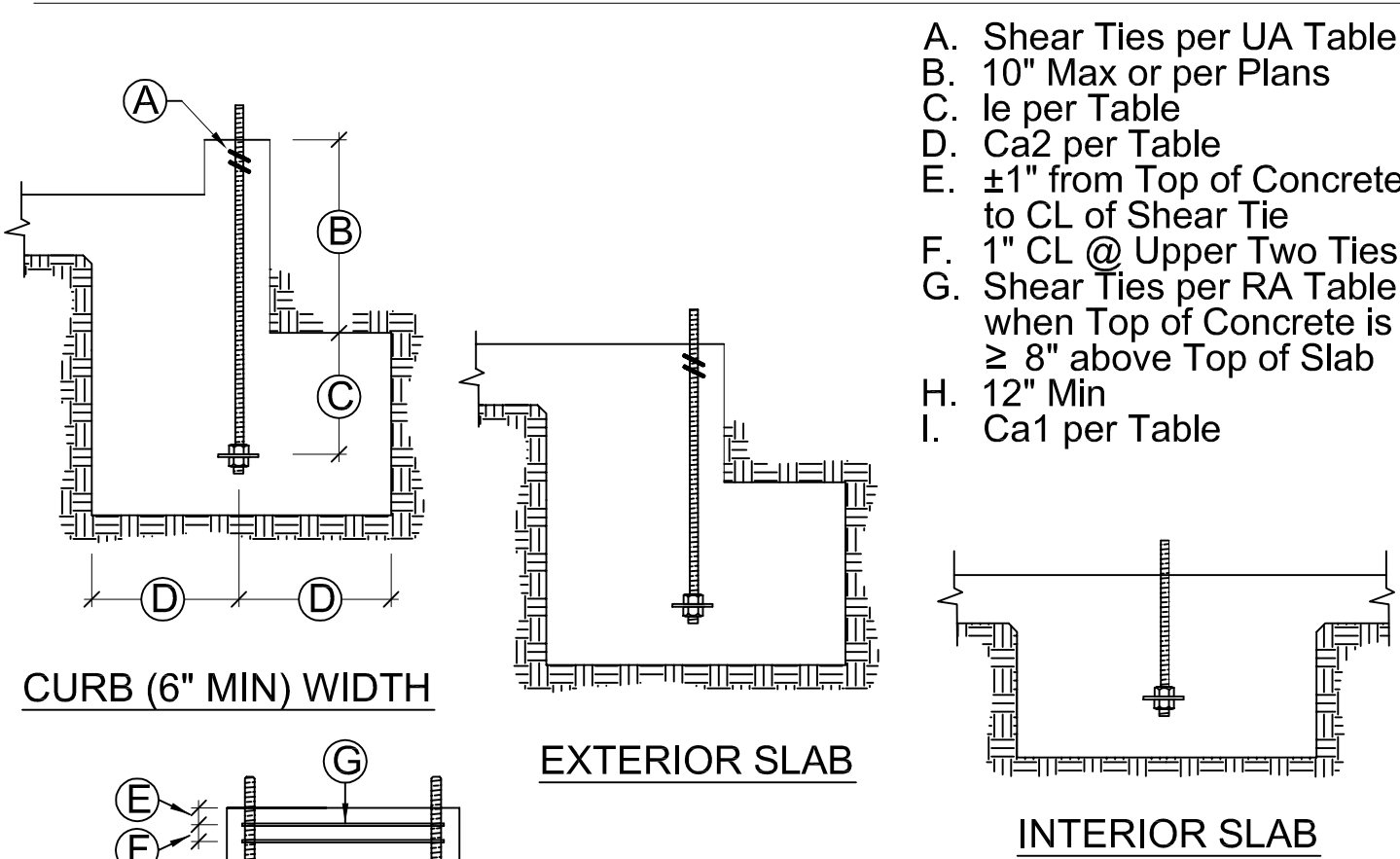
UNREINFORCED ANCHORAGE (UA)

Model	Panel Height	Anchorage ¹	Rod Dia (in)	Rod 2,3 Grade	UA			Shear ^{7,8} Ties
					le ⁴ (in)	Ca1 ⁵ (in)	Ca2 ⁶ (in)	
HFX-9x	79.5" - 8'	1-1/8-STD-13-19	1-1/8	STD	13	19	1 - # 3	
HFX-12x	78" - 10'	1-1/8-HS-20-30		HS	20	30		
HFX-15x, 18x	78" - 13'	1-1/8-STD-14-20	STD	14	20	2 - # 3		
HFX-15x, 18x Balloon	14' - 20'	1-1/8-HS-20-30	HS	20	30			
HFX-21x, 24x	78" - 13'	1-1/8-STD-14-20 1-1/8-HS-23-34	STD	14	20	2 - # 3		
HFX-21x, 24x Balloon	14' - 20'	1-1/8-HS-20-30	HS	20	30			

UNREINFORCED ANCHORAGE NOMENCLATURE



UA SHEAR TIES



UA SECTIONS & ELEVATIONS

TABLE NOTES

- Designs are to resist loading per ACI 318-14, Section 17.2.3.4.3.
- STD indicates Anchors complying with ASTM F1554 Grade 36 with a Hardy Frame Bolt Brace (HFXBB) installed with double nuts on the embed end.
- HS indicates Anchors complying with ASTM A193 Grade B7 with a 1/2"x3"x3"(Min) Plate Washer installed with double nuts on the embed end (HFXBB not required).
- le = length of embedment from the top of footing or grade beam to the top of the HFXBB Bolt Brace (top of the embedded Plate Washer @ HS anchors)
- Ca1 = distance from HD Centerline to the end of the footing or grade beam.
- Ca2 = distance from HD Centerline to both the front and the back face of the footing or grade beam.
- Shear Ties are Grade 60 (Min) rebar and required for near edge distance conditions per ACI-318-14, fc = 2,500 psi. Curbs and stem walls must be 6 inch (min) width for UA and RA, 12 inch (min) width for BB-RA.
- For UA applications, additional ties may be required at stem walls. Shear Ties are not required for installation away from edge (see detail 1A), installation on wood framing, or for IRC Braced Wall Panel applications.
- Stirrups are Grade 60 (Min) rebar. See table for size and spacing. See "Stirrup Layout" diagrams and "Key" for layout patterns.
- Concrete Edge Distances must comply with ACI 318-14, Section 17.7.1

Model	Width	TOP OF CONCRETE	
		(A)	(B)
HFX-9x	9"	1-3/4"	5-1/2"
HFX-12x	12"	2-1/4"	8-1/2"
HFX-15x	15"	2-5/8"	9-3/4"
HFX-18x	18"	2-5/8"	12-3/4"
HFX-21x	21"	2-5/8"	15-3/4"
HFX-24x	24"	2-5/8"	18-3/4"

HFX ANCHOR CENTERLINES

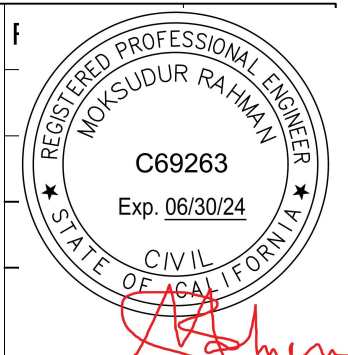
IMPORTANT!

- ANCHORAGE IS DESIGNED FOR TENSION AND SHEAR TRANSFER ONLY, FOUNDATION DESIGN PER EOR.
- REINFORCEMENT SHOWN IS THE MINIMUM REQUIREMENT AND IS NOT INTENDED TO REPLACE REINFORCEMENT DESIGNED BY THE EOR.
- FOR RA AND BB-RA INSTALLATIONS, THE HFXBB BOLT BRACE MAY BE PLACED ON TOP OF THE STIRRUPS WITH DOUBLE-NUTS INSTALLED AT EMBED END OF STANDARD GRADE ANCHOR RODS. (NOTE: 1/2" x 3" x 3" PLATE WASHERS ARE REQUIRED TO BE DOUBLE-NUTTED AT EMBED END OF HIGH STRENGTH ANCHOR RODS.)
- HIGH STRENGTH ALL-THREAD RODS PROVIDED BY HARDY FRAMES ARE STAMPED ON BOTH ENDS.

HF B7

County of Riverside Building & Safety
4080 Lemon St. 9th Floor
Riverside, CA 92502
APPROVED
12/08/2022 4:22:08 PM
REVIEWED BY: jduangan
Approval of these plans shall not be construed to be a permit for, or an approval of, any violations of any of the provisions of the state or county laws. This set of plans must be kept on the job until completion.

IMPORTANT NOTES



ANCHORAGE DETAILS - HFX PANELS

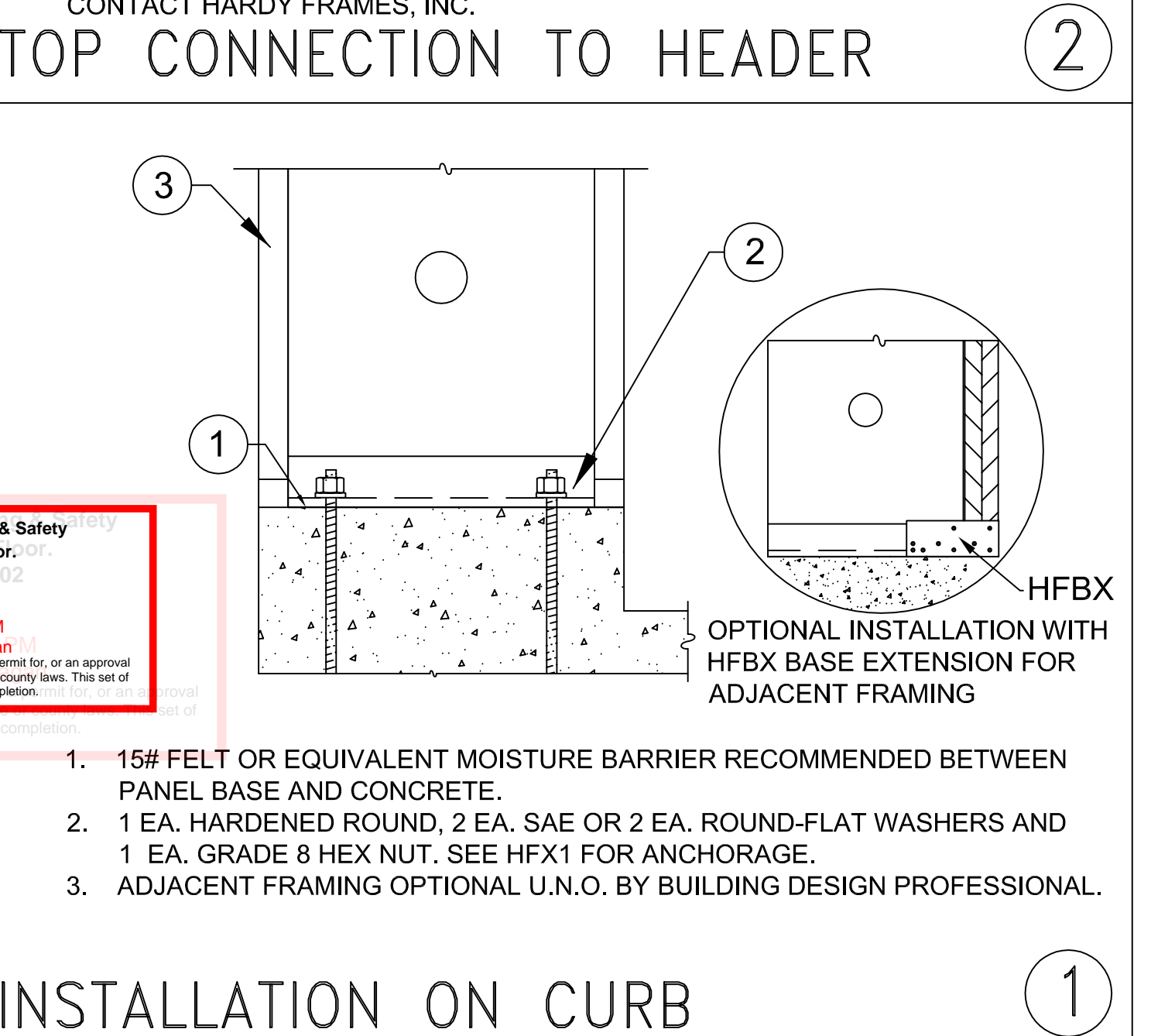
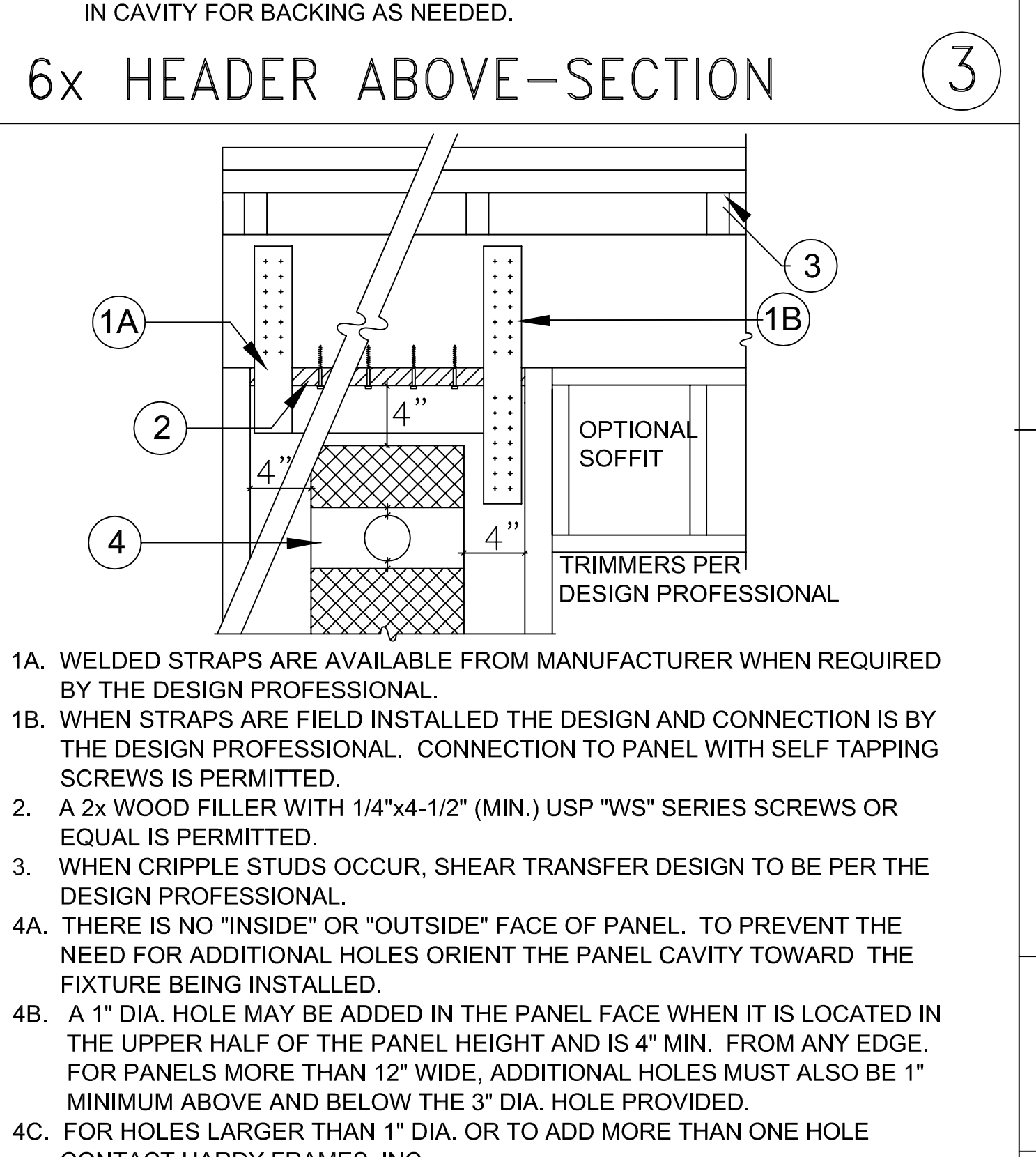
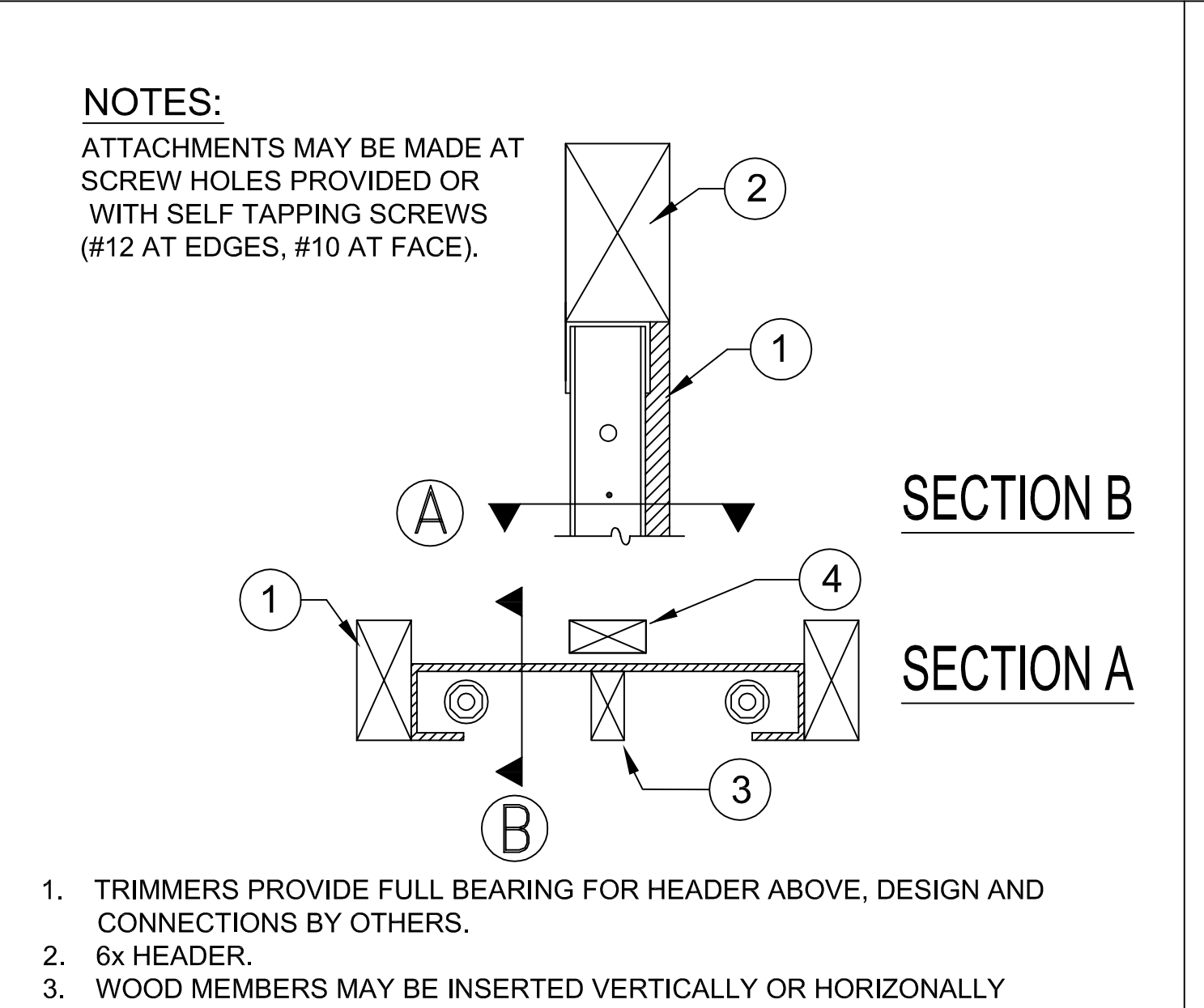
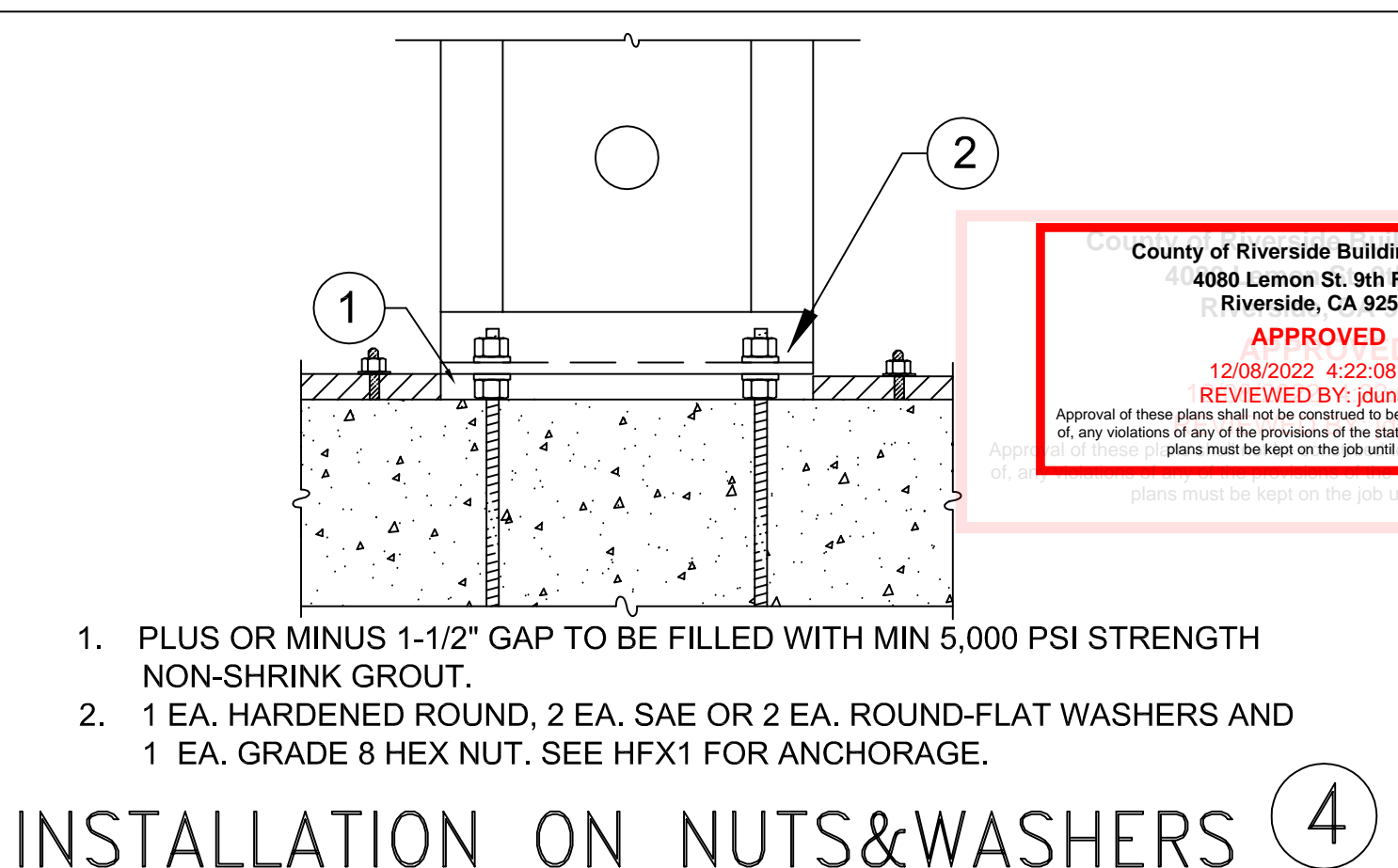
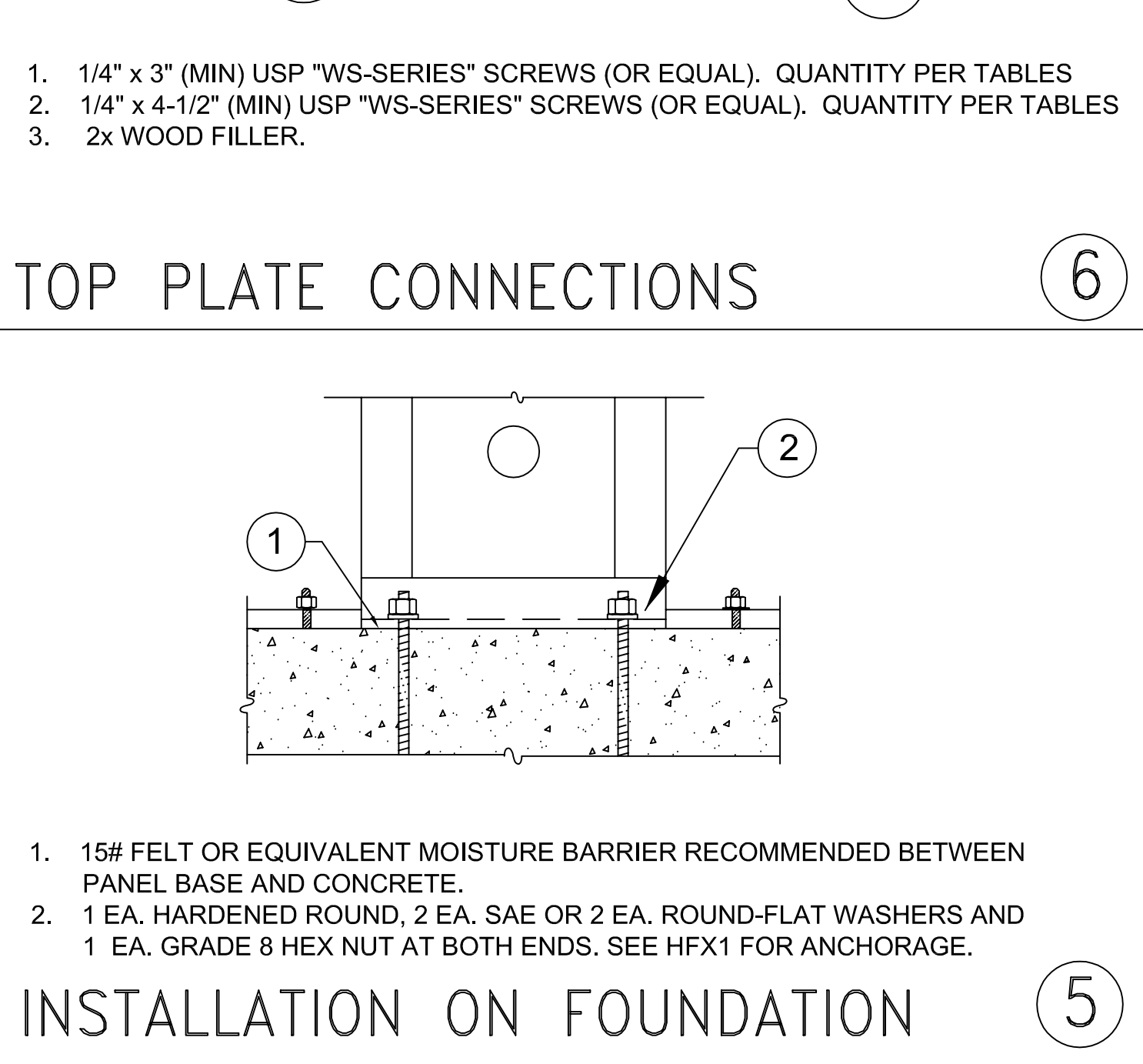
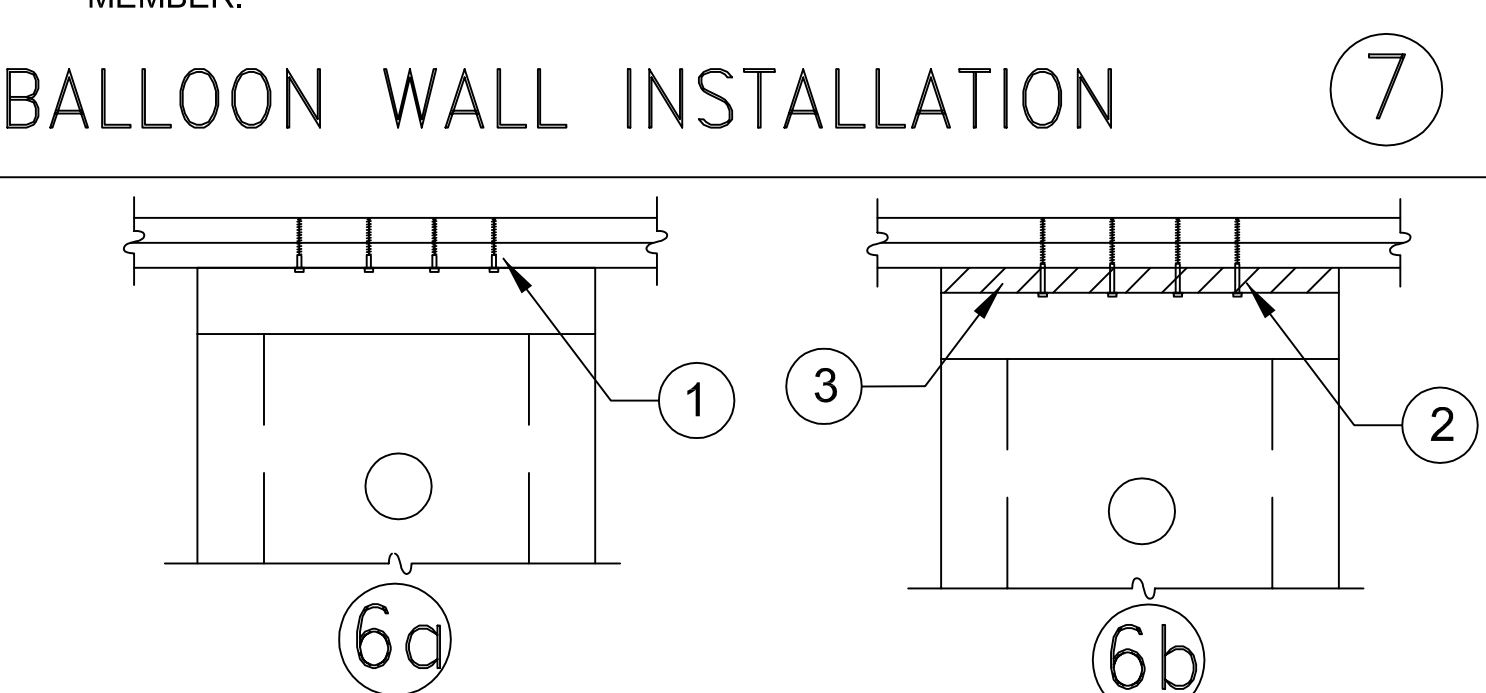
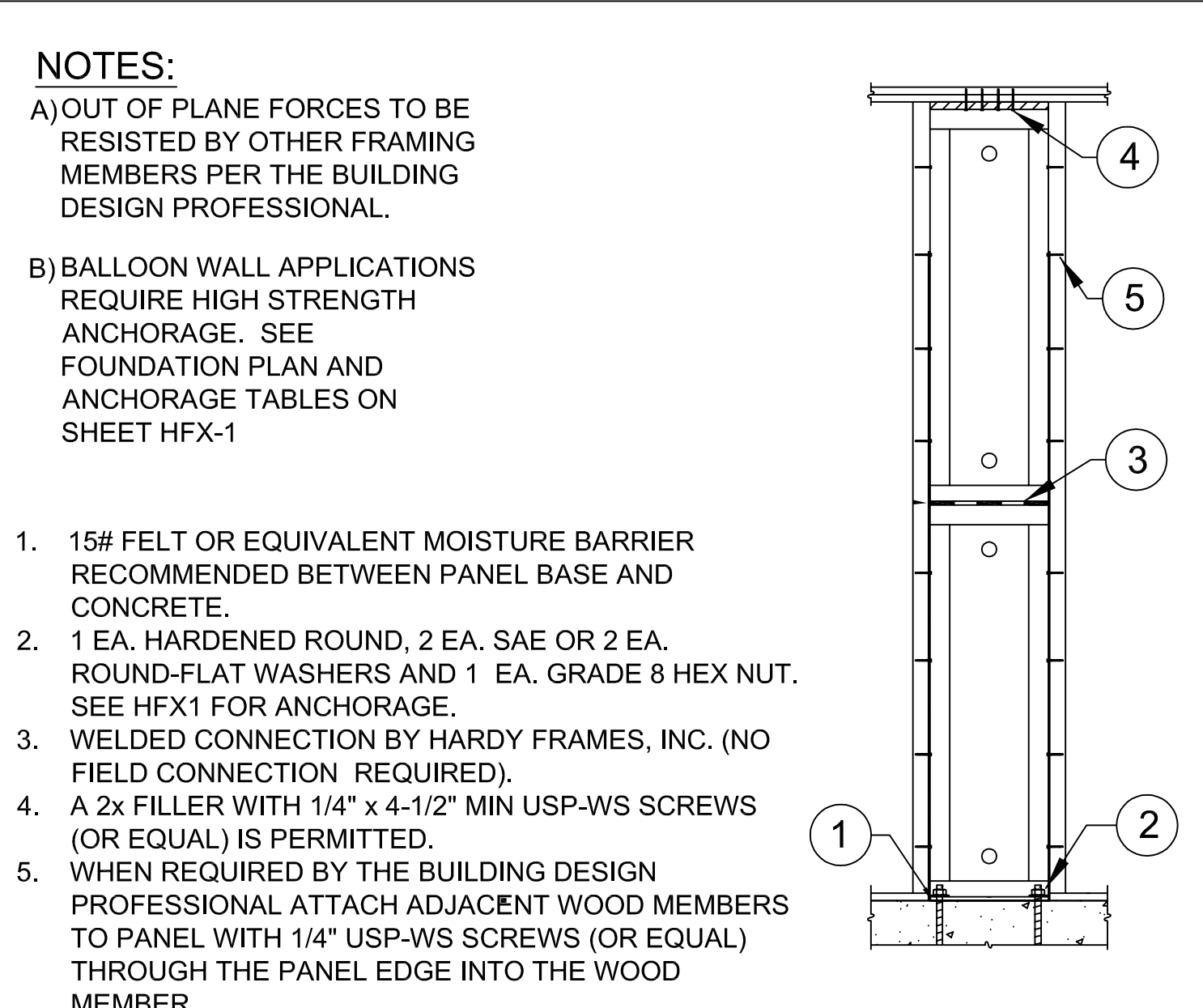
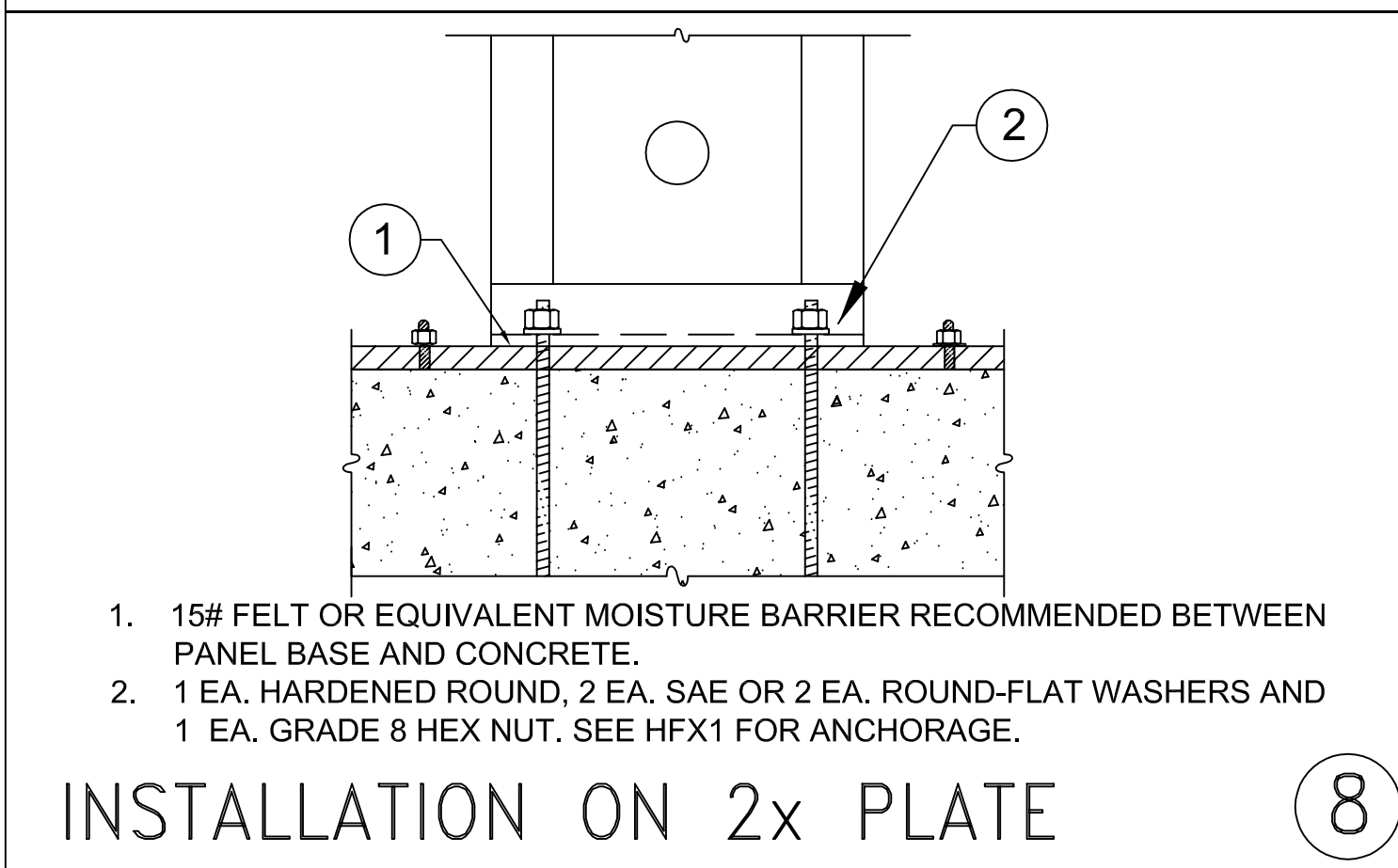
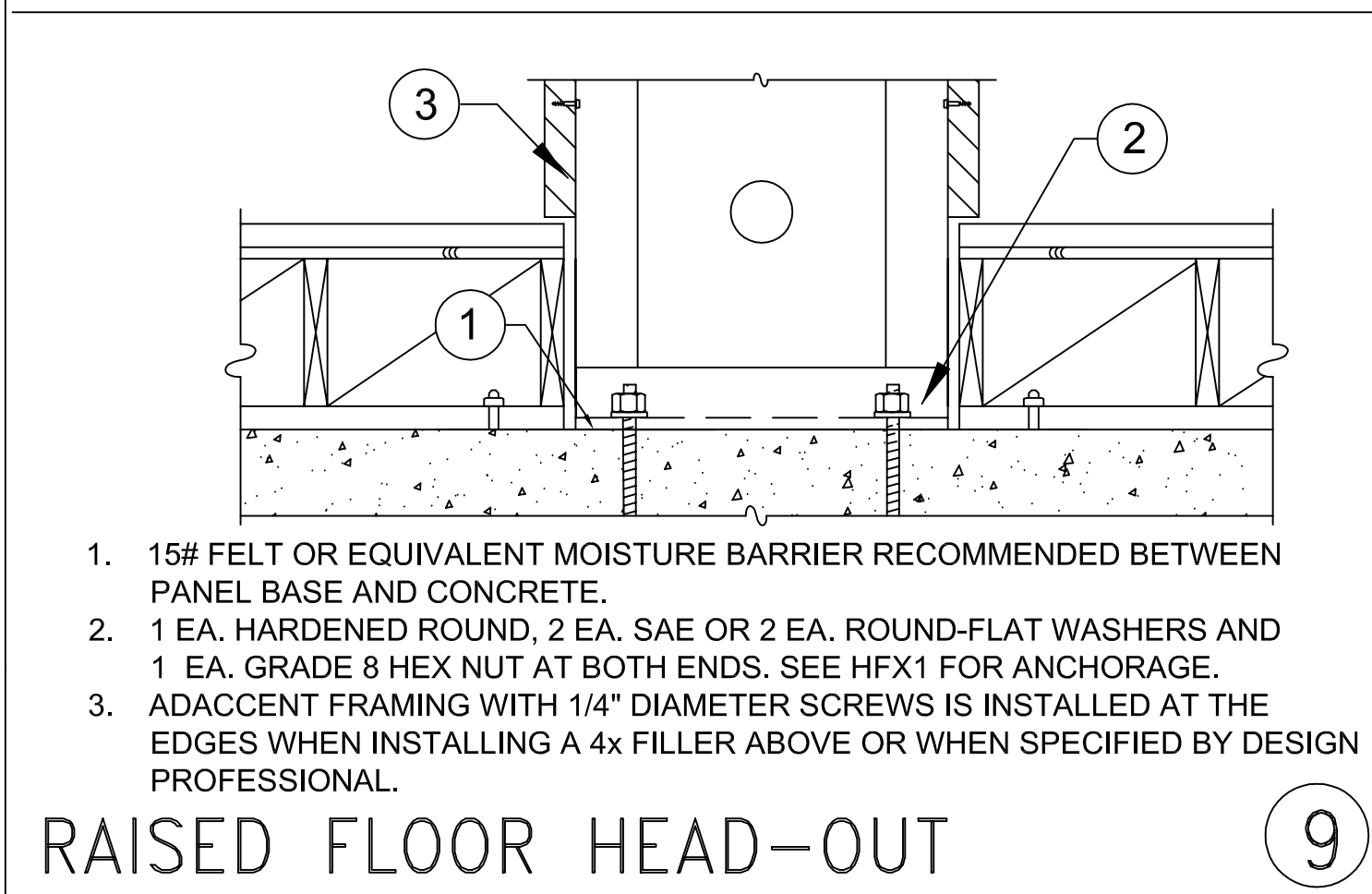
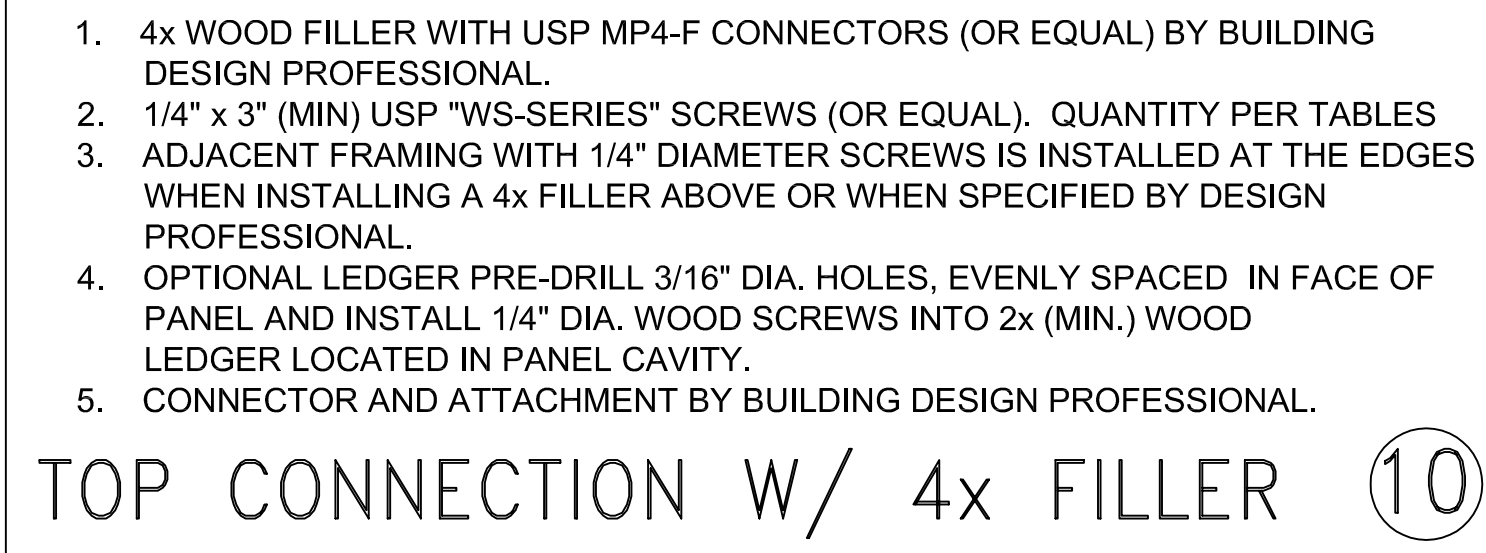
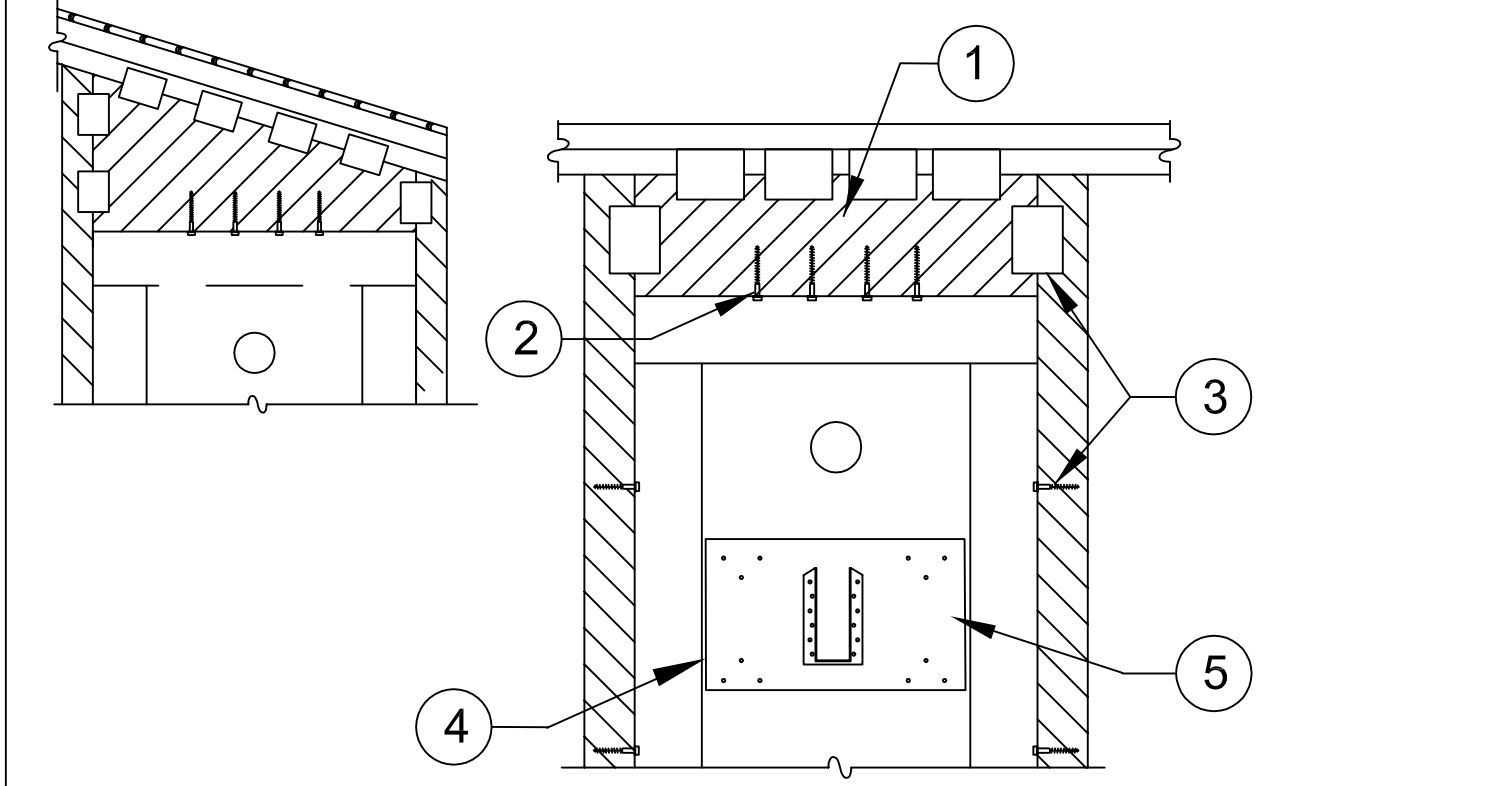
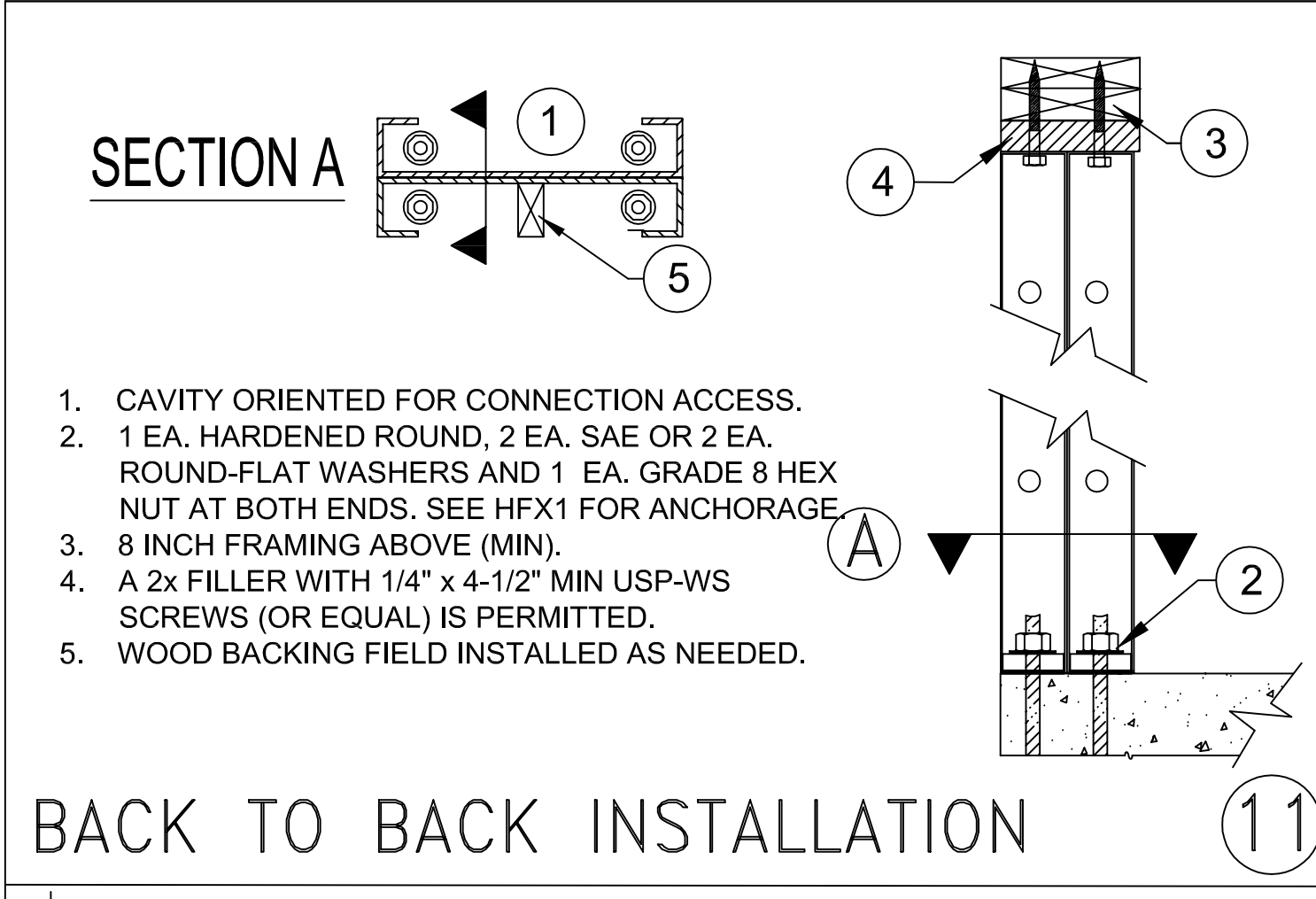
THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH HARDY FRAME PRODUCTS

HARDY FRAME
SHEAR-WALL SYSTEM
1732 PALMA DRIVE, SUITE 200, VENTURA, CA 93003
TELEPHONE: 800 754-3030 / www.hardyframe.com



DATE: 1-1-2017

HFX1



County of Riverside Building & Safety
4080 Lemon St. 9th Floor.
Riverside, CA 92502
APPROVED
12/08/2022 4:22:08 PM
REVIEWED BY: jduangan
Approval of these plans shall not be construed to be a permit for, or an approval of, any violations of any of the provisions of the state or county laws. This set of plans must be kept on the job until completion.

HFX-SERIES 78 IN. THRU 13 FOOT

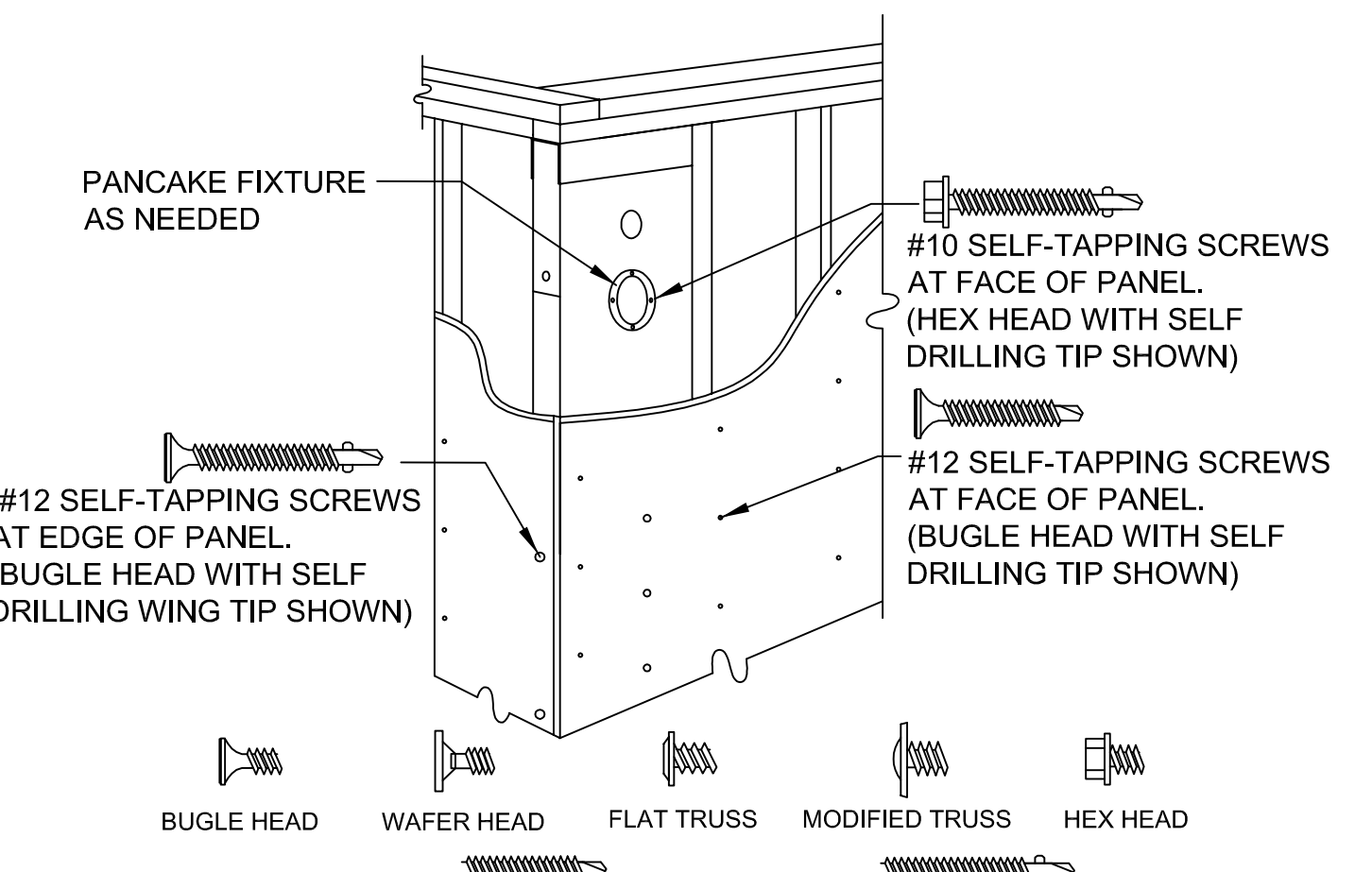
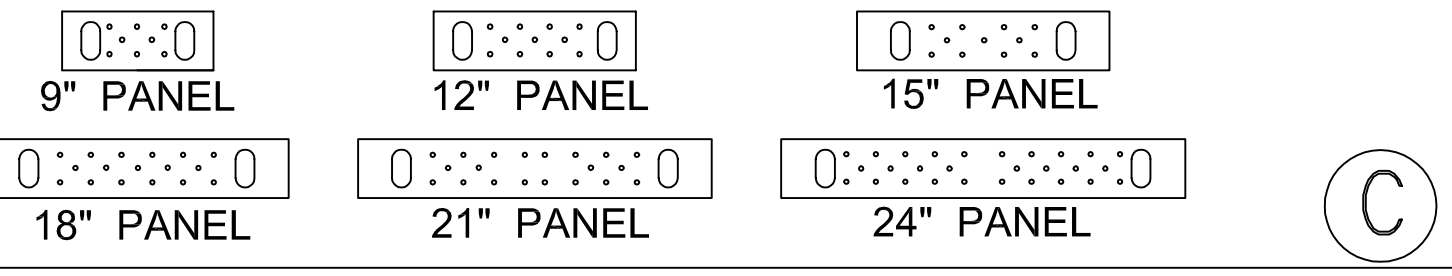
Model Number	Net Height (in)	Depth (in)	Hold Down Diameter ¹ (in)	Top Screw Qty ² (ea)	Screw Qty Available at Edges (ea) ³
HFX-12,15,18,21 & 24x78	78	3-1/2	1-1/8	9" Width = 5	4
HFX-9x79.5	79-1/2			12" Width = 6	
HFX-12,15,18,21 & 24x8	92-1/4	3-1/2	1-1/8	15" Width = 8	5
HFX-9x8	93-3/4			18" Width = 10	
HFX-12,15,18,21 & 24x9	104-1/4	3-1/2	1-1/8	21" Width = 12	6
HFX-12,15,18,21 & 24x10	116-1/4			24" Width = 14	
HFX-15,18,21 & 24x11	128-1/4	3-1/2	1-1/8	21" Width = 12	6
HFX-15,18,21 & 24x12	140-1/4			24" Width = 14	
HFX-15,18,21 & 24x13	152-1/4	3-1/2	1-1/8	21" Width = 12	7
HFX-15,18,21 & 24x14	164-1/4			24" Width = 14	
HFX-15,18,21 & 24x15	176-1/4	3-1/2	1-1/8	21" Width = 12	8
HFX-15,18,21 & 24x16	188-1/4			24" Width = 14	
HFX-15,18,21 & 24x17	200-1/4	3-1/2	1-1/8	21" Width = 12	8
HFX-15,18,21 & 24x18	212-1/4			24" Width = 14	
HFX-15,18,21 & 24x19	224-1/4	3-1/2	1-1/8	21" Width = 12	8
HFX-15,18,21 & 24x20	236-1/4			24" Width = 14	

BALLOON PANELS 14 FEET THRU 20 FEET

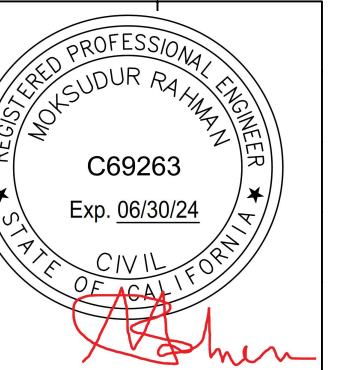
Model Number	Net Height (in)	Depth (in)	Hold Down Diameter ¹ (in)	Top Screw Qty ² (ea)	Screw Qty Available at Edges (ea) ³
HFX-15,18,21 & 24x14	164-1/4	3-1/2	1-1/8	15" Width = 8	6
HFX-15,18,21 & 24x15	176-1/4			18" Width = 10	
HFX-15,18,21 & 24x16	188-1/4	3-1/2	1-1/8	21" Width = 12	7
HFX-15,18,21 & 24x17	200-1/4			24" Width = 14	
HFX-15,18,21 & 24x18	212-1/4	3-1/2	1-1/8	21" Width = 12	8
HFX-15,18,21 & 24x19	224-1/4			24" Width = 14	
HFX-15,18,21 & 24x20	236-1/4	3-1/2	1-1/8	21" Width = 12	8
HFX-15,18,21 & 24x21	248-1/4			24" Width = 14	

- Hold down bolts connect to the Panel base with (1 ea) Hardened Round, (2 ea) Round-Flat or (2 ea) SAE Washers below (1 ea) Grade 8 Hex Nut on each rod or as specified by the Building Design Professional.
- 1/4" diameter USP-WS Series screws (or equal). Length is 3" (minimum) when attached directly to the collector and 4-1/2" (minimum) when installing a 2x filler above the Panel.
- Adjacent framing with 1/4" diameter screws is required at the edges when installing a 4X filler above or when specified by the Design Professional.

- INSTALLATION INSTRUCTIONS
- When installing directly on concrete, place Panel over bolts and connect with (1 ea) Hardened Round, (2 ea) Round-Flat or (2 ea) SAE Washers below (1 ea) Grade 8 or 2H Heavy Hex Nut. Secure with a deep socket (recommended) until "Snug Tight".
 - If bottom connection is not detailed on plans, confirm with Design Professional before installing on Nuts & Washers or on a Mudsill.
 - Use 1/4"x4-1/2" USP-WS Series screws (or equal) at top connections with a 2x filler. If the top of Panel is in direct contact with the collector above (top plates, header, beam, etc.) use 1/4 x 3" (minimum)
 - For installations with a 4x filler above 1/4" diameter screws are required at the Panel edges to brace for the out-of-plane hinge or when they are specified by the Design Professional.



- NOTES:
- SURFACE FINISHES, CONNECTORS AND FIXTURES ARE ATTACHED TO THE PANEL FACE WITH # 10 SELF-TAPPING SCREWS SPACED NO LESS THAN 2-1/4" OC.
 - ATTACHMENTS TO THE PANEL EDGES ARE MADE WITH # 12 SELF-TAPPING SCREWS.
 - STRUCTURAL CONNECTIONS ARE TO BE DESIGNED BY THE DESIGN PROFESSIONAL.
 - STRUCTURAL HARDWARE USED TO TRANSFER LOADS SHOULD NOT EXCEED 12 GAUGE.



FRAMING DETAILS - HFX PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH HARDY FRAME PRODUCTS

HARDY FRAME
SHEAR WALL SYSTEM
1732 PALMA DRIVE, SUITE 200, VENTURA, CA 93003
TELEPHONE: 800-754-3030 / www.hardyframe.com



DATE:
1-1-2017

HFX2



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STRUCTURAL CALCULATIONS

Project Name & Address

Proposed New ADU for Murphy & Nelson Residence
9306 Hot Springs Rd, Corona, CA 92883



Date: 06-Oct-22

by - Moksud Rahman, PE





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Table of Contents

Item No.	Page No.
<input checked="" type="checkbox"/> Design Criteria	---
<input checked="" type="checkbox"/> Lateral Analysis	---
<input checked="" type="checkbox"/> Roof Framing	---
<input checked="" type="checkbox"/> Foundation	---

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Design Criteria

1. Codes and Loads: All Design & Construction work for this project will conform to CBC 2019, IBC 2018, ASCE 7-16, ACI 318-14, NDS 2018.
2. Seismic: Site Class: D, S_{DS}: ...(see page-5)..., S_{D1}: ...(see page-4)..., I_E = 1.0
3. Wind: Basic wind speed: 96 mph, Exposure: C
4. Loads: Roof: DL = 20, L_r = 20; Floor: DL = 15, LL = 40; Deck: DL = 15, LL = 60 (in psf)
5. Soil: Allowable soil bearing capacity 1500 psf
6. Reinforcement: ASTM A615 Grade 60 (#4 & larger), Grade 40 for #3
7. Structural Steel: ASTM A-36, ASTM A-992
8. Pipe Columns: ASTM A-53, Grade B
9. Welding: Electric arc process by certified welders in approved licensed Fabrication Shop
10. Concrete Masonry: ASTM C-90, Grade N, f_m = 1500 psi
11. Mortar: Type M, 1:3:1/4 Mix = Cement : Sand : Lime Putty
12. Grout: 1:3:2 Mix = Cement : Sand : 3/8" pea gravel, f_c 2000 psi
13. Concrete: ASTM C150. f_c = 2500 psi @ 28 days, Ready-mixed, ASTM C94, Aggregate ATM C33, Cement ASTM C150, Type II or V U.N.O.
14. Wood Framing: WCLIB or WWPA Grading Rules Agency
 - a) Studs: Douglas Fir-Larch #2, DOC PS 20
 - b) Joist, Rafter: Douglas Fir-Larch #2, DOC PS 20
 - c) 6x Beam/Post: Douglas Fir-Larch #1, DOC PS 20
 - d) 4x Beam/Post: Douglas Fir-Larch #2, DOC PS 20
 - e) Glulam: 24F-V4 or 24F-V8 DF/DF, ASTM D3737, AITC A190.1
 - f) Parallam 2.0 PSL: ICC ESR-1387/Dry Condition (16% moisture)
 - g) Plywood: APA rated sheathing, or structural 1 per DOC PS1 AND DOC PS2, Exposure 1
 - h) Simpson Epoxy: RR25279, ICC ESR 1772 FOR CMU, ICC ESR 2508 for concrete (Set Epoxy)
 - i) TJI: ICC ESR 1153, ASTM D5055





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LATERAL ANALYSIS / DESIGN





16230 Mt Lowe Cir, Fountain Valley, CA 92708, USA

Latitude, Longitude: 33.7275417, -117.93474



Date	10/3/2022, 2:15:14 PM
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	D - Default (See Section 11.4.3)

Type	Value	Description
S _S	1.331	MCE _R ground motion. (for 0.2 second period)
S ₁	0.476	MCE _R ground motion. (for 1.0s period)
S _{MS}	1.597	Site-modified spectral acceleration value
S _{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S _{DS}	1.065	Numeric seismic design value at 0.2 second SA
S _{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F _a	1.2	Site amplification factor at 0.2 second
F _v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.571	MCE _G peak ground acceleration
F _{PGA}	1.2	Site amplification factor at PGA
PGA _M	0.685	Site modified peak ground acceleration
T _L	8	Long-period transition period in seconds
SsRT	1.331	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.448	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.809	Factored deterministic acceleration value. (0.2 second)
S1RT	0.476	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.517	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.629	Factored deterministic acceleration value. (1.0 second)
PGAd	0.745	Factored deterministic acceleration value. (Peak Ground Acceleration)
PGA _{UH}	0.571	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C _{RS}	0.919	Mapped value of the risk coefficient at short periods
C _{R1}	0.921	Mapped value of the risk coefficient at a period of 1 s
C _V	1.366	Vertical coefficient

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PAGE:	
DATE:	10-06-22
Project #:	

9306 Hot Springs Rd, Corona, CA 92883

1 STORY LATERAL LOAD (WIND)

ASCE 7-16 Section 28: Envelope Procedure

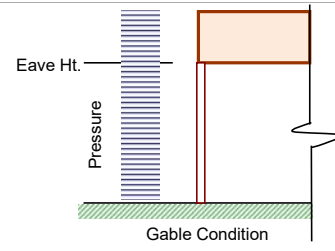
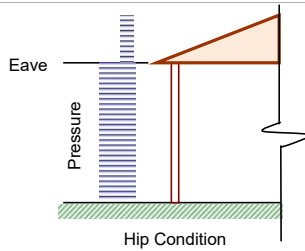
Location / Description **1-STORY BLDG**

Design Data & Inputs:

Basic Wind Speed (mph)	96	Figure 26.5-1	Gust Factor, G or G _f	0.85	Sect. 26.9
Directionality Factor, K _d	0.85	Table 26.6-1	Enclosure Classification	Enclosed	Sect. 26.10
Risk Factor, I	1.00	Table 1.5-2	Internal Pressure Coeff., GC _{pi}	0.18	Table 26.11-1
Exposure Category	C	Sect. 26.7	External Pressure Coeff., C _p	see chart ASCE	
Topographic Factor, K _{zt}	1.00	Sect. 26.8	Design Wind Load, p	qGC _p - q _i GC _{pi}	Eqn. 28.4-1
Terrain Exposure Constants, α ...	9.5	Table 26.9-1			
Terrain Exposure Constants, z _g ...	900	feet			

Building Data:

Roof Slope	4	:12 (max)
Theta, Θ	18.4	degrees*
N-S Dimension	62	feet
E-W Dimension	28	feet
Mean Roof Ht., h	13.0	feet
1st Floor Plate Ht.	9.0	feet



NORTH-SOUTH

Hip Roof:

Location	Pressure	Tributary	Load	Load*ω
Wall	16.00	4.50	72.00	56.16
Roof	9.91	5.00	49.57	38.66
Total (plf)				94.82

Gable Roof:

Pressure	Tributary	Load	Load*ω
16.00	4.50	72.00	56.16
16.00	3.50	56.00	43.68
Total (plf)			99.84

EAST-WEST

Hip Roof:

Location	Pressure	Tributary	Load	Load*ω
Wall Below	18.60	4.50	83.68	65.27
Roof	8.00	5.00	40.00	31.20
Total (plf)				96.47

Gable Roof:

Pressure	Tributary	Load	Load*ω
18.60	4.50	83.68	65.27
18.60	3.50	65.09	50.77
Total (plf)			116.04

Notes:

When Alternative Basic Load Combination, Sect. 1605.3.2, is utilized the wind load shall be magnified by the following coefficient **0.6ω = 0.78**

Since all internal wind pressures for enclosed buildings act equally on all the internal surfaces (equally and in opposite directions), these pressures cancel each other out in the lateral direction only. Net uplift pressures acting on components to be analyzed and designed separately.

References:

- California Building Code (CBC), 2019 Edition
- Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-16

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 Project #: _____

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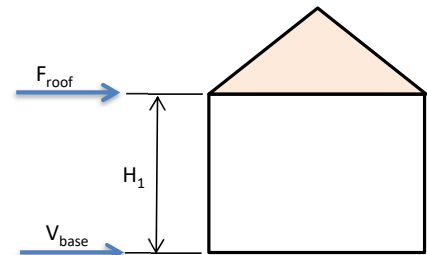
1 STORY LATERAL LOAD ANALYSIS (SEISMIC)

ASCE 7-16 Section 12.8: Equivalent Lateral Force Procedure (ELFP)

Location / Description **1-STORY BLDG**

Derivation of Dead Loads and Building Weight:

Dimension of Structure:						
North/South Direction	62.0	ft	Roof area	1736	Plate Height., H ₁	9.0 ft
East/West Direction	28.0	ft				
Roof Dead Weight	20.0	psf				
Exterior Wall Weight	15.0	psf				
N/S Walls..... (9/2)		ft x (2.0)				
E/W Walls..... (9/2)		ft x (2.0)				
Interior Wall Weight	10.0	psf				
N/S Walls..... (9/2)		ft x (0.0)				
E/W Walls..... (9/2)		ft x (0.0)				
Total Building Dead Load, W	46.87	kips				



Seismic Base Shear:

S _S	2.40	F _a	1.20	S _{MS} = F _a *S _S	2.88	S _{DS} = 2/3*S _{MS}	1.92	Site Class	D
S ₁	0.96	F _v	1.50	S _{M1} = F _v *S ₁	1.44	S _{D1} = 2/3*S _{M1}	0.96	SDC	E
Bld'g. Height, h _n	13.00	Seismic Coeff., C _t	0.020	Transition, T _L	8	Occupancy	II		
Response Coeff., R	6.50	Period Exponent	0.75	T _a = C _t *h _n ^x	0.14	Factor, I _E	1.00		
V = (S _{DS} *I _E /R)*W / 1.4		0.211	x W _{DL}	Eqn. 12.8-2	Governs	Use: Response Coeff., C _s	0.211		
V _{Max} ≤ (S _{D1} *I _E /R*T)*W / 1.4		0.770	x W _{DL}	Eqn. 12.8-3	.	Base Shear, V = C _s x W	9.89	kips	
V _{Max} ≤ (S _{D1} *T _L *I _E /R*T ²)*W / 1.4		45.01	x W _{DL}	Eqn. 12.8-4	n/a				
V _{Min} ≥ (0.01)*W / 1.4		0.007	x W _{DL}	Eqn. 12.8-5	n/a				
V _{Min} ≥ (0.5*S ₁ *I _E /R)*W / 1.4		0.053	x W _{DL}	Eqn. 12.8-6	.				

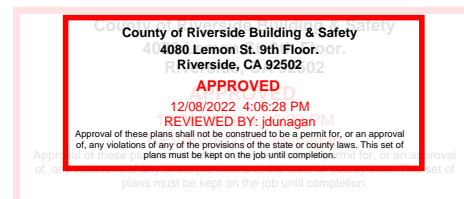
Lateral Load at Roof:

	EQ Shear (lbs)	ρ	EQ Shear (psf)	Wind* Shear (plf)	Label	
North/South Direction	9,890	1.30	8.0	100.0	(L3)	↕
East/West Direction	9,890	1.30	8.0	117.0	(T3)	

* See previous caclulation

References:

- California Buiding Code (CBC), 2019 Edition
- Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-16



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 Project #: _____

9306 Hot Springs Rd, Corona, CA 92883

SHEAR WALL (S.W.) / ELEMENT DESIGN
 California Building Code (CBC) 2019 Edition, SDPWS-2018 & ASCE 7-16

A 1 st Floor -

$$V_{\text{seismic}} = (8 \times 120/2) \times (28/2) + (L1)$$

$$V_{\text{wind}} = (117 \times 28/2) + (L1)$$

Seismic: $= 6,720 / 27.50 = 244 \text{ plf} < 380 \text{ OK}$

Wind: $= 1,638 / 27.50 = 60 \text{ plf} < 532 \text{ OK}$

Use: **2** 1/2" CDX PLYWOOD w/ 8d NAILS AT 4" O.C. EN & 12" O.C. FN **3x Sill AB24-2**

Pnl No	L ft	H ft	OTM, K-ft		Resisting Moment (RM)		External Uplift, lb		H / W Ratio	Modifier r	Uplift, lb		Holddown Type:	Chk:
			D±E	D±W	Due to Uniform Load, lb-ft		D±E	D±W			D±E	D±W		
1	14.50	9.00	31.9	7.8			0	0	0.62	1.00	2,199	536	HDU2	OK
2	8.00	9.00	17.6	4.3					1.13	1.00	2,199	536	HDU2	OK
3	5.00	9.00	11.0	2.7					1.80	1.00	2,199	536	HDU2	OK

Comments: None

B 1 st Floor -

$$V_{\text{seismic}} = (8 \times 78/2) \times (28/2) + (T3)$$

$$V_{\text{wind}} = (117 \times 28/2) + (T3)$$

Seismic: $= 4,368 / 15.08 = 290 \text{ plf} < 327 \text{ OK}$

Wind: $= 1,638 / 15.08 = 109 \text{ plf} < 686 \text{ OK}$

Use: **3** 1/2" CDX PLYWOOD w/ 8d NAILS AT 3" O.C. EN & 12" O.C. FN **3x Sill 5/8 AB24-3**

Pnl No	L ft	H ft	OTM, K-ft		Resisting Moment (RM)		External Uplift, lb		H / W Ratio	Modifier r	Uplift, lb		Holddown Type:	Chk:
			D±E	D±W	Due to Uniform Load, lb-ft		D±E	D±W			D±E	D±W		
1	3.00	9.00	7.8	2.9					3.00	0.67	2,607	978	HDU2	OK
2	3.50	9.00	9.1	3.4					2.57	0.78	2,607	978	HDU2	OK
3	5.33	9.00	13.9	5.2					1.69	1.00	2,607	978	HDU2	OK
4	3.25	9.00	8.5	3.2					2.77	0.72	2,607	978	HDU2	OK

Comments: None

ERR

$$V_{\text{seismic}} = () \times () + (T3)$$

$$V_{\text{wind}} = () \times () + (T3)$$

Seismic: $= 0 / 0.00 = \text{n/a} \text{ plf}$

Wind: $= 0 / 0.00 = \text{n/a}$

Use: **####**

Pnl No	L ft	H ft	OTM, K-ft		Resisting Moment (RM)		External Uplift, lb		H / W Ratio	Modifier r	Uplift, lb		Holddown Type:	Chk:
			D±E	D±W	Due to Uniform Load, lb-ft		D±E	D±W			D±E	D±W		

Comments: None

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Notes:
 CBC Alternate Basic (ASD) & ASCE7-16 Sect. 12.4.2.3 used for uplift calculations: $(0.6-0.14S_{DS})D \pm pE/1.4$ and $(2/3)D \pm \omega W$ $S_{DS} =$ _____
 Height-to-width (H / W) Ratio modifier $r = 2 * L / H$ for $2:1 < H / W < 3.5:1$ (seismic loads only)

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 Project #: _____

9306 Hot Springs Rd, Corona, CA 92883

SHEAR WALL (S.W.) / ELEMENT DESIGN
 California Building Code (CBC) 2019 Edition, SDPWS-2018 & ASCE 7-16

1 1 st Floor -

Seismic	$V_{seismic} = (8 \times 52/2) \times (40/2) + (L1)$	$V_{wind} = (117) \times (40/2) + (L1)$
	$() \times () +$	$() \times () +$
	$() \times () +$	$() \times () +$
	$() \times () =$	$() \times () =$
$= 4,160 / 14.25 = 292 \text{ plf} < 380 \text{ OK}$	$= 2,340 / 14.25 = 164 \text{ plf} < 532 \text{ OK}$	

Use: **2** 1/2" CDX PLYWOOD w/ 8d NAILS AT 4" O.C. EN & 12" O.C. FN **3x Sill AB24-2**

Pnl No	L ft	H ft	OTM, K-ft		Resisting Moment (RM)		External Uplift, lb		H / W Ratio	Modifier r	Uplift, lb		Downlow Type:	Chk:
			D±E	D±W	Due to Uniform Load, lb-ft	D±E	D±W	D±E			D±W			
1	8.50	9.00	22.3	12.6			0	0	1.06	1.00	2,627	1,478	HDU2	OK
2	5.75	9.00	15.1	8.5					1.57	1.00	2,627	1,478	HDU2	OK

Comments: None

4 1 st Floor -

Seismic	$V_{seismic} = (8 \times 52/2) \times (60/2) + (T3)$	$V_{wind} = (117) \times (60/2) + (T3)$
	$() \times () +$	$() \times () +$
	$() \times () +$	$() \times () +$
	$() \times () =$	$() \times () =$
$= 6,240 / 19.00 = 328 \text{ plf} < 380 \text{ OK}$	$= 3,510 / 19.00 = 185 \text{ plf} < 532 \text{ OK}$	

Use: **2** 1/2" CDX PLYWOOD w/ 8d NAILS AT 4" O.C. EN & 12" O.C. FN **3x Sill AB24-2**

Pnl No	L ft	H ft	OTM, K-ft		Resisting Moment (RM)		External Uplift, lb		H / W Ratio	Modifier r	Uplift, lb		Downlow Type:	Chk:
			D±E	D±W	Due to Uniform Load, lb-ft	D±E	D±W	D±E			D±W			
1	7.00	9.00	20.7	11.6					1.29	1.00	2,956	1,663	HDU2	OK
2	12.00	9.00	35.5	20.0					0.75	1.00	2,956	1,663	HDU2	OK

Comments: None

5 1 st Floor -

Seismic	$V_{seismic} = (8 \times 46/2) \times (20/2) + (T3)$	$V_{wind} = (117) \times (20/2) + (T3)$
	$() \times () +$	$() \times () +$
	$() \times () +$	$() \times () +$
	$() \times () =$	$() \times () =$
$= 1,840 / 12.00 = 153 \text{ plf} < 260 \text{ OK}$	$= 1,170 / 12.00 = 98 \text{ plf} < 364 \text{ OK}$	

Use: **1** 1/2" CDX PLYWOOD w/ 8d NAILS AT 6" O.C. EN & 12" O.C. FN **2x Sill AB36-1**

Pnl No	L ft	H ft	OTM, K-ft		Resisting Moment (RM)		External Uplift, lb		H / W Ratio	Modifier r	Uplift, lb		Downlow Type:	Chk:
			D±E	D±W	Due to Uniform Load, lb-ft	D±E	D±W	D±E			D±W			
1	6.00	9.00	8.3	5.3					1.50	1.00	1,380	878	HDU2	OK
2	6.00	9.00	8.3	5.3					1.50	1.00	1,380	878	HDU2	OK

Comments: None

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 Height-to-width (H / W) Ratio modifier $r = 2 * L / H$ for $2:1 < H / W < 3.5:1$ (seismic loads only) $S_{DS} =$ _____



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ROOF FRAMING DESIGN



Project Title:
 Engineer:
 Project ID:
 Project Descr:

Wood Beam

Project File: EC.ec6

LIC# : KW-06017805, Build:20.22.8.17

MS CONSULTING ENGINEERS

(c) ENERCALC INC 1983-2022

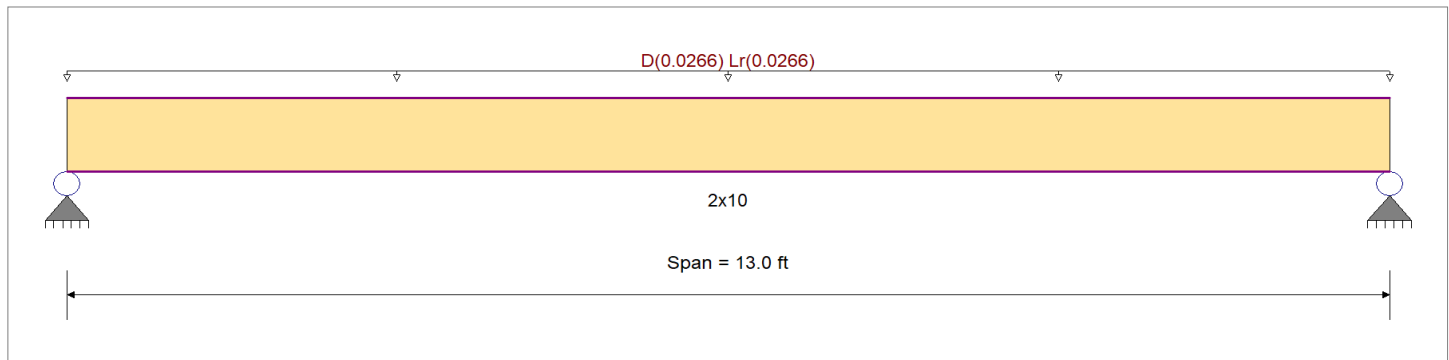
DESCRIPTION: ROOF RAFTER

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
 Load Combination Set : IBC 2018

Material Properties

Analysis Method : Allowable Stress Design	Fb +	900.0 psi	E : Modulus of Elasticity
Load Combination IBC 2018	Fb -	900.0 psi	Ebend- xx
	Fc - Prll	1,350.0 psi	Eminbend - xx
	Fc - Perp	625.0 psi	
Wood Species : Douglas Fir - Larch	Fv	180.0 psi	
Wood Grade : No.2	Ft	575.0 psi	Density
			Repetitive Member Stress Increase
Beam Bracing : Beam is Fully Braced against lateral-torsional buckling			



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight NOT internally calculated and added
 Uniform Load : D = 0.020, Lr = 0.020 ksf, Tributary Width = 1.330 ft, (ROOF)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.443 : 1	Maximum Shear Stress Ratio	=	0.147 : 1
Section used for this span		2x10	Section used for this span		2x10
fb: Actual	=	630.47 psi	fv: Actual	=	33.02 psi
Fb: Allowable	=	1,423.13 psi	Fv: Allowable	=	225.00 psi
Load Combination		+D+Lr	Load Combination		+D+Lr
Location of maximum on span	=	6.500ft	Location of maximum on span	=	12.241 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1
Maximum Deflection					
Max Downward Transient Deflection		0.109 in	Ratio =	1436 >=240	Span: 1 : Lr Only
Max Upward Transient Deflection		0 in	Ratio =	0 <240	n/a
Max Downward Total Deflection		0.217 in	Ratio =	718 >=180	Span: 1 : +D+Lr
Max Upward Total Deflection		0 in	Ratio =	0 <180	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Max Stress Ratios									Moment Values			Shear Values				
			M	V	C _d	C _{F/V}	C _i	C _r	C _m	C _t	C _L	M	fb	F'b	V	fv	F'v		
D Only	Length = 13.0 ft	1	0.308	0.102	0.90	1.100	1.00	1.15	1.00	1.00	1.00	0.56	315.24	1024.65	0.00	0.00	0.00	0.00	162.00
+D+Lr	Length = 13.0 ft	1	0.443	0.147	1.25	1.100	1.00	1.15	1.00	1.00	1.12	630.47	1423.13	0.00	0.31	33.02	225.00	0.00	
+D+0.750Lr	Length = 13.0 ft	1	0.388	0.128	1.25	1.100	1.00	1.15	1.00	1.00	0.98	551.00	1423.13	0.00	0.00	0.00	28.89	225.00	
+0.60D	Length = 13.0 ft	1	0.104	0.034	1.60	1.100	1.00	1.15	1.00	1.00	0.34	189.14	1821.60	0.09	9.91	0.00	288.00	0.00	

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Span	Max. "+" Defl	Location in Span
+D+Lr	1	0.2172	6.547			0.0000	0.000

County of Riverside Building & Safety
 4080 Lemon St. 9th Floor
 Riverside, CA 92502
 REVIEWED BY: jburgen
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Project Title:
 Engineer:
 Project ID:
 Project Descr:

Wood Beam	Project File: EC.ec6
LIC# : KW-06017805, Build:20.22.8.17	MS CONSULTING ENGINEERS (c) ENERCALC INC 1983-2022

DESCRIPTION: ROOF RAFTER

Vertical Reactions	Support notation : Far left is #1		Values in KIPS
Load Combination	Support 1	Support 2	
Overall MAXimum	0.346	0.346	
Overall MINimum	0.173	0.173	
D Only	0.173	0.173	
+D+Lr	0.346	0.346	
+D+0.750Lr	0.303	0.303	
+0.60D	0.104	0.104	
Lr Only	0.173	0.173	

County of Riverside Building & Safety
 4080 Lemon St. 9th Floor.
 Riverside, CA 92502, CA

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Project Title:
 Engineer:
 Project ID:
 Project Descr:

Wood Beam

Project File: EC.ec6

LIC# : KW-06017805, Build:20.22.8.17

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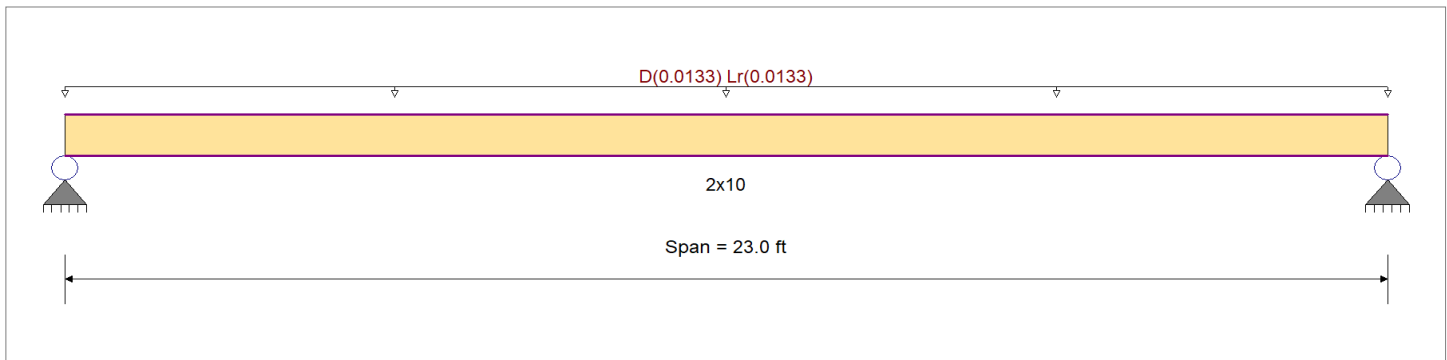
DESCRIPTION: CEILING JOIST

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
 Load Combination Set : IBC 2018

Material Properties

Analysis Method : Allowable Stress Design	Fb +	900.0 psi	E : Modulus of Elasticity
Load Combination IBC 2018	Fb -	900.0 psi	Ebend- xx
	Fc - Prll	1,350.0 psi	Eminbend - xx
	Fc - Perp	625.0 psi	
Wood Species : Douglas Fir - Larch	Fv	180.0 psi	
Wood Grade : No.2	Ft	575.0 psi	Density
			Repetitive Member Stress Increase
Beam Bracing : Beam is Fully Braced against lateral-torsional buckling			



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight NOT internally calculated and added
 Uniform Load : D = 0.010, Lr = 0.010 ksf, Tributary Width = 1.330 ft, (CEILING)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.693 : 1	Maximum Shear Stress Ratio	=	0.137 : 1
Section used for this span		2x10	Section used for this span		2x10
fb: Actual	=	986.75 psi	fv: Actual	=	30.90 psi
Fb: Allowable	=	1,423.13 psi	Fv: Allowable	=	225.00 psi
Load Combination		+D+Lr	Load Combination		+D+Lr
Location of maximum on span	=	11.500ft	Location of maximum on span	=	0.000ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1
Maximum Deflection					
Max Downward Transient Deflection		0.532 in Ratio =	518 >=240	Span: 1 : Lr Only	
Max Upward Transient Deflection		0 in Ratio =	0 <240	n/a	
Max Downward Total Deflection		1.064 in Ratio =	259 >=180	Span: 1 : +D+Lr	
Max Upward Total Deflection		0 in Ratio =	0 <180	n/a	

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Max Stress Ratios									Moment Values			Shear Values				
			M	V	C _d	C _{F/V}	C _i	C _r	C _m	C _t	C _L	M	fb	F'b	V	fv	F'v		
D Only	Length = 23.0 ft	1	0.482	0.095	0.90	1.100	1.00	1.15	1.00	1.00	1.00	0.88	493.37	1024.65	0.00	0.00	0.00	0.00	162.00
+D+Lr	Length = 23.0 ft	1	0.693	0.137	1.25	1.100	1.00	1.15	1.00	1.00	1.00	1.76	986.75	1423.13	0.00	0.00	0.00	0.00	225.00
+D+0.750Lr	Length = 23.0 ft	1	0.607	0.120	1.25	1.100	1.00	1.15	1.00	1.00	1.00	1.54	863.40	1423.13	0.00	0.00	0.00	0.00	225.00
+0.60D	Length = 23.0 ft	1	0.163	0.032	1.60	1.100	1.00	1.15	1.00	1.00	1.00	0.53	296.02	1821.60	0.09	9.27	0.00	0.00	288.00

County of Riverside Building & Safety
 4080 Lemon St. 9th Floor
 Riverside, CA 92502
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Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+Lr	1	1.0643	11.584		0.0000	0.000

Project Title:
 Engineer:
 Project ID:
 Project Descr:

Wood Beam	Project File: EC.ec6
LIC# : KW-06017805, Build:20.22.8.17	(c) ENERCALC INC 1983-2022

MS CONSULTING ENGINEERS

DESCRIPTION: CEILING JOIST

Vertical Reactions

Support notation : Far left is #1

Values in KIPS

Load Combination	Support 1	Support 2
Overall MAXimum	0.306	0.306
Overall MINimum	0.153	0.153
D Only	0.153	0.153
+D+Lr	0.306	0.306
+D+0.750Lr	0.268	0.268
+0.60D	0.092	0.092
Lr Only	0.153	0.153

County of Riverside Building & Safety
 4080 Lemon St. 9th Floor.
 Riverside, CA 92502

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Project Title:
 Engineer:
 Project ID:
 Project Descr:

Wood Beam

Project File: EC.ec6

LIC# : KW-06017805, Build:20.22.8.17

MS CONSULTING ENGINEERS

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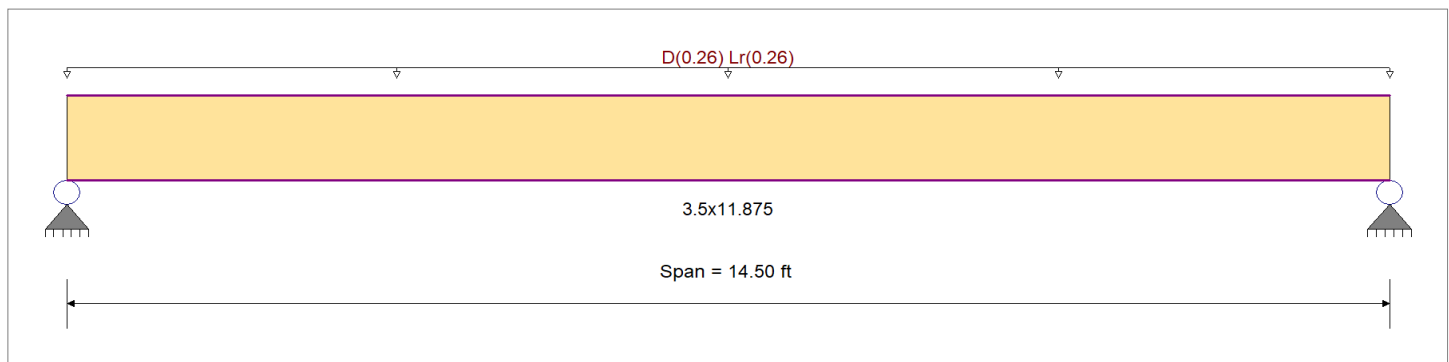
DESCRIPTION: RIDGE BEAM

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
 Load Combination Set : IBC 2018

Material Properties

Analysis Method : Allowable Stress Design	Fb +	2,900.0 psi	E : Modulus of Elasticity	
Load Combination IBC 2018	Fb -	2,900.0 psi	Ebend- xx	2,000.0ksi
	Fc - Prll	2,900.0 psi	Eminbend - xx	1,016.54ksi
Wood Species : Trus Joist	Fc - Perp	625.0 psi		
Wood Grade : Parallam PSL 2.0E	Fv	290.0 psi		
	Ft	2,025.0 psi	Density	45.070pcf
Beam Bracing : Beam is Fully Braced against lateral-torsional buckling				



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
 Uniform Load : D = 0.020, Lr = 0.020 ksf, Tributary Width = 13.0 ft, (ROOF)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.564 : 1	Maximum Shear Stress Ratio	=	0.334 : 1
Section used for this span		3.5x11.875	Section used for this span		3.5x11.875
fb: Actual	=	2,043.51 psi	fv: Actual	=	121.14 psi
Fb: Allowable	=	3,625.00 psi	Fv: Allowable	=	362.50 psi
Load Combination		+D+Lr	Load Combination		+D+Lr
Location of maximum on span	=	7.250ft	Location of maximum on span	=	0.000ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1
Maximum Deflection					
Max Downward Transient Deflection		0.266 in Ratio = 653 >=240	Span: 1 : Lr Only		
Max Upward Transient Deflection		0 in Ratio = 0 <240	n/a		
Max Downward Total Deflection		0.546 in Ratio = 318 >=180	Span: 1 : +D+Lr		
Max Upward Total Deflection		0 in Ratio = 0 <180	n/a		

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Max Stress Ratios								Moment Values			Shear Values								
			M	V	C _d	C _{F/V}	C _i	C _r	C _m	C _t	C _L	M	fb	F'b	V	fv	F'v					
D Only	Length = 14.50 ft	1	0.401	0.238	0.90	1.000	1.00	1.00	1.00	1.00	1.00	1.00	7.18	1,046.69	2610.00	0.00	0.00	0.00	0.00	0.00	261.00	
+D+Lr	Length = 14.50 ft	1	0.564	0.334	1.25	1.000	1.00	1.00	1.00	1.00	1.00	1.00	14.01	2,043.51	3625.00	0.00	0.00	0.00	0.00	0.00	0.00	362.50
+D+0.750Lr	Length = 14.50 ft	1	0.495	0.293	1.25	1.000	1.00	1.00	1.00	1.00	1.00	1.00	12.30	1,794.91	2610.00	0.00	0.00	0.00	0.00	0.00	0.00	362.50
+0.60D	Length = 14.50 ft	1	0.135	0.080	1.60	1.000	1.00	1.00	1.00	1.00	1.00	1.00	4.31	628.02	4640.00	1.03	37.23	0.00	0.00	0.00	0.00	464.00

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+Lr	1	0.5459	7.303		0.0000	0.000

1,794.91 ksf
 4080 Lemon St. 9th Floor
 Riverside, CA 92502
 951-509-8200
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 REVIEWED BY: jduragen
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Project Title:
 Engineer:
 Project ID:
 Project Descr:

Wood Beam	Project File: EC.ec6
LIC# : KW-06017805, Build:20.22.8.17	MS CONSULTING ENGINEERS (c) ENERCALC INC 1983-2022

DESCRIPTION: RIDGE BEAM

Vertical Reactions	Support notation : Far left is #1		Values in KIPS
Load Combination	Support 1	Support 2	
Overall MAXimum	3.864	3.864	
Overall MINimum	1.885	1.885	
D Only	1.979	1.979	
+D+Lr	3.864	3.864	
+D+0.750Lr	3.393	3.393	
+0.60D	1.188	1.188	
Lr Only	1.885	1.885	

County of Riverside Building & Safety
 4080 Lemon St. 9th Floor.
 Riverside, CA 92502, CA

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Project Title:
 Engineer:
 Project ID:
 Project Descr:

Wood Beam

Project File: EC.ec6

LIC# : KW-06017805, Build:20.22.8.17

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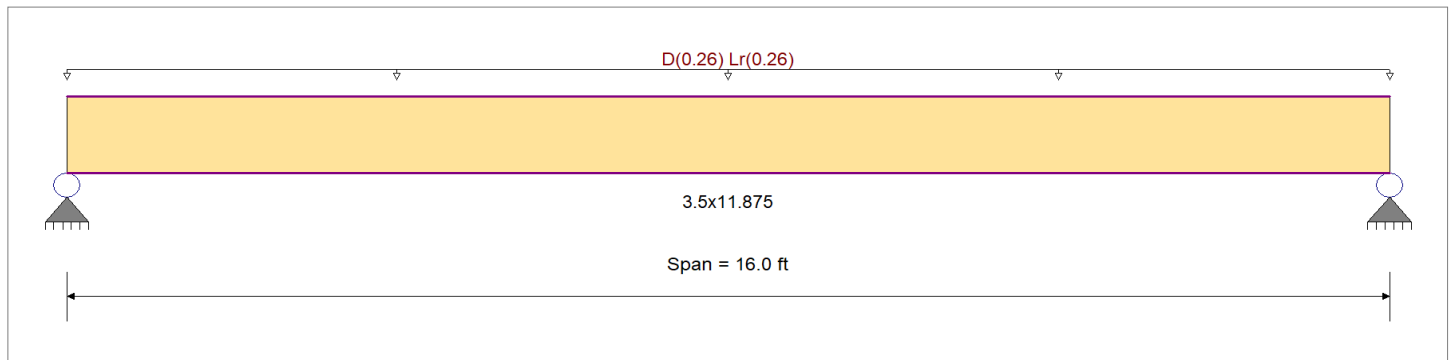
DESCRIPTION: GARAGE HDR: H1

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
 Load Combination Set : IBC 2018

Material Properties

Analysis Method : Allowable Stress Design	Fb +	2,900.0 psi	E : Modulus of Elasticity	
Load Combination IBC 2018	Fb -	2,900.0 psi	Ebend- xx	2,000.0ksi
	Fc - Prll	2,900.0 psi	Eminbend - xx	1,016.54ksi
Wood Species : Trus Joist	Fc - Perp	625.0 psi		
Wood Grade : Parallam PSL 2.0E	Fv	290.0 psi		
	Ft	2,025.0 psi	Density	45.070pcf
Beam Bracing : Beam is Fully Braced against lateral-torsional buckling				



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
 Uniform Load : D = 0.020, Lr = 0.020 ksf, Tributary Width = 13.0 ft, (ROOF)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = 0.686 : 1	Maximum Shear Stress Ratio = 0.375 : 1
Section used for this span = 3.5x11.875	Section used for this span = 3.5x11.875
fb: Actual = 2,488.18 psi	fv: Actual = 135.92 psi
Fb: Allowable = 3,625.00 psi	Fv: Allowable = 362.50 psi
Load Combination = +D+Lr	Load Combination = +D+Lr
Location of maximum on span = 8.000ft	Location of maximum on span = 15.066ft
Span # where maximum occurs = Span # 1	Span # where maximum occurs = Span # 1
Maximum Deflection	
Max Downward Transient Deflection = 0.395 in Ratio = 486 >=240	Span: 1 : Lr Only
Max Upward Transient Deflection = 0 in Ratio = 0 <240	n/a
Max Downward Total Deflection = 0.809 in Ratio = 237 >=180	Span: 1 : +D+Lr
Max Upward Total Deflection = 0 in Ratio = 0 <180	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Max Stress Ratios								Moment Values			Shear Values						
			M	V	C _d	C _{F/V}	C _i	C _r	C _m	C _t	C _L	M	fb	F'b	V	fv	F'v			
D Only	Length = 16.0 ft	1	0.488	0.267	0.90	1.000	1.00	1.00	1.00	1.00	1.00	8.74	1,274.45	2610.00	0.00	0.00	0.00	0.00	0.00	261.00
+D+Lr	Length = 16.0 ft	1	0.686	0.375	1.25	1.000	1.00	1.00	1.00	1.00	1.00	17.06	2,488.18	3625.00	0.00	0.00	0.00	0.00	0.00	0.00
+D+0.750Lr	Length = 16.0 ft	1	0.603	0.329	1.25	1.000	1.00	1.00	1.00	1.00	1.00	14.98	2,184.79	3220.00	0.00	0.00	0.00	0.00	0.00	0.00
+0.60D	Length = 16.0 ft	1	0.165	0.090	1.60	1.000	1.00	1.00	1.00	1.00	1.00	5.24	764.67	4640.00	1.16	41.77	0.00	0.00	0.00	464.00

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+Lr	1	0.8093	8.058		0.0000	0.000

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Project Title:
 Engineer:
 Project ID:
 Project Descr:

Wood Beam	Project File: EC.ec6
LIC# : KW-06017805, Build:20.22.8.17	MS CONSULTING ENGINEERS (c) ENERCALC INC 1983-2022

DESCRIPTION: GARAGE HDR: H1

Vertical Reactions	Support notation : Far left is #1		Values in KIPS
Load Combination	Support 1	Support 2	
Overall MAXimum	4.264	4.264	
Overall MINimum	2.080	2.080	
D Only	2.184	2.184	
+D+Lr	4.264	4.264	
+D+0.750Lr	3.744	3.744	
+0.60D	1.310	1.310	
Lr Only	2.080	2.080	

County of Riverside Building & Safety
 4080 Lemon St. 9th Floor.
 Riverside, CA 92502

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Project Title:
 Engineer:
 Project ID:
 Project Descr:

Wood Beam

Project File: EC.ec6

LIC# : KW-06017805, Build:20.22.8.17

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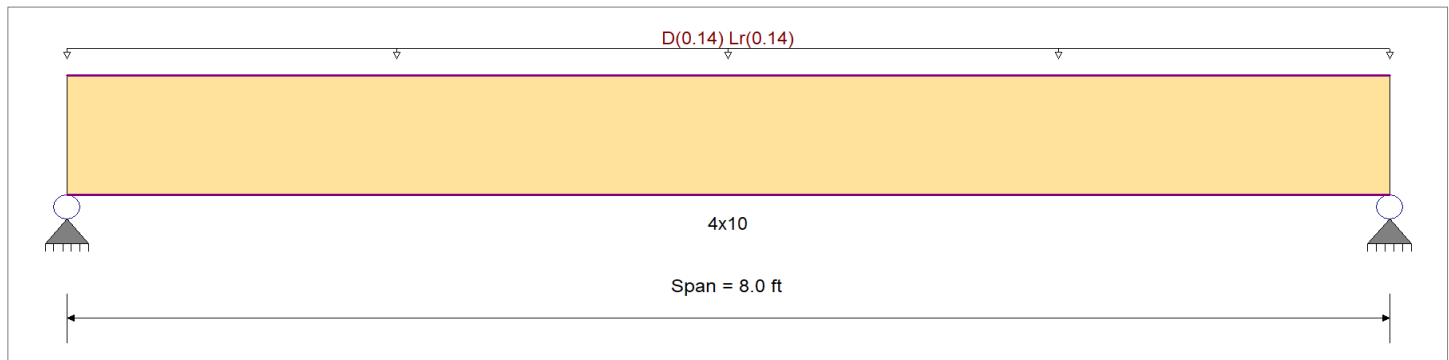
DESCRIPTION: HDR: H2

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
 Load Combination Set : IBC 2018

Material Properties

Analysis Method : Allowable Stress Design	Fb +	900.0 psi	E : Modulus of Elasticity
Load Combination IBC 2018	Fb -	900.0 psi	Ebend- xx 1,600.0ksi
	Fc - Prll	1,350.0 psi	Eminbend - xx 580.0ksi
Wood Species : Douglas Fir-Larch	Fc - Perp	625.0 psi	
Wood Grade : No.2	Fv	180.0 psi	
	Ft	575.0 psi	Density 31.210pcf
Beam Bracing : Beam is Fully Braced against lateral-torsional buckling			



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
 Uniform Load : D = 0.020, Lr = 0.020 ksf, Tributary Width = 7.0 ft, (ROOF)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = 0.409 : 1	Maximum Shear Stress Ratio = 0.192 : 1
Section used for this span = 4x10	Section used for this span = 4x10
fb: Actual = 552.05 psi	fv: Actual = 43.10 psi
Fb: Allowable = 1,350.00 psi	Fv: Allowable = 225.00 psi
Load Combination = +D+Lr	Load Combination = +D+Lr
Location of maximum on span = 4.000ft	Location of maximum on span = 7.241 ft
Span # where maximum occurs = Span # 1	Span # where maximum occurs = Span # 1
Maximum Deflection	
Max Downward Transient Deflection = 0.035 in Ratio = 2732 >=240	Span: 1 : Lr Only
Max Upward Transient Deflection = 0 in Ratio = 0 <240	n/a
Max Downward Total Deflection = 0.072 in Ratio = 1332 >=180	Span: 1 : +D+Lr
Max Upward Total Deflection = 0 in Ratio = 0 <180	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Max Stress Ratios								Moment Values			Shear Values						
			M	V	C _d	C _{F/V}	C _i	C _r	C _m	C _t	C _L	M	fb	F'b	V	fv	F'v			
D Only	Length = 8.0 ft	1	0.291	0.136	0.90	1.200	1.00	1.00	1.00	1.00	1.00	1.18	282.77	972.00	0.00	0.00	0.00	0.00	0.00	162.00
+D+Lr	Length = 8.0 ft	1	0.409	0.192	1.25	1.200	1.00	1.00	1.00	1.00	1.00	2.30	552.05	1350.00	0.00	0.00	0.00	0.00	0.00	0.00
+D+0.750Lr	Length = 8.0 ft	1	0.359	0.168	1.25	1.200	1.00	1.00	1.00	1.00	1.00	2.02	484.79	1350.00	0.00	0.00	0.00	0.00	0.00	0.00
+0.60D	Length = 8.0 ft	1	0.098	0.046	1.60	1.200	1.00	1.00	1.00	1.00	1.00	0.71	169.66	1728.00	0.00	0.00	0.00	0.00	0.00	0.00

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+Lr	1	0.0720	4.029		0.0000	0.000

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Project Title:
 Engineer:
 Project ID:
 Project Descr:

Wood Beam	Project File: EC.ec6
LIC# : KW-06017805, Build:20.22.8.17	MS CONSULTING ENGINEERS (c) ENERCALC INC 1983-2022

DESCRIPTION: HDR: H2

Vertical Reactions	Support notation : Far left is #1		Values in KIPS
Load Combination	Support 1	Support 2	
Overall MAXimum	1.148	1.148	
Overall MINimum	0.560	0.560	
D Only	0.588	0.588	
+D+Lr	1.148	1.148	
+D+0.750Lr	1.008	1.008	
+0.60D	0.353	0.353	
Lr Only	0.560	0.560	

County of Riverside Building & Safety
 4080 Lemon St. 9th Floor.
 Riverside, CA 92502

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Rahman Engineering Inc.

A Civil / Structural & Environmental Engineering Services Company
(Professional Engineer License # C69263, QSD/QSP # 22406)



FOUNDATION DESIGN



Title Block Line 1
 You can change this area
 using the "Settings" menu item
 and then using the "Printing &
 Title Block" selection.
 Title Block Line 6

Project Title:
 Engineer:
 Project ID:
 Project Descr:

Printed: 17 MAY 2021, 11:42AM

General Footing

Lic. # : KW-06007915

File: EC.ec6
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MS CONSULTING ENGINEERS

DESCRIPTION: PAD FOOTING: F1

Code References

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16
 Load Combinations Used : IBC 2018

General Information

Material Properties

fc : Concrete 28 day strength	=	2.50	ksi
fy : Rebar Yield	=	60.0	ksi
Ec : Concrete Elastic Modulus	=	3,122.0	ksi
Concrete Density	=	145.0	pcf
φ Values Flexure	=	0.90	
Shear	=	0.750	

Soil Design Values

Allowable Soil Bearing	=	1.50	ksf
Increase Bearing By Footing Weight	=	No	
Soil Passive Resistance (for Sliding)	=	150.0	pcf
Soil/Concrete Friction Coeff.	=	0.30	

Analysis Settings

Min Steel % Bending Reinf.	=	
Min Allow % Temp Reinf.	=	0.00180
Min. Overturning Safety Factor	=	1.0 : 1
Min. Sliding Safety Factor	=	1.0 : 1
Add Ftg Wt for Soil Pressure	:	Yes
Use ftg wt for stability, moments & shears	:	Yes
Add Pedestal Wt for Soil Pressure	:	No
Use Pedestal wt for stability, mom & shear	:	No

Increases based on footing Depth

Footing base depth below soil surface	=	ft
Allow press. increase per foot of depth when footing base is below	=	ksf
	=	ft

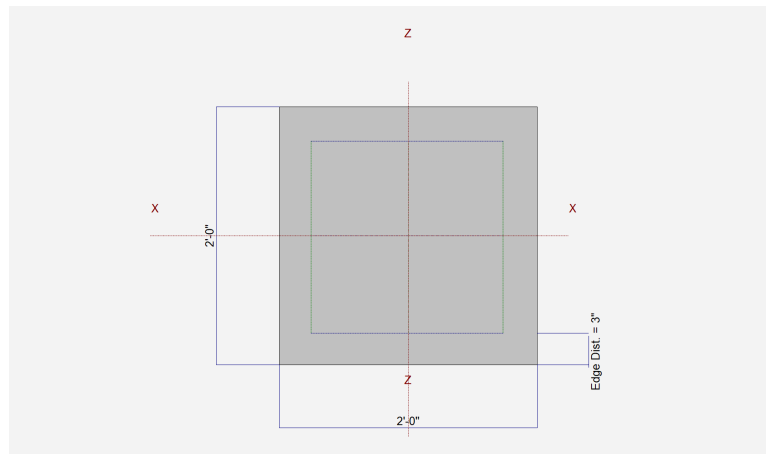
Increases based on footing plan dimension

Allowable pressure increase per foot of depth when max. length or width is greater than	=	ksf
	=	ft

Dimensions

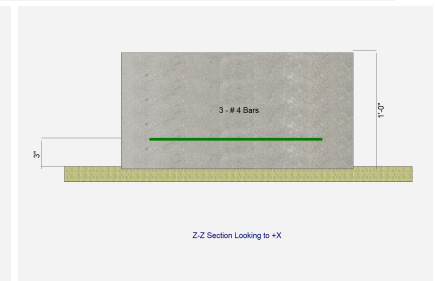
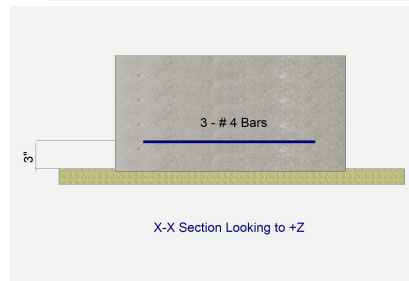
Width parallel to X-X Axis	=	2.0	ft
Length parallel to Z-Z Axis	=	2.0	ft
Footing Thickness	=	12.0	in

Pedestal dimensions...	=		in
px : parallel to X-X Axis	=		in
pz : parallel to Z-Z Axis	=		in
Height	=		in
Rebar Centerline to Edge of Concrete... at Bottom of footing	=	3.0	in



Reinforcing

Bars parallel to X-X Axis	=	3.0
Number of Bars	=	# 4
Reinforcing Bar Size	=	# 4
Bars parallel to Z-Z Axis	=	3.0
Number of Bars	=	# 4
Reinforcing Bar Size	=	# 4
Bandwidth Distribution Check (ACI 15.4.4.2)		n/a
Direction Requiring Closer Separation		n/a
# Bars required within zone		n/a
# Bars required on each side of zone		n/a



Applied Loads

	D	Lr	L	S	
P : Column Load	=	2.70	2.70		
OB : Overburden	=				
M-xx	=				
M-zz	=				
V-x	=				
V-z	=				

W County of Riverside Building & Safety **H**

4080 Lemon St. 9th Floor
 Riverside, CA 92502-02

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General Footing

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Lic. #: KW-06007915

DESCRIPTION: PAD FOOTING: F1

DESIGN SUMMARY

Design OK

	Min. Ratio	Item	Applied	Capacity	Governing Load Combination
PASS	0.9967	Soil Bearing	1.495 ksf	1.50 ksf	+D+Lr+H about Z-Z axis
PASS	n/a	Overturning - X-X	0.0 k-ft	0.0 k-ft	No Overturning
PASS	n/a	Overturning - Z-Z	0.0 k-ft	0.0 k-ft	No Overturning
PASS	n/a	Sliding - X-X	0.0 k	0.0 k	No Sliding
PASS	n/a	Sliding - Z-Z	0.0 k	0.0 k	No Sliding
PASS	n/a	Uplift	0.0 k	0.0 k	No Uplift
PASS	0.08095	Z Flexure (+X)	0.9450 k-ft/ft	11.674 k-ft/ft	+1.20D+1.60Lr+0.50L+1.60H
PASS	0.08095	Z Flexure (-X)	0.9450 k-ft/ft	11.674 k-ft/ft	+1.20D+1.60Lr+0.50L+1.60H
PASS	0.08095	X Flexure (+Z)	0.9450 k-ft/ft	11.674 k-ft/ft	+1.20D+1.60Lr+0.50L+1.60H
PASS	0.08095	X Flexure (-Z)	0.9450 k-ft/ft	11.674 k-ft/ft	+1.20D+1.60Lr+0.50L+1.60H
PASS	0.0560	1-way Shear (+X)	4.20 psi	75.0 psi	+1.20D+1.60Lr+0.50L+1.60H
PASS	0.0560	1-way Shear (-X)	4.20 psi	75.0 psi	+1.20D+1.60Lr+0.50L+1.60H
PASS	0.0560	1-way Shear (+Z)	4.20 psi	75.0 psi	+1.20D+1.60Lr+0.50L+1.60H
PASS	0.0560	1-way Shear (-Z)	4.20 psi	75.0 psi	+1.20D+1.60Lr+0.50L+1.60H
PASS	0.1331	2-way Punching	19.964 psi	150.0 psi	+1.20D+1.60Lr+0.50L+1.60H

Detailed Results

Soil Bearing

Rotation Axis & Load Combination...	Gross Allowable	Xecc	Zecc (in)	Actual Soil Bearing Stress @ Location		Stress @ Location		Actual / Allow Ratio
				Bottom, -Z	Top, +Z	Left, -X	Right, +X	
X-X, +D+H	1.50	n/a	0.0	0.820	0.820	n/a	n/a	0.547
X-X, +D+L+H	1.50	n/a	0.0	0.820	0.820	n/a	n/a	0.547
X-X, +D+Lr+H	1.50	n/a	0.0	1.495	1.495	n/a	n/a	0.997
X-X, +D+S+H	1.50	n/a	0.0	0.820	0.820	n/a	n/a	0.547
X-X, +D+0.750Lr+0.750L+H	1.50	n/a	0.0	1.326	1.326	n/a	n/a	0.884
X-X, +D+0.750L+0.750S+H	1.50	n/a	0.0	0.820	0.820	n/a	n/a	0.547
X-X, +D+0.60W+H	1.50	n/a	0.0	0.820	0.820	n/a	n/a	0.547
X-X, +D+0.70E+H	1.50	n/a	0.0	0.820	0.820	n/a	n/a	0.547
X-X, +D+0.750Lr+0.750L+0.450W+H	1.50	n/a	0.0	1.326	1.326	n/a	n/a	0.884
X-X, +D+0.750L+0.750S+0.450W+H	1.50	n/a	0.0	0.820	0.820	n/a	n/a	0.547
X-X, +D+0.750L+0.750S+0.5250E+H	1.50	n/a	0.0	0.820	0.820	n/a	n/a	0.547
X-X, +0.60D+0.60W+0.60H	1.50	n/a	0.0	0.4920	0.4920	n/a	n/a	0.328
X-X, +0.60D+0.70E+0.60H	1.50	n/a	0.0	0.4920	0.4920	n/a	n/a	0.328
Z-Z, +D+H	1.50	0.0	n/a	n/a	n/a	0.820	0.820	0.547
Z-Z, +D+L+H	1.50	0.0	n/a	n/a	n/a	0.820	0.820	0.547
Z-Z, +D+Lr+H	1.50	0.0	n/a	n/a	n/a	1.495	1.495	0.997
Z-Z, +D+S+H	1.50	0.0	n/a	n/a	n/a	0.820	0.820	0.547
Z-Z, +D+0.750Lr+0.750L+H	1.50	0.0	n/a	n/a	n/a	1.326	1.326	0.884
Z-Z, +D+0.750L+0.750S+H	1.50	0.0	n/a	n/a	n/a	0.820	0.820	0.547
Z-Z, +D+0.60W+H	1.50	0.0	n/a	n/a	n/a	0.820	0.820	0.547
Z-Z, +D+0.70E+H	1.50	0.0	n/a	n/a	n/a	0.820	0.820	0.547
Z-Z, +D+0.750Lr+0.750L+0.450W+H	1.50	0.0	n/a	n/a	n/a	1.326	1.326	0.884
Z-Z, +D+0.750L+0.750S+0.450W+H	1.50	0.0	n/a	n/a	n/a	0.820	0.820	0.547
Z-Z, +D+0.750L+0.750S+0.5250E+H	1.50	0.0	n/a	n/a	n/a	0.820	0.820	0.547
Z-Z, +0.60D+0.60W+0.60H	1.50	0.0	n/a	n/a	n/a	0.4920	0.4920	0.328
Z-Z, +0.60D+0.70E+0.60H	1.50	0.0	n/a	n/a	n/a	0.4920	0.4920	0.328

Overturning Stability

Rotation Axis & Load Combination...	Overturning Moment	Resisting Moment	Stability Ratio	Status
Footing Has NO Overturning				

Sliding Stability

Force Application Axis Load Combination...	Sliding Force	Resisting Force	Stability Ratio	Status
Footing Has NO Sliding				

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 All units

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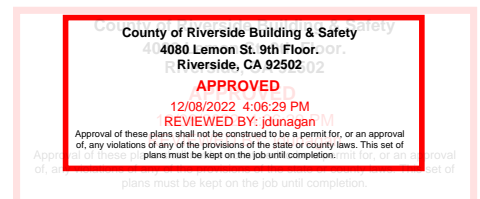
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DESCRIPTION: PAD FOOTING: F1

One Way Shear

Load Combination...	Vu @ -X	Vu @ +X	Vu @ -Z	Vu @ +Z	Vu:Max	Phi Vn	Vu / Phi*Vn	Status
+0.90D+E+0.90H	1.35 psi	1.35 psi	1.35 psi	1.35 psi	1.35 psi	75.00 psi	0.02	OK
Two-Way "Punching" Shear								All units k

Load Combination...	Vu	Phi*Vn	Vu / Phi*Vn	Status
+1.40D+1.60H	9.98 psi	150.00psi	0.06655	OK
+1.20D+0.50Lr+1.60L+1.60H	12.12 psi	150.00psi	0.08081	OK
+1.20D+1.60L+0.50S+1.60H	8.56 psi	150.00psi	0.05704	OK
+1.20D+1.60Lr+0.50L+1.60H	19.96 psi	150.00psi	0.1331	OK
+1.20D+1.60Lr+0.50W+1.60H	19.96 psi	150.00psi	0.1331	OK
+1.20D+0.50L+1.60S+1.60H	8.56 psi	150.00psi	0.05704	OK
+1.20D+1.60S+0.50W+1.60H	8.56 psi	150.00psi	0.05704	OK
+1.20D+0.50Lr+0.50L+W+1.60H	12.12 psi	150.00psi	0.08081	OK
+1.20D+0.50L+0.50S+W+1.60H	8.56 psi	150.00psi	0.05704	OK
+1.20D+0.50L+0.70S+E+1.60H	8.56 psi	150.00psi	0.05704	OK
+0.90D+W+0.90H	6.42 psi	150.00psi	0.04278	OK
+0.90D+E+0.90H	6.42 psi	150.00psi	0.04278	OK



Project Title:
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 Project ID:
 Project Descr:

General Footing

Project File: EC.ec6

LIC# : KW-06017805, Build:20.22.8.17

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DESCRIPTION: PAD FOOTING: F2

Code References

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16
 Load Combinations Used : IBC 2018

General Information

Material Properties

f'c : Concrete 28 day strength	=	2.50 ksi
fy : Rebar Yield	=	60.0 ksi
Ec : Concrete Elastic Modulus	=	3,122.0 ksi
Concrete Density	=	145.0 pcf
φ Values Flexure	=	0.90
Shear	=	0.750

Soil Design Values

Allowable Soil Bearing	=	1.50 ksf
Soil Density	=	110.0 pcf
Increase Bearing By Footing Weight	=	No
Soil Passive Resistance (for Sliding)	=	150.0 pcf
Soil/Concrete Friction Coeff.	=	0.30

Analysis Settings

Min Steel % Bending Reinf.	=	
Min Allow % Temp Reinf.	=	0.00180
Min. Overturning Safety Factor	=	1.0 : 1
Min. Sliding Safety Factor	=	1.0 : 1
Add Ftg Wt for Soil Pressure	:	Yes
Use ftg wt for stability, moments & shears	:	Yes
Add Pedestal Wt for Soil Pressure	:	No
Use Pedestal wt for stability, mom & shear	:	No

Increases based on footing depth

Footing base depth below soil surface	=	ft
Allow press. increase per foot of depth when footing base is below	=	ksf ft

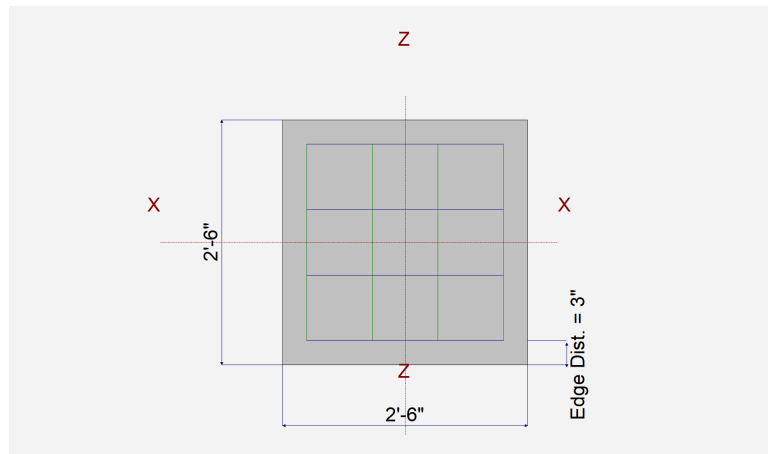
Increases based on footing plan dimension

Allowable pressure increase per foot of depth when max. length or width is greater than	=	ksf ft
---	---	-----------

Dimensions

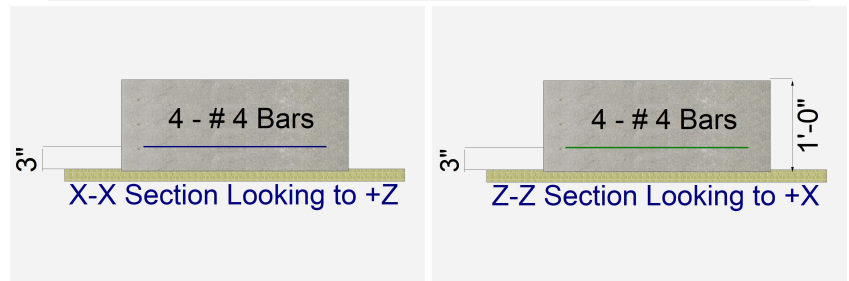
Width parallel to X-X Axis	=	2.50 ft
Length parallel to Z-Z Axis	=	2.50 ft
Footing Thickness	=	12.0 in

Pedestal dimensions...	=	
px : parallel to X-X Axis	=	in
pz : parallel to Z-Z Axis	=	in
Height	=	in
Rebar Centerline to Edge of Concrete... at Bottom of footing	=	3.0 in



Reinforcing

Bars parallel to X-X Axis	=	
Number of Bars	=	4.0
Reinforcing Bar Size	=	# 4
Bars parallel to Z-Z Axis	=	
Number of Bars	=	4.0
Reinforcing Bar Size	=	# 4
Bandwidth Distribution Check (ACI 15.4.4.2)		
Direction Requiring Closer Separation		n/a
# Bars required within zone		n/a
# Bars required on each side of zone		n/a



Applied Loads

	D	Lr	L	S
P : Column Load	=	4.20	4.20	
OB : Overburden	=			
M-xx	=			
M-zz	=			
V-x	=			
V-z	=			

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 4080 Lemon St. 9th Floor
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General Footing

Project File: EC.ec6

LIC# : KW-06017805, Build:20.22.8.17

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DESCRIPTION: PAD FOOTING: F2

DESIGN SUMMARY

Design OK

	Min. Ratio	Item	Applied	Capacity	Governing Load Combination
PASS	0.9927	Soil Bearing	1.489 ksf	1.50 ksf	+D+Lr about Z-Z axis
PASS	n/a	Overturning - X-X	0.0 k-ft	0.0 k-ft	No Overturning
PASS	n/a	Overturning - Z-Z	0.0 k-ft	0.0 k-ft	No Overturning
PASS	n/a	Sliding - X-X	0.0 k	0.0 k	No Sliding
PASS	n/a	Sliding - Z-Z	0.0 k	0.0 k	No Sliding
PASS	n/a	Uplift	0.0 k	0.0 k	No Uplift
PASS	0.1184	Z Flexure (+X)	1.470 k-ft/ft	12.418 k-ft/ft	+1.20D+1.60Lr
PASS	0.1184	Z Flexure (-X)	1.470 k-ft/ft	12.418 k-ft/ft	+1.20D+1.60Lr
PASS	0.1184	X Flexure (+Z)	1.470 k-ft/ft	12.418 k-ft/ft	+1.20D+1.60Lr
PASS	0.1184	X Flexure (-Z)	1.470 k-ft/ft	12.418 k-ft/ft	+1.20D+1.60Lr
PASS	0.1161	1-way Shear (+X)	8.711 psi	75.0 psi	+1.20D+1.60Lr
PASS	0.1161	1-way Shear (-X)	8.711 psi	75.0 psi	+1.20D+1.60Lr
PASS	0.1161	1-way Shear (+Z)	8.711 psi	75.0 psi	+1.20D+1.60Lr
PASS	0.1161	1-way Shear (-Z)	8.711 psi	75.0 psi	+1.20D+1.60Lr
PASS	0.2202	2-way Punching	33.030 psi	150.0 psi	+1.20D+1.60Lr

Detailed Results

Soil Bearing

Rotation Axis & Load Combination...	Gross Allowable	Xecc	Zecc (in)	Actual Soil Bearing Stress @ Location				Actual / Allow Ratio
				Bottom, -Z	Top, +Z	Left, -X	Right, +X	
X-X, D Only	1.50	n/a	0.0	0.8170	0.8170	n/a	n/a	0.545
X-X, +D+Lr	1.50	n/a	0.0	1.489	1.489	n/a	n/a	0.993
X-X, +D+0.750Lr	1.50	n/a	0.0	1.321	1.321	n/a	n/a	0.881
X-X, +0.60D	1.50	n/a	0.0	0.4902	0.4902	n/a	n/a	0.327
Z-Z, D Only	1.50	0.0	n/a	n/a	n/a	0.8170	0.8170	0.545
Z-Z, +D+Lr	1.50	0.0	n/a	n/a	n/a	1.489	1.489	0.993
Z-Z, +D+0.750Lr	1.50	0.0	n/a	n/a	n/a	1.321	1.321	0.881
Z-Z, +0.60D	1.50	0.0	n/a	n/a	n/a	0.4902	0.4902	0.327

Overturning Stability

Rotation Axis & Load Combination...	Overturning Moment	Resisting Moment	Stability Ratio	Status
Footing Has NO Overturning				

All units k

Sliding Stability

Force Application Axis Load Combination...	Sliding Force	Resisting Force	Stability Ratio	Status
Footing Has NO Sliding				

Footing Flexure

Flexure Axis & Load Combination	Mu k-ft	Side	Tension Surface	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Status
X-X, +1.40D	0.7350	+Z	Bottom	0.2592	AsMin	0.320	12.418	OK
X-X, +1.40D	0.7350	-Z	Bottom	0.2592	AsMin	0.320	12.418	OK
X-X, +1.20D+0.50Lr	0.8925	+Z	Bottom	0.2592	AsMin	0.320	12.418	OK
X-X, +1.20D+0.50Lr	0.8925	-Z	Bottom	0.2592	AsMin	0.320	12.418	OK
X-X, +1.20D	0.630	+Z	Bottom	0.2592	AsMin	0.320	12.418	OK
X-X, +1.20D	0.630	-Z	Bottom	0.2592	AsMin	0.320	12.418	OK
X-X, +1.20D+1.60Lr	1.470	+Z	Bottom	0.2592	AsMin	0.320	12.418	OK
X-X, +1.20D+1.60Lr	1.470	-Z	Bottom	0.2592	AsMin	0.320	12.418	OK
X-X, +0.90D	0.4725	+Z	Bottom	0.2592	AsMin	0.320	12.418	OK
X-X, +0.90D	0.4725	-Z	Bottom	0.2592	AsMin	0.320	12.418	OK
Z-Z, +1.40D	0.7350	-X	Bottom	0.2592	AsMin	0.320	12.418	OK
Z-Z, +1.40D	0.7350	+X	Bottom	0.2592	AsMin	0.320	12.418	OK
Z-Z, +1.20D+0.50Lr	0.8925	-X	Bottom	0.2592	AsMin	0.320	12.418	OK
Z-Z, +1.20D+0.50Lr	0.8925	+X	Bottom	0.2592	AsMin	0.320	12.418	OK
Z-Z, +1.20D	0.630	-X	Bottom	0.2592	AsMin	0.320	12.418	OK
Z-Z, +1.20D	0.630	+X	Bottom	0.2592	AsMin	0.320	12.418	OK
Z-Z, +1.20D+1.60Lr	1.470	-X	Bottom	0.2592	AsMin	0.320	12.418	OK

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 4080 Lemon St. 9th Floor
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Project Title:
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General Footing

Project File: EC.ec6

LIC# : KW-06017805, Build:20.22.8.17

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DESCRIPTION: PAD FOOTING: F2

Footing Flexure

Flexure Axis & Load Combination	Mu k-ft	Side	Tension Surface	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Status
Z-Z, +1.20D+1.60Lr	1.470	+X	Bottom	0.2592	AsMin	0.320	12.418	OK
Z-Z, +0.90D	0.4725	-X	Bottom	0.2592	AsMin	0.320	12.418	OK
Z-Z, +0.90D	0.4725	+X	Bottom	0.2592	AsMin	0.320	12.418	OK

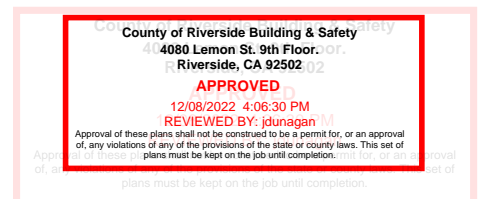
One Way Shear

Load Combination...	Vu @ -X	Vu @ +X	Vu @ -Z	Vu @ +Z	Vu:Max	Phi Vn	Vu / Phi*Vn	Status
+1.40D	4.36 psi	4.36 psi	4.36 psi	4.36 psi	4.36 psi	75.00 psi	0.06	OK
+1.20D+0.50Lr	5.29 psi	5.29 psi	5.29 psi	5.29 psi	5.29 psi	75.00 psi	0.07	OK
+1.20D	3.73 psi	3.73 psi	3.73 psi	3.73 psi	3.73 psi	75.00 psi	0.05	OK
+1.20D+1.60Lr	8.71 psi	8.71 psi	8.71 psi	8.71 psi	8.71 psi	75.00 psi	0.12	OK
+0.90D	2.80 psi	2.80 psi	2.80 psi	2.80 psi	2.80 psi	75.00 psi	0.04	OK

All units k

Two-Way "Punching" Shear

Load Combination...	Vu	Phi*Vn	Vu / Phi*Vn	Status
+1.40D	16.52 psi	150.00psi	0.1101	OK
+1.20D+0.50Lr	20.05 psi	150.00psi	0.1337	OK
+1.20D	14.16 psi	150.00psi	0.09437	OK
+1.20D+1.60Lr	33.03 psi	150.00psi	0.2202	OK
+0.90D	10.62 psi	150.00psi	0.07078	OK



Title Block Line 1
 You can change this area using the "Settings" menu item and then using the "Printing & Title Block" selection.
 Title Block Line 6

Project Title:
 Engineer:
 Project ID:
 Project Descr:

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Pole Footing Embedded in Soil

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DESCRIPTION: CANTILEVER POST FOOTING

Code References

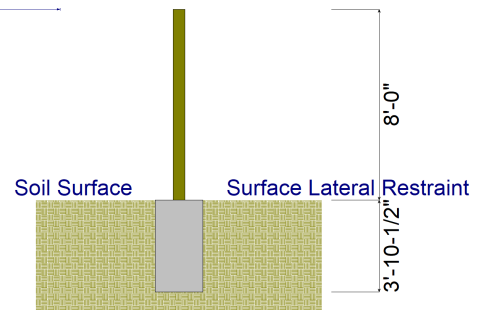
Calculations per IBC 2018 1807.3, CBC 2019, ASCE 7-16
 Load Combinations Used : IBC 2018

General Information

Pole Footing Shape	Circular
Pole Footing Diameter	24.0 in
Calculate Min. Depth for Allowable Pressures	
Lateral Restraint at Ground Surface	
Allow Passive	150.0 pcf
Max Passive	1,500.0 pcf

Controlling Values	
Governing Load Combination :	+D+0.70E+H
Lateral Load	0.490 k
Moment	3.920 k-ft
Restraint @ Ground Surface	
Pressure at Depth	
Actual	554.76 psf
Allowable	581.25 psf
Surface Restraint Force	2,639.68 lbs
Minimum Required Depth	3.875 ft
Footing Base Area	3.142 ft ²
Maximum Soil Pressure	0.0 ksf

Point Load



Applied Loads

Lateral Concentrated Load (k)	Lateral Distributed Loads (klf)	Applied Moment (kft)	Vertical Load (k)
D : Dead Load	k/ft	k-ft	k
Lr : Roof Live	k/ft	k-ft	k
L : Live	k/ft	k-ft	k
S : Snow	k/ft	k-ft	k
W : Wind	0.70 k/ft	k-ft	k
E : Earthquake	0.70 k/ft	k-ft	k
H : Lateral Earth	k/ft	k-ft	k
Load distance above ground surface	TOP of Load above ground surface	ft	
	BOTTOM of Load above ground surface	ft	

Load Combination Results

Load Combination	Forces @ Ground Surface		Required Depth - (ft)	Pressure at Depth		Soil Increase Factor
	Loads - (k)	Moments - (ft-k)		Actual - (psf)	Allow - (psf)	
+D+H	0.000	0.000	0.13	0.0	18.8	1.000
+D+L+H	0.000	0.000	0.13	0.0	18.8	1.000
+D+Lr+H	0.000	0.000	0.13	0.0	18.8	1.000
+D+S+H	0.000	0.000	0.13	0.0	18.8	1.000
+D+0.750Lr+0.750L+H	0.000	0.000	0.13	0.0	18.8	1.000
+D+0.750L+0.750S+H	0.000	0.000	0.13	0.0	18.8	1.000
+D+0.60W+H	0.420	3.360	3.63	543.0	543.8	1.000
+D+0.70E+H	0.490	3.920	3.88	554.0	581.3	1.000
+D+0.750Lr+0.750L+0.450W+H	0.315	2.520	3.38	470.1	506.3	1.000

County of Riverside Building & Safety
 4680 Lemon St. 9th Floor
 Riverside, CA 92502
APPROVED
 12/08/2022 4:06:30 PM
 REVIEWED BY: jburgin
 Approval of these plans shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of the state or county laws. This set of plans must be kept on the job until completion.

Title Block Line 1
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DESCRIPTION: CANTILEVER POST FOOTING

+D+0.750L+0.750S+0.450W+H	0.315	2.520	3.38	470.1	506.3	1.000
+D+0.750L+0.750S+0.5250E+H	0.368	2.940	3.50	510.0	525.0	1.000
+0.60D+0.60W+0.60H	0.420	3.360	3.63	543.4	543.8	1.000
+0.60D+0.70E+0.60H	0.490	3.920	3.88	554.8	581.3	1.000

