

FLOOR PLAN NOTES

CONSTRUCTION SHALL COMPLY WITH THE 2019 CALIFORNIA RESIDENTIAL (C.R.C.), MECHANICAL (C.M.C.), PLUMBING (C.P.C.) AND ELECTRICAL (C.E.C.) CODES, AND THE 2019 CALIFORNIA ENERGY CODE AS AMENDED BY LOCAL ORDINANCES.

CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AT JOBSITE PRIOR TO THE START OF ANY WORK.

IF ERRORS ARE FOUND WITHIN THESE DRAWINGS, THE DESIGNER SHALL BE CONSULTED FOR CORRECTIONS PRIOR TO CONTINUANCE OF WORK AFFECTED.

ALL FRAMING LUMBER SHALL BE D.F. #2 OR BETTER UNLESS NOTED OTHERWISE. PROVIDE FIRE BLOCKING AT FLOORS, CEILING COVES AND SOFFITS AND AT 10'-0" INTERVALS.

PROVIDE FIRE-STOP AT ALL FURRED DOWN AREAS INCLUDING ARCHED AREAS, AT MAX. 10'-0" O.G. HORIZONTAL AND VERTICAL, AND AT ALL FLOOR AND CEILING LEVELS.

PROVIDE FIRE-STOP AT ALL COLUMNS AT MAX. 10'-0" HIGH.

FINGER JOINTED STUDS MUST BE GRADE STAMPED BY AN APPROVED ICBO INSPECTION AGENCY, AND CLEARLY SPECIFIED ON PLANS. (NO FINGER JOINTED STUDS SHALL BE USED IN ANY SHEAR WALL.)

WINDOW SILL HEIGHT SHALL NOT EXCEED 44" FROM THE BOTTOM OF THE NET CLEAR OPENING TO THE FINISHED FLOOR IN ALL SLEEPING ROOMS.

FLOOR AND LANDINGS ON EACH SIDE OF DOORWAYS SHALL CONFORM TO THE REQUIREMENTS OF C.R.C. R310.3.

A. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SERVED AND SHALL EXCEED A MINIMUM DIMENSION OF 36 INCHES MEASURED IN THE DIRECTION OF TRAVEL.

B. LANDINGS SHALL BE NO MORE THAN 1 1/2" LOWER THAN THE TOP OF THE THRESHOLD.

C. LANDINGS MAY BE NO MORE THAN 1 3/4" BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR.

D. THE MINIMUM NET HEIGHT OF REQUIRED EGRESS DOORS SHALL BE NOT LESS THAN 78" MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE DOOR STOP.

THE ATTIC ACCESS SHALL BE WEATHER-STRIPPED AND INSULATION EQUIVALENT TO THAT OF THE CEILING SHALL BE INSTALLED ON THE ACCESS PANEL.

FASTENERS AND CONNECTORS IN DIRECT CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE APPROVED SILICON BRONZE OR COPPER, STAINLESS STEEL OR HOT-DIPPED ZINC-COATED GALVANIZED STEEL PER C.R.C. R317.3.1.

AFTER INSTALLING HVAC EQUIPMENT AND WATER HEATING SYSTEMS, THE INSTALLER SHALL SUBMIT TO THE BUILDING DEPARTMENT AND THE OWNER, REGISTERED COPIES OF THE CF-6R SIGNED BY THE INSTALLER, LISTING THE EQUIPMENT INSTALLED, AND THAT IT MEETS OR EXCEEDS THE REQUIREMENTS OF THE ENERGY DOCUMENTATION.

WATER CLOSET COMPARTMENTS MUST HAVE 30" WIDTH AND 24" CLEAR IN FRONT OF THE FIXTURE. THE WATER CLOSET SHALL NOT BE SET CLOSER THAN 15" FROM ITS CENTER TO ANY SIDE WALL OR OBSTRUCTION.

CEMENT, FIBER CEMENT OR GLASS MAT GYPSUM BACKERS SHALL BE USED AS A BASE FOR WALL TILES IN TUB AND SHOWER AREAS. WATER RESISTIVE GYP. BOARD IS NOT PERMITTED AT THESE LOCATIONS.

REGISTERED COPIES OF THE CF-4R FORM SHALL BE SUBMITTED PRIOR TO FINAL INSPECTION, SIGNED BY CERTIFIED HERS RATER, FOR FIELD VERIFICATION AND DIAGNOSTIC TESTING.

AFTER INSTALLING WALL, CEILING, OR FLOOR INSULATION, THE INSTALLER SHALL MAKE AVAILABLE TO THE ENFORCEMENT AGENCY OR POST IN A CONSPICUOUS LOCATION IN THE BUILDING A CERTIFICATE SIGNED BY THE INSTALLER STATING THAT THE INSTALLATION IS CONSISTENT WITH THE PLANS AND SPECIFICATIONS. THE CERTIFICATE SHALL ALSO STATE THE MANUFACTURER'S NAME AND MATERIAL IDENTIFICATION, THE INSTALLED R-VALUE, AND (IN APPLICATIONS OF LOOSE FILL INSULATION) THE MINIMUM INSTALLED WEIGHT PER SQUARE FOOT CONSISTENT WITH THE MANUFACTURER'S LABELED INSTALLED DESIGN DENSITY FOR THE DESIRED R-VALUE.

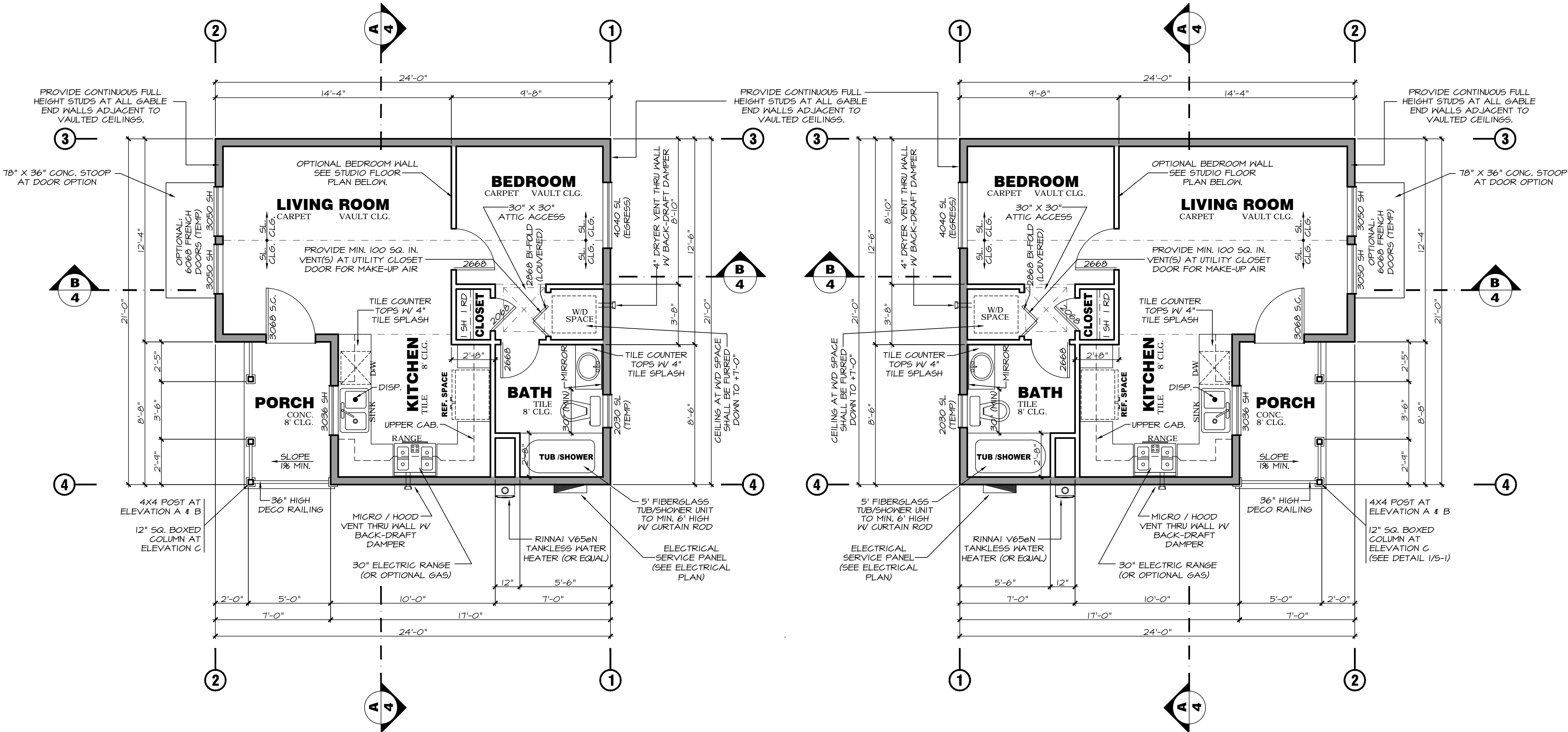
JOINTS AND OTHER OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL SOURCES OF AIR LEAKAGE SHALL BE CAULKED, EQUIPPED WITH GASKETS, WEATHER-STRIPPED, OR OTHERWISE SEALED TO LIMIT INTERNAL OR EXTERNAL AIR FILTRATION.

EVERY MANUFACTURED AND SITE-BUILT FENESTRATION PRODUCT OR FENESTRATION SYSTEM INSTALLED IN CONSTRUCTION SUBJECT TO TITLE 24, PART 6 SHALL HAVE ATTACHED TO IT A CLEARLY VISIBLE TEMPORARY LABEL OR HAVE AN ASSOCIATED LABEL CERTIFICATE THAT LISTS THE U-FACTOR, THE SOLAR HEAT GAIN COEFFICIENT (SHGC) OF THAT PRODUCT AND THE METHOD USED TO DERIVE THOSE VALUES, AND CERTIFIES COMPLIANCE WITH AIR LEAKAGE REQUIREMENTS OF THE CALIFORNIA ENERGY CODE, SECTION 116(A) 1. THE LABEL SHALL NOT BE REMOVED UNTIL APPROVED BY THE BUILDING INSPECTOR.

SHEET ROCK NAILING INSPECTION IS REQUIRED PER R104.1.4.2. NAILING SHALL BE IN ACCORDANCE WITH TABLE R102.3.5 (SEE SHEET 4).

VERTICAL CLEARANCE ABOVE THE COOKING SURFACE TO COMBUSTIBLES SHALL BE 30" UNPROTECTED, OR 24" PROTECTED, AND HORIZONTAL CLEARANCES SHALL BE PER THE PERMANENT MARKINGS LISTED ON THE UNIT.

BLOWN OR POURED TYPE INSULATION MATERIAL SHALL ONLY BE USED IN ATTIC SPACES WHERE THE SLOPE OF THE CEILING DOES NOT EXCEED MORE THAN 2.5:12 PITCH.



REVERSE FLOOR PLAN

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

1 BEDRM PLAN
397 S.F.

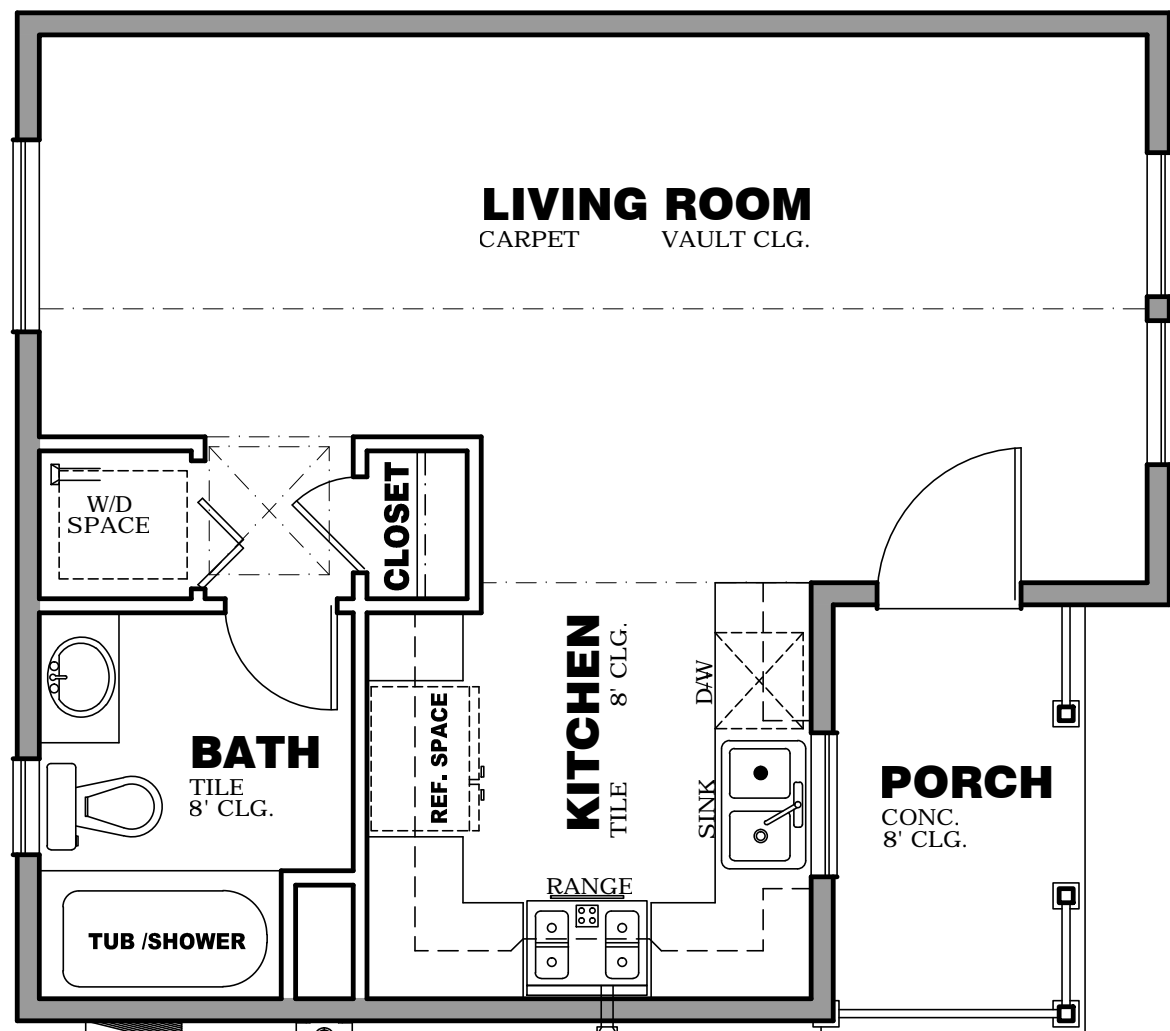
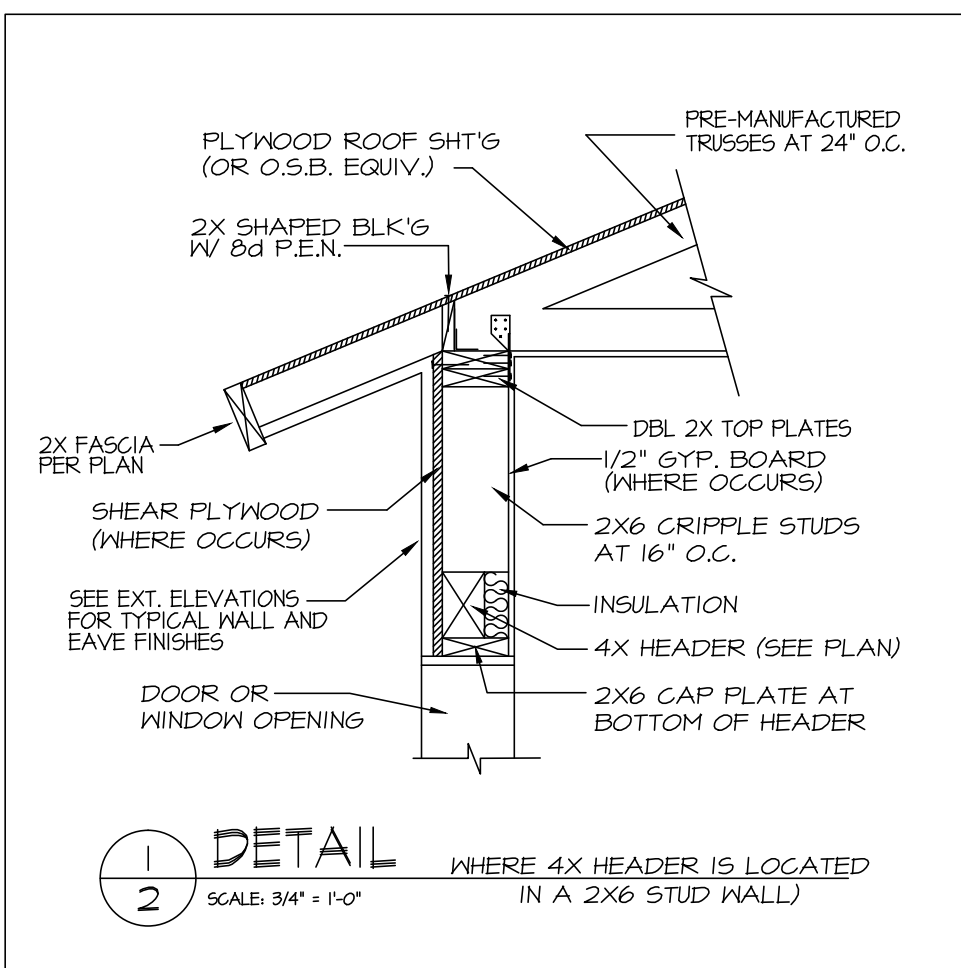
WALL LEGEND

- 2X4 STUDS AT 16" O.C.
- 2X6 D.F. #2 CONTINUOUS STUDS AT 16" O.C.

FLOOR PLAN

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

1 BEDRM PLAN
397 S.F.



SEE 1 BEDROOM FLOOR PLAN FOR
TYPICAL NOTES AND DIMENSIONS.

STUDIO FLOOR PLAN

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

AREA SCHEDULE

RESIDENCE:	397 S.F.
PORCH:	43 S.F.
TOTAL COVERED AREA:	440 S.F.

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DATE: 06-17-2022

CWB DESIGNS

3838 N. CHICKADEE AVE.

SANGER, CA 93657

PHONE: 559.294.6534

STANDARD PLAN #1 FOR:

CITY OF CHOWCHILLA

130 S 2ND STREET

CHOWCHILLA, CA 93610

PHONE: 559-665-8615

SHEET

2

OF 19

FLOOR PLAN

CWB

DRAWING FILE
F:\CHOWCHILLA
PLAN1A2A

REVISIONS	DATE
REV 05.09.22	NEW
ENG 05.25.22	ENG
SUB 06.17.22	SUB

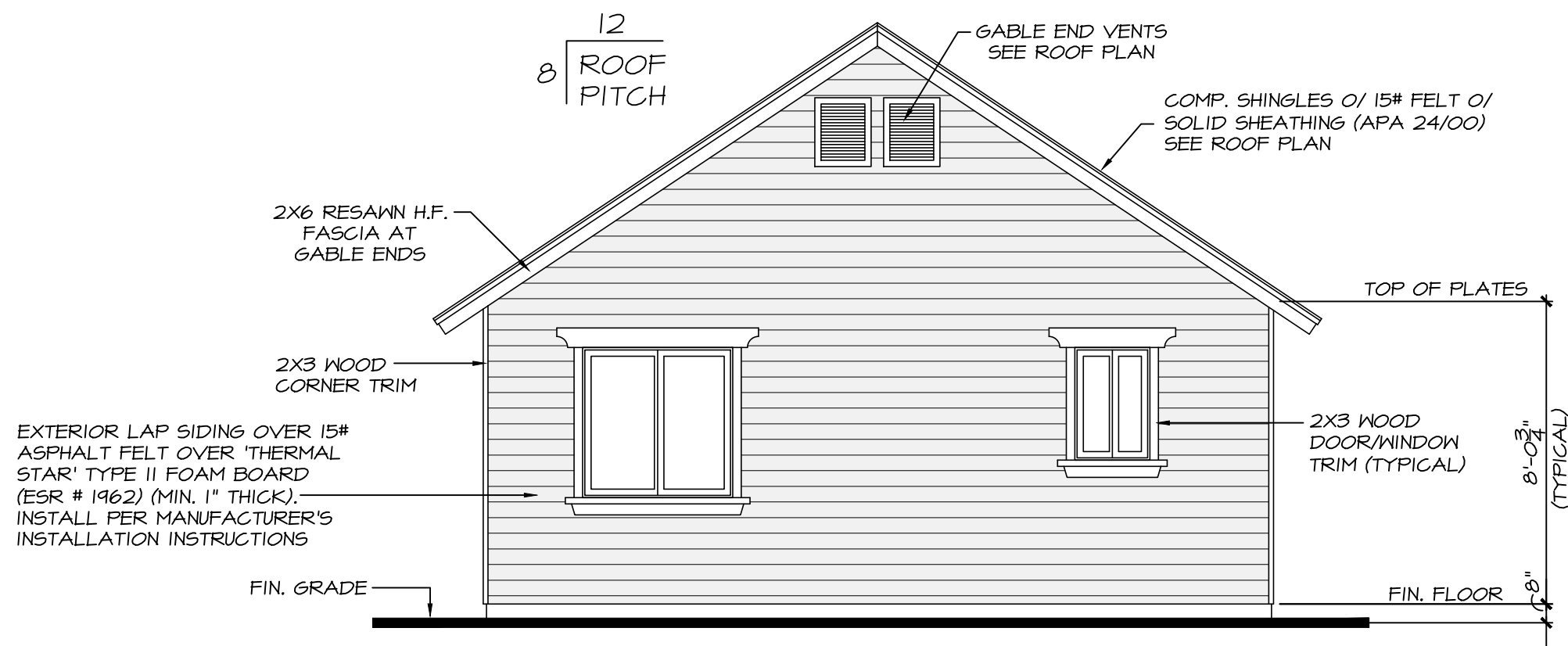
ELEVATION NOTES

ALL SIDING SHALL BE APPLIED OVER A WEATHER RESISTIVE BARRIER (TYPE 'D' BUILDING PAPER) PER CRC R703.2.

TWO LAYERS TYPE 'D' BUILDING PAPER UNDERLAYMENT IS REQUIRED WHERE LATH IS TO BE APPLIED OVER WOOD SHEATHING CRC R703.6.3

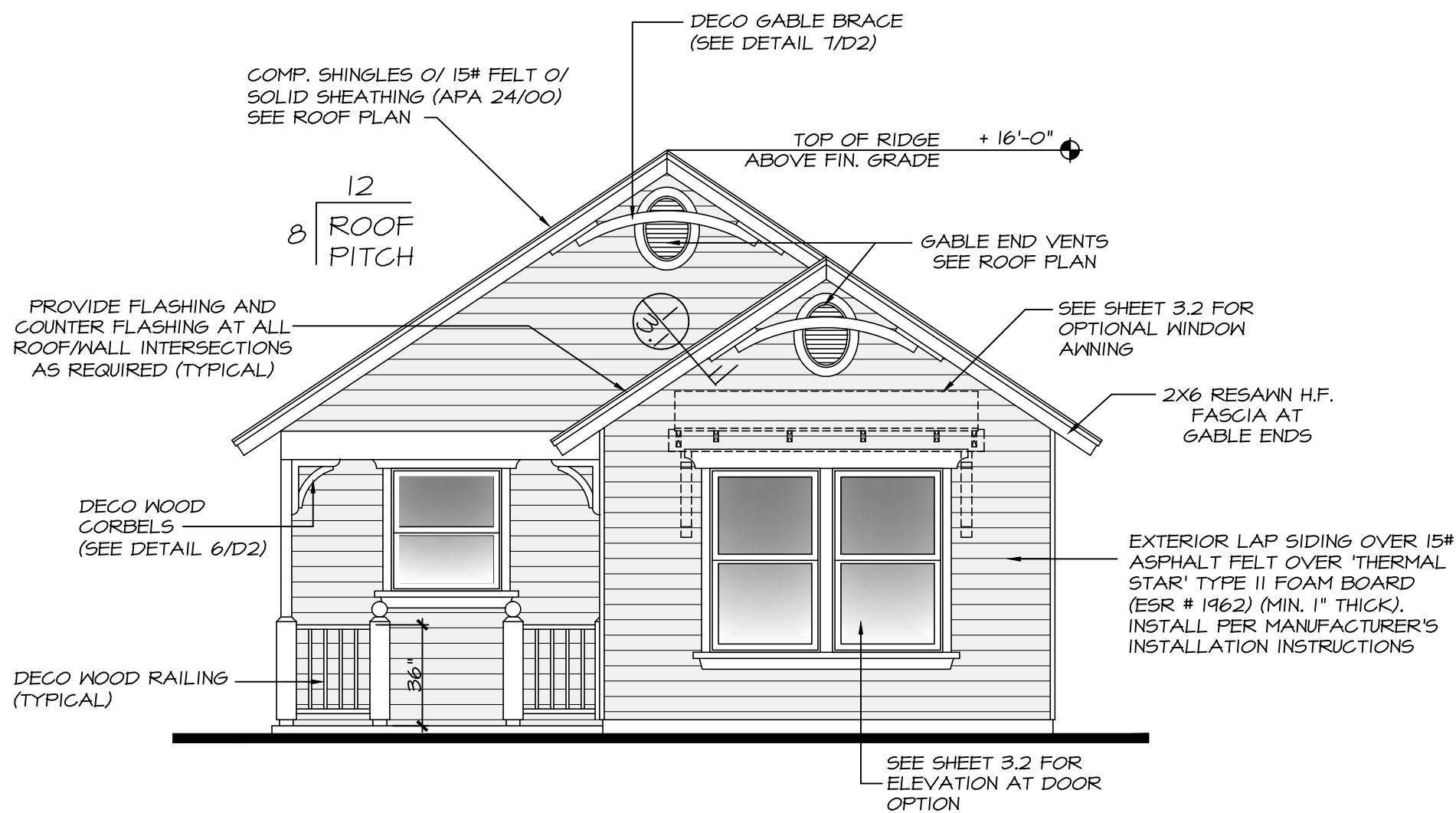
ALL DECORATIVE CORBELS, BRACES AND BRACKETS MAY BE CONSTRUCTED IN FIELD PER DETAILS PROVIDED, OR OWNER MAY PURCHASE PRE-ASSEMBLED PIECES, PROVIDED THEY MATCH AS CLOSELY AS POSSIBLE TO THE PIECES SHOWN IN THE DRAWINGS AND ARE APPLIED AS PER THE PRODUCTS INSTALLATION INSTRUCTIONS.

'THERMAL STAR' TYPE II FOAM BOARD INSTALLED AT A THICKNESS OF 1" PROVIDES R-4 THERMAL RESISTANCE PER ESR # 1462



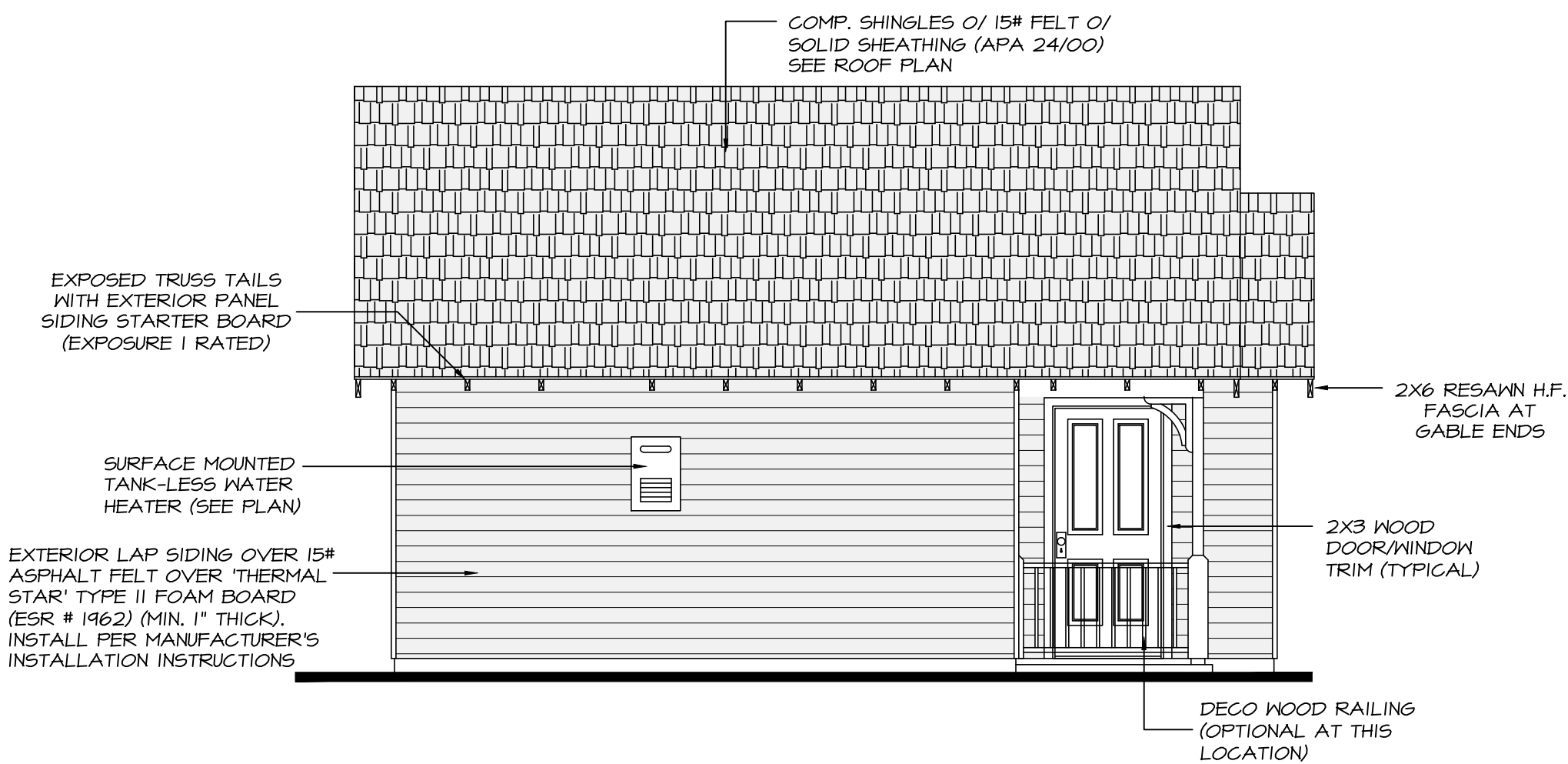
REAR ELEVATION - A

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



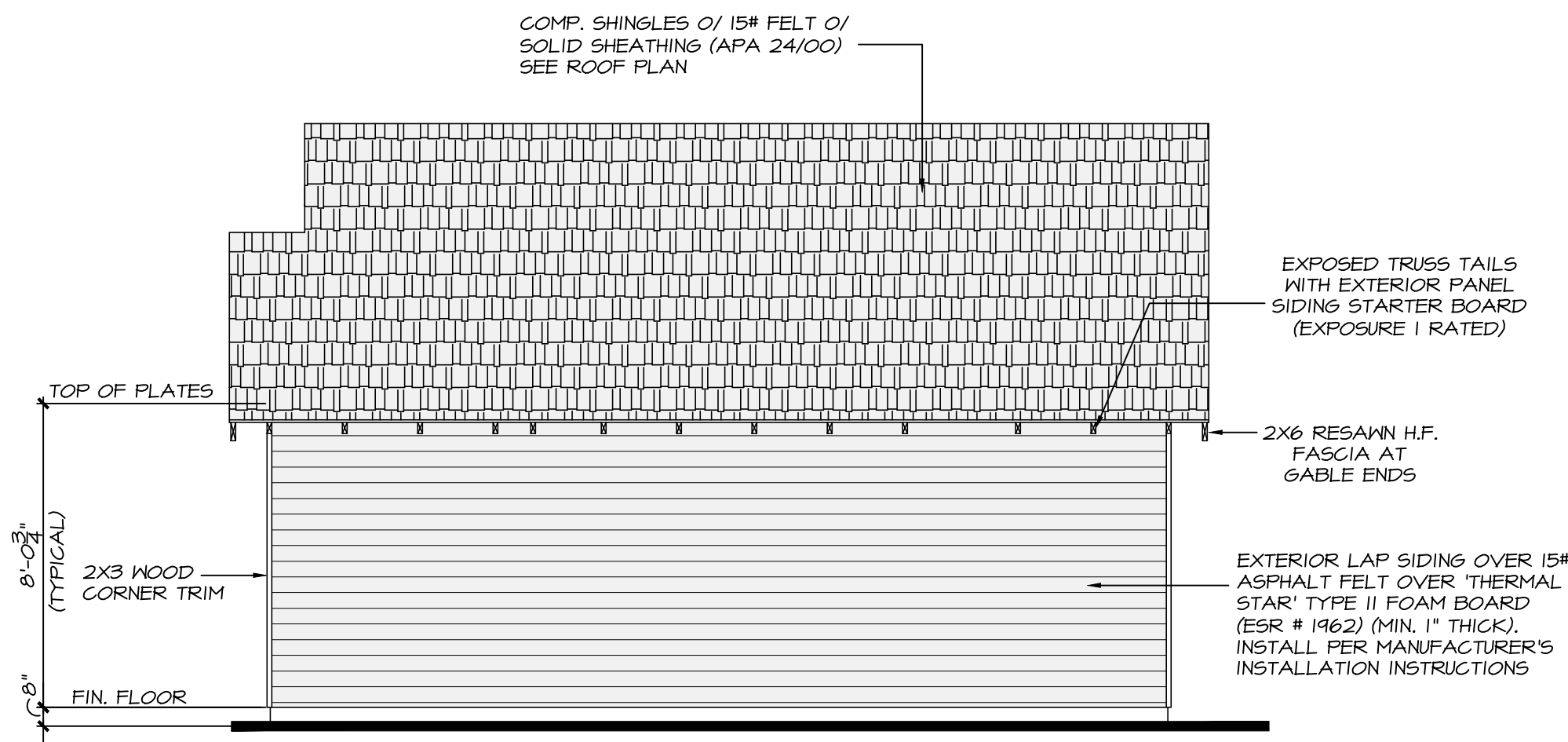
FRONT ELEVATION - A

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



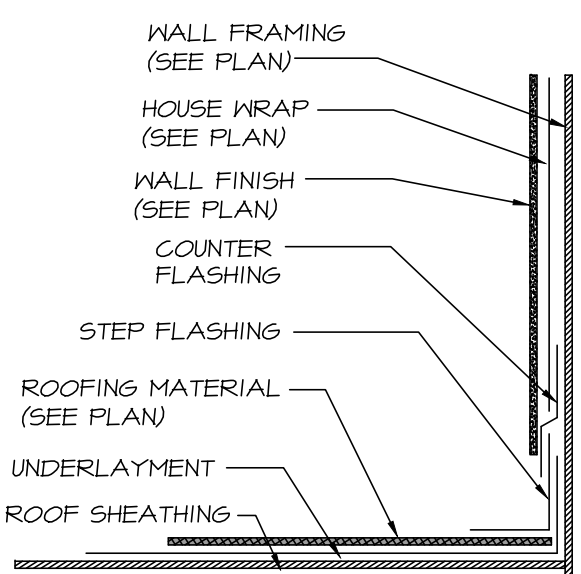
LEFT ELEVATION - A

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

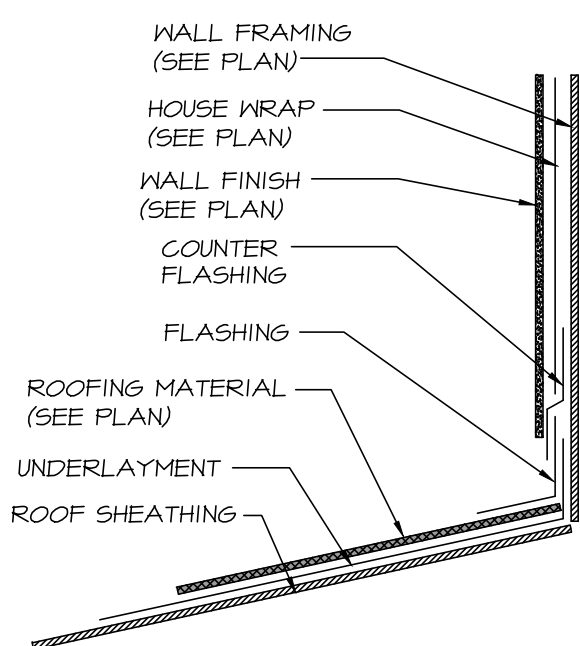


RIGHT ELEVATION - A

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



1 ROOF-TO-SIDEWALL FLASHING
3.1 SCALE: NONE



2 ROOF-TO-HEADWALL FLASHING
3.1 SCALE: NONE

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SANGER, CA 93657
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130 S 2ND STREET
CHOWCHILLA, CA 93610
PHONE: 559-665-8615

ELEVATION - A

SHEET

3.1

OF 19

ELEVATION NOTES

ALL LATH AND PLASTER SHALL COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SHALL BE PROVIDED WITH WEEP SCREEDS PER CRC 103.6.2.1

ALL STUCCO LATH SHALL BE APPLIED OVER A WEATHER RESISTIVE BARRIER (TYPE 'D' BUILDING PAPER) PER CRC R103.2.

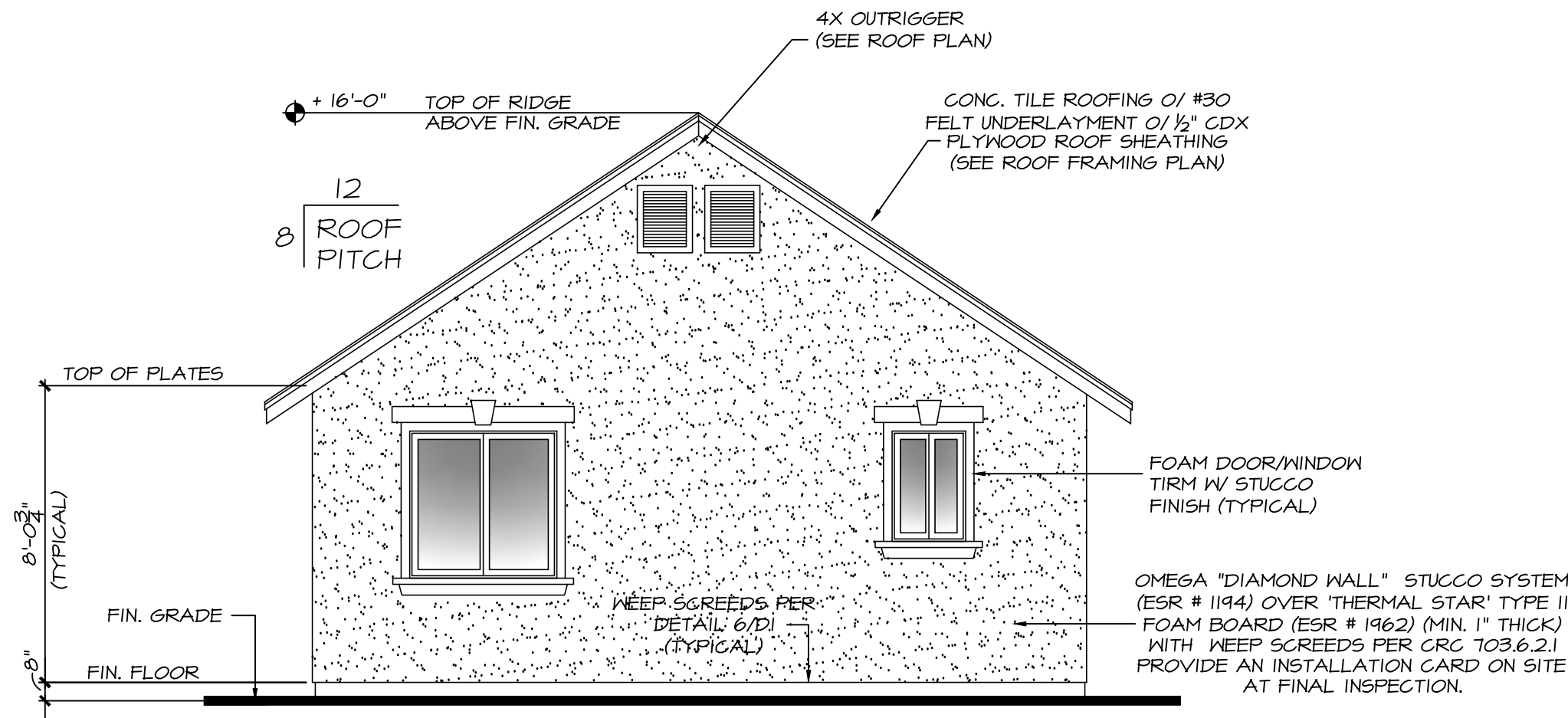
TWO LAYERS TYPE 'D' BUILDING PAPER UNDERLAYMENT IS REQUIRED WHERE LATH IS TO BE APPLIED OVER WOOD SHEATHING CRC R103.6.3

PER ICC REPORT ESR 1194, A SPECIAL INSPECTION IS REQUIRED FOR STUCCO;
1. LATH INSTALLATION, PRIOR TO COATING APPLICATION
2. FIELD BATCHING AND MIXING OF COMPONENTS.

ALL TILE ROOFING MUST HAVE AN ICC REPORT NUMBER. A COPY OF THE REPORT SHALL BE ON SITE DURING ROOFING INSPECTION.

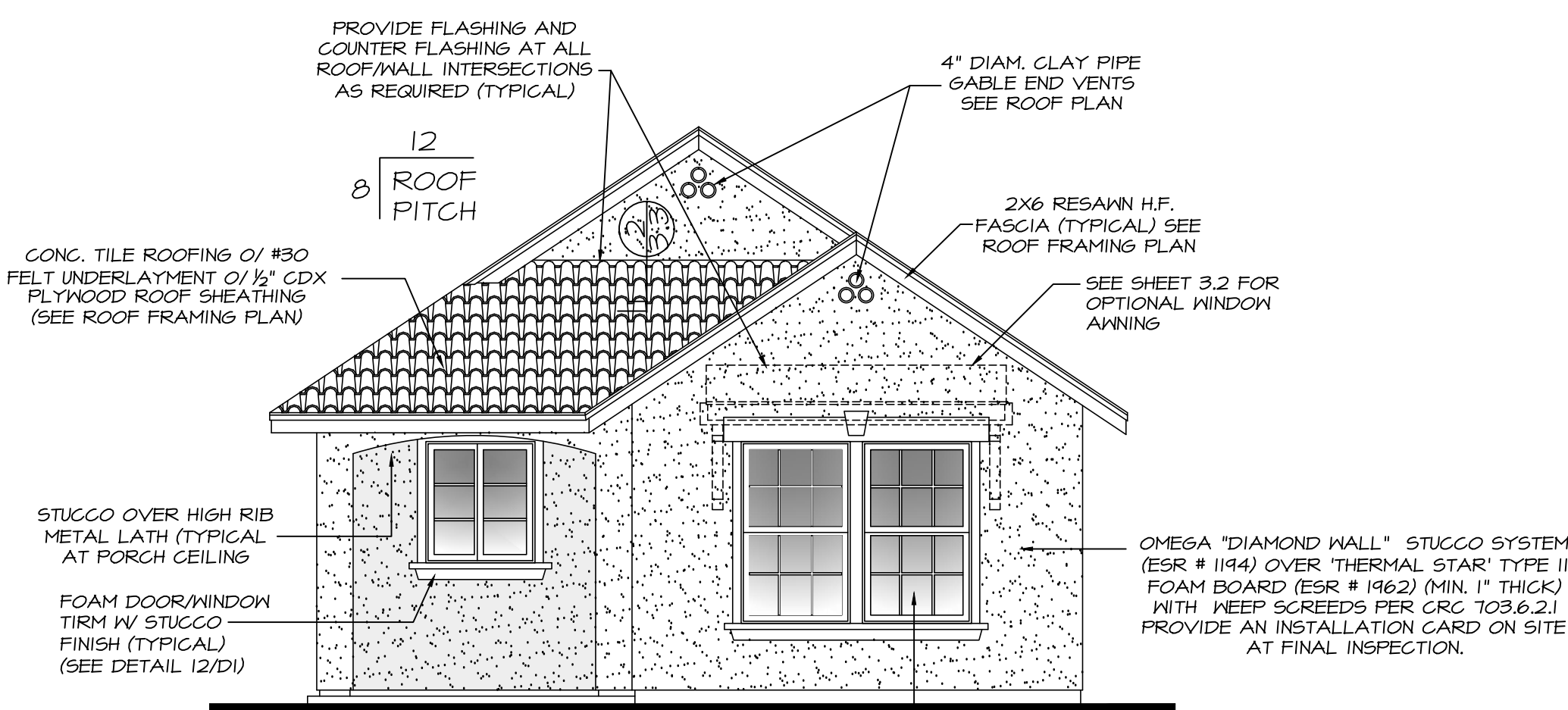
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'THERMAL STAR' TYPE II FOAM BOARD INSTALLED AT A THICKNESS OF 1" PROVIDES R-4 THERMAL RESISTANCE PER ESR # 1962



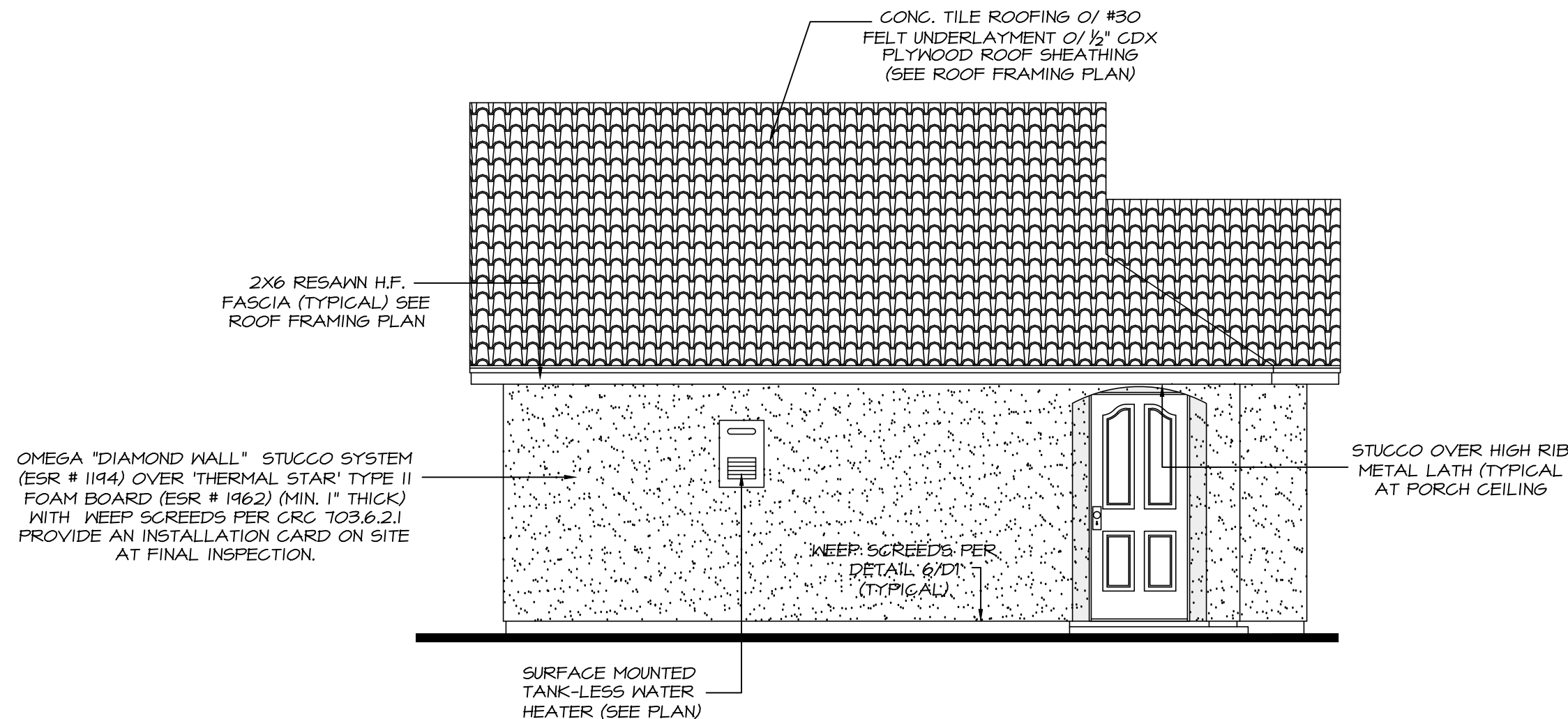
REAR ELEVATION - C

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



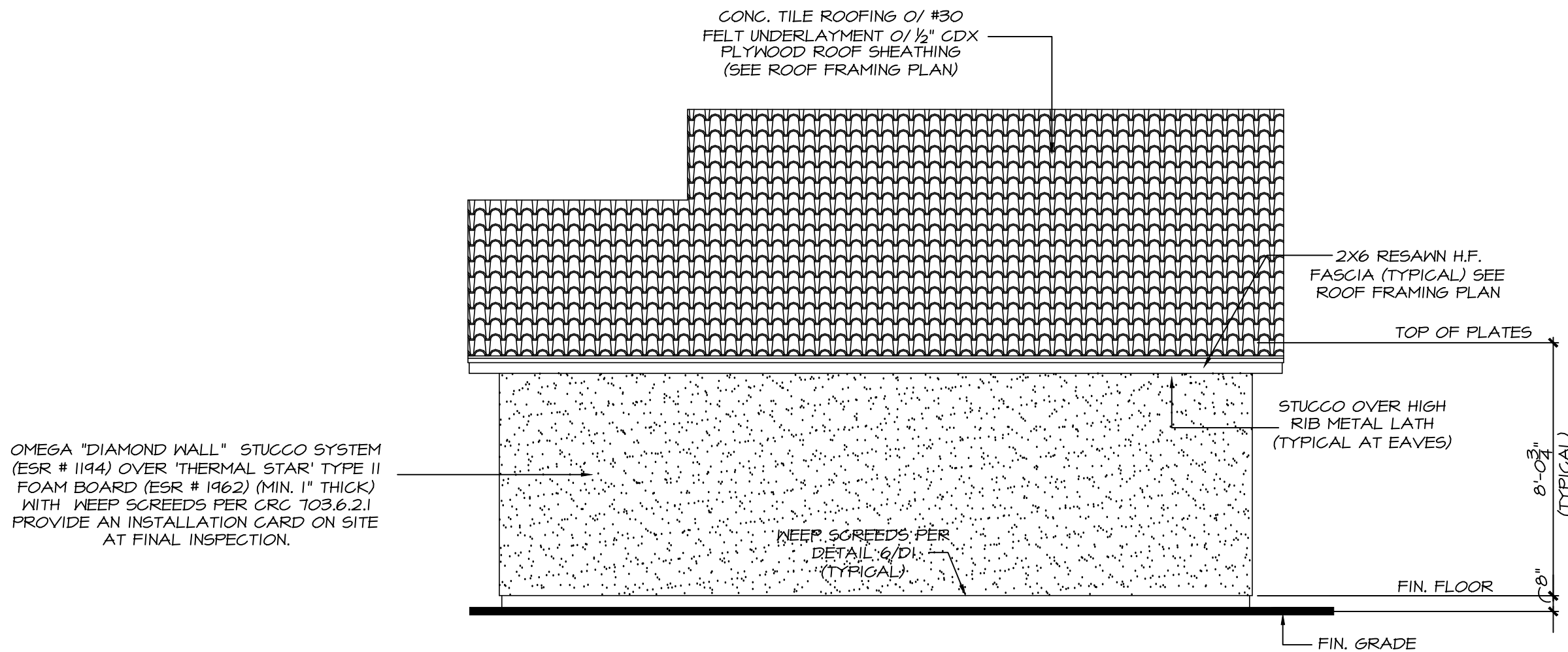
FRONT ELEVATION - C

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



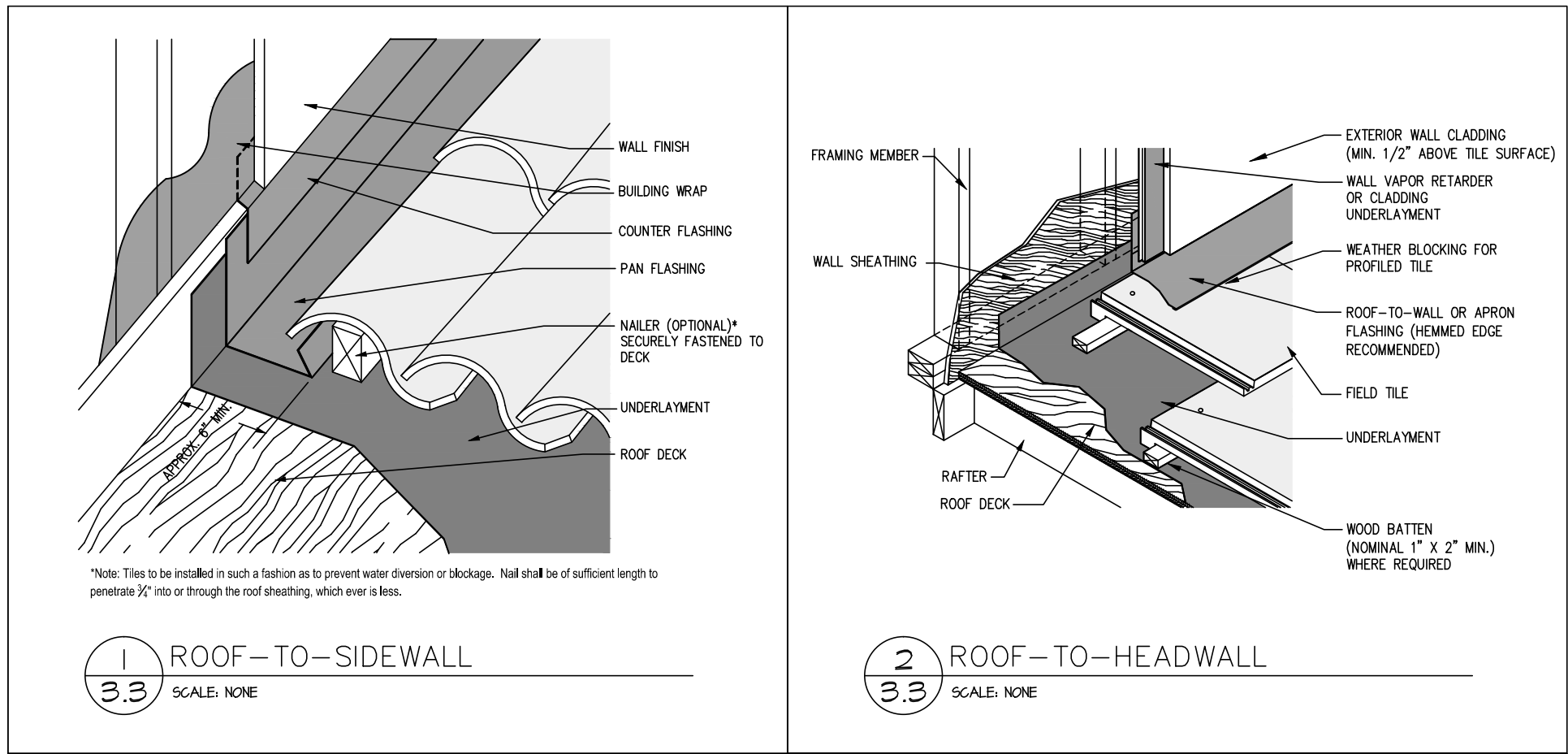
LEFT ELEVATION - C

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



RIGHT ELEVATION - C

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



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ELEVATION - C

SHEET

3.3

OF 19

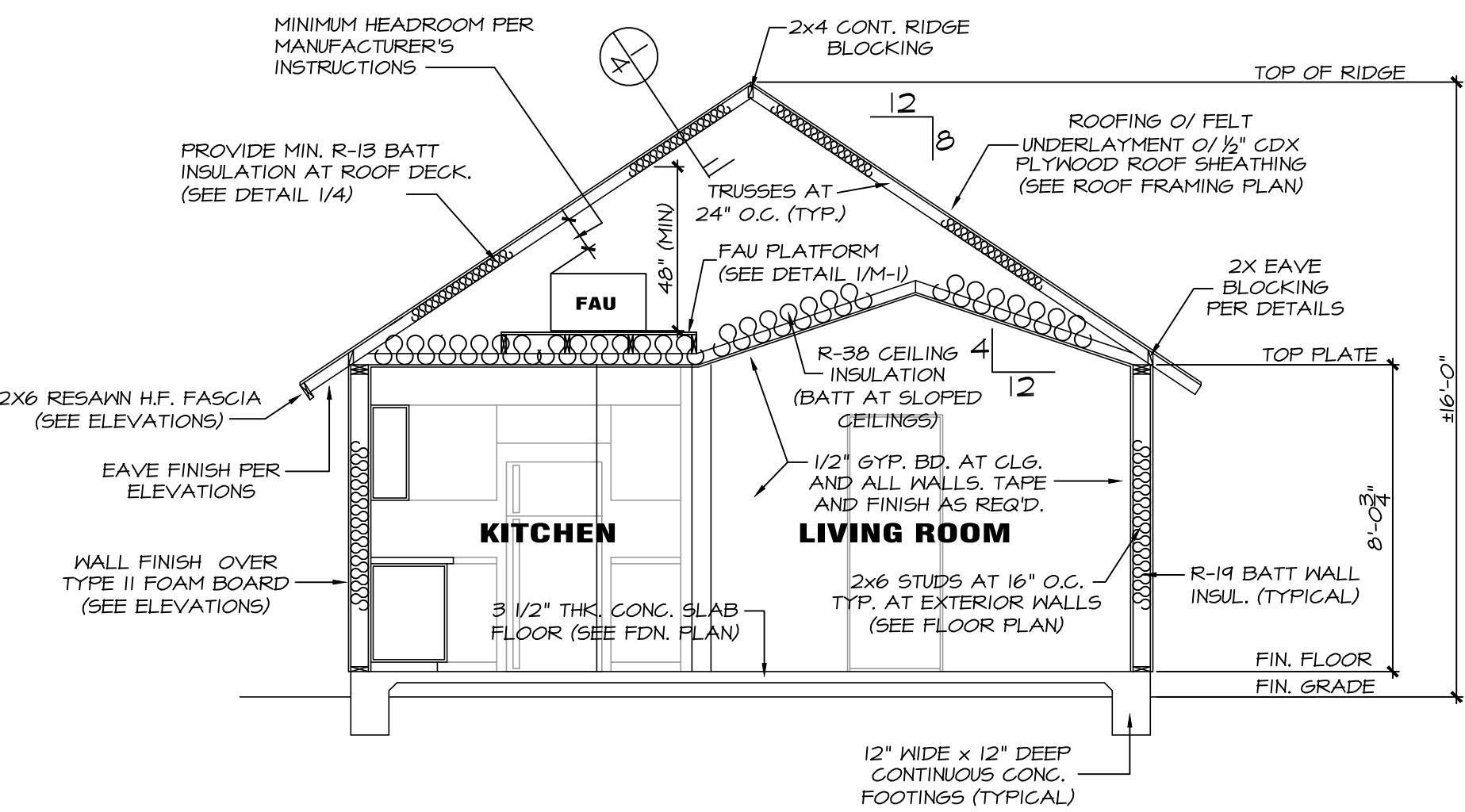
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ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ^{a,c}	SPACING AND LOCATION
Roof			
1	Blocking between ceiling joists or rafters to top plate	4-8d box ($2\frac{1}{2}$ " \times 0.113"); or 3-8d common ($2\frac{1}{2}$ " \times 0.131"); or 3-10d box (3 " \times 0.128"); or 3-3" \times 0.131" nails	Toe nail
2	Ceiling joists to top plate	4-8d box ($2\frac{1}{2}$ " \times 0.113"); or 3-8d common ($2\frac{1}{2}$ " \times 0.131"); or 3-10d box (3 " \times 0.128"); or 3-3" \times 0.131" nails	Per joist, toe nail
3	Ceiling joist not attached to parallel rafter, laps over partitions (see Section R802.5.2 and Table R802.5.2)	4-10d box (3 " \times 0.128"); or 3-16d common ($3\frac{1}{2}$ " \times 0.162"); or 4-3" \times 0.131" nails	Face nail
4	Ceiling joist attached to parallel rafter (heel joint) (see Section R802.5.2 and Table R802.5.2)	Table R802.5.2	Face nail
5	Collar tie to rafter, face nail or $1\frac{1}{2}$ " \times 20 ga. ridge strap to rafter	4-10d box (3 " \times 0.128"); or 3-10d common (3 " \times 0.148"); or 4-3" \times 0.131" nails	Face nail each rafter
6	Rafter or roof truss to plate	3-16d box nails ($3\frac{1}{2}$ " \times 0.135"); or 3-10d common nails (3 " \times 0.148"); or 4-10d box (3 " \times 0.128"); or 4-3" \times 0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss
7	Roof rafters to ridge, valley or hip rafters or roof rafter to minimum 2" ridge beam	4-16d ($3\frac{1}{2}$ " \times 0.135"); or 3-10d common (3 " \times 0.148"); or 4-10d box (3 " \times 0.128"); or 4-3" \times 0.131" nails	Toe nail
		3-16d box $3\frac{1}{2}$ " \times 0.135"; or 2-16d common ($3\frac{1}{2}$ " \times 0.162"); or 3-10d box (3 " \times 0.128"); or 3-3" \times 0.131" nails	End nail
Wall			
8	Stud to stud (not at braced wall panels)	16d common ($3\frac{1}{2}$ " \times 0.162")	24" o.c. face nail
		10d box (3 " \times 0.128"); or 3" \times 0.131" nails	16" o.c. face nail
9	Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d box ($3\frac{1}{2}$ " \times 0.135"); or 3" \times 0.131" nails	12" o.c. face nail
		16d common ($3\frac{1}{2}$ " \times 0.162")	16" o.c. face nail
10	Build-up header (2" to 2" header with $\frac{1}{2}$ " spacer)	16d common ($3\frac{1}{2}$ " \times 0.162")	16" o.c. each edge face nail
		16d box ($3\frac{1}{2}$ " \times 0.135")	12" o.c. each edge face nail
11	Continuous header to stud	5-8d box ($2\frac{1}{2}$ " \times 0.113"); or 4-8d common ($2\frac{1}{2}$ " \times 0.131"); or 4-10d box (3 " \times 0.128")	Toe nail
12	Top plate to top plate	16d common ($3\frac{1}{2}$ " \times 0.162")	16" o.c. face nail
		10d box (3 " \times 0.128"); or 3" \times 0.131" nails	12" o.c. face nail
13	Double top plate splice	8-16d common ($3\frac{1}{2}$ " \times 0.162"); or 12-16d box ($3\frac{1}{2}$ " \times 0.135"); or 12-10d box (3 " \times 0.128"); or 12-3" \times 0.131" nails	Face nail on each side of end joint (minimum 24" lap splice length each side of end joint)

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ^{a,c}	SPACING AND LOCATION
Floor			
14	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common ($3\frac{1}{2}$ " \times 0.162")	16" o.c. face nail
		16d box ($3\frac{1}{2}$ " \times 0.135"); or 3" \times 0.131" nails	12" o.c. face nail
15	Bottom plate to joist, rim joist, band joist or blocking (at braced wall panels)	3-16d box ($3\frac{1}{2}$ " \times 0.135"); or 2-16d common ($3\frac{1}{2}$ " \times 0.162"); or 4-3" \times 0.131" nails	3 each 16" o.c. face nail 2 each 16" o.c. face nail 4 each 16" o.c. face nail
Roof			
16	Top or bottom plate to stud	4-8d box ($2\frac{1}{2}$ " \times 0.113"); or 3-16d box ($3\frac{1}{2}$ " \times 0.135"); or 4-8d common ($2\frac{1}{2}$ " \times 0.131"); or 4-10d box (3 " \times 0.128"); or 4-3" \times 0.131" nails	Toe nail
		3-16d box ($3\frac{1}{2}$ " \times 0.135"); or 2-16d common ($3\frac{1}{2}$ " \times 0.162"); or 3-10d box (3 " \times 0.128"); or 3-3" \times 0.131" nails	End nail
17	Top plates, laps at corners and intersections	3-10d box (3 " \times 0.128"); or 2-16d common ($3\frac{1}{2}$ " \times 0.162"); or 3-3" \times 0.131" nails	Face nail
18	1" brace to each stud and plate	3-8d box ($2\frac{1}{2}$ " \times 0.113"); or 2-8d common ($2\frac{1}{2}$ " \times 0.131"); or 2-10d box (3 " \times 0.128"); or 2 staples $1\frac{1}{2}$ "	Face nail
19	1" \times 6" sheathing to each bearing	3-8d box ($2\frac{1}{2}$ " \times 0.113"); or 2-8d common ($2\frac{1}{2}$ " \times 0.131"); or 2-10d box (3 " \times 0.128"); or 2 staples, 1" crown, 16 ga., $1\frac{1}{2}$ " long	Face nail
20	1" \times 8" and wider sheathing to each bearing	3-8d box ($2\frac{1}{2}$ " \times 0.113"); or 2-8d common ($2\frac{1}{2}$ " \times 0.131"); or 3-10d box (3 " \times 0.128"); or 3 staples, 1" crown, 16 ga., $1\frac{1}{2}$ " long	Face nail
		Wider than 1" \times 8" 4-8d box ($2\frac{1}{2}$ " \times 0.113"); or 3-8d common ($2\frac{1}{2}$ " \times 0.131"); or 3-10d box (3 " \times 0.128"); or 2 staples, 1" crown, 16 ga., $1\frac{1}{2}$ " long	Face nail
Floor			
21	Joist to sill, top plate or girder	4-8d box ($2\frac{1}{2}$ " \times 0.113"); or 3-8d common ($2\frac{1}{2}$ " \times 0.131"); or 3-10d box (3 " \times 0.128"); or 3-3" \times 0.131" nails	Toe nail
22	Rim joist, band joist or blocking to sill or top plate (roof applications also)	8d box ($2\frac{1}{2}$ " \times 0.113")	4" o.c. toe nail
		8d common ($2\frac{1}{2}$ " \times 0.131"); or 10d box (3 " \times 0.128"); or 3" \times 0.131" nails	6" o.c. toe nail
23	1" \times 6" subfloor or less to each joist	3-8d box ($2\frac{1}{2}$ " \times 0.113"); or 2-8d common ($2\frac{1}{2}$ " \times 0.131"); or 3-10d box (3 " \times 0.128"); or 2 staples, 1" crown, 16 ga., $1\frac{1}{2}$ " long	Face nail

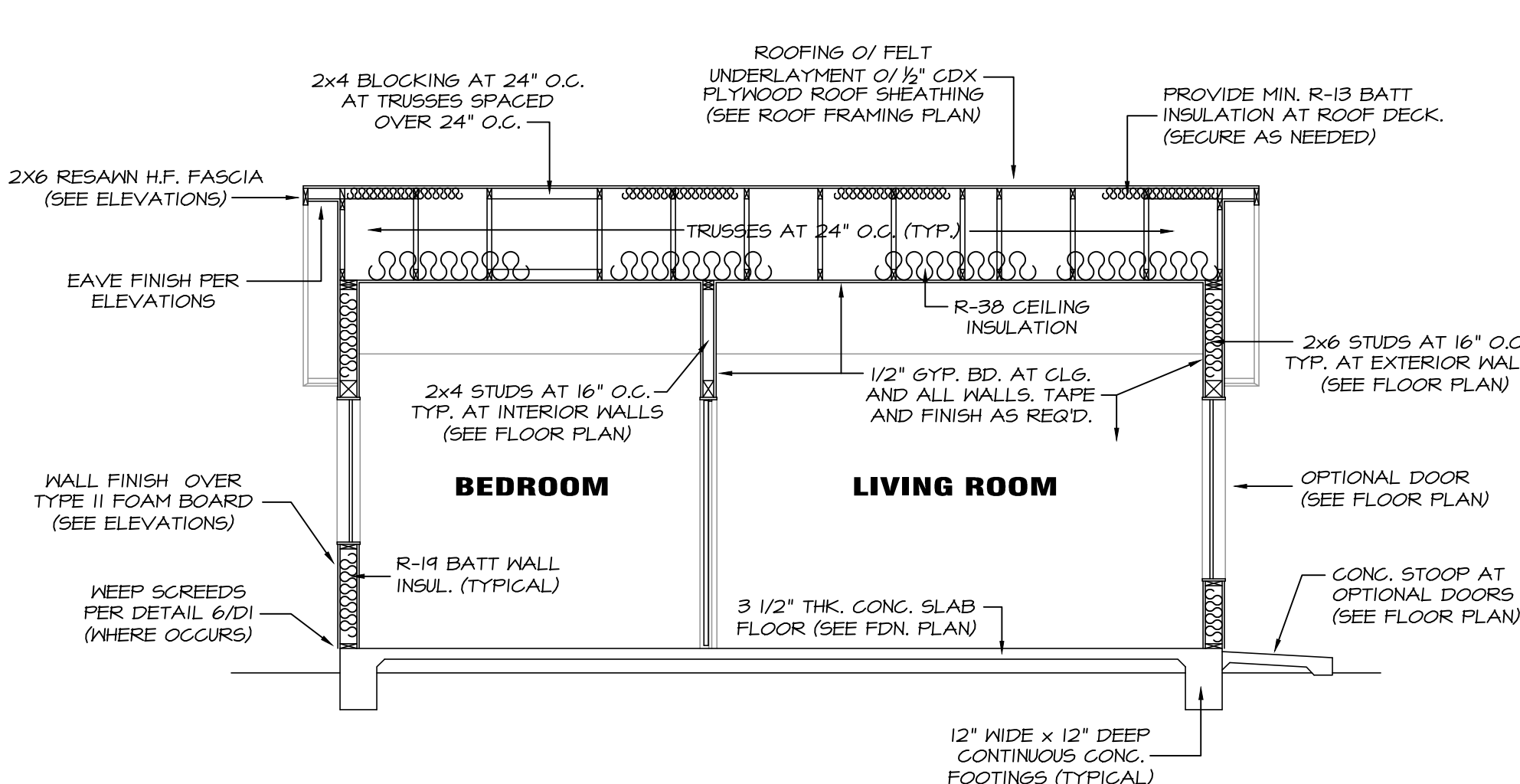
ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ^{a,c}	SPACING AND LOCATION
Floor			
24	2" subfloor to joist or girder	3-16d box ($3\frac{1}{2}$ " \times 0.135"); or 2-16d common ($3\frac{1}{2}$ " \times 0.162")	Blind and face nail
25	2" planks (plank & beam—floor & roof)	3-16d box ($3\frac{1}{2}$ " \times 0.135"); or 2-16d common ($3\frac{1}{2}$ " \times 0.162")	At each bearing, face nail
26	Band or rim joist to joist	3-16d common ($3\frac{1}{2}$ " \times 0.162"); 4-10d box (3 " \times 0.128"); or 4-3" \times 0.131" nails; or 4-3" \times 14 ga. staples, $1\frac{1}{2}$ " crown	End nail
27	Build-up girders and beams, 2-inch lumber layers	20d common (4 " \times 0.192"); or Staple 15 ga. 2" 10d box (3 " \times 0.128"); or 3" \times 0.131" nails	Nail each layer as follows: 32" o.c. at top and bottom and staggered; 24" o.c. face nail at top and bottom staggered on opposite sides
28	Ledger strip supporting joists or rafters	4-16d box ($3\frac{1}{2}$ " \times 0.135"); or 3-16d common ($3\frac{1}{2}$ " \times 0.162"); or 4-10d box (3 " \times 0.128"); or 4-3" \times 0.131" nails	Face nail at ends and at each splice
29	Bridging or blocking to joist	2-10d box (3 " \times 0.128"); or 2-8d common ($2\frac{1}{2}$ " \times 0.131"); or 2-3" \times 0.131" nails	Each end, toe nail
ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ^{a,c}	SPACING OF FASTENERS Edges (inches) Intermediate supports (inches)
Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing (see Table R602.3(2) for wood structural panel exterior wall sheathing to wall framing)			
30	$\frac{1}{2}$ "- $\frac{1}{2}$ "	6d common (2 " \times 0.113") nail (subfloor, wall); 8d common ($2\frac{1}{2}$ " \times 0.131") nail (roof); or RSRS-01 ($2\frac{1}{2}$ " \times 0.115") nail (roof)	6 12'
31	$1\frac{1}{2}$ "-1"	8d common nail ($2\frac{1}{2}$ " \times 0.131"); or RSRS-01 ($2\frac{1}{2}$ " \times 0.115") nail (roof)	6 12'
32	$1\frac{1}{2}$ "- $1\frac{1}{4}$ "	8d common (3 " \times 0.148") nail; or 8d ($2\frac{1}{2}$ " \times 0.131") deformed nail	6 12
Other wall sheathing^d			
33	$\frac{1}{2}$ " structural cellulose fiberboard sheathing	$1\frac{1}{2}$ " galvanized roofing nail, $\frac{1}{2}$ " head diameter, or $1\frac{1}{4}$ " long 16 ga. staple with $\frac{1}{2}$ " or 1" crown	3 6
34	$\frac{1}{2}$ " structural cellulose fiberboard sheathing	$1\frac{1}{2}$ " galvanized roofing nail, $\frac{1}{2}$ " head diameter, or $1\frac{1}{2}$ " long 16 ga. staple with $\frac{1}{2}$ " or 1" crown	3 6
35	$\frac{1}{2}$ " gypsum sheathing ^e	$\frac{1}{2}$ " galvanized roofing nail; staple galvanized, $1\frac{1}{2}$ " long; $1\frac{1}{4}$ " screws, Type W or S	7 7
36	$\frac{1}{2}$ " gypsum sheathing ^f	$\frac{1}{2}$ " galvanized roofing nail; staple galvanized, $1\frac{1}{2}$ " long; $1\frac{1}{4}$ " screws, Type W or S	7 7
Wood structural panels, combination subfloor underlayment to framing			
37	$\frac{1}{2}$ " and less	6d deformed (2 " \times 0.120") nail; or 8d common ($2\frac{1}{2}$ " \times 0.131") nail	6 12
38	$\frac{1}{2}$ "-1"	8d common ($2\frac{1}{2}$ " \times 0.131") nail; or 8d deformed ($2\frac{1}{2}$ " \times 0.120") nail	6 12
39	$1\frac{1}{4}$ "- $1\frac{1}{2}$ "	10d common (3 " \times 0.148") nail; or 8d deformed ($2\frac{1}{2}$ " \times 0.120") nail	6 12

- a. Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.
- b. Staples are 16 gauge wire and have a minimum $\frac{1}{2}$ " inch on diameter crown width.
- c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.
- d. Four feet by 8 feet or 4 feet by 9 feet panels shall be applied vertically.
- e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).
- f. For wood structural panel roof sheathing attached to gable end roof framing and to intermediate supports within 48 inches of roof edges and ridges, nails shall be spaced at 6 inches on center where the ultimate design wind speed is less than 130 mph and shall be spaced 4 inches on center where the ultimate design wind speed is 130 mph or greater but less than 140 mph.
- g. Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C208.
- h. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking and at floor perimeter only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.
- i. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.
- j. RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.



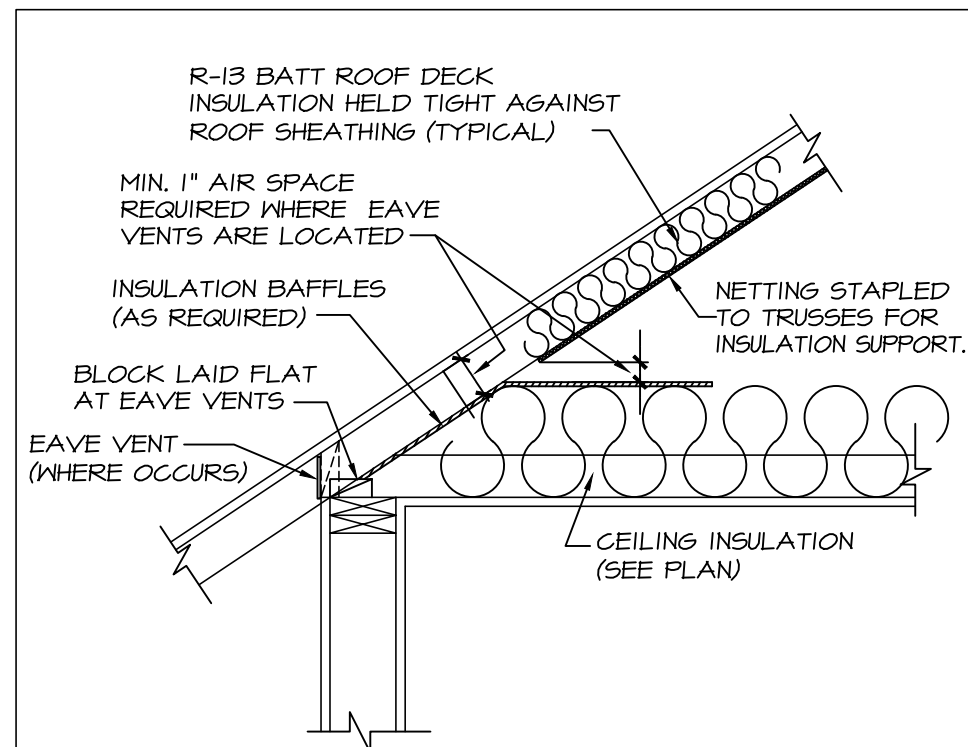
SECTION A-A

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



SECTION B-B

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



1 ROOF DECK INSULATION

SCALE: 3/4" = 1'-0"

NOMINAL MATERIAL THICKNESS (inches)	DESCRIPTION ^a OF FASTENER AND LENGTH (inches)	SPACING OF FASTENERS Edges (inches) Intermediate supports (inches)
Wood structural panels subfloor, roof and wall sheathing to framing and particleboard wall sheathing to framing^d		
Up to $\frac{1}{2}$	Staple 15 ga. $1\frac{1}{2}$ "	4 8
	0.097 - 0.099 Nail $2\frac{1}{4}$ "	3 6
	Staple 16 ga. $1\frac{1}{2}$ "	3 6
$\frac{1}{2}$ and $\frac{1}{4}$	0.113 Nail 2	3 6
	Staple 15 and 16 ga. 2	4 8
	0.097 - 0.099 Nail $2\frac{1}{4}$ "	4 8
$\frac{3}{4}$ and $\frac{1}{4}$	Staple 14 ga. 2	4 8
	Staple 15 ga. $2\frac{1}{4}$ "	3 6
	0.097 - 0.099 Nail $2\frac{1}{4}$ "	4 8
1	Staple 16 ga. 2	4 8
	Staple 14 ga. $2\frac{1}{4}$ "	4 8
	0.113 Nail $2\frac{1}{4}$ "	3 6
1	Staple 15 ga. $2\frac{1}{4}$ "	4 8
	0.097 - 0.099 Nail $2\frac{1}{4}$ "	4 8
SPACING OF FASTENERS		
NOMINAL MATERIAL THICKNESS (inches)	DESCRIPTION ^a OF FASTENER AND LENGTH (inches)	Edges (inches) Body of panel ^b (inches)
Fiber cement		
$\frac{1}{4}$	3d, corrosion-resistant, ring shank nails (finished flooring other than tile)	3 6
	Staple 18 ga., $\frac{1}{4}$ " long, $\frac{1}{2}$ " crown (finished flooring other than tile)	3 6
	$1\frac{1}{2}$ " long \times 121 shank \times 375 head diameter corrosion-resistant (galvanized or stainless steel) roofing nails (for tile finish)	8 8
$\frac{1}{2}$ and $\frac{1}{4}$	$1\frac{1}{4}$ " long, No. 8 \times 375 head diameter, ribbed water-head screws (for tile finish)	8 8
	Plywood	
	$1\frac{1}{4}$ " ring or screw shank nail-minimum $2\frac{1}{4}$ " ga. (0.099") shank diameter	3 6
$\frac{1}{2}$ and $\frac{1}{4}$	Staple 18 ga., $\frac{1}{2}$ " crown width	2 5
	$1\frac{1}{4}$ " ring or screw shank nail-minimum $12\frac{1}{2}$ " ga. (0.099") shank diameter	6 8
	$1\frac{1}{2}$ " ring or screw shank nail-minimum $12\frac{1}{2}$ " ga. (0.099") shank diameter	6 8
0.200	Staple 16 ga. $1\frac{1}{2}$ "	6 8
	Hardboard	
	$1\frac{1}{4}$ " long ring-grooved underlayment nail	6 6
$\frac{1}{4}$	4d cement-coated sinker nail	6 6
	Staple 18 ga., $\frac{1}{2}$ " long (plastic coated)	3 6
$\frac{1}{2}$	Particleboard	
	4d ring-grooved underlayment nail	3 6
	Staple 18 ga., $\frac{1}{2}$ " long, $\frac{1}{2}$ " crown	3 6
$\frac{1}{2}$	6d ring-grooved underlayment nail	6 10
	Staple 16 ga., $1\frac{1}{2}$ " long, $\frac{1}{2}$ " crown	3 6
	6d ring-grooved underlayment nail	6 10
$\frac{1}{2}$, $\frac{3}{4}$	Staple 16 ga., $1\frac{1}{2}$ " long, $\frac{1}{2}$ " crown	3 6

- a. Nail is a general description and shall be permitted to be T-head, modified round head or round head.
- b. Staples shall have a minimum crown width of $\frac{1}{4}$ " inch on diameter except as noted.
- c. Nails or staples shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater. Nails or staples shall be spaced at not more than 12 inches on center at intermediate supports for floors.
- d. Fasteners shall be placed in a grid pattern throughout the body of the panel.
- e. For 5 ply panels, intermediate nails shall be spaced at not more than 12 inches on center away.
- f. Hardboard underlayment shall conform to CPANSA A154.
- g. Specified alternate attachments for roof sheathing shall be permitted where the ultimate design wind speed is less than 130 mph. Fasteners attaching wood structural panel roof sheathing to gable end wall framing shall be installed using the spacing listed for panel edges.
- h. Fiber cement underlayment shall conform to ASTM C1288 or ISO 8336, Category C.

TABLE R702.2.5 MINIMUM THICKNESS AND APPLICATION OF GYPSUM BOARD AND GYPSUM PANEL PRODUCTS							
THICKNESS OF GYPSUM BOARD OR GYPSUM PANEL PRODUCTS (inches)	APPLICATION	ORIENTATION OF GYPSUM BOARD OR GYPSUM PANEL PRODUCTS TO FRAMING	MAXIMUM SPACING OF FRAMING MEMBERS (inches o.c.)	MAXIMUM SPACING OF FASTENERS (inches)	Nails ^a	Screws ^b	SIZE OF NAILS FOR APPLICATION TO WOOD FRAMING ^c
Application without adhesive							
1/2	Ceiling ^d	Perpendicular	16	7	12		13 gage, 1 1/2" long, 1/8" head; 0.098" diameter, 1/2" long, annular-ridge or 44 cooler nail, 0.086" diameter, 1 1/2" long, 1/4" head.
	Wall	Either direction	16	8	16		13 gage, 1 1/2" long, 1/8" head; 0.098" diameter, 1/2" long, annular-ridge, 54 cooler nail, 0.086" diameter, 1 1/2" long, 1/4" head; or gypsum board nail, 0.086" diameter, 1 1/2" long, 1/4" head.
	Ceiling	Either direction	16	7	12		13 gage, 1 1/2" long, 1/8" head; 0.098" diameter, 1/2" long, annular-ridge, 54 cooler nail, 0.086" diameter, 1 1/2" long, 1/4" head; or gypsum board nail, 0.086" diameter, 1 1/2" long, 1/4" head.
	Wall	Either direction	24	8	12		13 gage, 1 1/2" long, 1/8" head; 0.098" diameter, 1/2" long, annular-ridge, 64 cooler nail, 0.092" diameter, 1 1/4" long, 1/4" head; or gypsum board nail, 0.0915" diameter, 1 1/4" long, 1/4" head.
	Ceiling	Either direction	16	7	12		13 gage, 1 1/2" long, 1/8" head; 0.098" diameter, 1/2" long, annular-ridge, 64 cooler nail, 0.092" diameter, 1 1/4" long, 1/4" head; or gypsum board nail, 0.0915" diameter, 1 1/4" long, 1/4" head.
	Wall	Either direction	16	8	16		13 gage, 1 1/2" long, 1/8" head; 0.098" diameter, 1/2" long, annular-ridge, 64 cooler nail, 0.092" diameter, 1 1/4" long, 1/4" head; or gypsum board nail, 0.0915" diameter, 1 1/4" long, 1/4" head.
1/2	Type X at garage ceiling (nonhabitable rooms)	Perpendicular	24	6	6		1 1/2" long cold coated nails or equivalent drywall screws. Screws shall comply with Section R702.3.5.1.
	Wall	Either direction	24	8	12		13 gage, 1 1/2" long, 1/8" head; 0.098" diameter, 1/2" long, annular-ridge, 64 cooler nail, 0.092" diameter, 1 1/4" long, 1/4" head; or gypsum board nail, 0.0915" diameter, 1 1/4" long, 1/4" head.
	Wall	Either direction	16	8	16		13 gage, 1 1/2" long, 1/8" head; 0.098" diameter, 1/2" long, annular-ridge, 64 cooler nail, 0.092" diameter, 1 1/4" long, 1/4" head; or gypsum board nail, 0.0915" diameter, 1 1/4" long, 1/4" head.
	Application with adhesive						
	Ceiling ^d	Perpendicular	16	16	16		Same as above for 1/2" gypsum board and gypsum panel products, respectively.
	Wall	Either direction	16	16	24		Same as above for 1/2" and 1/2" gypsum board and gypsum panel products, respectively.
1/2, or 1/2	Ceiling ^d	Perpendicular	24	12	16		Same as above for 1/2" and 1/2" gypsum board and gypsum panel products, respectively.
	Wall	Either direction	24	16	24		Same as above for 1/2" and 1/2" gypsum board and gypsum panel products, respectively.
Two 1/4 bays	Ceiling	Perpendicular	16	16	16		Base ply nailed as above for 1/2" gypsum board and gypsum panel products; face ply installed with adhesive.
	Wall	Either direction	24	24	24		Same as above for 1/2" gypsum board and gypsum panel products, respectively.

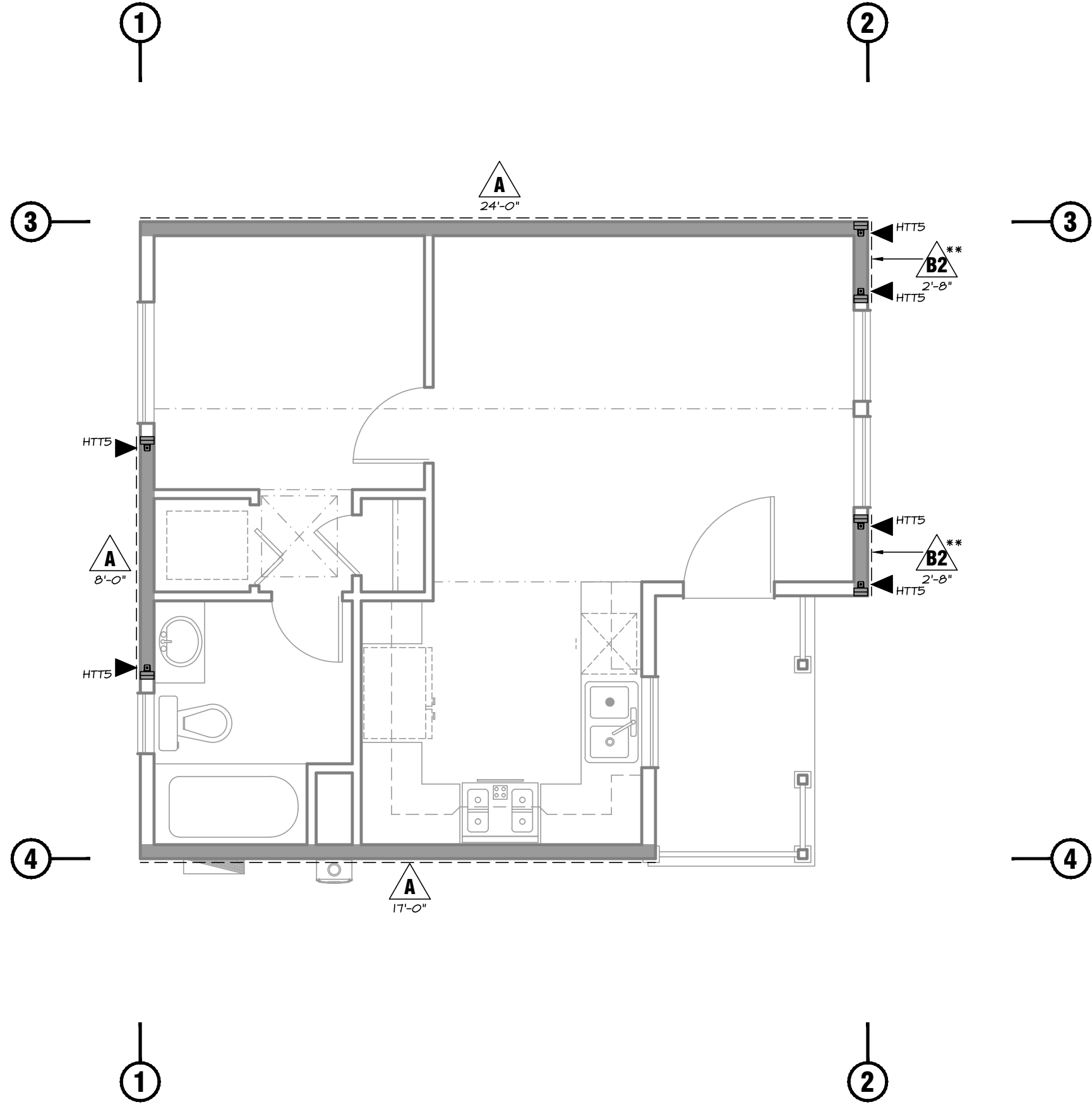
a. For application without adhesive, a pair of nails spaced not less than 2 inches apart or more than 24" apart shall be permitted to be used with the pair of nails spaced 12 inches on center.

b. Screws shall be in accordance with Section R702.3.5.1. Screws for attaching gypsum board or gypsum panel products to structural insulated panels that penetrate the wood structural panel facing are not less than 1 1/4" inch.

c. When cold formed steel framing is used with a cladding design to receive nails by two edges of metal, the nails shall not be less than 1 1/4" inch longer than the gypsum board or gypsum panel product thickness and shall have tapered shanks. Where the cold formed steel framing has a nailing groove provided to receive the nails, the nails shall have barbed ends or be 5/16, 3/8, 1/2, 5/8, 3/4, 7/8, 1 inch long, 1/4 inch head for 1/2 inch gypsum board or gypsum panel products and 13 gage, 1 1/2, 1 inches long, 1/8 inch head for 1/4 inch gypsum board or gypsum panel product.

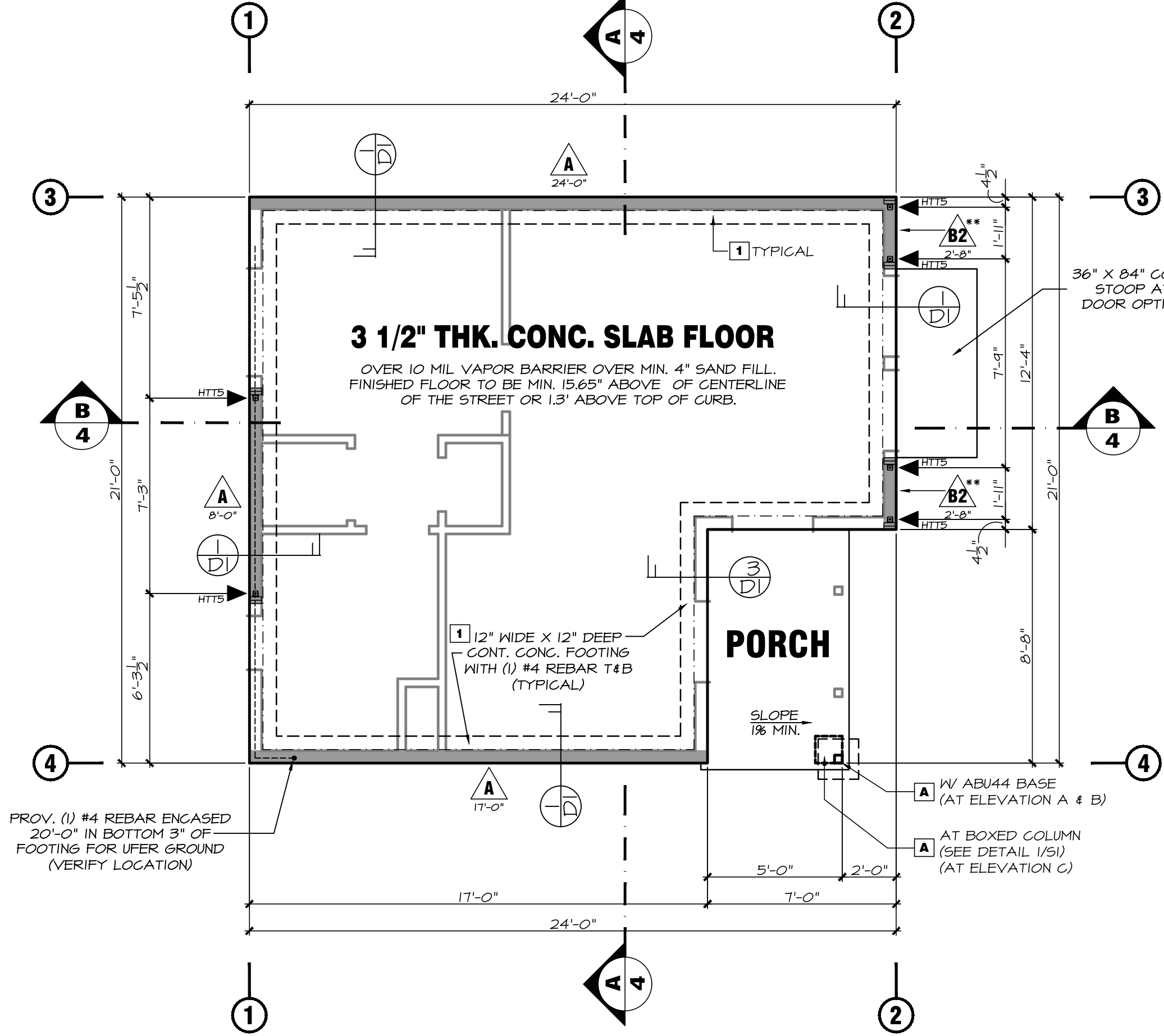
d. Three-edges-thick single-ply gypsum board or gypsum panel product shall not be used on a ceiling where a water-based textured finish is to be applied, or where it will be required to support insulation above a ceiling. On ceiling applications to receive a water-based texture material, either hand or spray applied, the gypsum board or gypsum panel product shall be applied perpendicular to framing. Where applying a water-based texture material, the minimum gypsum board thickness shall be increased to 1/2 inch for 1/2 inch (or 1/4 inch on center) framing, and from 1/4 inch to 1/2 inch for 24 inch on center framing and 1/2 inch sag resistant gypsum ceiling board shall be used.

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SHEARWALL PLAN

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



FOUNDATION PLAN

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

FOUNDATION NOTES:

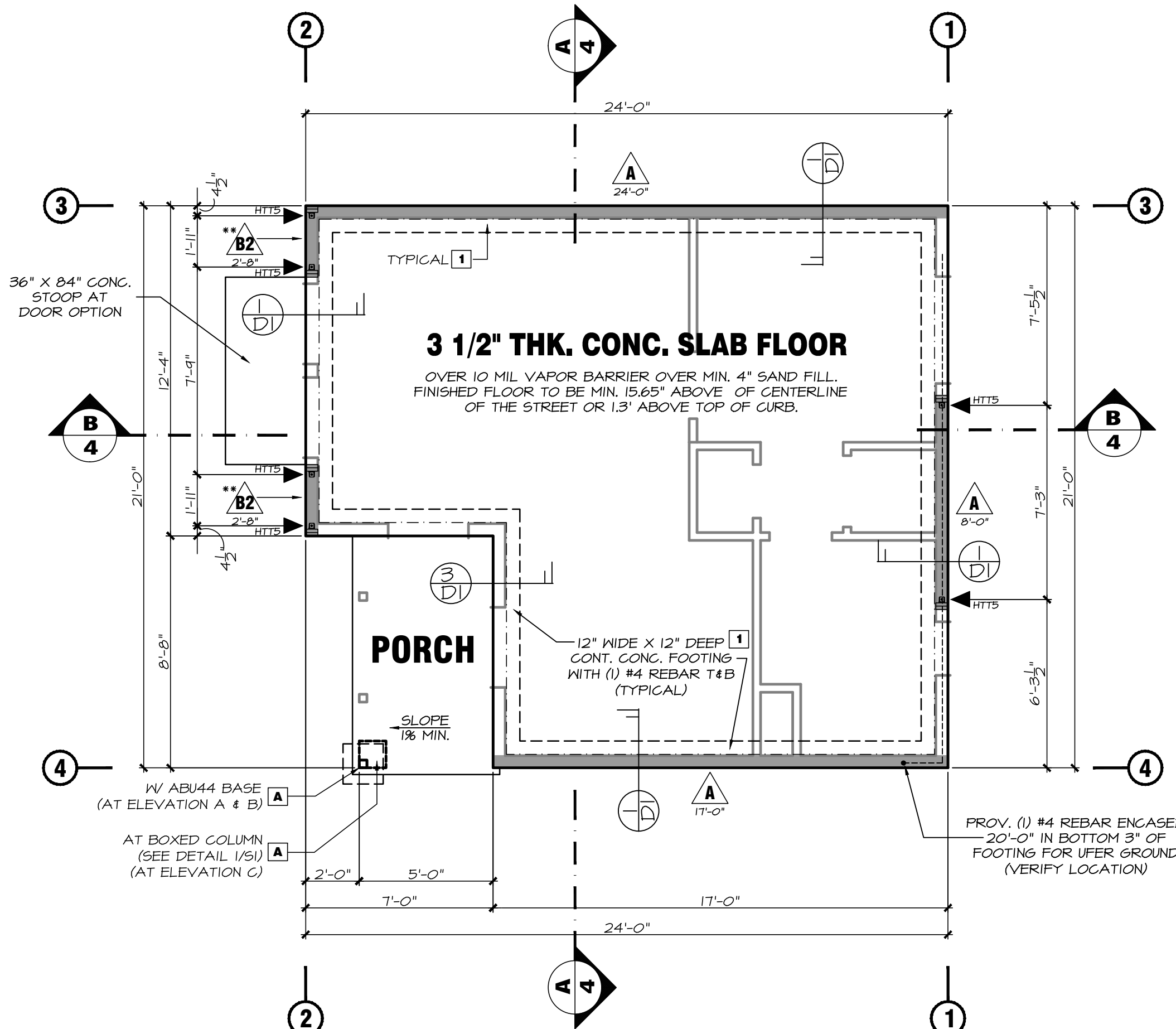
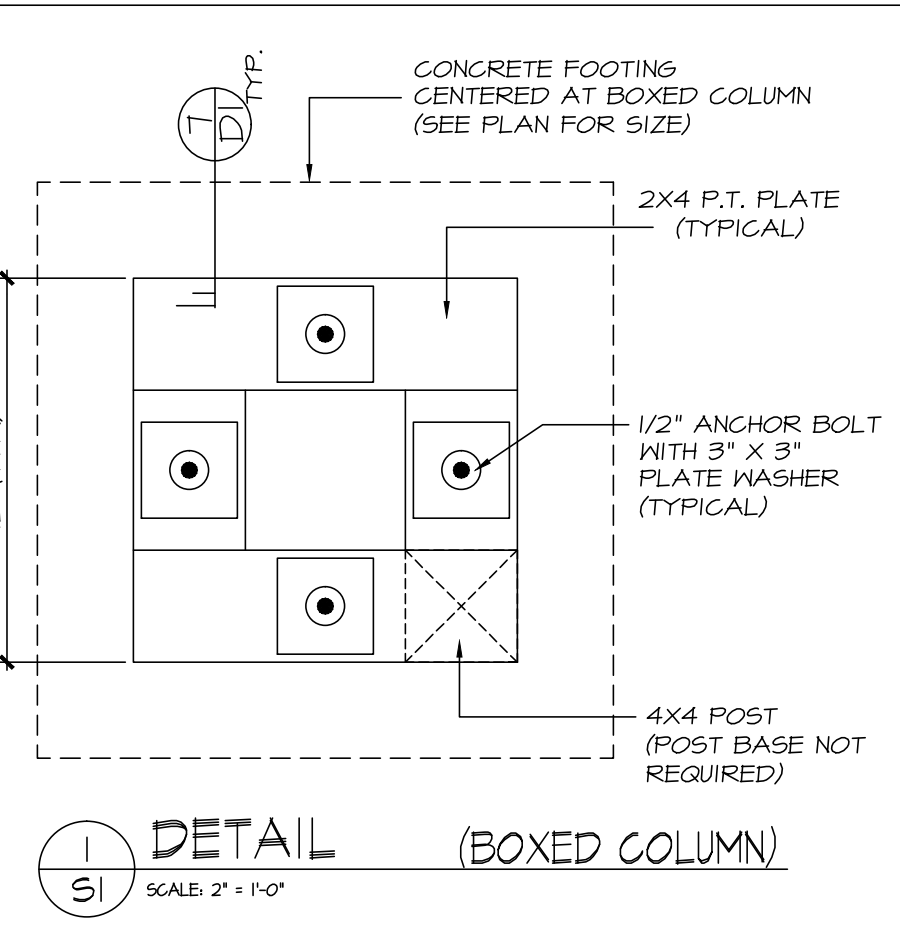
- PRIOR TO CALLING FOR A BUILDING DIVISION FOUNDATION INSPECTION, PRELIMINARY GRADING AND COMPACTION REPORTS SHALL BE SUBMITTED TO AND APPROVED BY THE BUILDING DIVISION GRADING INSPECTOR.
- LOCATE AND EXPOSE ALL PROPERTY CORNERS AND STRINGS SIDE YARD PROPERTY LINES PRIOR TO THE FOUNDATION INSPECTION.
- THE MAXIMUM ALLOWABLE SOIL BEARING CAPACITY IS 1500 LBS. PER S.F.
- CONCRETE SHALL HAVE AN ULTIMATE COMPRESSION STRENGTH OF 2500 P.S.I. IN 28 DAYS.
- THE CONCRETE SLABS SHALL HAVE A MINIMUM THICKNESS OF 3 1/2" APPLIED OVER 2" OF SAND (ASTM-C83) OVER MIN. 10 MIL VAPOR BARRIER AND SHALL BE PLACED OVER COMPACTED SUB-GRADE OR ENGINEERED FILL.
- THE SOILS REPORT (IF REQUIRED) SHALL BE REVIEWED BY THE CONTRACTOR FOR SPECIAL REQUIREMENTS AND RECOMMENDATIONS PRIOR TO START OF FOUNDATION WORK. PROVIDE A COPY OF THE SOILS REPORT ON SITE FOR INSPECTION PURPOSES.
- SLABS AND FOOTINGS SHALL BE POURED MONOLITHICALLY. IF 2-POUR SYSTEM IS TO BE USED, AUTHORIZATION FROM ENGINEER IS REQUIRED PRIOR TO WORK STARTED.
- ALL HOLDDOWNS, SPECIAL ANCHOR BOLTING REQUIREMENTS AND STRAPS THAT ARE APPLICABLE TO THE BUILDING MUST BE SECURELY IN PLACE AT TIME OF FOUNDATION INSPECTION.
- VERIFY THE LOCATION OF ALL HOLDDOWNS WITH THE FRAMING CONTRACTOR.
- FOUNDATION CONTRACTOR SHALL VERIFY AND PROVIDE CONTROL JOINTS TO CONTROL CRACKING.
- PROVIDE (1) #4 REBAR TOP AND BOTTOM IN ALL FOOTINGS
- UNLESS NOTED OTHERWISE FOR SHEAR WALLS, ALL EXTERIOR WALLS SHALL HAVE 1/2" DIAMETER X 10' LONG ANCHOR BOLTS INSTALLED AT 12" O.C. WITH MIN. 1" EMBEDMENT. PROVIDE MIN. 2 A.B. PER WALL AND NOT MORE THAN 12" FROM END OR SPLICES IN BOTTOM PLATES. 14" LONG ANCHOR BOLTS ARE REQUIRED AT THE GARAGE STEM WALLS.
- ALL ANCHOR BOLTS ARE REQUIRED TO BE INSTALLED IN THE MIDDLE 1/3 OF THE PLATE.
- PROVIDE A 3" X 3" X 0.224" STEEL PLATE WASHER AT ALL ANCHOR BOLTS. (CRG R602.II.1)
- A STANDARD CUT WASHER SHALL BE PLACED BETWEEN THE PLATE WASHER AND THE NUT. WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE WITH WALL SHEATHING. (SDPPS-08 SECTION 4.3.6.4.3)
- POWDER DRIVEN FASTENERS SHALL NOT BE LOCATED IN STEM WALLS LESS THAN 5 1/2" WIDE OR GREATER THAN 5 1/2" HIGH.
- FASTENERS AT INTERIOR NON-LOAD BEARING WALLS SHALL BE 'RAMSET' #334@ AT 48" O.C. (ESR 1749). FOR SHEAR WALLS USE A.B. PER FOUND. PLAN
- THE FASTENERS EMBEDDED IN CONCRETE SHALL BE ATTACHED TO, OR HOOKED AROUND, REINFORCING STEEL OR OTHERWISE TERMINATE TO EFFECTIVELY TRANSFER FORCES TO THE REINFORCING STEEL.
- WOOD FRAMING MEMBERS, INCLUDING WOOD SHEATHING, THAT REST ON EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8" FROM EXPOSED EARTH SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.
- SURFACE WATER WILL BE DRAINED AWAY FROM THE BUILDING FOR AT LEAST THE FIRST 10' WITH A MINIMUM GRADE OF 6". WHERE THIS REQUIREMENT CANNOT BE MET BECAUSE THE DISTANCE BETWEEN THE STRUCTURE AND THE PROPERTY LINE IS LESS THAN 10', PROVIDE LANDSCAPE DRAINS & INLETS NOT TO EXCEED 15' AT SIDE YARDS. -2019 CRG R401.3
- SUBTERRANEAN TERMITE CONTROL "METHODS OF PROTECTION" SHALL BE DONE WITH CHEMICAL TERMITICIDE TREATMENT, AS PROVIDED IN SECTION R310.2. PRIOR TO FOUNDATION INSPECTION.
- A COMPACTION REPORT IS REQUIRED. AS AN OPTION, THE PROPERTY OWNER MAY PROVIDE A SOILS REPORT FOR THIS PROJECT FROM A LICENSED PROFESSIONAL.
- A SOILS REPORT MAY BE REQUESTED BY THE CITY OF CLOVIS BUILDING DEPARTMENT AT TIME OF PERMIT APPLICATION.

HOLDDOWN SCHEDULE

MARK	HOLDDOWNS
	HTTS W/ 55TB16 ANCHOR BOLT PER DETAIL 4/D1 -OR- STD10 PER DETAIL 5/D1
	ANCHOR BOLT PER SCHEDULE (WHERE OCCURS) SYMBOL (SEE HOLDDOWN SCHEDULE)
	HOLDDOWN TYPE
	POST OR STUDS (SEE HOLDDOWN SCHEDULE)
LEGEND	
NOTES: STD10 HOLDDOWN MAY BE SUBSTITUTED WHERE HTTS HOLDDOWN IS SPECIFIED. CONTRACTOR SHALL VERIFY STRAP / BOLT LOCATION WHERE DIFFERENT FROM THAT LISTED ON PLANS. ALL HOLDDOWNS DIMENSIONED ON PLAN ARE MEASURED TO THE CENTER OF THE HOLDDOWN DEVICE (BOLT OR STRAP)	

SHEAR WALL SCHEDULE

SHEARWALLS			
MARK	WALL SHEATHING	EDGE NAILING	ANCHOR BOLTS
		D.F. #2	
A	3/8" CDX PLY. PSR 24/00 or 1/2" O.S.B. PSR 24/16	8d @ 6" O.C.	1/2" DIAM. @ 48" O.C. or MASA @ 48" O.C.
B2**	3/8" CDX PLY. PSR 24/00 or 1/2" O.S.B. PSR 24/16	8d @ 4" O.C.	1/2" DIAM. @ 24" O.C. or MASA @ 24" O.C.
** ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL BE NOT LESS THAN 3X MEMBER, OR 2-2X MEMBERS FASTENED TOGETHER WITH 16d NAILS AT 9" O.C. FLYWOOD JOINT AND SILL PLATE NAILING SHALL BE STAGGERED.			
NOTES: MASA = SIMPSON MUD SILL ANCHORS - ESR-2555 (OR EQUAL) INSTALLED PER MANIF. INSTALLATION INSTRUCTIONS. ALL SILL PLATES SHALL BE PRESSURE TREATED DOUGLAS FIR #2. NAILING AT INTERMEDIATE MEMBERS TO BE SPACED AT 12" O.C. (TYPICAL U.N.O.) NAILING OF PLYWOOD SHEAR WALLS OR PLYWOOD DIAPHRAGMS SHALL BE DONE WITH COMMON OR GALVANIZED BOX NAILS ONLY. GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED. ALL WOOD SHEAR WALLS AND DIAPHRAGMS SHALL CONFORM TO CRG SECTION 2305.2.4. A) SHEETS USED IN THE CONSTRUCTION OF DIAPHRAGMS AND SHEAR WALLS SHALL NOT BE LESS THAN 4' X 8' IN SIZE B) MINIMUM SIZE SHEET AT BOUNDARIES AND CHANGES IN FRAMING SHALL BE 24" UNLESS ALL EDGES ARE BLOCKED AND NAILED. C) PROVIDE FRAMING MEMBERS OR BLOCKING AT ALL PANEL EDGES IN SHEAR WALLS ALL EXTERIOR FOOTINGS SHALL HAVE 1/2" DIAMETER X 10" ANCHOR BOLTS (OR MASA) AT 12" O.C. UNLESS NOTED OTHERWISE IN SHEAR WALL SCHEDULE. FASTENERS FOR PRESERVATIVE-TREATED AND FIRE-RETARDANT-TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.			



REVERSE FOUNDATION PLAN

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

FOOTING SCHEDULE		
MARK	FOOTING SIZE	REINFORCING
1	12" WIDE X 12" DEEP CONT. FOOTING PER DETAIL 1/D1	(1) #4 REBAR T & B
A	18" X 18" X 12" DEEP	(2) #4 REBAR E.W.
CONCRETE SHALL HAVE AN ULTIMATE COMPRESSION STRENGTH OF 2500 P.S.I. IN 28 DAYS. SEE FOUNDATION PLAN FOR POST BASE AND SPECIAL REQUIREMENTS		

ENGINEER'S SEAL AND SIGNATURE ON PLANS ARE LIMITED TO THE ITEMS ON THE PLANS ADDRESSED IN THE STRUCTURAL CALCULATIONS ONLY. NO OTHER APPROVAL, LIABILITY OR CONSENT FOR ANY OTHER ASPECT OR PHASE OF THIS STRUCTURE IS IMPLIED OR EXPRESSED.



7/8/22

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DATE: 06-17-2022

CWB DESIGNS

3838 N. CHICKADEE AVE.
SANGER, CA 93657
PHONE: 559.294.6534

STANDARD PLAN #1 FOR:

CITY OF CHOWCHILLA

130 S 2ND STREET
CHOWCHILLA, CA 93610
PHONE: 559-665-8615

SHEET

S1

OF 19

FOUNDATION

REVISIONS	
REV	DATE
NEW	05.09.22
ENG	05.25.22
SUB	06.17.22

DRAWING FILE
C:\CHOWCHILLA
PLAN 151A

CWB



AT OPTIONAL AWNING



ALL ATTIC ACCESS OPENINGS SHALL BE GASKETED TO PREVENT AIR LOSS.

7/8/22

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OF 19

ROOF FRAMING-A

HEADER & BEAM SCHEDULE			
MARK	BEAM SIZE	GRADE	REMARKS
B1	4X6	D.F. #2	
B2	4X6	D.F. #2	
B3	4X6	D.F. #2	
B4	4X6	D.F. #2	
NOTES: BEAM DESIGN NO. AS REFERENCED IN ENGINEER'S CALCULATIONS ALL LUMBER SHALL BE GRADE MARKED, DF STD. OR BETTER, UNO. GLUE-LAMINATED WOOD TO BE 24F-V4 DF/DF, UNO. ALL BEAMS SHALL HAVE SOLID SUPPORT TO FOUNDATION. UNLESS NOTED OTHERWISE, PROVIDE MIN (1) 2X TRIMMER AT EACH END.			

VENTILATION CALCULATIONS:
(AT ELEVATION B)

TOTAL ATTIC AREA: 487 SQ. FT.
487 SQ. FT. X 1/150 = 3.2 S.F. REQ'D
3.2 SQ. FT. X 144 = 460 SQ. IN. REQ'D
COMBUSTION AIR:
(80K / 4K) = 20 S.I. ADDITIONAL REQ'D

(4) 3 1/2" X 22 3/8" EAVE VENTS 188 S.I.

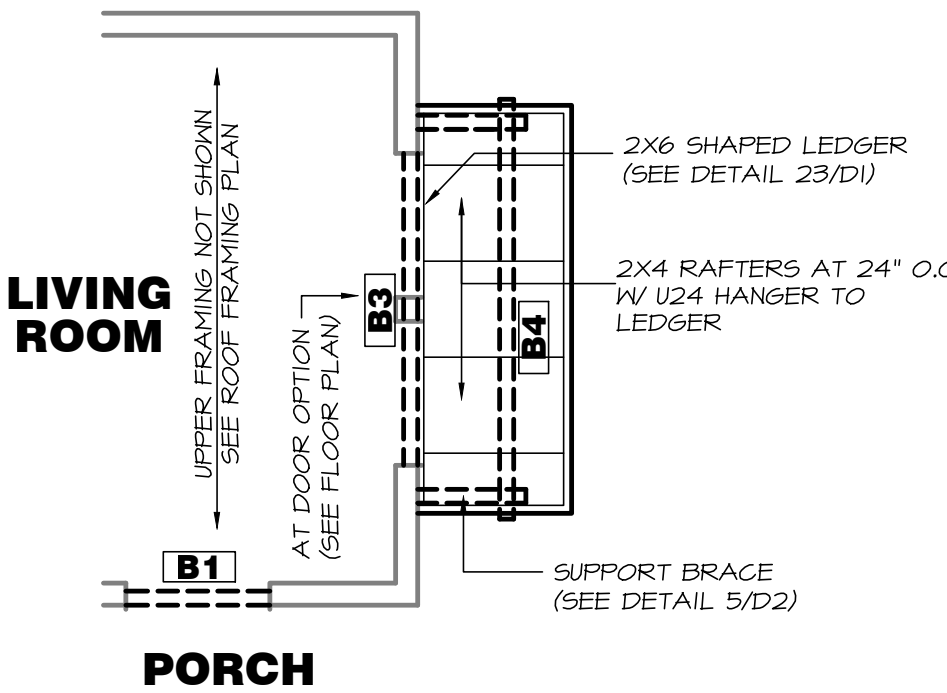
(3) 14" X 18" GABLE END VENTS 354 S.I.

TOTAL VENTILATION PROVIDED: 542 S.I.

ALL VENTS SHALL HAVE CORROSION RESISTANT
SCREENS WITH OPENINGS AT LEAST 1/8", AND NOT MORE
THAN 1/4" MAXIMUM.

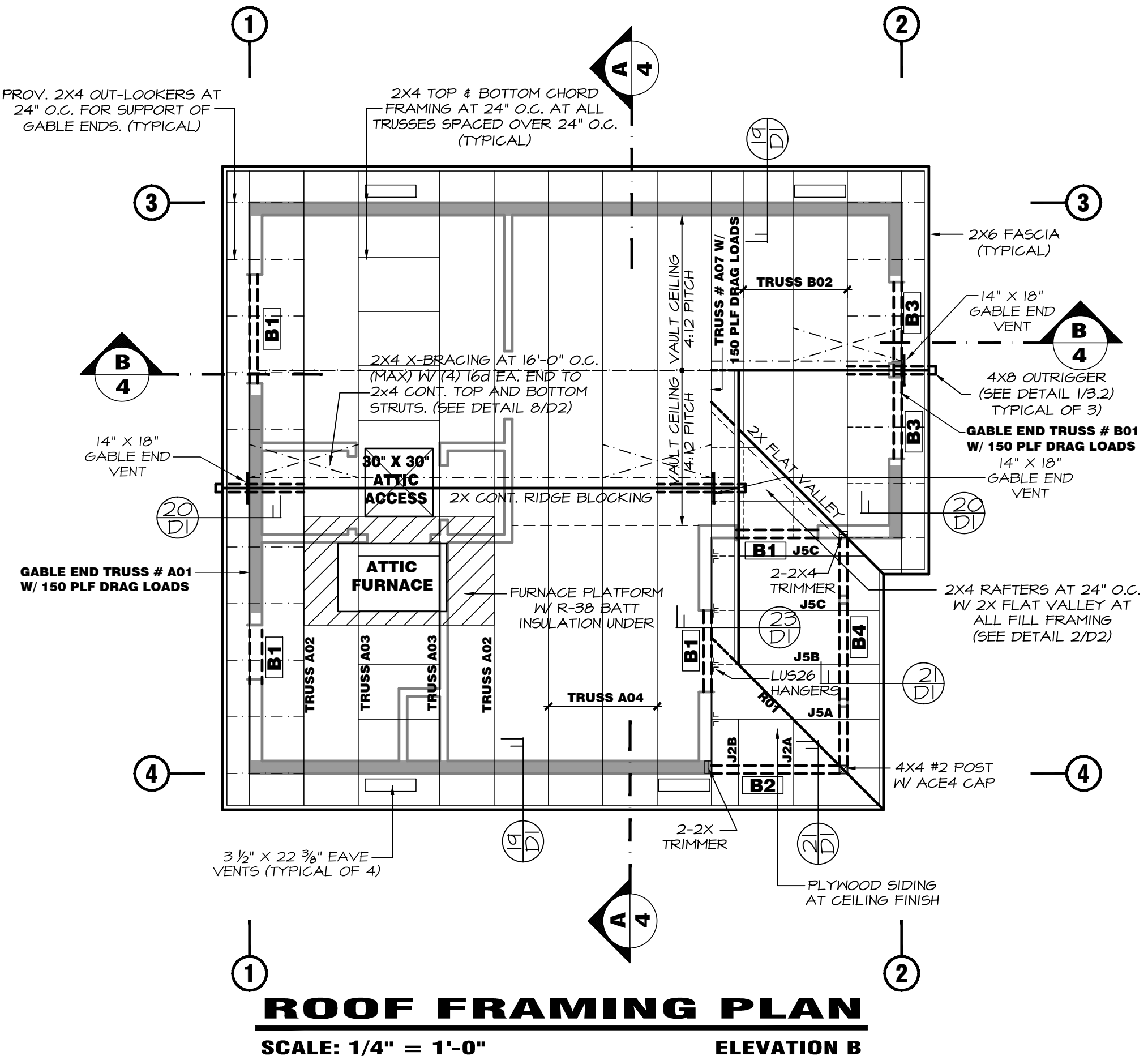
PROVIDE 1" MIN. AIR SPACE BETWEEN INSULATION AND
ROOF SHEATHING.

PROVIDE MIN. 4'-0" LONG BAFFLES AT EAVE VENTS
WHERE LOOSE FILLED INSULATION IS USED IN THE ATTIC
ADJACENT TO THE VENTS.



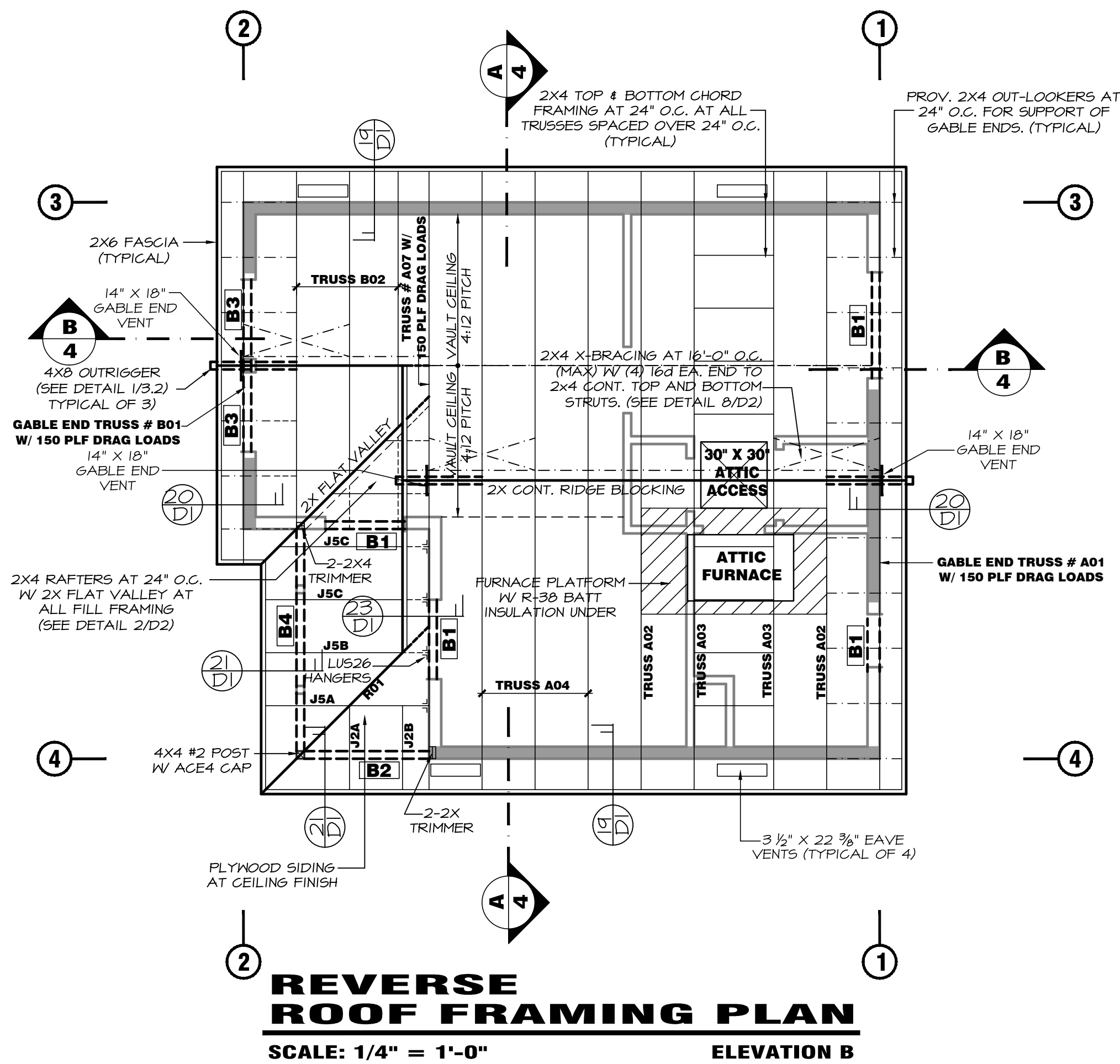
AWNING FRAMING

SCALE: 1/4" = 1'-0" AT OPTIONAL AWNING



ROOF FRAMING PLAN

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



REVERSE ROOF FRAMING PLAN

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

ROOF FRAMING NOTES:

USE PRE-MANUFACTURED TRUSSES AT 24" O.C. UNLESS NOTED OTHERWISE IN
DRAWINGS. TRUSS DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE
BUILDING DEPARTMENT PRIOR TO FABRICATION OF ANY TRUSSES.

SEE TYPICAL TRUSS AND ROOF FRAMING NOTES AT SHEET N-1

APPROVED TRUSS DRAWINGS SHALL BE ON SITE FOR INSPECTION PURPOSES

SEE TRUSS DRAWINGS FOR WEB BRACING REQUIREMENTS AND/OR ANY
ADDITIONAL REQUIREMENTS.

ALL FRAMING LUMBER TO BE D.F. #2 OR BETTER UNLESS NOTED OTHERWISE IN
DRAWINGS.

ALL FASCIA TO BE 2X8 RESAWN HEM FIR

ROOF COVERING TO BE MIN. 26 GA. CLASS "A", METAL ROOFING OVER 30 #
FELT OVER 1/2" CDX RATED 24/00 PLYWOOD ROOF SHEATHING (OR 7/16" OSB
RATED 24/16) WITH BD AT 6" O.C. AT EDGE AND BOUNDARY NAILING AND BD
AT 12" O.C. AT FIELD NAILING. THE ENTIRE PERIMETER SHALL BE BLOCKED AND
EDGE NAILED.

NAILING OF PLYWOOD SHEAR WALLS OR PLYWOOD DIAPHRAGMS SHALL BE
DONE WITH COMMON WIRE NAILS, UNO. SHOULD THE CONTRACTOR DESIRE TO
USE ANY OTHER FASTENERS, HE SHALL OBTAIN WRITTEN APPROVAL FROM THE
ENGINEER AND/OR DESIGNER PRIOR TO THE USE OF SUCH FASTENERS IN THE
FIELD.

ENTIRE PERIMETER OF ROOF SHALL BE BLOCKED AND EDGE NAILED

PROVIDE 1/8" GAP AT ALL PLYWOOD PANEL EDGES.

PLYWOOD ROOF DIAPHRAGM SHALL BE CONTINUOUS BELOW ALL CALIFORNIA
FILL FRAMING. PROVIDE 22" X 30" OPENING FOR ACCESS AND VENTILATION.
BLOCK ALL EDGES OF OPENING.

ALL PLYWOOD ROOF SHEATHING SHALL BE LAID PERPENDICULAR TO RAFTERS
WITH STAGGERED END JOINT PATTERNS.

ALL PLYWOOD EXPOSED TO THE WEATHER SHALL BE "EXPOSURE ONE" RATED.

PROVIDE STEPPED FLASHING AT ALL ROOF JUNCTIONS TO VERTICAL
SURFACES. (WALLS, SKYLIGHTS AND FIREPLACES)

ANY EXTERIOR TOP PLATE THAT CANNOT LAP DUE TO CHANGES IN PLATE
HEIGHT OR AT CORNERS WHERE RAKED WALLS INTERSECT LEVEL WALLS, SHALL
USE 28" LONG "CS16" STRAPS TO TIE THEM TOGETHER. (SEE DETAIL 10/D1)

ALL WOOD SHEAR WALLS AND DIAPHRAGMS SHALL CONFORM TO THE
FOLLOWING:

A) SHEETS USED IN THE CONSTRUCTION OF DIAPHRAGMS AND SHEAR WALLS
SHALL NOT BE LESS THAN 4' X 8' IN SIZE

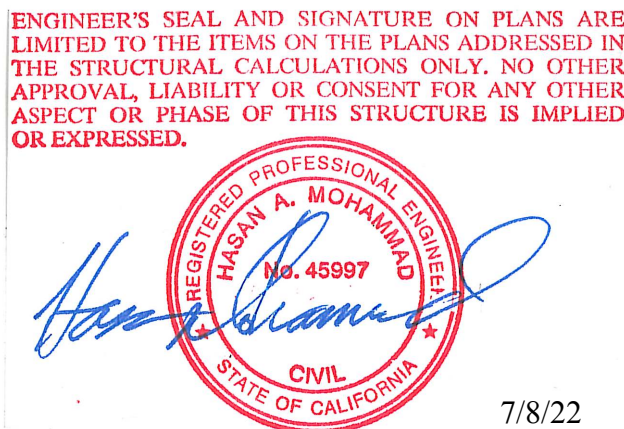
B) MINIMUM SIZE SHEET AT BOUNDARIES AND CHANGES IN FRAMING SHALL BE
24" UNLESS ALL EDGES ARE BLOCKED AND NAILED.

C) PROVIDE FRAMING MEMBERS OR BLOCKING AT ALL PANEL EDGES IN
SHEAR WALLS

ALL ELEVATIONS ARE GIVEN FROM TOP OF FLOOR SLAB.

SEE DETAIL 1/D2 FOR TYPICAL BEAM CONNECTION DETAILS

ALL ATTIC ACCESS OPENINGS SHALL BE GASKETED TO PREVENT AIR LOSS.



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WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIC PROJECT
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THE WRITTEN CONSENT OF C.W.B. DESIGNS. VISUAL CONTACT WITH
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STANDARD PLAN #1 FOR:

CITY OF CHOWCHILLA

130 S 2ND STREET
CHOWCHILLA, CA 93610
PHONE: 559-665-8615

ROOF FRAMING-B

SHEET

22

OF 19

DATE: 06-17-2022

CWB DESIGNS

3838 N. CHICKADEE AVE.
SANGER, CA 93657
PHONE: 559.294.6534

CWB

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REV	DATE
NEW	05.09.22
ENG	05.25.22
SUB	06.17.22

DRAWING FILE
C:\CHOWCHILLA
PLAN 1\55B

HEADER & BEAM SCHEDULE			
MARK	BEAM SIZE	GRADE	REMARKS
B1	4x6	D.F. #2	
B2	4x6	D.F. #2	
B3	4x6	D.F. #2	
B4	4x6	D.F. #2	
NOTES: BEAM DESIGN NO. AS REFERENCED IN ENGINEER'S CALCULATIONS. ALL LUMBER SHALL BE GRADE MARKED, D.F. STD. OR BETTER, U.N.O. GLUE-LAMINATED WOOD TO BE 24F-V4 DF/DF, U.N.O. ALL BEAMS SHALL HAVE SOLID SUPPORT TO FOUNDATION. UNLESS NOTED OTHERWISE, PROVIDE MIN (U) 2X TRIMMER AT EACH END.			

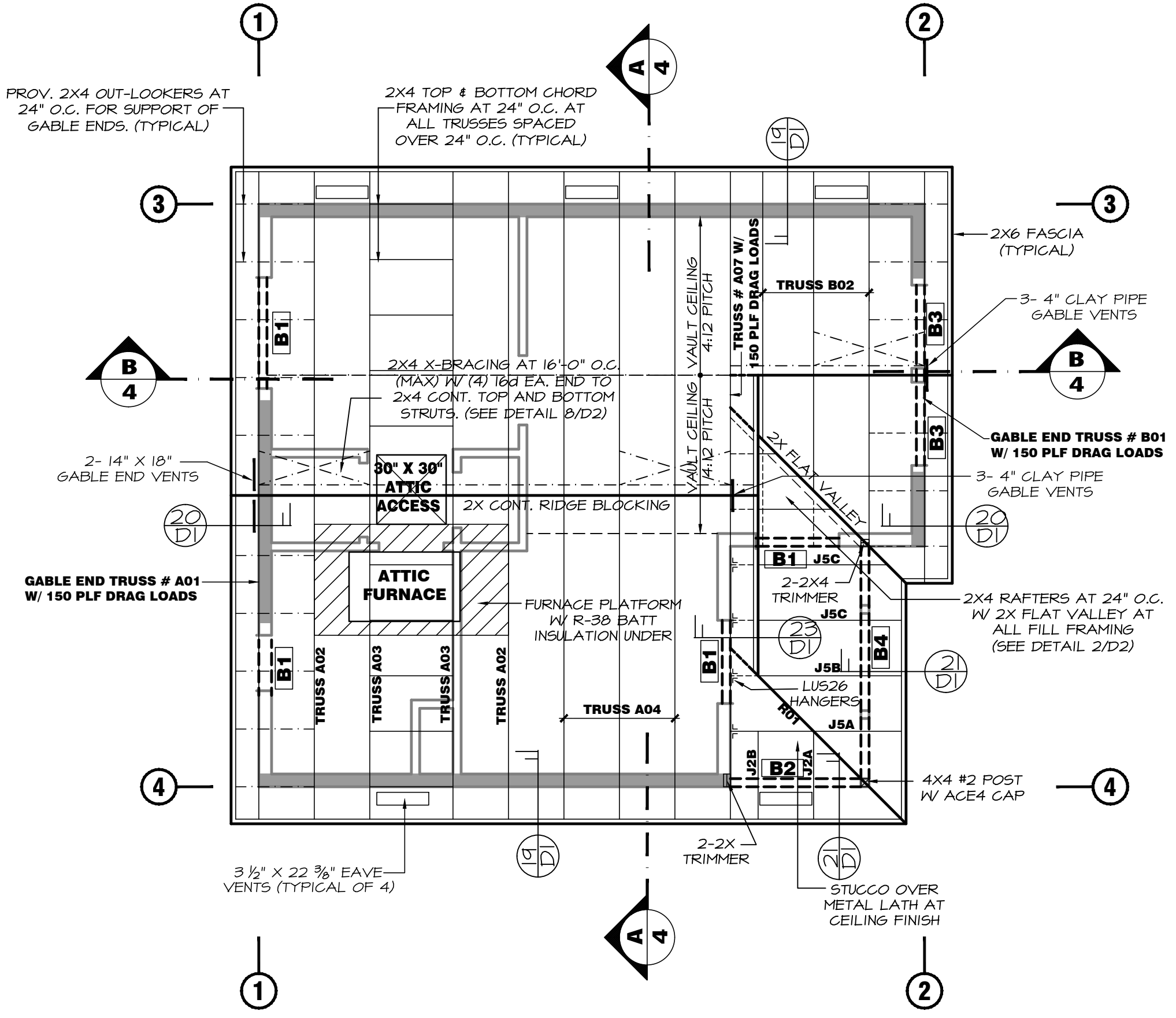
VENTILATION CALCULATIONS:
(AT ELEVATION C)

TOTAL ATTIC AREA: 487 SQ. FT.
487 SQ. FT. X 1/150 = 3.2 S.F. REQ'D
3.2 SQ. FT. X 144 = 460 SQ. IN. REQ'D.
COMBUSTION AIR:
(80K / 4K) = 20 S.I. ADDITIONAL REQ'D

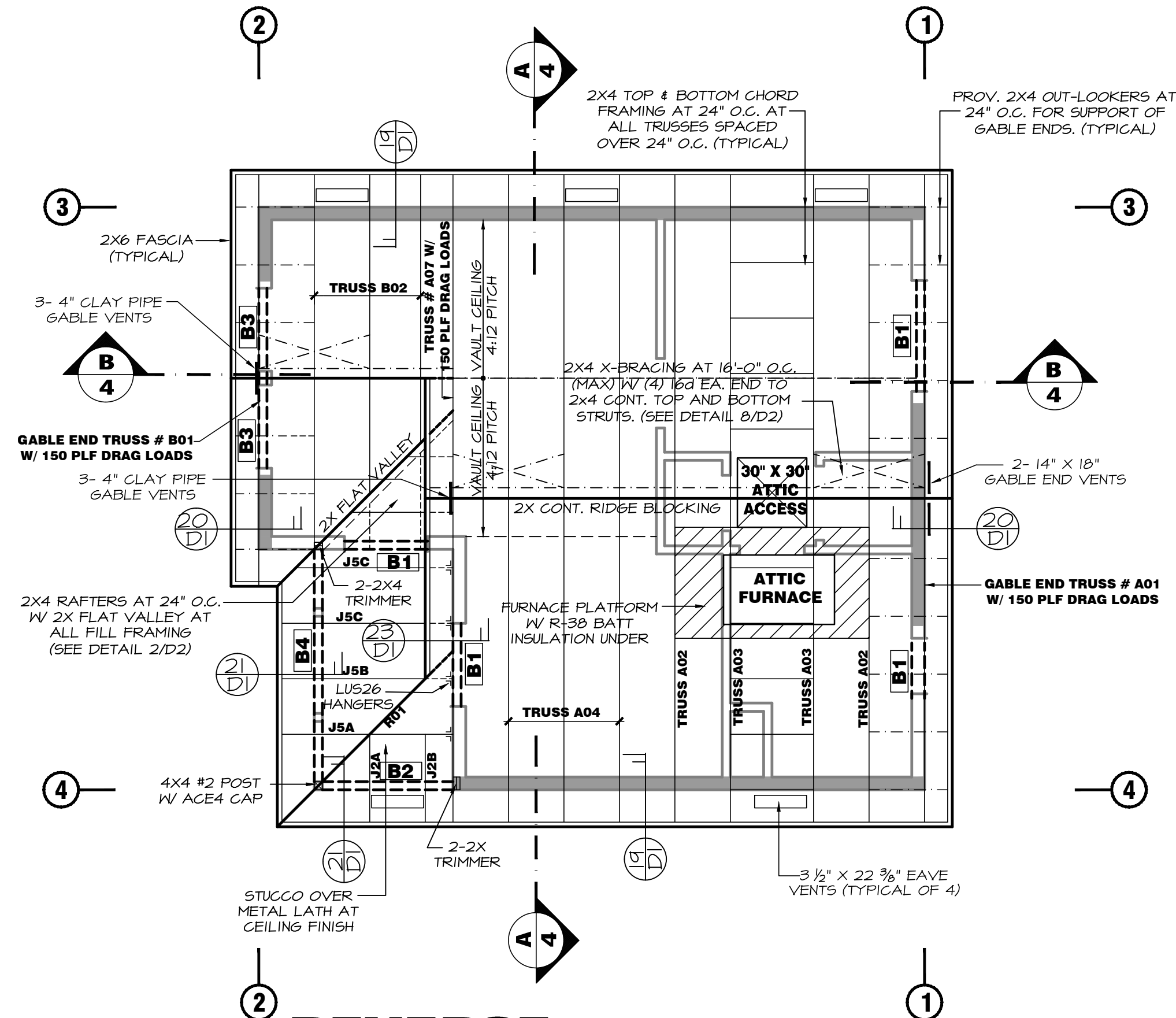
(3) 3 1/2" X 22 1/2" EAVE VENTS 235 S.I.
(2) 14" X 18" GABLE END VENTS 236 S.I.
(2) 3- 4" DIAM. CLAY PIPE VENTS 50 S.I.
TOTAL VENTILATION PROVIDED: 521 S.I.

ALL VENTS SHALL HAVE CORROSION RESISTANT
SCREENS WITH OPENINGS AT LEAST 1/8", AND NOT MORE
THAN 1/4" MAXIMUM.
PROVIDE 1" MIN. AIR SPACE BETWEEN INSULATION AND
ROOF SHEATHING.

PROVIDE MIN. 4'-0" LONG BAFFLES AT EAVE VENTS
WHERE LOOSE FILLED INSULATION IS USED IN THE ATTIC
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ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0" ELEVATION C



REVERSE
ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0" ELEVATION C

ROOF FRAMING NOTES:

USE PRE-MANUFACTURED TRUSSES AT 24" O.C. UNLESS NOTED OTHERWISE IN
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ALL FRAMING LUMBER TO BE D.F. #2 OR BETTER UNLESS NOTED OTHERWISE IN
DRAWINGS.

ALL FASCIA TO BE 2x6 RESAWN HEM FIR

ROOF COVERING TO BE "EAGLE" (ESR 1900) CLASS "A", CONCRETE TILE OVER
30 # FELT OVER 1/2" CDX RATED 24/00 PLYWOOD ROOF SHEATHING (OR 1/6"
OSB RATED 24/16) WITH BD AT 6" O.C. AT EDGE AND BOUNDARY NAILING AND
BD AT 12" O.C. AT FIELD NAILING. THE ENTIRE PERIMETER SHALL BE BLOCKED
AND EDGE NAILED.

AN ANTI-PONDING DEVICE IS REQUIRED AT THE BOTTOM COURSE OF ALL TILE
ROOFS WHERE A RAISED FASCIA IS USED.

NAILING OF PLYWOOD SHEAR WALLS OR PLYWOOD DIAPHRAGMS SHALL BE
DONE WITH COMMON WIRE NAILS, U.N.O. SHOULD THE CONTRACTOR DESIRE TO
USE ANY OTHER FASTENERS, HE SHALL OBTAIN WRITTEN APPROVAL FROM THE
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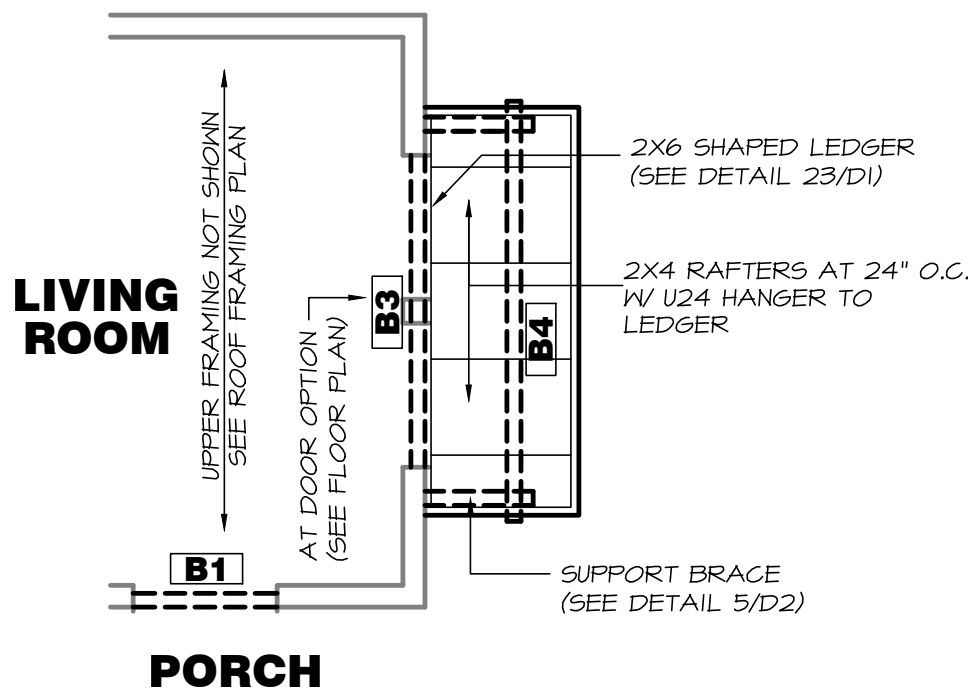
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SEE DETAIL 1/D2 FOR TYPICAL BEAM CONNECTION DETAILS

ALL ATTIC ACCESS OPENINGS SHALL BE GASKETED TO PREVENT AIR LOSS.



AWNING FRAMING
SCALE: 1/4" = 1'-0" AT OPTIONAL AWNING

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STANDARD PLAN #1 FOR:

CITY OF CHOWCHILLA

130 S 2ND STREET
CHOWCHILLA, CA 93610
PHONE: 559-665-8615

ROOF FRAMING-C

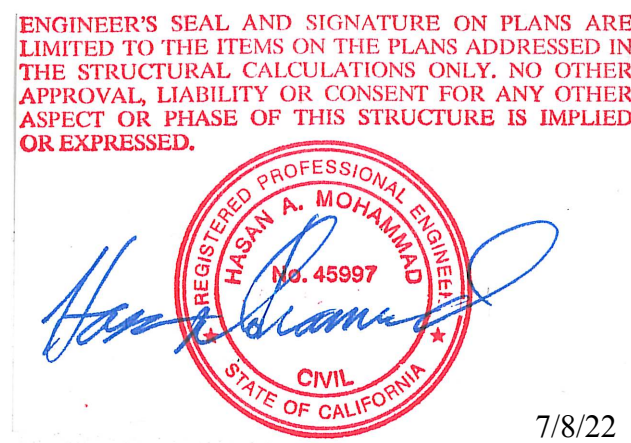
DATE: 06-17-2022

CWB DESIGNS

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SANGER, CA 93657
PHONE: 559.294.6534

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SUB	06.17.22

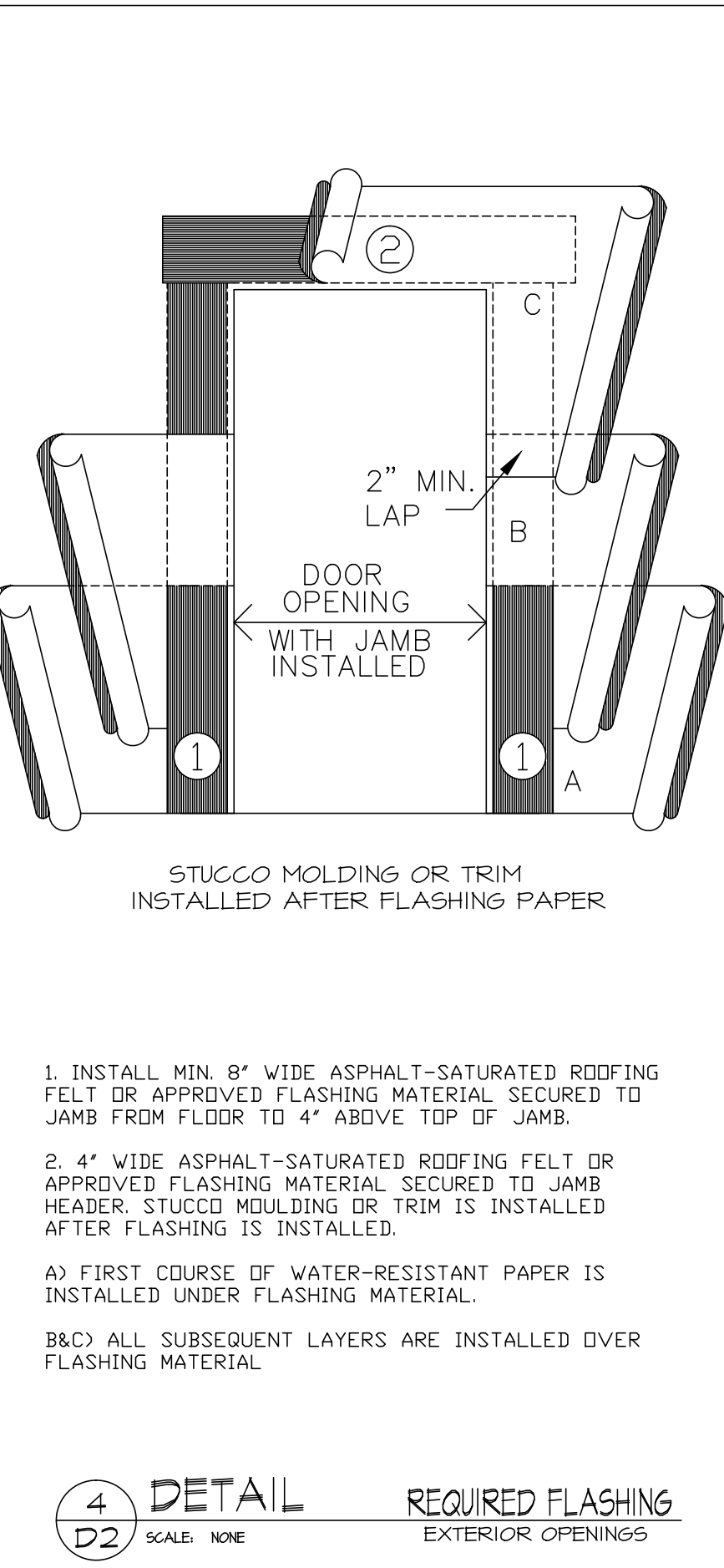
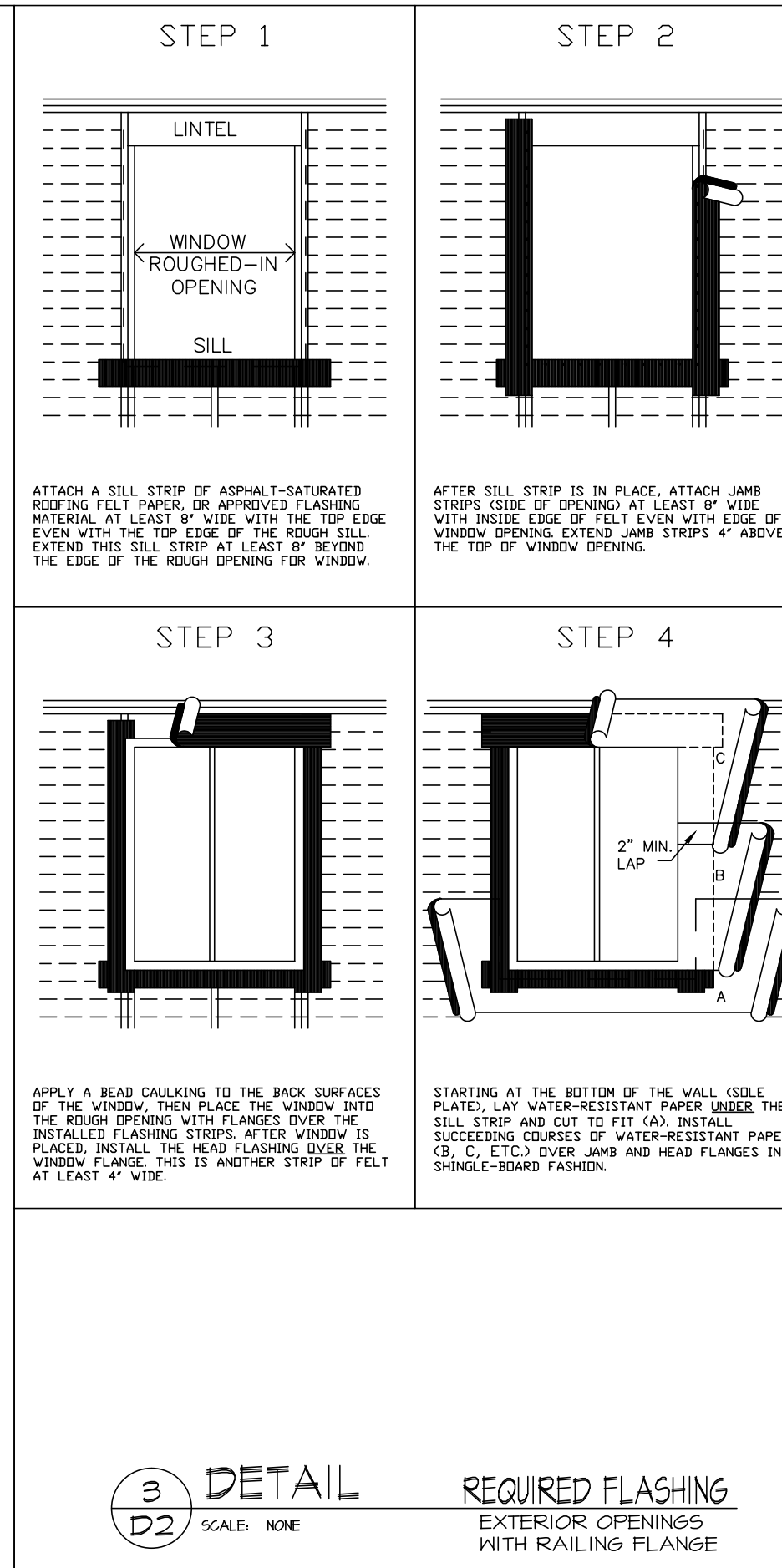
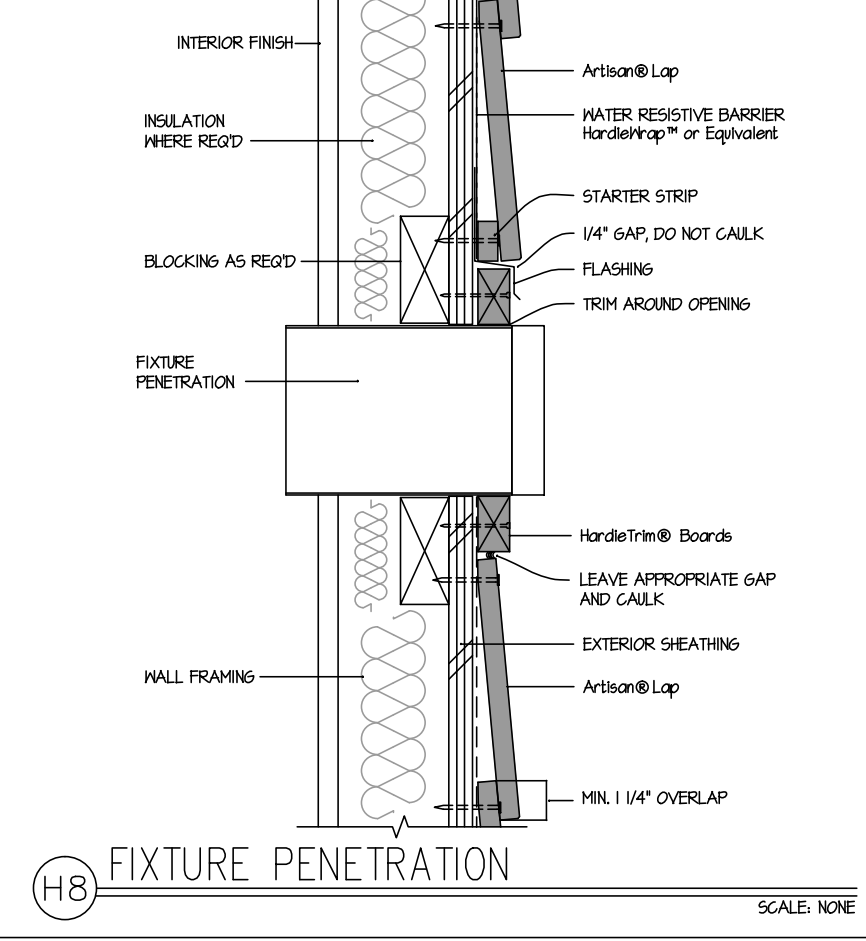
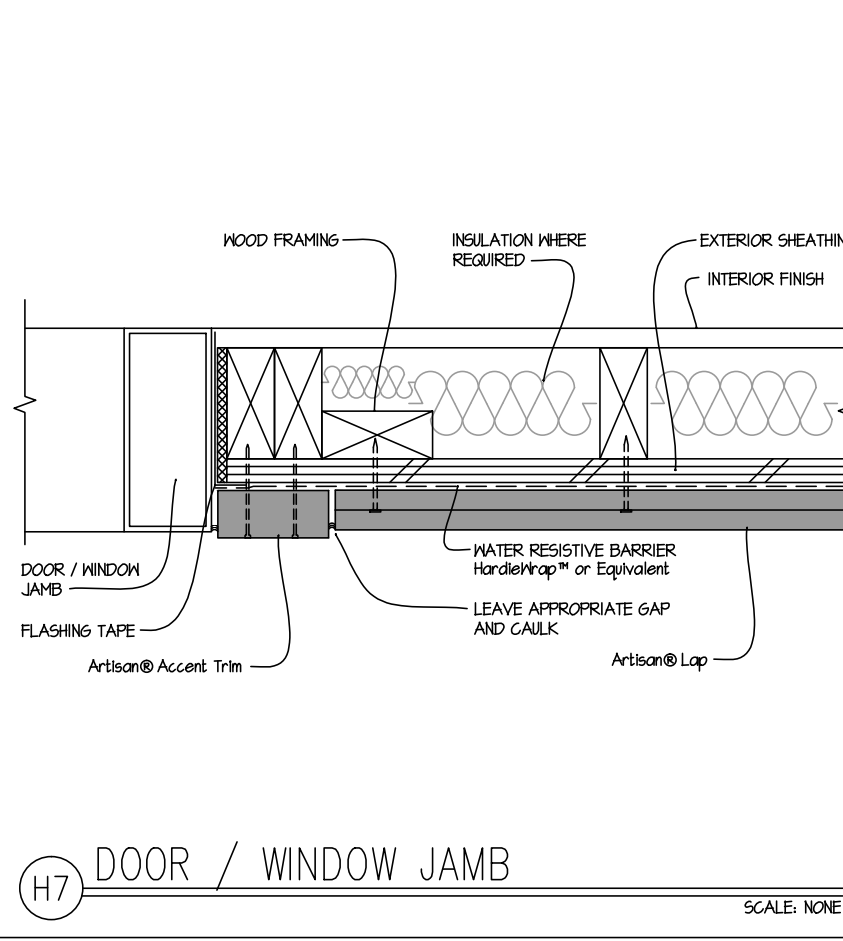
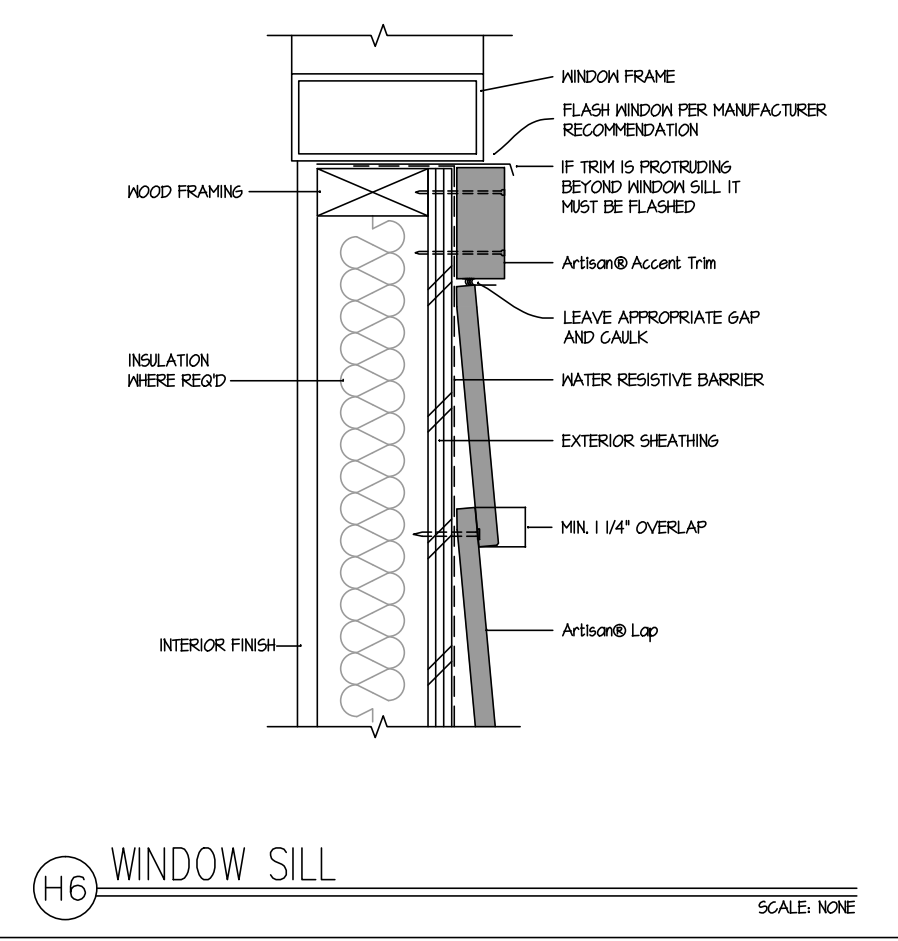
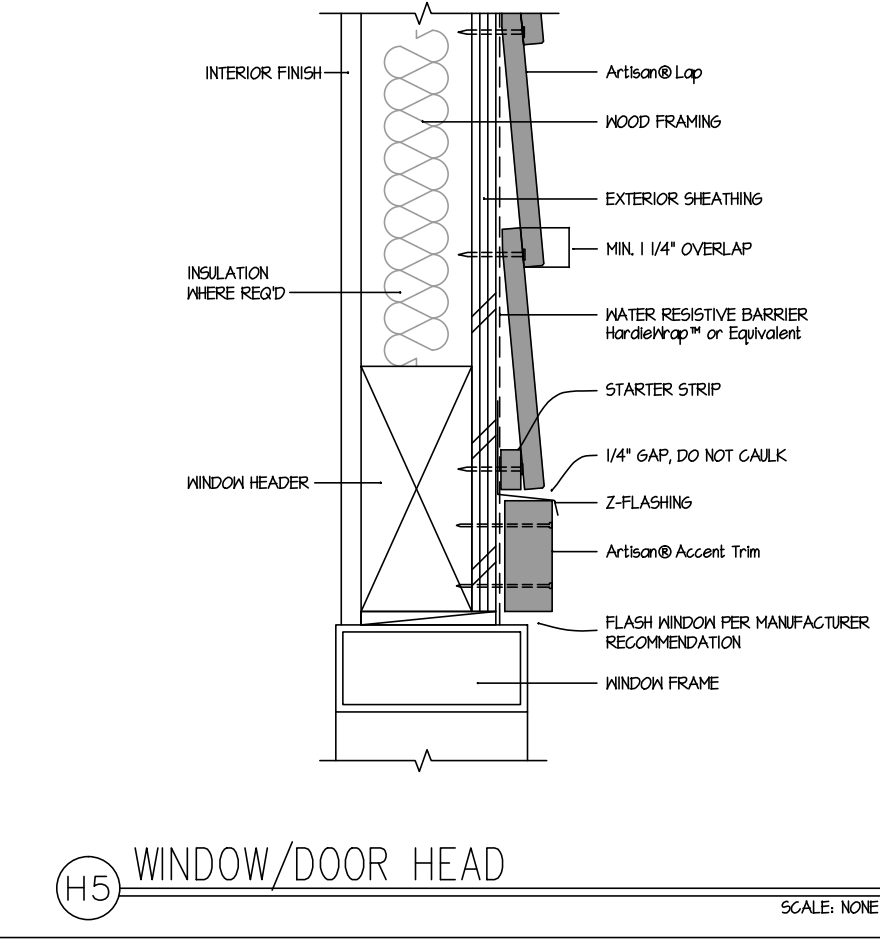
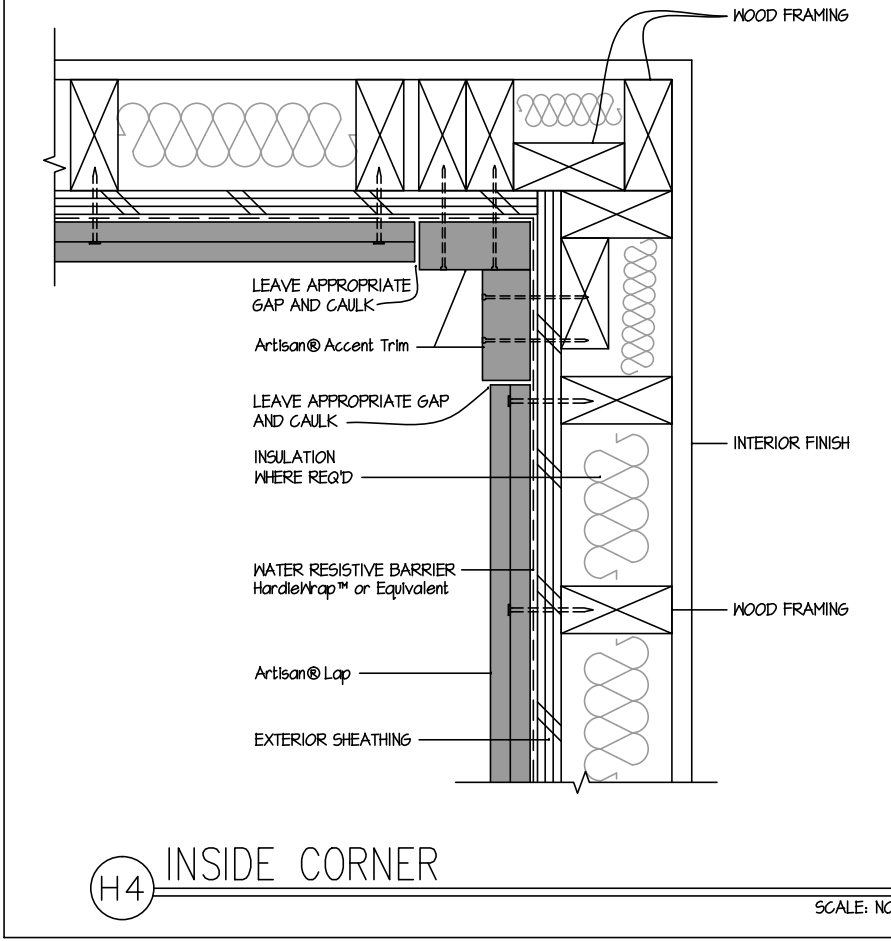
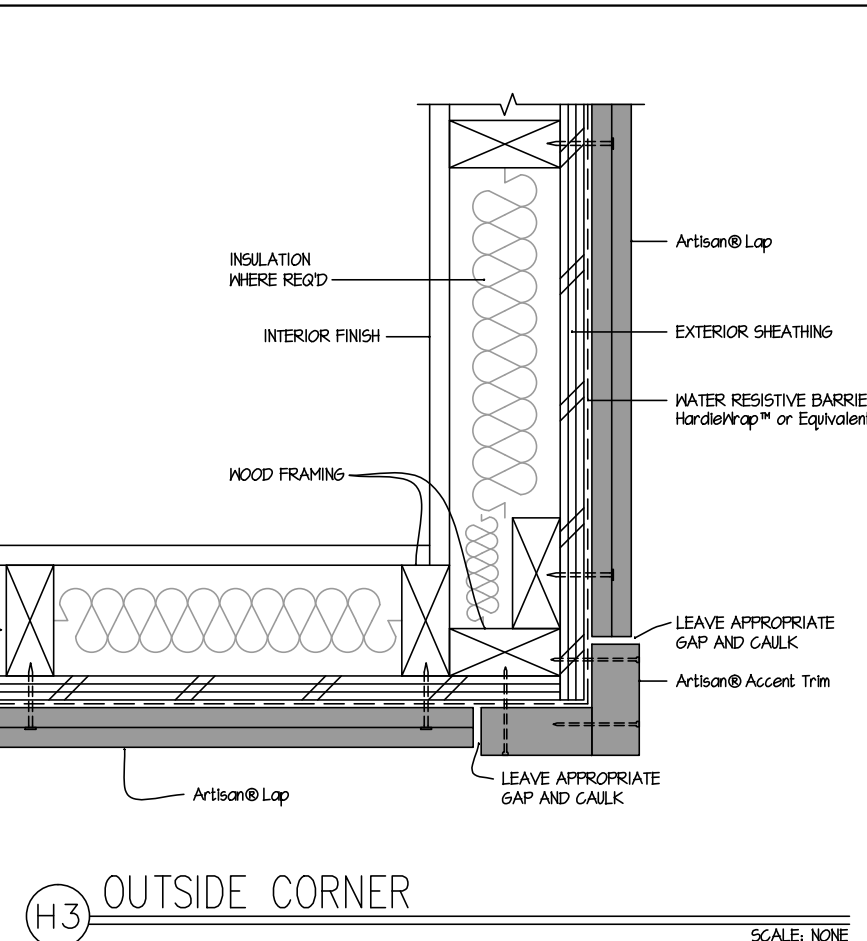
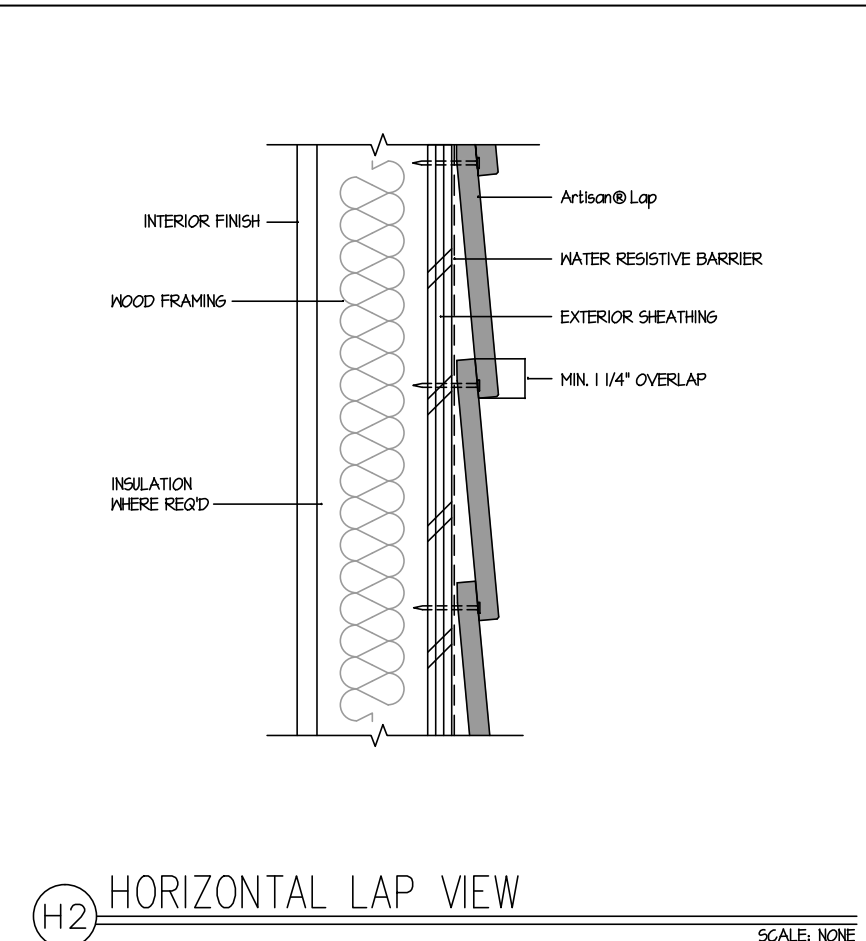
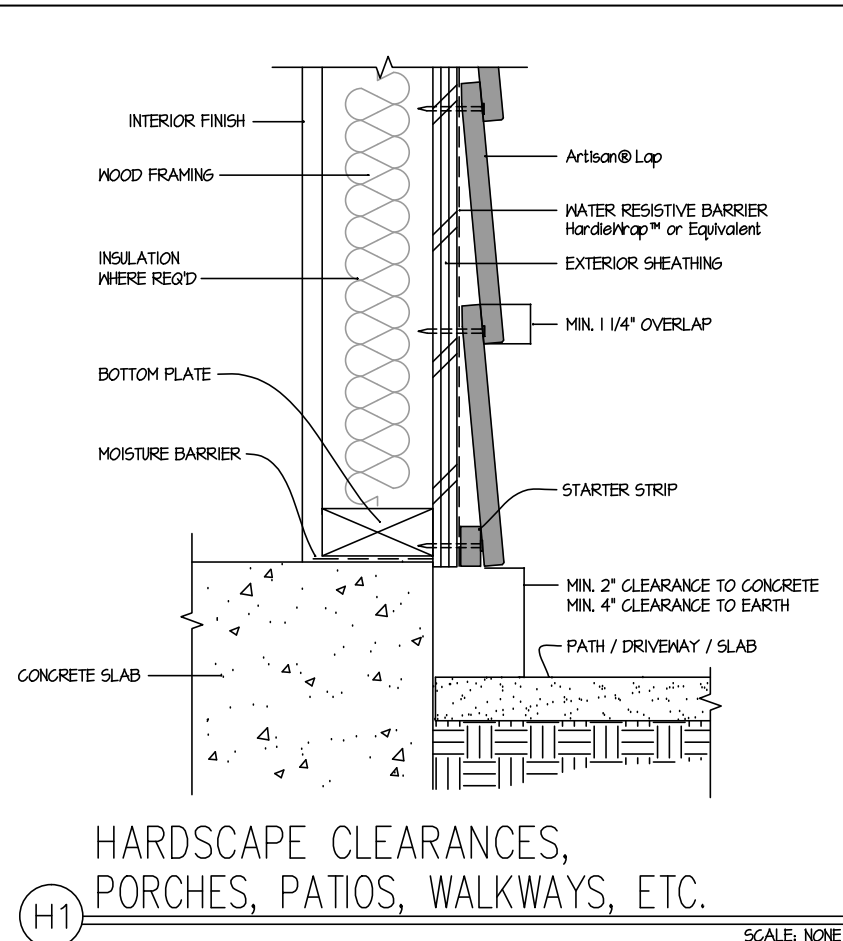
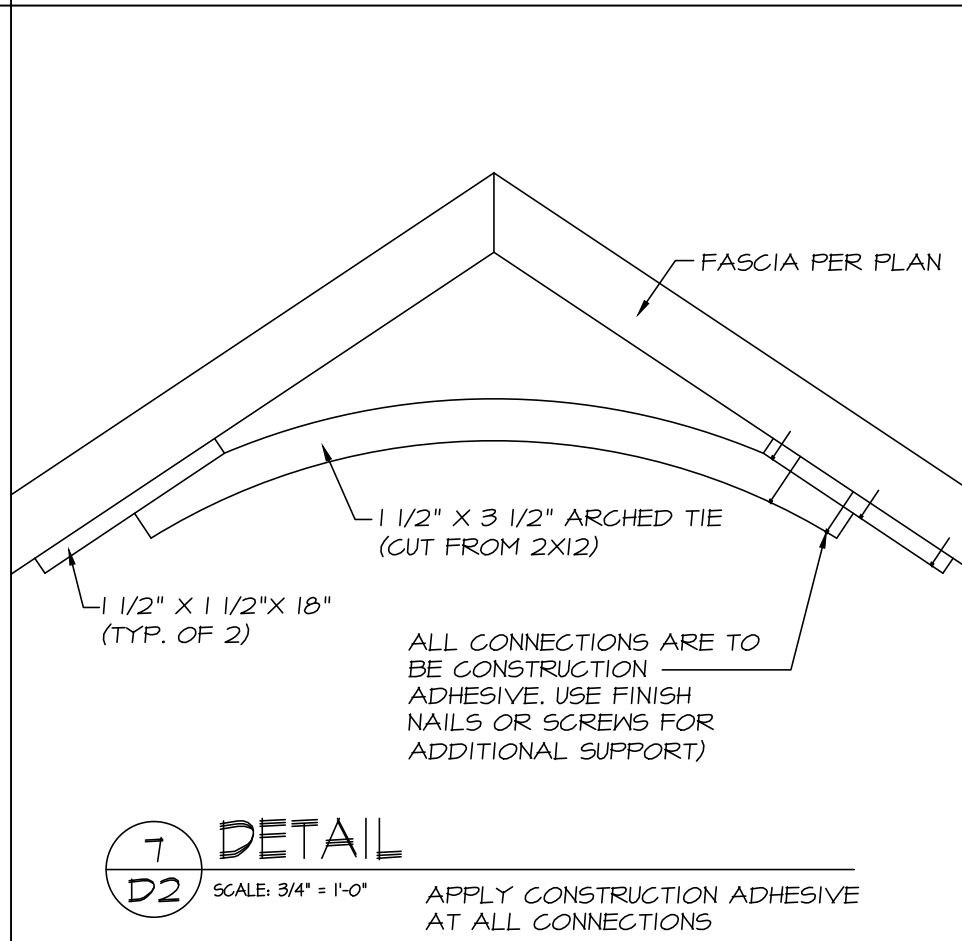
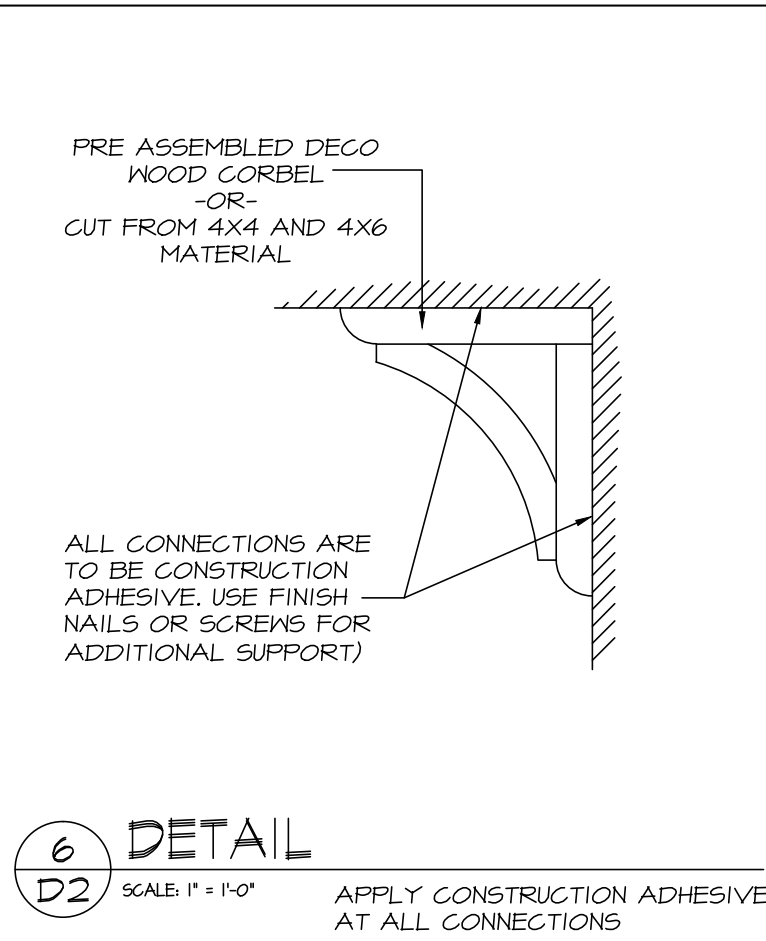
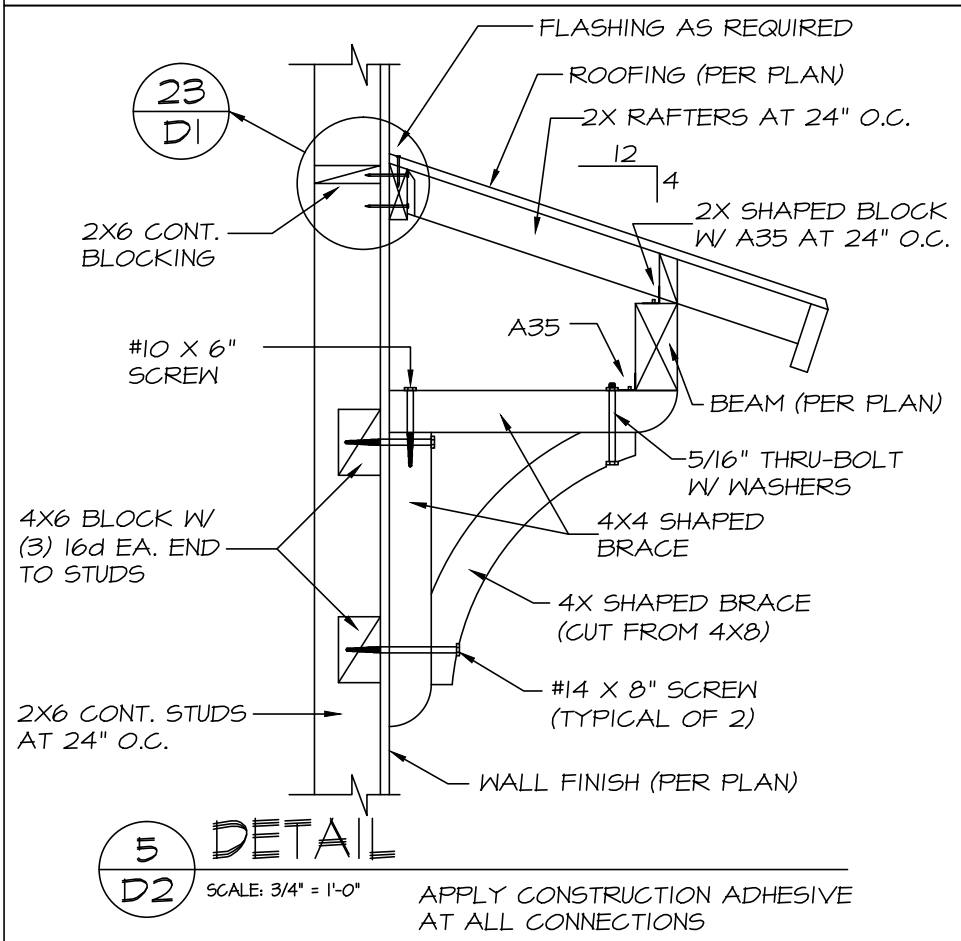
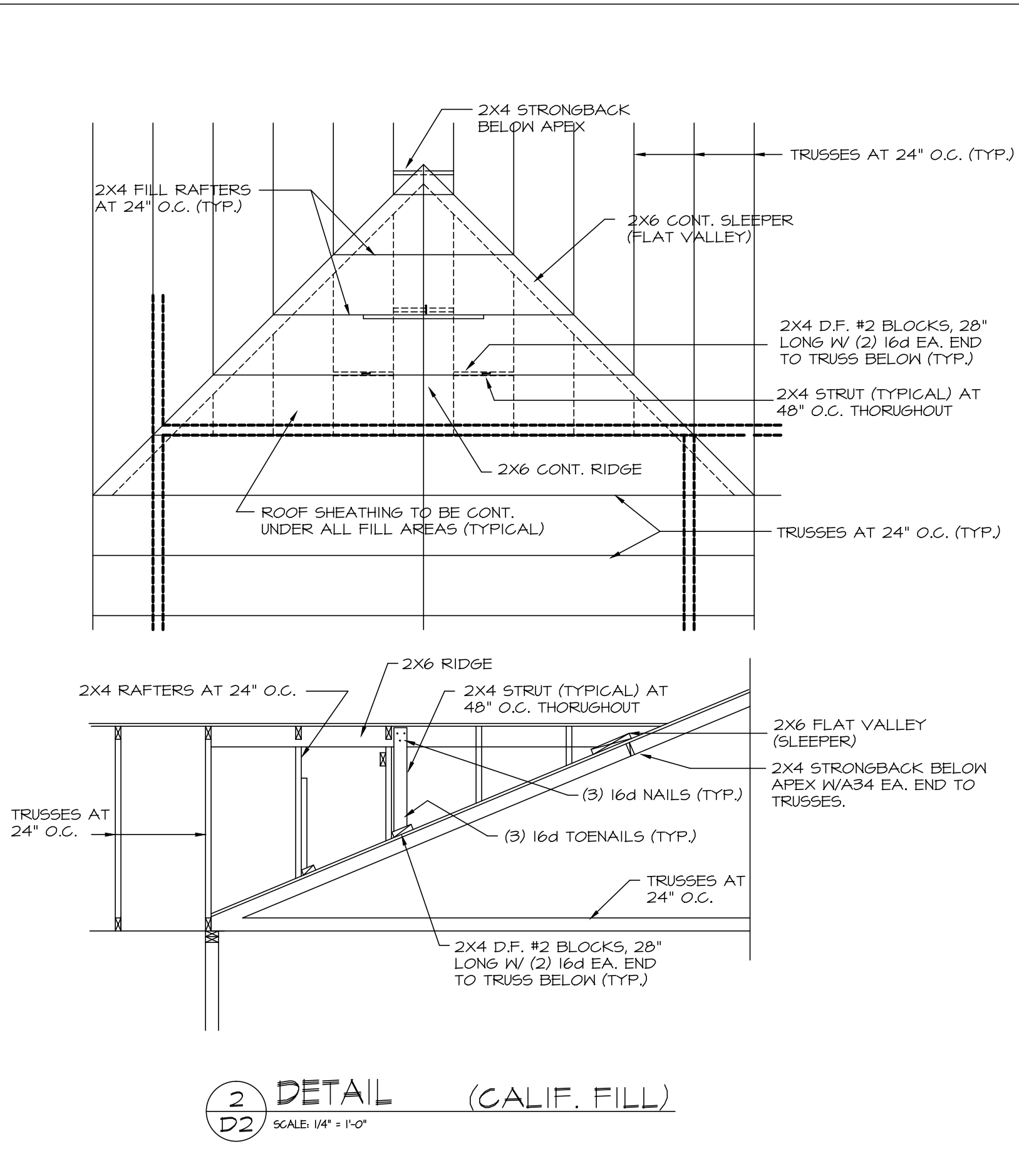
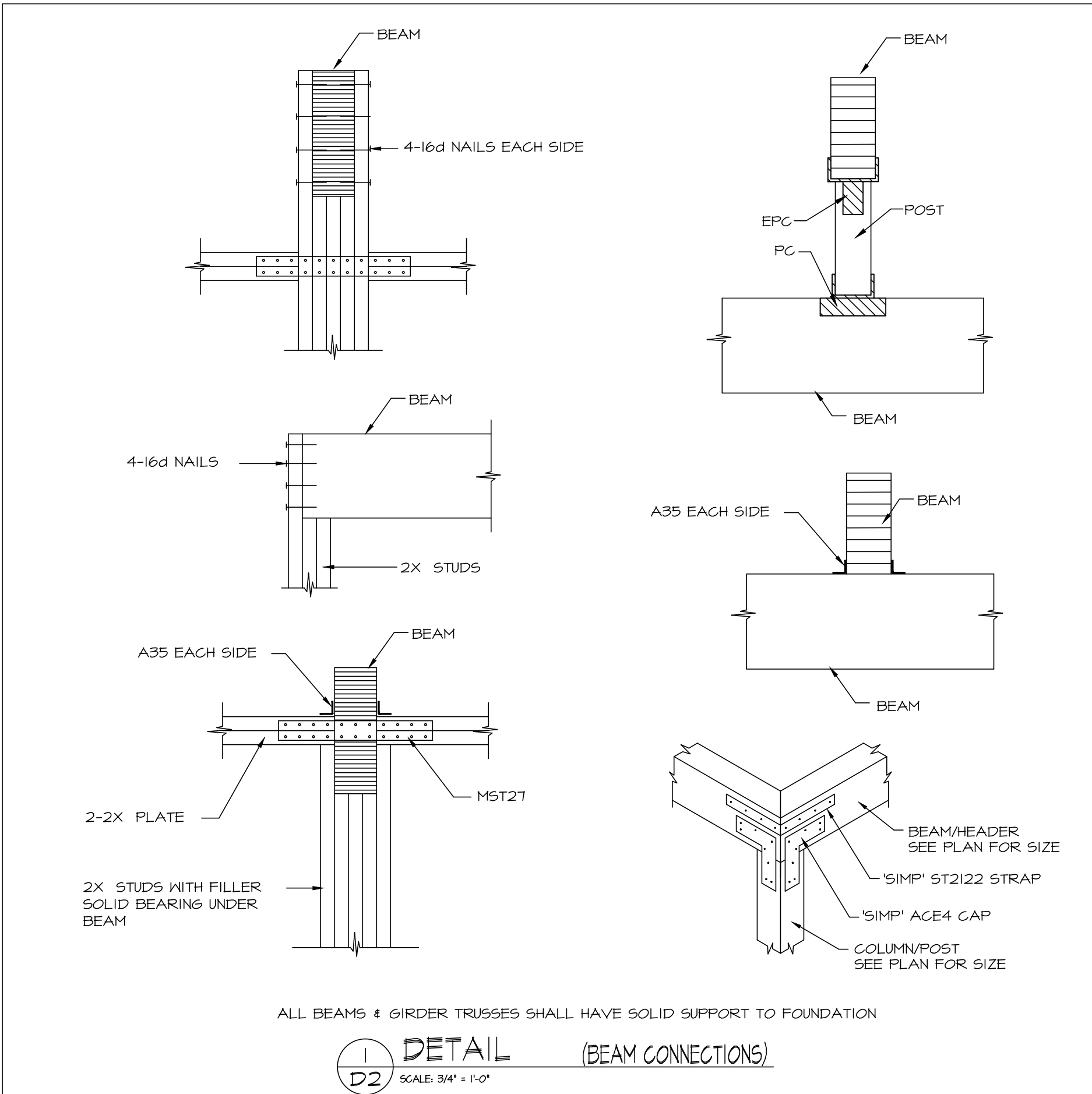
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PLAN 1.DWG



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7/8/22

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1. INSTALL MIN. 8" WIDE ASPHALT-SATURATED ROOFING FELT OR APPROVED FLASHING MATERIAL SECURED TO JAMB FROM FLOOR TO 4" ABOVE TOP OF JAMB.
2. 4" WIDE ASPHALT-SATURATED ROOFING FELT OR APPROVED FLASHING MATERIAL SECURED TO JAMB HEADER. STUCCO MOLDING OR TRIM IS INSTALLED AFTER FLASHING IS INSTALLED.
- A) FIRST COURSE OF WATER-RESISTANT PAPER IS INSTALLED UNDER FLASHING MATERIAL.
- B&C) ALL SUBSEQUENT LAYERS ARE INSTALLED OVER FLASHING MATERIAL.

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REGISTERED PROFESSIONAL ENGINEER
HASAN A. MOHAMMED
NO. 45997
CIVIL
STATE OF CALIFORNIA

7/8/22

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PLAN 11ADB

DATE: 06-17-2022

CWB DESIGNS

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SANGER, CA 93657
PHONE: 559.294.6534

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STANDARD PLAN #1 FOR:

CITY OF CHOWCHILLA

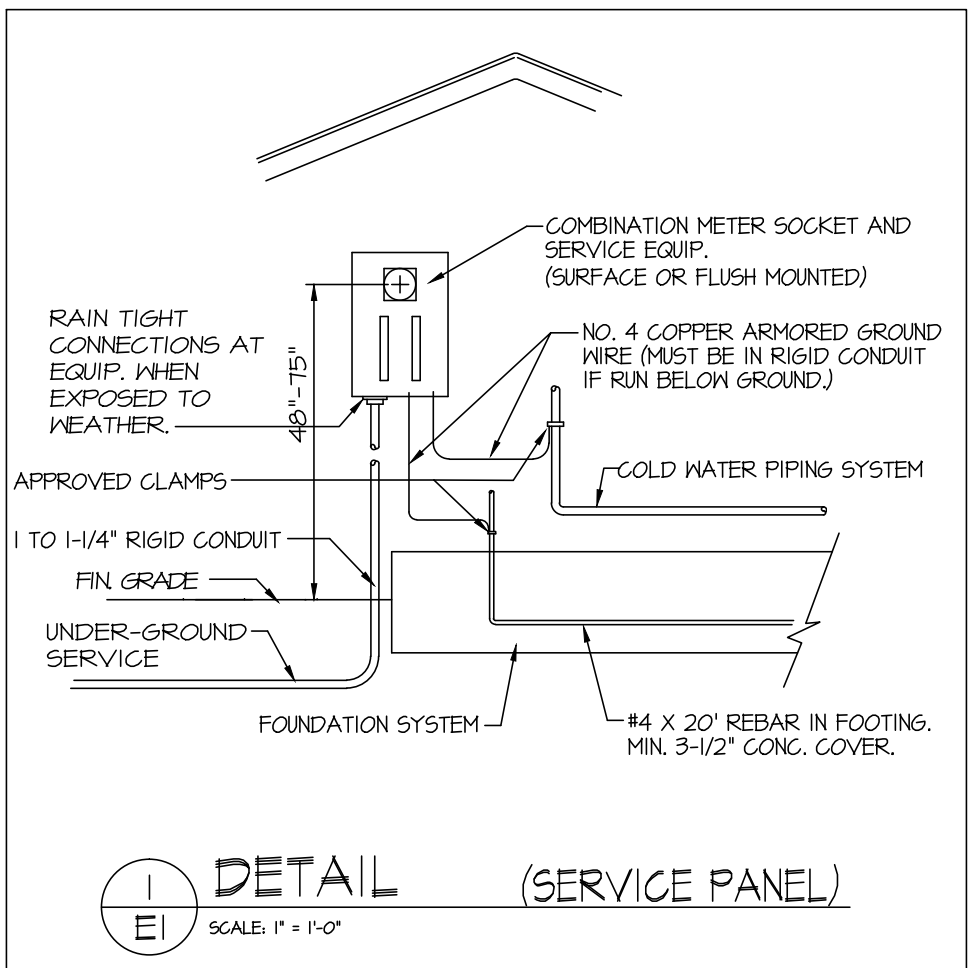
130 S 2ND STREET
CHOWCHILLA, CA 93610
PHONE: 559-665-8615

DETAILS

SHEET

D2

OF 19



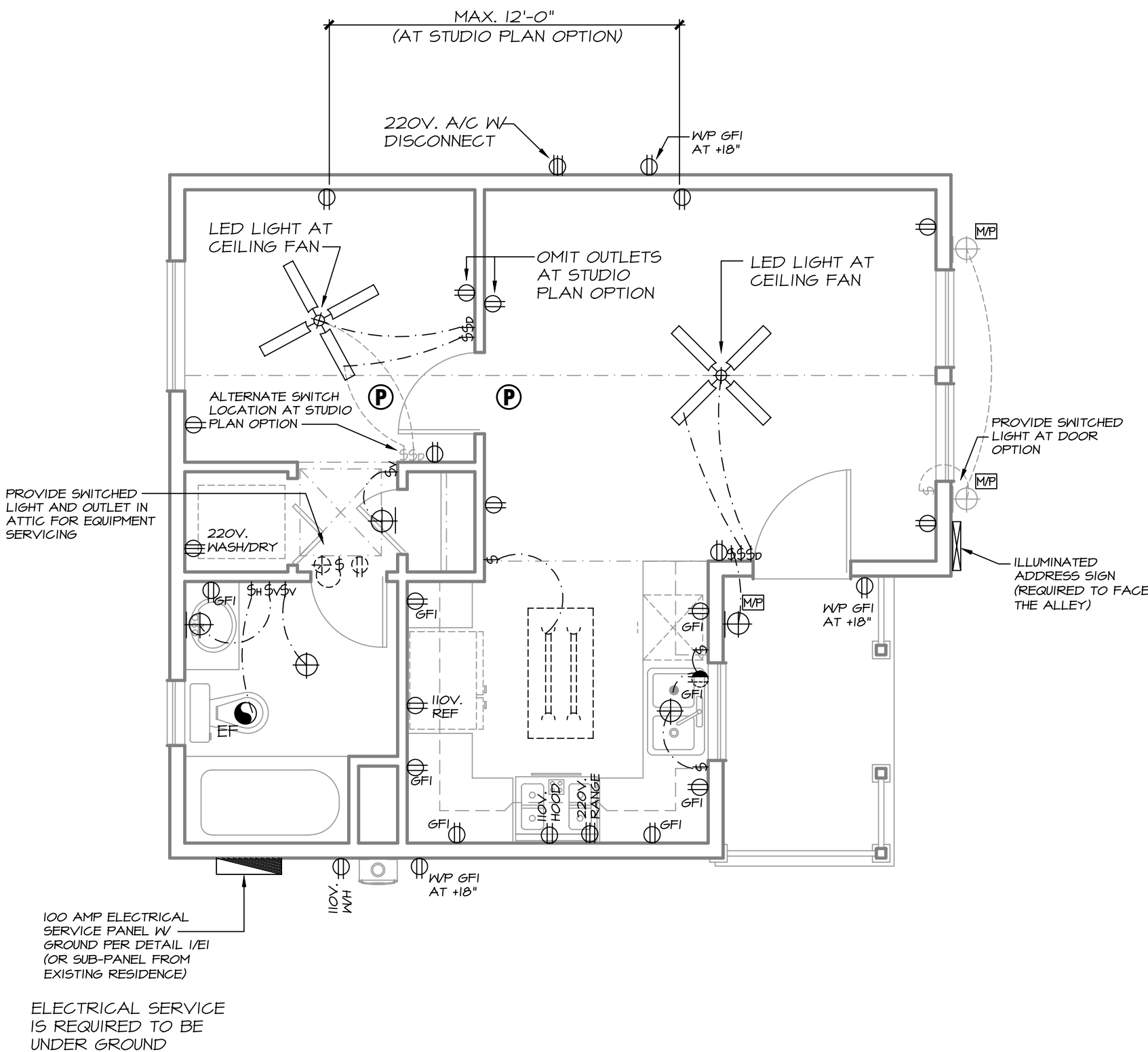
WATER HEATING MANDATORY MEASURES

WATER HEATING SYSTEMS USING GAS TO SERVE INDIVIDUAL DWELLING UNITS SHALL INCLUDE THE FOLLOWING COMPONENTS:

WATER HEATING SYSTEMS USING GAS OR PROPANE TO SERVE INDIVIDUAL DWELLING UNITS SHALL INCLUDE THE FOLLOWING COMPONENTS:

- A DEDICATED 125 VOLT, 20 AMP RECEPTACLE THAT IS CONNECTED TO THE ELECTRIC PANEL WITH A 120/240 VOLT 3 CONDUCTOR, 10 AWG COPPER BRANCH CIRCUIT, WITHIN 3' FROM THE WATER HEATER AND ACCESSIBLE TO THE WATER HEATER WITH NO OBSTRUCTIONS. IN ADDITION, ALL OF THE FOLLOWING:
 - BOTH ENDS OF THE UNUSED CONDUCTOR SHALL BE LABELED WITH THE WORD "SPARE" AND BE ELECTRICALLY ISOLATED; AND
 - A RESERVED SINGLE POLE CIRCUIT POLE BREAKER SPACE IN THE ELECTRICAL PANEL ADJACENT TO THE CIRCUIT BREAKER FOR THE BRANCH CIRCUIT IN A ABOVE AND LABELED WITH THE WORDS, "FUTURE 240 VOLT USE"; AND
- A CATEGORY III OR IV VENT, OR A TYPE B VENT WITH STRAIGHT PIPE BETWEEN THE OUTSIDE TERMINATION AND THE SPACE WHERE THE WATER HEATER IS INSTALLED; AND
- A CONDENSATE DRAIN THAT IS NO MORE THAN 2 INCHES HIGHER THAN THE BASE OF THE INSTALLED WATER HEATER, AND ALLOWS NATURAL DRAINING WITHOUT PUMP ASSISTANCE, AND
- A GAS SUPPLY LINE WITH A CAPACITY OF AT LEAST 200,000 BTU/HR. - 2019 CEC 150N

ELECTRICAL CALCULATIONS	
AREA OF BUILDING:	341 SF.
LIGHTING: 3 WATTS PER SQ. FT.:	1191 WATTS
TWO SMALL APPLIANCES:	3000 WATTS
DISHWASHER	1000 WATTS
DISPOSAL 1/2 HP.	500 WATTS
CLOTHES WASHER	1500 WATTS
CLOTHES DRYER	5000 WATTS
MICROWAVE	1500 WATTS
RANGE	12000 WATTS
SUBTOTAL	25691 WATTS
PER TABLE 220-30 NEC.: FIRST 100% AT 100% REMAINING 156% AT 40%:	10000 WATTS 6216 WATTS
TOTAL COMPUTED LOAD:	16216 WATTS 10.8 AMPS
A/C UNIT 20 FLA AT 125%:	25.0 AMPS
TOTAL AMPS REQUIRED:	45.8 AMPS
PROVIDE 100 AMP ELECTRICAL SERVICE PANEL, SERVICE RATING AT 120/240 VOLTS SINGLE PHASE, THREE WIRE WITH #4 COPPER GROUND. SEE DETAIL 1/EI FOR UFER GROUND REQUIREMENTS.	



ELECTRICAL PLAN

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

ELECTRICAL SYMBOL SCHEDULE	
	DUPLEX RECEPTACLE, WALL MOUNTED +12", 15a 3w
	DUPLEX RECEPTACLE, 1/2 SWITCHED, +12", 15a 3w
	220 V SPECIAL OUTLET MOUNTED +12"
	JUNCTION BOX, MOUNTED +18"
	PUSH BUTTON, LOW VOLTAGE, MOUNTED +54"
	SWITCH, SINGLE POLE MOUNTED +54"
	3-WAY SWITCH
	DIMMER SWITCH
	HUMIDISTAT SWITCH (SEE NOTES)
	VACANCY SENSOR SWITCH
	RECESSED LED CAN LIGHT FIXTURE
	CEILING MOUNTED LED LIGHT FIXTURE
	WALL MOUNTED BRACKET LED LIGHT
	MOTION SENSOR W/ PHOTO CELL
	SMOKE DETECTOR, CEILING MOUNTED
	CARBON MONOXIDE DETECTOR, CEILING MOUNTED
	COMBINATION SMOKE DETECTOR / CARBON MONOXIDE DETECTOR
	GAS OUTLET
	EXHAUST FAN (SEE ALSO SHEET M1)
	ELECTRIC VEHICLE (EV) CHARGING STATION. (SEE NOTE)
	SERVICE ENTRANCE WITH UFER GROUND
	ILLUMINATED ADDRESS SIGN. NUMBERS TO BE MIN. OF 4" HIGH USING A MIN 1/2" STROKE WIDTH

ELECTRICAL PLAN NOTES

PROVIDE AN APPROVED SMOKE DETECTOR LOCATED BETWEEN THE KITCHEN AND ANY BEDROOM, ON THE KITCHEN SIDE AND AT LEAST 36" FROM THE AIR OUTLET OR RETURN. SMOKE DETECTORS SHALL ALSO BE INSTALLED IN EACH STORY OF A DWELLING, AT THE TOP OF VAULTED CEILINGS ADJACENT TO HALLS AND SLEEPING AREAS, AND ONE IN EACH ROOM USED FOR SLEEPING. DETECTORS SHALL BE HARD WIRED INTO THE ELECTRICAL SYSTEM, INTERCONNECTED TO SOUND SIMULTANEOUSLY, AND SHALL BE EQUIPPED WITH A BATTERY BACKUP, ALARMS TO SOUND IN THE SLEEPING AREAS.

PROVIDE AN APPROVED CARBON MONOXIDE DETECTOR OUTSIDE OF EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S). CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACK-UP WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED. THE ALARMS SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL OF THE ALARMS. CARBON MONOXIDE ALARMS COMBINED WITH SMOKE ALARMS SHALL COMPLY WITH SECTION 905, ALL APPLICABLE STANDARDS, AND REQUIREMENTS FOR LISTINGS AND APPROVAL BY THE OFFICE OF THE STATE FIRE MARSHAL, FOR SMOKE ALARMS.

ELECTRIC RANGES AND CLOTHES DRYER SHALL BE PROVIDED WITH AN EQUIPMENT GROUNDING CONDUCTOR BY MEANS OF A SEPARATE FLEXIBLE WIRE OR STRAP. (4 CONDUCTORS REQUIRED)

EACH DISCONNECTING MEANS REQUIRED BY THE NEC FOR MOTORS AND APPLIANCES, AND EACH SERVICE FEEDER, OR BRANCH CIRCUIT AT THE POINT WHERE IT ORIGINATES SHALL BE LEGIBLY MARKED TO INDICATE ITS PURPOSE UNLESS LOCATED AND ARRANGED SO THE PURPOSE IS EVIDENT. THE MARKING SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. (PROPER IDENTIFICATION IS TO BE SPECIFIC.)

EACH DISCONNECT SHALL BE ADJACENT TO AND IN SIGHT FROM THE EQUIPMENT SERVED

AN EXHAUST FAN WITH A CAPACITY OF 50 CFM INTERMITTENT OR 25 CFM CONTINUOUS SHALL BE PROVIDED IN PRIVATE BATHROOMS.

BATHROOM EXHAUST FANS THAT ARE NOT A COMPONENT OF THE WHOLE HOUSE VENTILATION SYSTEM MUST BE CONTROLLED BY A READILY ACCESSIBLE HUMIDISTAT, CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGES OF 40% TO 80 PERCENT. HUMIDISTAT FUNCTION OF FAN SHALL NOT BE CAPABLE OF BEING OVERRIDDEN. (USE PANASONIC RV-KC50-3WV CONDENSATION SENSOR SWITCH OR EQUAL.)

PROVIDE ILLUMINATED ADDRESS SIGN AS SHOWN ON PLANS. STREET ADDRESS NUMBERS SHALL BE A MINIMUM OF FOUR INCHES HIGH USING A MINIMUM STROKE WIDTH OF 1/2" AND LOCATED AS TO BE CLEARLY VISIBLE FROM THE ALLEY.

PROVIDE DESIGNATED 20 AMP CIRCUIT FOR:
A) 2 SMALL APPLIANCE CIRCUITS IN THE KITCHEN
B) THE LAUNDRY ROOM
C) BUILT-IN MICROWAVE OVENS

ALL 125 VOLT, SINGLE PHASE, 15 AMP AND 20 AMP BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN'S, BEDROOMS, SUN ROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR OTHER SIMILAR ROOMS OR AREAS, SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER (AFCI), COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT. (THE BREAKER MUST STATE "COMBINATION AFCI")

INTER SYSTEM BONDING IS REQUIRED FOR THIS RESIDENCE

BUILDER MUST PROVIDE THE NEW HOMEOWNER WITH A LUMINAIRE SCHEDULE THAT INCLUDES A LIST OF LAMPS INSTALLED IN THE LUMINAIRES.

BUILDER IS REQUIRED TO PROVIDE THE INSPECTOR WITH A COMPLETED LUMINAIRE SCHEDULE FOR REVIEW.

LIGHTING:

LIGHTING IN CLOTHES CLOSETS SHALL COMPLY W/ CEC SECTION 410-16.

ALL PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICACY IN ACCORDANCE WITH TABLE 150-0-A

1. BE RATED FOR ZERO CLEARANCE INSULATION CONTACT (IC)
2. MUST HAVE A LABEL THAT CERTIFIED THE FIXTURE AS AIRTIGHT
3. MUST BE SEALED WITH A GASKET OR CAULKING BETWEEN THE HOUSING AND THE CEILING.
4. FOR LUMINAIRES WITH HARDWIRED BALLASTS OR DRIVERS, ALLOW BALLAST OR DRIVER MAINTENANCE AND REPLACEMENT TO BE READILY ACCESSIBLE TO BUILDING OCCUPANTS FROM BELOW THE CEILING WITHOUT REQUIRING THE CUTTING OF HOLES IN THE CEILING
5. SHALL NOT CONTAIN SCREEN BASED SOCKETS
6. SHALL CONTAIN LIGHT SOURCES THAT COMPLY WITH REFERENCES JOINT APPENDIX JAB, INCLUDING THE ELE-VATED TEMPERATURE REQUIREMENTS, AND THAT ARE MARKED 6/10-2016-6A AS SPECIFIED IN REFERENCE JOINT APPENDIX JAB.

ALL FLUORESCENT LAMPS ARE REQUIRED TO HAVE AN EFFICIENCY OF NOT LESS THAN 45 LUMENS PER WATT.

ALL FLUORESCENT LAMPS RATED AT 13 WATTS OR GREATER SHALL HAVE AN ELECTRONIC BALLAST

PROVIDE MIN. (1) SWITCHED LIGHT FIXTURE IN ATTIC USED FOR STORAGE OR CONTAINING EQUIPMENT REQUIRES SERVICING. SWITCH SHALL BE LOCATED AT THE ATTIC ACCESS PANEL.

NO PARTS OF CORD CONNECTED FIXTURES, HANGING FIXTURES, TRACK LIGHTING, PENDANTS, OR CEILING FANS SHALL BE LOCATED DIRECTLY ABOVE ANY BATHTUB OR WITHIN A ZONE MEASURED 3 FT. HORIZONTALLY AND 8 FT. VERTICALLY FROM THE BATHTUB RIM

ALL LED LIGHTING MUST BE CERTIFIED TO CEC. IF THE LIGHTING IS NOT CERTIFIED IT MUST BE CONSIDERED AS "LOW EFFICACY LIGHTING". ALL LED LIGHTING USED AS "HIGH EFFICACY LIGHTING" SHALL HAVE THE DATA PROVIDED AT THE JOBSITE FOR INSPECTION PURPOSES.

OUTDOOR LIGHTING:

ALL OUTDOOR LIGHTING THAT IS ATTACHED TO THE BUILDING OR ANY OTHER BUILDING PROVIDED WITH COMMERCIAL POWER IS REQUIRED TO BE HIGH EFFICACY.

LIGHT FIXTURES INSTALLED ON THE OUTSIDE OF THE BUILDING MUST BE LISTED FOR DAMP LOCATIONS.

ALL LUMINAIRES PROVIDING RESIDENTIAL OUTDOOR LIGHTING SHALL BE CONTROLLED BY A MANUAL ON AND OFF SWITCH AND BE CONTROLLED BY PHOTOCELL AND MOTION SENSOR.

CONTROLS THAT OVERRIDE TO ON SHALL NOT BE ALLOWED UNLESS THE OVERRIDE AUTOMATICALLY REACTIVATES THE MOTION SENSOR WITHIN 6 HOURS

ALL EXTERIOR LIGHTING SHALL BE DIRECTED DOWNWARD AND SHIELDED TO CONFINE THE LIGHTING WITHIN THE BOUNDARIES OF THE SUBJECT PARCEL.

EXTERIOR LIGHTING SHALL NOT EXCEED 150 WATTS AND MUST NOT BE VISIBLE FROM ADJACENT PROPERTIES.

SWITCHING:

EXHAUST FANS SHALL BE SWITCHED SEPARATELY FROM LIGHTING SYSTEM.

LUMINAIRES SHALL BE SWITCHED WITH READILY ACCESSIBLE CONTROLS THAT PERMIT THE LUMINAIRES TO BE MANUALLY SWITCHED ON AND OFF.

NO CONTROLS SHALL BYPASS A DIMMER OR VACANCY SENSOR FUNCTION WHERE THAT DIMMER OR VACANCY SENSOR HAS BEEN INSTALLED TO COMPLY WITH SECTION 150.0(K).

AT LEAST ONE LIGHTING FIXTURE INSTALLED IN BATHROOMS, UTILITY ROOMS AND GARAGES SHALL BE CONTROLLED BY A VACANCY SENSOR.
ANY LED LIGHTING THAT IS NOT CERTIFIED AS HIGH EFFICACY TO THE CALIFORNIA ENERGY COMMISSION MUST BE JOINT APPENDIX JAB COMPLIANT AND MUST BE SWITCHED WITH A DIMMER SWITCH OR VACANCY SENSOR.

DIMMERS OR VACANCY SENSORS SHALL CONTROL ALL LUMINAIRES REQUIRED TO HAVE LIGHT SOURCES COMPLIANT WITH REFERENCE JOINT APPENDIX JAB. (EXCEPT IN HALLWAYS AND/OR CLOSETS LESS THAN 10 SF.)
ANY UNDER CABINET LIGHTING MUST BE SWITCHED SEPARATELY FROM OTHER LIGHTING SYSTEMS.

RECEPTACLES:

THE NUMBER OF ELECTRICAL BOXES THAT ARE MORE THAN 5 FEET ABOVE THE FINISHED FLOOR AND DO NOT CONTAIN A LUMINAIRE OR OTHER DEVICE SHALL BE NO GREATER THAN THE NUMBER OF BEDROOMS. THESE ELECTRICAL BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR CONTROL, OR FAN SPEED CONTROL.

BATHROOM RECEPTACLES MUST BE SERVED BY A SEPARATE 20 AMP CIRCUIT WITH NO OTHER OUTLETS SERVED FROM THAT CIRCUIT. (ONE CIRCUIT MAY SERVE ALL BATHROOMS)

PROVIDE RECEPTACLE WITHIN 25 FEET AND ON THE SAME LEVEL OF MECHANICAL EQUIPMENT.

FOR RECEPTACLES SERVING COUNTER TOPS:

A) RECEPTACLE OUTLETS SHALL NOT BE INSTALLED IN A FACE UP POSITION IN THE WORK SURFACES.

B) RECEPTACLE OUTLETS SHALL BE LOCATED ABOVE, BUT NOT MORE THAN 20" ABOVE THE COUNTER TOPS

C) RECEPTACLE OUTLETS SHALL BE PERMITTED TO BE MOUNTED NOT MORE THAN 12" BELOW THE COUNTERTOP PROVIDED THE COUNTERTOP DOES NOT EXTEND MORE THEN 6" BEYOND ITS SUPPORT BASE.

D) ON ISLAND AND PENINSULAR COUNTER TOPS, RECEPTACLES MAY BE MOUNTED A MAX. 12" BELOW COUNTER TOP PROVIDED THERE ARE NO BACK SPLASHES OR DIVIDERS AND NO MEANS TO MOUNT WITHIN 18" ABOVE COUNTERTOP, SUCH AS AN OVERHEAD CABINET.

ALL DWELLING UNIT RECEPTACLES SHALL BE LISTED TAMPER RESISTANT RECEPTACLES PER CEC 406.12

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C. N. B. DESIGNS

REVISIONS	
REV.	DATE
NEW	05.09.22
ENG	05.25.22
SUB	06.17.22

DRAWING FILE
F:\CHOWCHILLA
PLAN 1\1EA

CWMB

DATE: 06-17-2022

CWMB DESIGNS

3838 N. CHICKADEE AVE.

SANGER, CA 93657

PHONE: 559.294.6534

STANDARD PLAN #1 FOR:

CITY OF CHOWCHILLA

130 S 2ND STREET

CHOWCHILLA, CA 93610

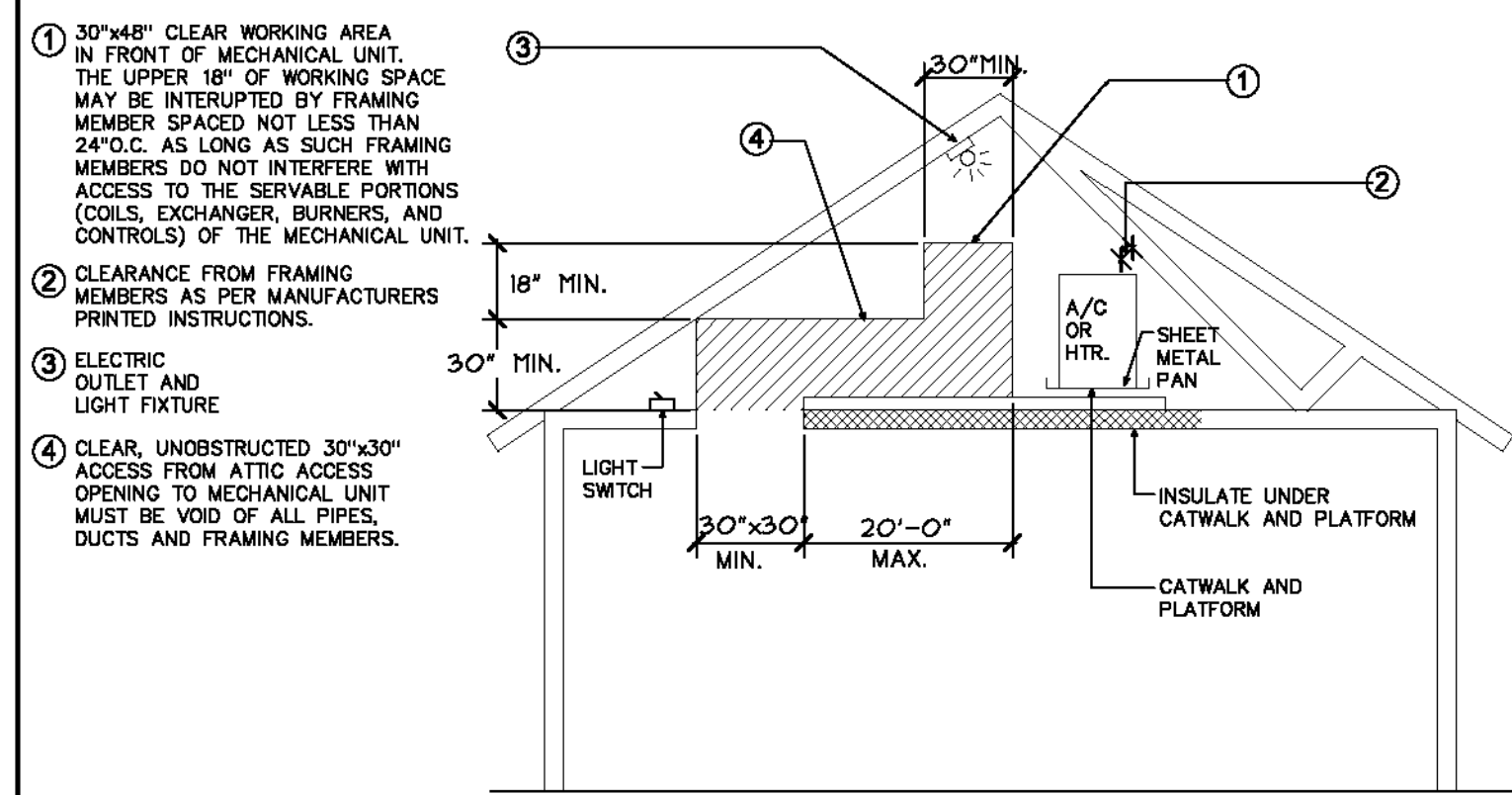
PHONE: 559-665-8615

ELECTRICAL

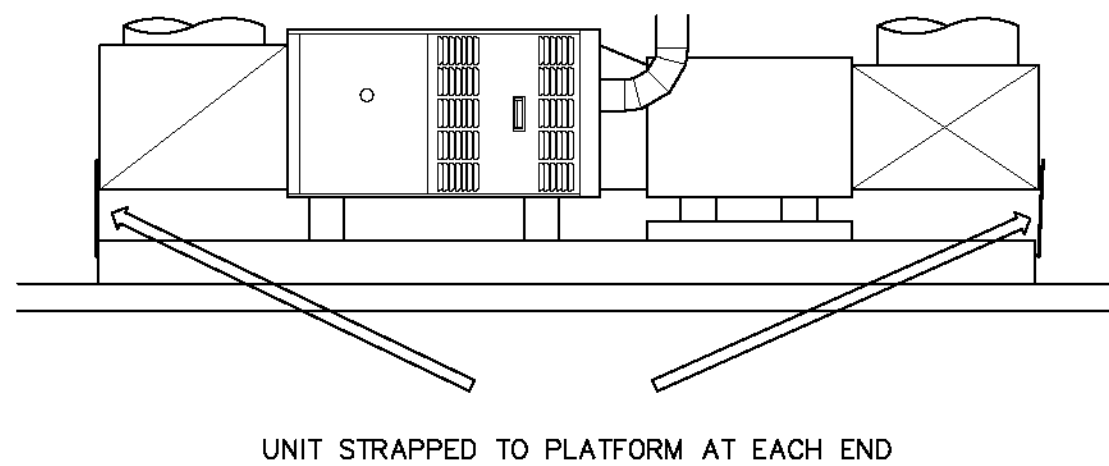
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E1

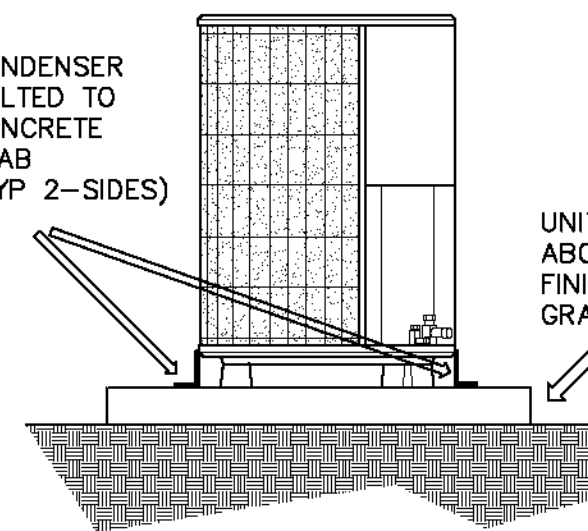
OF 19



1 NO SCALE ATTIC A/C OR HEATER ACCESS REQUIREMENT
HORIZ. DET. BULLETIN B-236 3-1-94

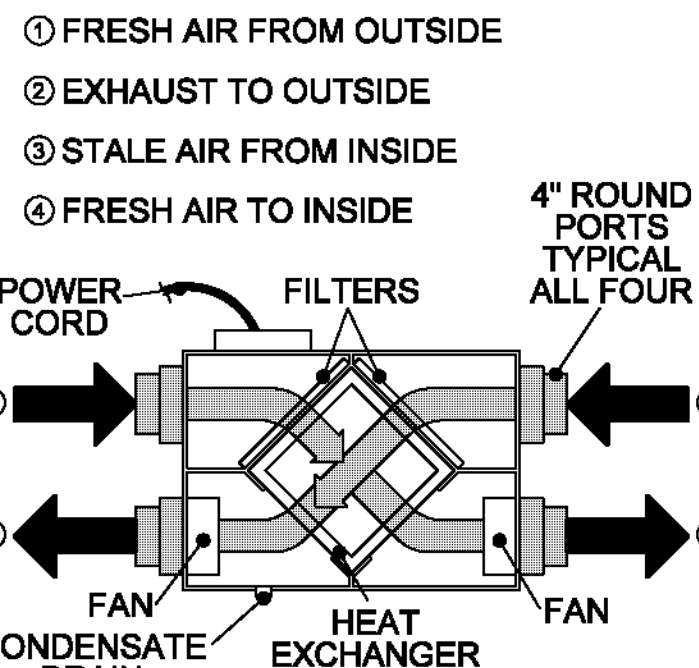


2 NO SCALE HORIZONTAL FURNACE
HORIZ. DET. MOUNTING DETAIL

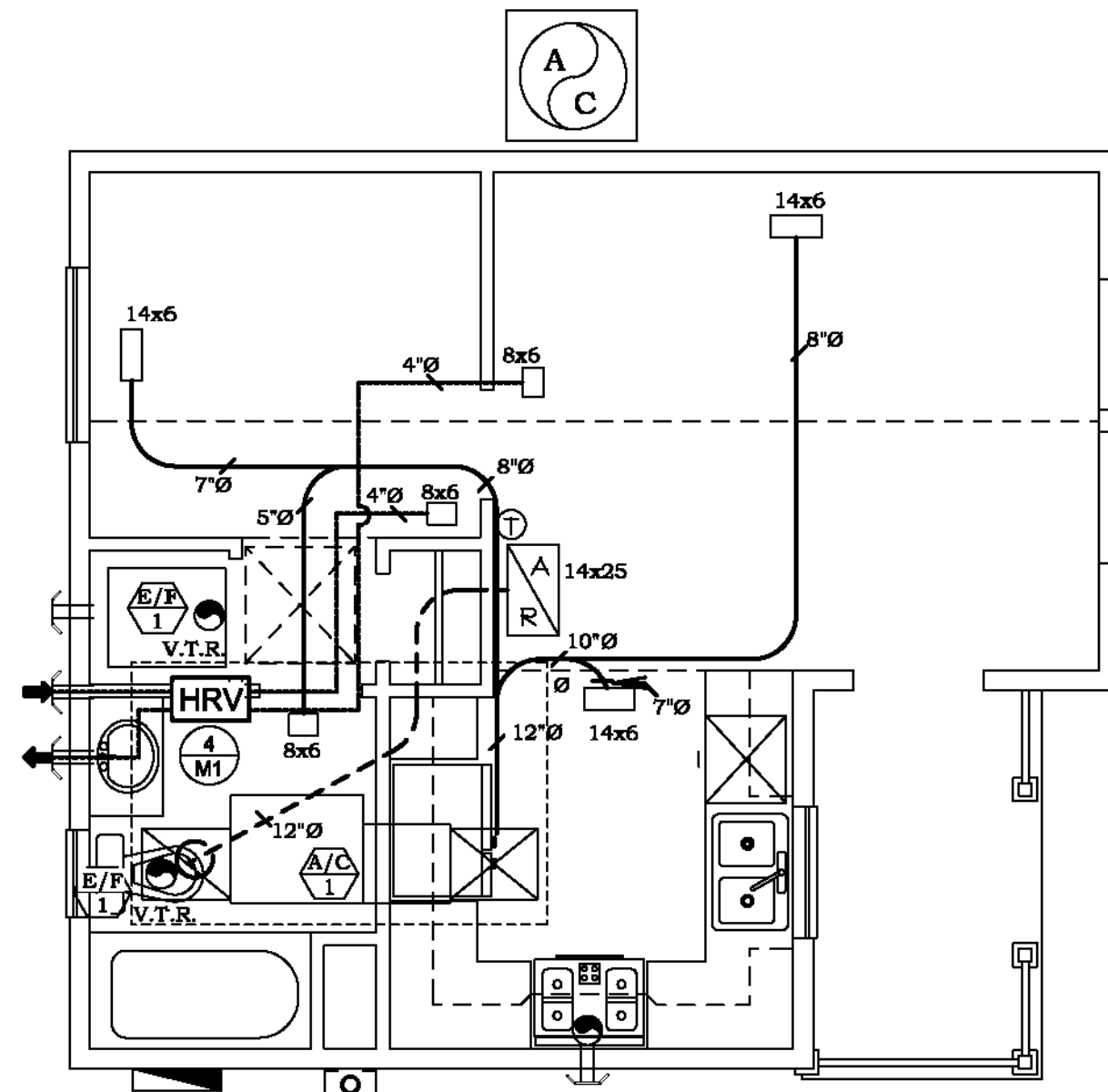


3 NO SCALE CONDENSER
COND. DETAIL MOUNTING DETAIL

HRV

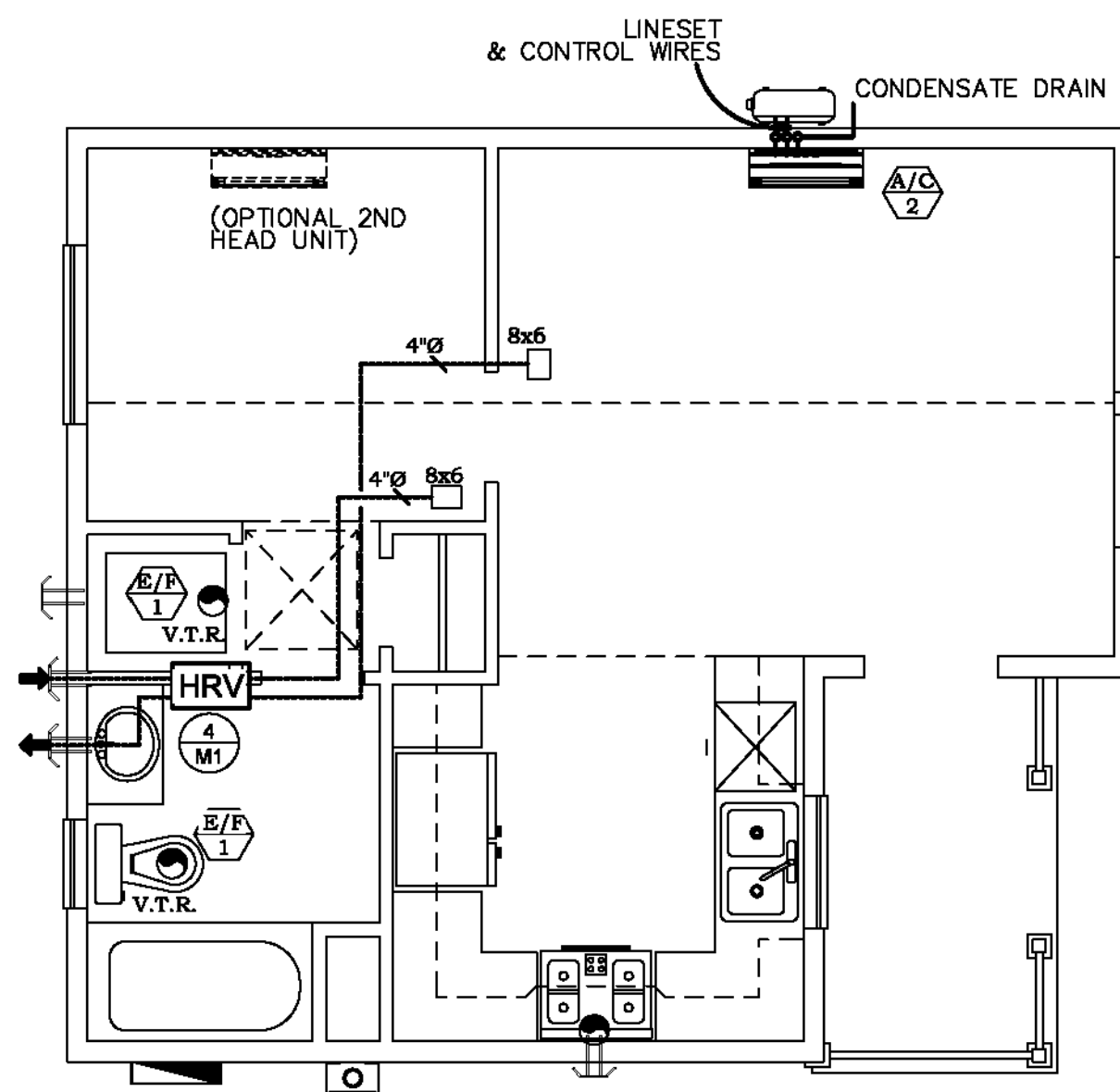


4 NO SCALE HRV
HRV TYPICAL DETAIL



MECHANICAL PLAN - STD. SPLIT

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



MECHANICAL PLAN - MINI SPLIT - HEAT PUMP

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

MINIMUM FRESH AIR

Enter Eq. 4.1a Calculation:

$$A_{\text{fan}} = \frac{397}{N_{\text{br}}} = 1$$
$$Q_{\text{fan}} = 40$$

(Eq. 4.1a)

$$Q_{\text{fan}} = 0.03A_{\text{floor}} + 7.5(N_{\text{br}} + 1)$$

Where:

$$A_{\text{floor}} = \text{conditioned floor area, ft}^2$$
$$N_{\text{br}} = \text{number of bedrooms; not to be less than one}$$
$$Q_{\text{fan}} = \text{ventilation air requirement = fan flow rate, (cfm)}$$

MINIMUM FRESH AIR VENTILATION REQUIRED TO BE MET BY A BALANCED SYSTEM "HVR"

DUCT INSULATION

R-8.0

PERFORMANCE RATINGS AIRZONE EXHAUST FANS

HVI PERFORMANCE						
SYMBOL	MODEL	STATIC PRESSURE (Pa)	CFM	SONES	WATTS	
E/F 1	SE090	0.10	80	0.3	23.3	
		0.25	70			
E/F 2	SE110	0.10	110	0.8	33.5	
		0.25	87			
E/F 3	SE140	0.10	140	1.1	51.3	
		0.25	128			

PERFORMANCE RATINGS AIR KING EXHAUST FAN

HVI PERFORMANCE						
SYMBOL	MODEL	STATIC PRESSURE (Pa)	CFM	SONES	WATTS	
E/F 4	BFQ50	0.25	30	0.5	28	

TANKLESS WATER HEATER

0.91 - UEF

HERS VERIFICATIONS

- ☐ VERIFIED EER
- ☐ VERIFIED AIRFLOW
- ☐ DUCT LEAKAGE (5%)
- ☐ VERIFIED REFRIGERANT CHARGE
- ☒ QUALITY INSULATION INSTALLATION INSPECTION
- ☐ FAN EFFICACY WATTS/CFM
- ☒ IAQ
- ☐ BUILDING ENVELOPE AIR LEAKAGE @___ ACH50
- ☐ VERIFIED SEER
- ☐ LOW LEAKAGE AIR HANDLER
- ☒ KITCHEN RANGE HOOD

(DUCTLESS SYSTEM)

EQUIPMENT SCHEDULE

1.5 TON - HEAT PUMP DUCTLESS MINI SPLIT

HPSF: 9
SEER: 16
EER: 10.8
—
—

HERS VERIFICATIONS

- ☒ VERIFIED EER
- ☒ VERIFIED AIRFLOW
- ☒ DUCT LEAKAGE (5%)
- ☒ VERIFIED REFRIGERANT CHARGE
- ☒ QUALITY INSULATION INSTALLATION INSPECTION
- ☐ FAN EFFICACY WATTS/CFM
- ☒ IAQ
- ☐ BUILDING ENVELOPE AIR LEAKAGE @___ ACH50
- ☒ VERIFIED SEER
- ☐ LOW LEAKAGE AIR HANDLER
- ☒ KITCHEN RANGE HOOD

(DUCTED SYSTEM)

EQUIPMENT SCHEDULE

1.5 TON - SPLIT SYSTEM

15.0 SEER
12.0 EER
18,000 BUTH COOLING

FURNACE: 80% AFUE
—
—

MECHANICAL NOTES

- FURNACE TO BE SECURELY FASTENED TO BUILDING PLATFORM.
- A COMPLETED "REGISTERED" CF3R FORM TO BE SUBMITTED PRIOR TO FINAL INSPECTION, SIGNED BY THE CERTIFIED HERS RATER, FOR FIELD VERIFICATION AND DIAGNOSTIC TESTING.
- AFTER INSTALLING WATER HEATING SYSTEMS, PENETRATION, AND HVAC EQUIPMENT THE INSTALLER SHALL POST IN A CONSPICUOUS LOCATION AN "INSTALLATION CERTIFICATE" (CF-2R FORM), COMPLETED AND SIGNED BY THE INSTALLER, LISTING THE EQUIPMENT INSTALLED, (MANUFACTURER, MODEL, AND EFFICIENCIES, U-V-VALUES AND SHG-V-VALUES, ETC.) AND THAT IT MEETS OR EXCEEDS THE REQUIREMENTS OF THE ENERGY DOCUMENTATION. (SEE SECTION 10-103.0(3)), REGISTERED COPIES SHALL BE PROVIDED WHEN HERS VERIFICATION IS REQUIRED.
- ELECTRICAL CONTRACTOR TO PROVIDE LIGHT FIXTURE WITH SWITCH AT ATTIC ACCESS.
- MINIMUM 30"x30" ATTIC ACCESS DOOR REQUIRED FOR ATTIC MOUNTED FURNACE.
- ANY CATWALKS TO ATTIC MOUNTED MECHANICAL EQUIPMENT TO BE MINIMUM 24" WIDE (NOT TO EXCEED 20' LONG).
- ALL ATTIC MOUNTED MECHANICAL EQUIPMENT TO HAVE A MINIMUM 30" CLEAR IN FRONT FOR SERVICE (BY 48" HIGH).
- ALL BEDROOM DOORS TO UNDERCUT TO ALLOW FOR AIR RETURN.
- SMOKE DETECTOR PROVIDED FOR THE PROTECTION OF THE SLEEPING ROOMS IS REQUIRED TO BE PLACED IN FRONT OF THE RETURN GRILL.
- CONTRACTOR SHALL PROVIDE THE ORIGINAL OCCUPANT WITH A LIST OF THE HEATING, COOLING, WATER HEATING, LIGHTING SYSTEMS, AND CONSERVATION OR SOLAR DEVICES INSTALLED IN THE BUILDING AND INSTRUCTIONS ON HOW TO USE THEM EFFICIENTLY.
- ALL KITCHENS AND BATHROOMS SHALL HAVE LOCAL EXHAUST SYSTEMS VENTED TO THE OUTDOORS. EACH LOCAL VENTILATION SYSTEM SHALL BE EITHER INTERMITTENT OR CONTINUOUS MECHANICAL EXHAUST SYSTEM. KITCHEN HOOD EXHAUST AIR FLOW RATE TO BE 100 CFM.
- AIR INLETS THAT ARE PART OF THE VENTILATION DESIGN SHALL BE LOCATED A MINIMUM 10 FEET FROM KNOWN SOURCES OF CONTAMINATION SUCH AS STACK, VENT, EXHAUST HOOD OR VEHICLE EXHAUST.
- MECHANICAL SYSTEMS INCLUDING HEATING AND AIR CONDITIONING SYSTEMS THAT SUPPLY AIR TO HABITABLE SPACES SHALL HAVE MERV 6 FILTERS OR BETTER.
- WHEN A LIVING SPACE ADJOINS A GARAGE THE DESIGN MUST PREVENT MIGRATION OF CONTAMINANTS FROM THE GARAGE TO THE ADJOINING LIVING SPACE. DOORS BETWEEN THE LIVING SPACE AND THE GARAGE SHALL HAVE GASKETS INSTALLED OR MADE SUBSTANTIALLY AIRTIGHT WITH WEATHER-STRIPPING.
- MINIMUM 50 CFM EXHAUST FAN (VENTED TO EXTERIOR) WITH INTERMITTENT SWITCH REQUIRED AT ALL BATHROOMS AND LAUNDRY PER SHRAE 62.2-2004
- KITCHEN HOOD TO HAVE A MINIMUM 100 CFM @ .3 SONES (VENTED TO EXTERIOR).
- AIR CONDITIONING EQUIPMENT DESIGNED TO BE IN A FIXED POSITION SHALL BE SECURELY FASTENED, PER MANUFACTURERS INSTALLATION INSTRUCTIONS. INSTALLATION INSTRUCTIONS SHALL BE PROVIDED TO THE FIELD INSPECTOR. (CMC SECTION 903.4).
- CONDENSING UNITS SHALL NOT BE PLACED WITHIN 5 FEET OF A DRYER VENT.
- DUCT INSTALLATION MUST COMPLY WITH 2016 CALIFORNIA CODE SECTIONS 601-605 AND CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS EFFECTIVE JANUARY, 2017.
- MANDATORY HERS TESTING FOR NEW DUCTED SYSTEMS (MAXIMUM LEAKAGE 5%)
- PICTURES ABOVE BATHTUBS: NO PART OF CORDS CONNECTED FIXTURES, HANGING FIXTURES, TRACK LIGHTING, PENDANTS, OR CEILING FANS SHALL BE LOCATED DIRECTLY ABOVE THE TUB AND WITHIN A ZONE MEASURED 3 FEET HORIZONTALLY AND 8 FEET VERTICALLY FROM THE BATHTUB RIM. (CEC 410.10)).
- FOR ATTIC MOUNTED FURNACES:
 - a. PROVIDE MINIMUM 24" WIDE SOLID FLOORING CATWALK FROM THE ATTIC ACCESS TO WORK PLATFORM ON THE CONTROL SIDE OF THE FURNACE.
 - b. PROVIDE 30"x30" ATTIC ACCESS WITHIN 20" OF FURNACE. ACCESS MAY BE SMALLER, PROVIDED FURNACE PARTS WILL PASS THROUGH. (PROVIDE DOCUMENTATION)
 - c. SEE ELECTRICAL PLAN FOR LIGHT AND ELECT. RECEPTACLE LOCATION
 - d. PROVIDE CONDENSATE DRIP PAN AND OVERFLOW LINES FOR COOLING COILS
- AFTER INSTALLING HVAC EQUIPMENT AND WATER HEATING SYSTEMS, THE INSTALLER SHALL POST IN A CONSPICUOUS LOCATION AT THE BUILDING SITE, AN "INSTALLATION CERTIFICATE" (CF-2R FORM) SIGNED BY THE INSTALLER, LISTING THE EQUIPMENT INSTALLED (MANUFACTURER, MODEL, AND EFFICIENCIES) AND THAT IT MEETS OR EXCEEDS THE REQUIREMENTS OF THE ENERGY DOCUMENTATION.
- AIR CONDITIONING EQUIPMENT DESIGNED TO BE IN A FIXED POSITION SHALL BE SECURELY FASTENED TO STRUCTURE.
- WHERE MECHANICAL VENTILATION IS USED IN BATHROOMS, EXHAUST FAN SHALL PROVIDE A MIN. OF FIVE AIR CHANGES PER HOUR, VENTED DIRECTLY TO THE OUTSIDE. THE POINT OF DISCHARGE OF EXHAUST AIR SHALL BE AT LEAST 5 FEET FROM ANY MECHANICAL VENTILATION INTAKE AND 3 FEET MIN. FROM PROPERTY LINES.
- CLOTHES DRYER SHALL BE VENTED TO EXTERIOR OF BUILDING PER U.M.C. 504.3 AND DRYER DUCTS SHALL NOT EXCEED A TOTAL HORIZONTAL AND VERTICAL LENGTH OF 14 FEET. 2 FEET SHALL BE DUCTED FOR EACH 90 DEGREE ELBOW IN EXCESS OF TWO. WHERE A DRYER SPACE IS PROVIDED, A MIN. 4 INCH DRYER VENT MUST BE INSTALLED.
- ALL DUCTS SHALL BE CONSTRUCTED, INSTALLED AND INSULATED PER CHAPTER 6 OF THE CURRENT C.M.C.

PLAN 1

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C. H. B. DESIGNS

DATE: 06-17-2022

CWB DESIGNS

3838 N. CHICKADEE AVE.
SANGER, CA 93657
PHONE: 559.294.6534

STANDARD PLAN #1 FOR:

CITY OF CHOWCHILLA

130 S 2ND STREET
CHOWCHILLA, CA 93610
PHONE: 559-665-8615

MECHANICAL

SHEET

M1

OF 19

REVISIONS
REV. DATE
NEW 05.09.22
ENG 05.25.22
SUB 06.17.22

DRAWING FILE
F:\CHOWCHILLA
PLAN 1.DWG

CWB

CERTIFICATE OF COMPLIANCE
Project Name: Plan 1
Calculation Description: Title 24 Analysis

Calculation Date/Time: 2022-06-16T13:10:42-07:00
Input File Name: Plan 1 - v2019.rbd19n

C31R-PHF-01E
(Page 1 of 11)

GENERAL INFORMATION	
01	Project Name
02	Run Title
03	Project Location
04	City
05	Standards Version
06	Zip code
07	Software Version
08	Climate Zone
09	Building Type
10	Project Occupancy
11	Number of Bedrooms
12	Number of Bathrooms
13	Number of Stories
14	Additional Cond. Floor Area (ft²)
15	Penetration Average U-Value
16	Glazing Percentage (%)
17	ADU Bedroom Count
18	Is Natural Gas Available?
COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below:

Registration Number: 222-PH10120007A-000-0000000-0000
CA Building Energy Efficiency Standards - 2019 Residential Compliance
Registration Date/Time: 2022-06-16 16:45:23
Report Version: 2019.2.000
Schema Version: rev 202009001
HERS Provider: CACERTS INC
Report Generated: 2022-06-16 13:11:22

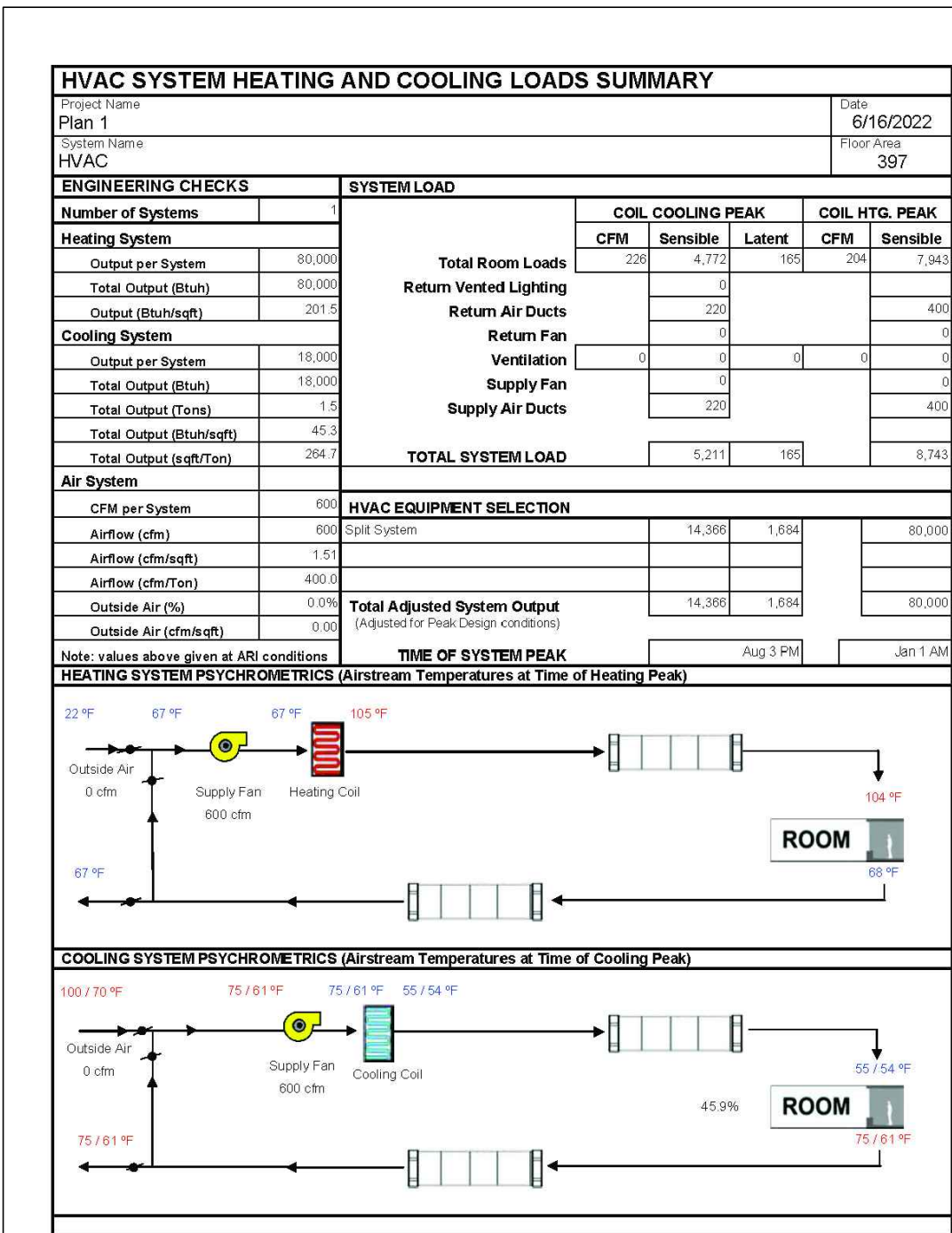
CERTIFICATE OF COMPLIANCE
Project Name: Plan 1
Calculation Description: Title 24 Analysis

Calculation Date/Time: 2022-06-16T13:10:42-07:00
Input File Name: Plan 1 - v2019.rbd19n

C31R-PHF-01E
(Page 5 of 11)

BUILDING - FEATURES INFORMATION							
01	02	03	04	05	06	07	
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Bathrooms	Number of Ventilation Cooling Systems	Number of Water Heating Systems	
Plan 1	397	1	1	1	0	1	
ZONE INFORMATION							
01	02	03	04	05	06	07	
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2	
House	Conditioned	HVAC1	397	8	DRHW Sys 1	N/A	
OPAQUE SURFACES							
01	02	03	04	05	06	07	08
Name	Zone	Construction	Asmtht.	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	TR (deg)
Front Wall	House	R-19 Wall R-4.1 EPS	0	Front	384	26	30
Left Wall	House	R-19 Wall R-4.1 EPS	0	Left	368	22	30
Back Wall	House	R-19 Wall R-4.1 EPS	0	Back	384	0	30
Right Wall	House	R-19 Wall R-4.1 EPS	0	Right	368	50.5	30
Roof	House	R-38 Ceiling R-13	N/A	N/A	397	N/A	N/A
ATTIC							
01	02	03	04	05	06	07	08
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof
Attic House	Attic Rooftop/House	Ventilated	8	0.1	0.85	No	No

Registration Number: 222-PH10120007A-000-0000000-0000
CA Building Energy Efficiency Standards - 2019 Residential Compliance
Registration Date/Time: 2022-06-16 16:45:23
Report Version: 2019.2.000
Schema Version: rev 202009001
HERS Provider: CACERTS INC
Report Generated: 2022-06-16 13:11:22



CERTIFICATE OF COMPLIANCE
Project Name: Plan 1
Calculation Description: Title 24 Analysis

Calculation Date/Time: 2022-06-16T13:10:42-07:00
Input File Name: Plan 1 - v2019.rbd19n

C31R-PHF-01E
(Page 2 of 11)

ENERGY DESIGN RATINGS	
Energy Design Ratings	
Standard Design	Efficiency* (EDR)
Proposed Designers	Efficiency* (EDR)
North Facing	Efficiency* (EDR)
East Facing	Efficiency* (EDR)
South Facing	Efficiency* (EDR)
West Facing	Efficiency* (EDR)
RESULTS: * COMPLIES	
* Efficiency EDR includes improvements to the building envelope and more efficient equipment.	
* Total EDR includes efficiency and demand response measures with a system that is a combination of (1) systems and (2) systems.	
* Building complex values efficiency and total compliance margins are greater than or equal to zero.	
* Standard Design PV Capacity: 2.06 kWdc	
* Proposed PV (80% net export) exceeds proposed electricity use by 0.7% which may violate NEM rules. Contact local utility.	
* Proposed PV Capacity Scaling: North (2.06 kWdc) East (2.06 kWdc) South (2.06 kWdc) West (2.06 kWdc)	

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FENESTRATION / GLAZING														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	
Name	Type	Surface	Orientation	Asmtht.	Width (ft)	Height (ft)	Multi.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	
2010S1L	Window	Left Wall	Left	90			1	6	0.3	NFRC	0.23	NFRC	Bug Screen	
2040S1L	Window	Left Wall	Left	90			1	6	0.3	NFRC	0.23	NFRC	Bug Screen	
4040R1R	Window	Right Wall	Right	270			1	40	0.3	NFRC	0.23	NFRC	Bug Screen	
3036S1H	Window	Right Wall	Right	270			3	3.5	1	30.3	0.3	NFRC	0.23	Bug Screen
OPAQUE DOORS														
Name		Side of Building		Area (ft²)		U-factor								
Door		Front Wall		20		0.5								
OVERHANGS AND FINS														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	
Overhang														
Window	Depth	Dist Up	Left Extent	Right Extent	Flap Ht.	Depth	Top Up	Dist L	Bot Up	Depth	Top Up	Dist R	Bot Up	
3036S1H	5	0.1	2	2	0	0	0	0	0	0	0	0	0	
SLAB FLOORS														
01	02	03	04	05	06	07	08							
Name	Zone	Area (ft²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated							
Slab-on-Grade	House	397		none	0	80%	No							

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HVAC - COOLING UNIT TYPES											
01	02	03	04	05	06	07	08				
Name	System Type	Number of Units	Efficiency EER/SEER	Efficiency SEER	Zoneally Controlled	Multi-speed Compressor	HERS Verification				
Cooling Component 1	Central split AC	1	12	15	Not Zonal	Single Speed	Cooling Component 1-her cool				
HVAC COOLING - HERS VERIFICATION											
01	02	03	04	05	06						
Name	Verified Airflow	Airflow Target	Verified EER	Verified SEER	Verified Refrigerant Charge						
Cooling Component 1-her cool	Required	350	Required	Required	Required						
HVAC - DISTRIBUTION SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	System Duct	Duct Leakage	HERS Verification
Air Distribution Systems 1	Unconditioned attic	Non-Verified	R-8	R-8	Attic	Attic	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-her cool
HVAC DISTRIBUTION - HERS VERIFICATION											
01	02	03	04	05	06	07	08	09			
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space			
Air Distribution Systems 1	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No			

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ENERGY USE SUMMARY				
Energy Use (kWh/yr-ft²)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	20.89	15.13	5.76	27.6
Space Cooling	84.05	95.71	-11.66	-13.9
IAQ Ventilation	13.24	6.76	6.48	48.9
Water Heating	43.69	39.7	3.99	9.1
Self Utilization Credit	n/a	0	0	n/a
North Facing Compliance Total	161.87	137.3	24.57	2.8
Space Heating	20.89	14.82	6.07	29.1
Space Cooling	84.05	80.83	3.22	3.8
IAQ Ventilation	13.24	6.76	6.48	48.9
Water Heating	43.69	39.7	3.99	9.1
Self Utilization Credit	n/a	0	0	n/a
East Facing Compliance Total	161.87	142.11	19.76	12.2
Space Heating	20.89	15.36	5.53	26.5
Space Cooling	84.05	90.54	-6.49	-7.7
IAQ Ventilation	13.24	6.76	6.48	48.9
Water Heating	43.69	39.7	3.99	9.1
Self Utilization Credit	n/a	0	0	n/a
South Facing Compliance Total	161.87	150.66	10.66	6.7
Space Heating	20.89	13.32	7.57	36.2
Space Cooling	84.05	84.25	-0.2	-0.2
IAQ Ventilation	13.24	6.76	6.48	48.9
Water Heating	43.69	39.7	3.99	9.1
Self Utilization Credit	n/a	0	0	n/a
West Facing Compliance Total	161.87	144.08	17.84	11

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OPAQUE SURFACE CONSTRUCTIONS							
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-19 Wall R-4.1 EPS	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-19	None / R-4	0.055	Inside finish: Gypsum Board Cavity / Frame: R-19 in 5-1/2 in. (R-19) / 2x6 Sheathing / Insulation: R-4 Sheathing Exterior Finish: Synthetic Stucco
Attic Rooftop/House	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-13	None / None	0.078	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding: Asbestos/Verdigris Cavity / Frame: R-13.0 / 2x4 Asbestos Roof Siding: R-10 Insul.
R-38 Ceiling R-13	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-38	None / None	0.035	Over Ceiling: R-38 Insul. Cavity / Frame: R-13 / 2x4 Inside finish: Gypsum Board
BUILDING ENVELOPE - HERS VERIFICATION							
01	02	03	04	05	06	07	08
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50				
Required	Not Required	Not Required	n/a				
WATER HEATING SYSTEMS							
01	02	03	04	05	06	07	08
Name	System Type	Distribution Type	Water Heater Name (B)	Solar Heating System	Compact Distribution	HERS Verification	
DRHW Sys 1	Domestic Hot Water (DRHW)	Standard Distribution System	DRHW Heater 1 (1)	n/a	None	n/a	

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HVAC - FAN SYSTEMS						
01	02	03	04			
Name	Type	Fan Power (Watts/CFM)	Name			
HVAC Fan 1	HVAC Fan	0.45	HVAC Fan 1-her fan			
HVAC FAN SYSTEMS - HERS VERIFICATION						
01	02	03				
Name	Verified Fan Watt Draw	Required Fan Efficiency (Watts/CFM)				
HVAC Fan 1-her fan	Required	0.45				
IAQ (INDOOR AIR QUALITY) RISKS						
01	02	03	04	05	06	07
Dwelling Unit	IAQ CFM	IAQ Werts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness - SRE	IAQ Recovery Effectiveness - ASRE	HERS Verification
1stam IAQVentilpt 1.1	40	0.25	Balance	69	75	Yes

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REQUIRED PV SYSTEMS - SIMPLIFIED											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CSI	Asmtht (deg)	TRI Input	TRI Angle (deg)	TRI in 12)	Inverter ETC (D)	Annual Solar Access (%)
2.06	NA	Standard	Fixed	none	true	150-170	n/a	n/a	<=712	96	98
REQUIRED SPECIAL FEATURES											
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis:											
• Indoor air quality balanced fan											
• IAQ Ventilation System: as low as 0.25 W/CFM											
• IAQ Ventilation System Heat Recovery: minimum 60 SRE and 75 ASRE											
• IAQ Ventilation System: supply outside air inlet, filter, and H/ERV cores accessible per RACM Reference Manual											
• Insulation below roof deck											
• Windows overhangs and/or fins											
HERS FEATURE SUMMARY											
The following is a summary of the features that must be field verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CDRs and CDRAs are required to be completed in the HERS Registry.											
Building Level Verification:											
• Quality insulation installation (QII)											
• Indoor air quality ventilation											
• Kitchen range hood											
Cooling System Verifications:											
• Minimum airflow											
• Verified EER											
• Verified SEER											
• Verified Refrigerant Charge											
• Fan Efficiency Rating (CFM)											
Heating System Verifications:											
• None											
HVAC Distribution System Verifications:											
• Duct leakage testing											
• Domestic Hot Water System Verifications:											
• None											

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WATER HEATERS											
01	02	03	04	05	06	07	08	09	10	11	12
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or P-Value (MBtu/hr)	Tank Insulation R-value (in/ft²)	Standby Loss or Recovery Eff.	1st Hc. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition
DRHW Heater 1	Gas	Consumer Instantaneous	1	0	0.93 UEF	<= 200 MBtu/hr	0	n/a	n/a	n/a	n/a
WATER HEATING - HERS VERIFICATION											
01	02	03	04	05	06	07	08				
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Central Drive Distribution	Shower Drain Water Heat Recovery				
DRHW Sys 1-1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required				
SPACE CONDITIONING SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	
Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Equipment Count	Heating Equipment Count	Cooling Equipment Count	
HVAC1	Heating and cooling system other	Heating Component 1	Cooling Component 1	HVAC Fan 1	Air Distribution System 1	Setback	New	NA	1	1	
HVAC - HEATING UNIT TYPES											
01	02	03	04								
Name	System Type	Number of Units	Heating Efficiency								
Heating Component 1	Central gas furnace	1	AFUE 80								

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CERTIFICATE OF COMPLIANCE
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GENERAL INFORMATION									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Project Name	Plan 1 - w Mini Split								
Run Title	Title 24 Analysis								
Project Location	Chowchilla								
City	Chowchilla								
Zip code	93502								
Climate Zone	15								
Building Type	Single family								
Project Scope	New Construction								
Existing Cond. Floor Area (ft²)	0								
Existing Cond. Floor Area (ft²)	0								
Total Cond. Floor Area (ft²)	397								
Water Heating System	None								
ADU (Indoor Court)	Yes								
Is Natural Gas Available?	Yes								

COMPLIANCE RESULTS									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Building Complies with Computer Performance									
This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.									
This building incorporates one or more Special Features shown below									

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BUILDING - FEATURES INFORMATION									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Project Name	Plan 1 - w Mini Split								
Conditioned Floor Area (ft²)	397								
Number of Dwellings	1								
Number of Bedrooms	1								
Number of Zones	1								
Number of Ventilation Cooling Systems	0								
Number of Water Heating Systems	1								

ZONE INFORMATION									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2			
Hour	Conditioned	HVAC1	397	8	DHW Sys 1	N/A			

OPAQUE SURFACES									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Name	Zone	Construction	Area (ft²)	U-factor	SHGC	SHGC Source	SHGC	SHGC	SHGC
Front Wall	House	8.59 Wall - R-11 EPS	0	Front	0.23	NFRC	0.23	NFRC	0.23
Left Wall	House	8.59 Wall - R-11 EPS	90	Left	0.23	NFRC	0.23	NFRC	0.23
Back Wall	House	8.59 Wall - R-11 EPS	180	Back	0.23	NFRC	0.23	NFRC	0.23
Right Wall	House	8.59 Wall - R-11 EPS	270	Right	0.23	NFRC	0.23	NFRC	0.23
Roof	House	8.59 Ceiling - R-13	397	Roof	0.23	NFRC	0.23	NFRC	0.23

ATTIC									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Name	Construction	Type	Roof Reflectance	Roof Reflectance	Roof Reflectance	Roof Reflectance	Roof Reflectance	Roof Reflectance	Roof Reflectance
Attic House	Attic Roof/Row	Unventilated	0.1	0.1	0.1	0.1	0.1	0.1	0.1

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ENERGY DESIGN RATINGS									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Standard Design									
Proposed Design									
North Facing									
East Facing									
South Facing									
West Facing									

RESULTS - COMPLETES									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Efficiency (EDR)	54.4								
Total (EDR)	26.8								
Efficiency (EDR)	54.2								
Total (EDR)	26.6								
Efficiency (EDR)	53.7								
Total (EDR)	26.2								
Efficiency (EDR)	53.2								
Total (EDR)	25.6								
Efficiency (EDR)	52.1								
Total (EDR)	24.5								

1. Efficiency (EDR) includes improvements to the building envelope and more efficient equipment.
2. Total EDR includes efficiency and demand response measures with asynchronous (PS) systems and batteries.
3. Building complies when efficiency and total compliance margins are greater than or equal to zero.
4. Standard Design PV Capacity: 2.06 kWdc
5. Proposed PV Capacity Scaling: North (2.06 kWdc) East (2.06 kWdc) South (2.06 kWdc) West (2.06 kWdc)

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PENETRATION/ GLAZING									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Name	Type	Surface	Orientation	Altitude	Width (ft)	Height (ft)	Multi.	Area (ft²)	U-factor
2030 SL	Window	Left Wall	Left	90	1	6	0.3	NFRC	0.23
8040 SL	Window	Left Wall	Left	90	1	16	0.3	NFRC	0.23
6048 FR	Window	Right Wall	Right	270	1	40	0.3	NFRC	0.23
3036 SH	Window	Right Wall	Right	270	1	35.5	0.3	NFRC	0.23

OPAQUE DOORS									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Name	Side of Building	Area (ft²)	U-factor	SHGC	SHGC Source	SHGC	SHGC	SHGC	SHGC
Door	Front Wall	0	0.5						

OVERHANGS AND FINIS									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Window	Depth	Dist Up	Left Extent	Right Extent	Flap H/L	Depth	Top Up	Dist L	Dist R
3036 SH	5	0.1	2	2	0	0	0	0	0

SLAB FLOORS									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Name	Zone	Area (ft²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Comparted Fraction	Heated		
Slab-on Grade	House	397	88	none	0	80%	No		

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ENERGY USE SUMMARY									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Energy Use (kWh/ft²-yr)									
Space Heating	25.08								
Space Cooling	88.81								
IAQ Ventilation	13.24								
Water Heating	43.69								
Self Utilization Credit	n/a								
North Facing Compliance Total	176.82								
Space Heating	25.08								
Space Cooling	88.81								
IAQ Ventilation	13.24								
Water Heating	43.69								
Self Utilization Credit	n/a								
East Facing Compliance Total	176.82								
Space Heating	25.08								
Space Cooling	88.81								
IAQ Ventilation	13.24								
Water Heating	43.69								
Self Utilization Credit	n/a								
South Facing Compliance Total	176.82								
Space Heating	25.08								
Space Cooling	88.81								
IAQ Ventilation	13.24								
Water Heating	43.69								
Self Utilization Credit	n/a								
West Facing Compliance Total	176.82								

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OPAQUE SURFACE CONSTRUCTIONS									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers		
R-19 Wall - R-11 EPS	Exterior Walls	Wood Framed Wall	2x6 @ 16in. O.C.	8.39	None / R-4	0.055	Inside Finish: Gypsum Board Cavity / Frame: R-39 in 5 1/2 in. (R-18) / Sheathing / Insulation: R-4 Sheathing Exterior Finish: Stucco		
Attic Roof/Row	Attic Roofs	Wood Framed Ceiling	2x4 @ 24in. O.C.	8.13	None / None	0.078	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/Sheathing/Decking Cavity / Frame: R-30.7 / 2x4 Around Roof Joist: R-0.0 Insul.		
R-18 Ceiling - R13	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24in. O.C.	8.38	None / None	0.035	Over Ceiling Joist: R-28.9 Insul. Cavity / Frame: R-6.7 / 2x4 Inside Finish: Gypsum Board		

BUILDING ENVELOPE - HERS VERIFICATION									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Quality Insulation Installation (QI)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50						
Required	Not Required	Not Required	Not Required						

WATER HEATING SYSTEMS									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Name	System Type	Distribution Type	Water Heater Name (H)	Solar Heating System	Compact Distribution	HERS Verification			
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a			

Registration Number: 222-P010120000A-000-000-0000000-0000
CA Building Energy Efficiency Standards - 2019 Residential Compliance

Registration Date/Time: 2022-06-16 16:40:01
Report Version: 2019.2.000
Schema Version: rev 20200901

HERS Provider: CalCERTS, Inc.
Report Generated: 2022-06-16 13:08:54

CERTIFICATE OF COMPLIANCE
Project Name: Plan 1 - w Mini Split
Calculation Description: Title 24 Analysis

Calculation Date/Time: 2022-06-16T13:08:17-07:00
Input File Name: Plan 1 - Mini Split HP - v2019.rbd15x

CF19-PHF-01E
(Page 9 of 10)

HVAC HEAT PUMPS - HERS VERIFICATION									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Name	Verified Airflow	Airflow Target	Verified EER	Verified SEER	Verified Refrigerant Charge	Verified HSPF	Verified Heating Cap 47	Verified Heating Cap 17	
Heat Pump System 1 (Heat Recovery)	Not Required	0	Not Required	Not Required	No	No	Yes	Yes	

IAQ (INDOOR AIR QUALITY) FINIS									
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness - SE	IAQ Recovery Effectiveness - ASH	HERS Verification			
5-Bed IAQ Ventilat-1	40	0.25	Balanced	69	75	Yes			

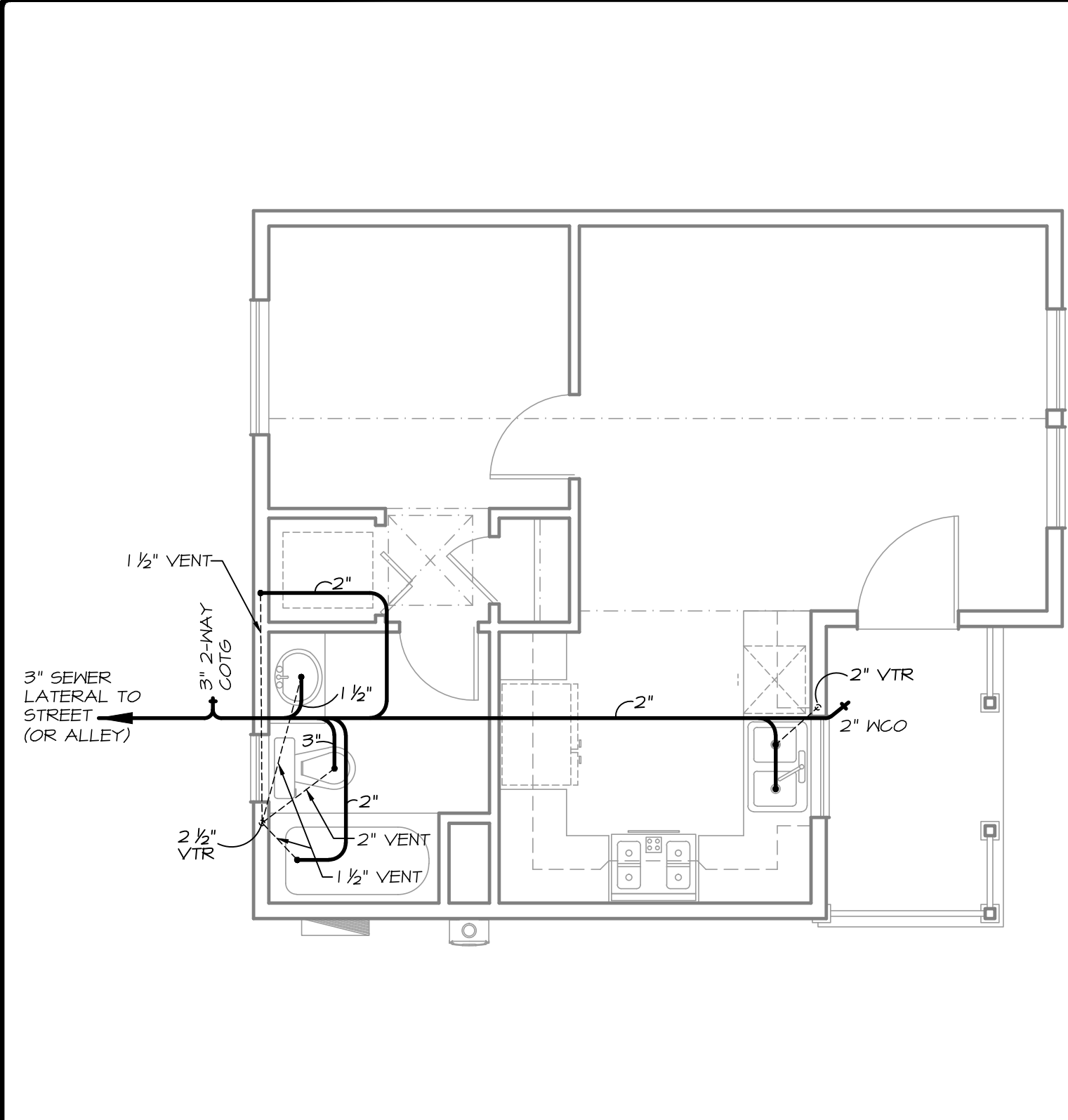
Registration Number: 222-P010120000A-000-000-0000000-0000
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Project Name: Plan 1 - w Mini Split
Calculation Description: Title 24 Analysis

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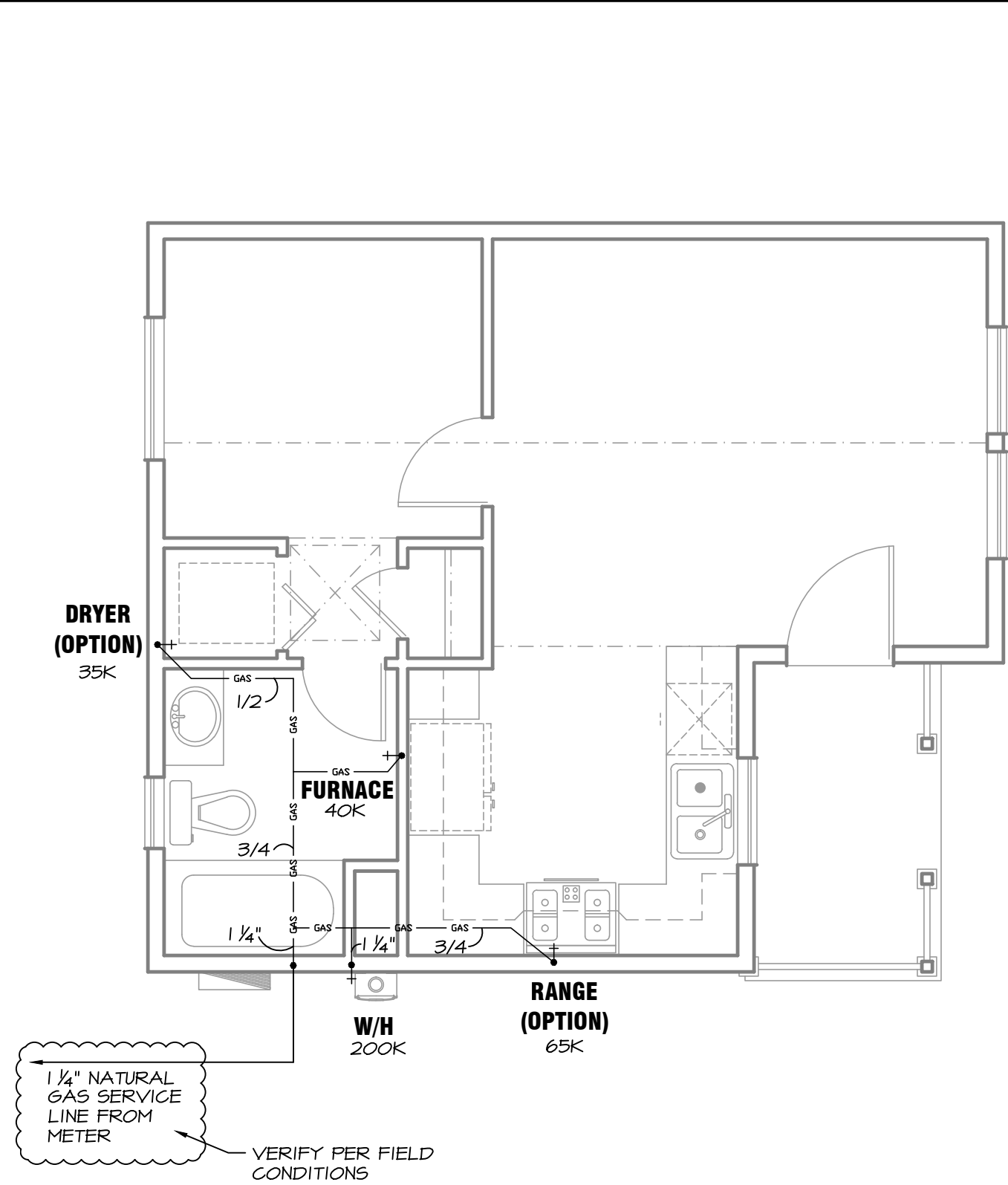
WASTE PIPING PLAN

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

DRAINAGE FIXTURE VALUES

FIXTURE	F.U. EA.	QUANT.	F.U. TOTAL
W/C	3	1	3
TUB/SHWR	2	1	2
LAV	1	1	1
SINK	2	1	2
WASHER	3	1	3
TOTAL		5	11

WASTE PIPE SIZING- UNIT LOADING TABLE (703.2)			
PIPE SIZE	WASTE		VENT F.U.
	F.U.	MAX. LENGTH	
1 1/4"	1	45'	1
1 1/2"	1	65'	8
2"	8	85'	24
2 1/2"	14	148'	48
3"	35	212'	84
4"	216	300'	256
WASTE PIPE SHALL HAVE MIN. 1/4" PER FOOT SLOPE			



GAS PIPING PLAN

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

GAS LINE FIXTURE VALUES

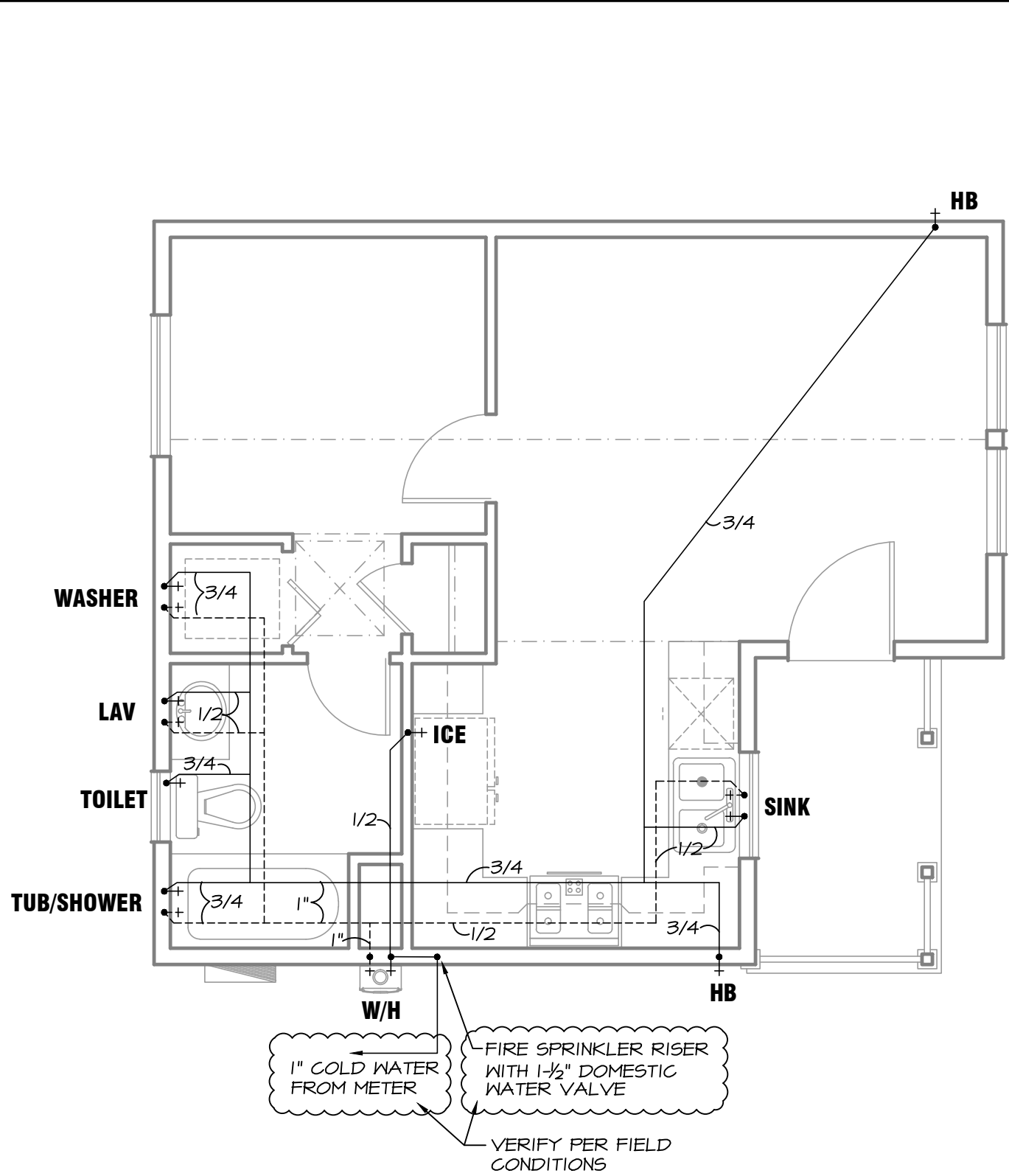
TABLE 1208.4.1)		
FIXTURE TYPE	B.T.U.H. (X 1000)	C.F.H.
WATER HEATER	200	181.8
FURNACE	40	36.4
GAS RANGE	65	59.0
GAS DRYER	35	31.8
TOTAL	340	309
LENGTH FROM METER TO FARTHEST FIXTURE : NOT TO EXCEED 150'-0"		

GAS PIPE SIZING- TABLE 1216.2(1)	
PIPE SIZE	CFM
1 1/2"	482
1 1/4"	322
1"	157
3/4"	83
1/2"	40
1 1/2" NATURAL GAS SERVICE DISTANCE TO REMOTE FIXTURE 150' PRESSURE DROP 0.5" W.G. SPECIFIC GRAVITY 0.80	

SPECIAL NOTES

THE ABOVE WATER AND GAS PIPING PLANS AND THE WASTE PIPING PLANS ARE SUBJECT TO CHANGE PER LOT SPECIFIC FIELD CONDITIONS. ONCE THE FIELD CONDITIONS HAVE BEEN VERIFIED, THE CITY OF CLOVIS BUILDING DEPARTMENT MUST REVIEW AND APPROVE THE PLANS PRIOR TO COMMENCING WITH THE PLUMBING INSTALLATION IN THE FIELD.

GAS PIPING PLANS ARE BASED ON A MAXIMUM DEVELOPED LENGTH OF 150'-0" FROM METER TO MOST REMOTE FIXTURE. THIS DISTANCE SHOULD BE VERIFIED IN THE FIELD AS WELL AS THE PIPE SIZE AT THE SERVICE. PG&E MAY NEED TO REPLACE EXISTING SERVICE TO ACCOMMODATE FOR 1 1/4" GAS PIPING.



WATER PIPING PLAN

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

WATER SUPPLY FIXTURE VALUES

FIXTURE	F.U. EA.	QUANT.	F.U. TOTAL
W/C	2.5	1	2.5
TUB/SHWR	4	1	4
LAV	1	1	1
SINK	1.5	1	1.5
WASHER	4	1	4
H.B.	2.5 / 1	2	3.5
REF	1	1	1
TOTAL		8	17.5

DISTANCE FROM WATER SERVICE TO MOST REMOTE PLUMBING FIXTURE = 150'-0"

WATER PIPE SIZING- FIXTURE UNIT TABLE (610.4)	
PIPE SIZE	FIXTURE UNITS
1 1/4"	32
1"	20
3/4"	9
1/2"	2
1" METER SERVICE 150' DISTANCE TO REMOTE FIXTURE 30 - 45 PSI AVAILABLE STATIC PRESSURE	

PLUMBING PLAN NOTES

WATER HAMMER ARRESTORS TO BE INSTALLED AT THE FOLLOWING QUICK-ACTING SHUTOFF VALVES:

- AUTOMATIC WASHING MACHINE (HOT & COLD WATER)
- ICE MAKER
- DISHWASHER
- FRONT & REAR SPRINKLER OUTLETS.

ALL HOSE BIBS SHALL BE EQUIPPED WITH NON-REMOVABLE BACK FLOW PREVENTERS.

ALL WATER CLOSETS SHALL BE LOW-FLOW WITH MAX. 1.28 GAL. PER FLUSH

SHOWER COMPARTMENTS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FINISHED WITH A NONABSORBENT SURFACE TO A HEIGHT NOT LESS THAN 6 FEET ABOVE THE FLOOR PER **CRC R307.2**.

ALL TUB-SHOWER OPENINGS SHALL BE RODENT PROOF, WITH 1" CEMENT COVERING IN AN APPROVED MANNER.

ALL TUB AND SHOWER VALVES ARE TO BE SINGLE CONTROL. PRESSURE BALANCING OR THERMOSTATIC MIXING TYPE. THE DEVICE IS REQUIRED TO LIMIT THE WATER TEMPERATURE TO A MAXIMUM OF 120 DEGREES. (SUCH DEVICES SHALL CONFORM TO ASSE 1070 OR CSA B125.3) THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED AS MEETING THIS PROVISION

PROVIDE WATERPROOF FINISH MATERIALS AT SHOWER WALLS TO +6'-0". SHOWER DOORS AND GLASS TUB ENCLOSURES SHALL BE SAFETY GLASS OR INSTALL ROD AND CURTAIN.

PROVIDE 12" x 12" TUB AND SHOWER ACCESS PANELS OR PROVIDE BRASS FERRULE OVERFLOW AND DRAIN.

GAS VENTS TO TERMINATE NOT LESS THAN 48" FROM OPENINGS OR PROPERTY LINES, AND NOT LESS THEN 12" ABOVE A DOOR, OPENABLE WINDOW OR GRAVITY AIR INLET.

CEMENT, FIBER CEMENT OR GLASS MAT GYPSUM BACKERS SHALL BE USED AS A BASE FOR WALL TILES IN TUB AND SHOWER AREAS. WATER RESISTIVE GYP. BOARD IS NOT PERMITTED AT THESE LOCATIONS.

ALL EQUIPMENT IN THE POTABLE WATER DELIVERY SYSTEM SHALL COMPLY WITH AB 1953 FOR LEAD CONTENT. THIS APPLIES TO ALL PIPING, FIXTURES AND FITTINGS THAT CONVEY OR DISPENSE WATER FOR HUMAN CONSUMPTION.

HOT AND COLD WATER PIPING IN UNCONDITIONED SPACE LEADING TO AND FROM WATER HEATER SHALL BE PROVIDED WITH A MINIMUM 1" THICK PIPE INSULATION FOR THE FIRST FIVE FEET OF PIPE CLOSEST TO THE WATER HEATER.

ALL DOMESTIC HOT WATER PIPING SHALL BE INSULATED. ALL HOT WATER PIPE INSULATION SHALL HAVE A MINIMUM WALL THICKNESS OF NOT LESS THAN THE DIAMETER OF THE PIPE UP TO 2"

THE MAXIMUM HOT WATER TEMPERATURE DISCHARGE SHALL BE LIMITED FOR THE FOLLOWING:

- BATHTUBS AND WHIRLPOOL. BATHTUBS SHALL BE LIMITED TO 120°F BY A DEVICE THAT CONFORMS TO ASSE 1070 OR CSA B125.3, (CPC SECTION 404.4) (THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A CONTROL FOR MEETING THIS PROVISION)
- SHOWERS AND TUB/SHOWER COMBINATIONS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE, THERMOSTATIC, OR COMBINATION PRESSURE BALANCE/MIXING VALVES TYPE THAT PROVIDE SCALD AND THERMAL SHOCK PROTECTION FOR THE RATED FLOW RATE OF THE INSTALLED SHOWERHEAD. THESE VALVES SHALL BE INSTALLED AT THE POINT OF USE AND IN ACCORDANCE WITH ASSE 1016 OR ASME AL 12.18.1/CSAB 125.1 (CPC SECTION 408.3)

AT THE TIME OF FINAL INSPECTION, THE PERMIT AUTHORITY MUST PROVIDE THE OWNER OF THE PROPERTY WITH A CERTIFICATE OF COMPLETION, CERTIFICATE OF INSTALLATION, IRRIGATION SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE.

THE WATER HEATER SHALL BE PROVIDED WITH A TEMPERATURE AND PRESSURE RELIEF VALVE HAVING A FULL SIZED DRAIN OF GALVANIZED STEEL OR HARD DRAWN COPPER TO THE OUTSIDE OF THE BUILDING WITH THE END OF THE PIPE NOT MORE THAN 24" NOR LESS THAN 6" ABOVE GRADE, POINTING DOWNWARD WITH THE TERMINAL END BEING UNTHREADED.

PEX PIPING MATERIAL SHALL BE USED FOR WATER DELIVERY. AT THE TIME OF FILL, EACH FIXTURE SHALL HAVE A REMOVABLE TAG APPLIED STATING: THIS NEW PLUMBING SYSTEM WAS FIRST FILLED AND FLUSHED ON _____ (DATE) BY _____ (NAME). THE STATE OF CALIFORNIA REQUIRES THAT THE SYSTEM BE FLUSHED AFTER STANDING AT LEAST ONE WEEK AFTER THE FILL DATE SPECIFIED ABOVE. IF THIS SYSTEM IS USED EARLIER THAN ONE WEEK AFTER THE FILL DATE, THE WATER MUST BE ALLOWED TO RUN FOR AT LEAST TWO MINUTES PRIOR TO USE FOR HUMAN CONSUMPTION. THIS TAG MAY NOT BE REMOVED PRIOR TO THE COMPLETION OF THE REQUIRED SECOND FLUSHING, EXCEPT BY THE OWNER OR OCCUPANT.' - 2013 CPC 604.1.2

CONDENSATE DRAIN LINES SHALL BE CONFIGURED OR PROVIDED WITH A CLEANOUT TO PERMIT THE CLEARING OF BLOCKAGES AND FOR MAINTENANCE WITHOUT REQUIRING THE DRAIN LINE TO BE CUT.

WATER HEATING MANDATORY MEASURES

WATER HEATING SYSTEMS USING GAS TO SERVE INDIVIDUAL DWELLING UNITS SHALL INCLUDE THE FOLLOWING COMPONENTS:

WATER HEATING SYSTEMS USING GAS OR PROPANE TO SERVE INDIVIDUAL DWELLING UNITS SHALL INCLUDE THE FOLLOWING COMPONENTS:

- A DEDICATED 125 VOLT, 20 AMP RECEPTACLE THAT IS CONNECTED TO THE ELECTRICAL PANEL WITH A 120/240 VOLT 3 CONDUCTOR, 10 AWG COPPER BRANCH CIRCUIT, WITHIN 3' FROM THE WATER HEATER AND ACCESSIBLE TO THE WATER HEATER WITH NO OBSTRUCTIONS. IN ADDITION, ALL OF THE FOLLOWING:
 - BOTH ENDS OF THE UNUSED CONDUCTOR SHALL BE LABELED WITH THE WORDS "SPARE" AND BE ELECTRICALLY ISOLATED; AND
 - A RESERVED SINGLE POLE CIRCUIT POLE BREAKER SPACE IN THE ELECTRICAL PANEL ADJACENT TO THE CIRCUIT BREAKER FOR THE BRANCH CIRCUIT IN A ABOVE AND LABELED WITH THE WORDS, "FUTURE 240 VOLT USE"; AND
- A CATEGORY III OR IV VENT, OR A TYPE B VENT WITH STRAIGHT PIPE BETWEEN THE OUTSIDE TERMINATION AND THE SPACES WHERE THE WATER HEATER IS INSTALLED; AND
- A CONDENSATE DRAIN THAT IS NO MORE THAN 2 INCHES HIGHER THAN THE BASE OF THE INSTALLED WATER HEATER, AND ALLOWS NATURAL DRAINING WITHOUT PUMP ASSISTANCE, AND
- A GAS SUPPLY LINE WITH A CAPACITY OF AT LEAST 200,000 BTU/HR. - 2019 CEC 150(N)

"ALL RIGHTS RESERVED"
THE ABOVE DRAWINGS AND SPECIFICATIONS AND IDEAS, DESIGNS AND ARRANGEMENTS REPRESENTED THEREBY ARE AND SHALL REMAIN THE PROPERTY OF C.W.B. DESIGNS AND NO PART THEREOF SHALL BE COPIED, DISCLOSED TO OTHERS OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED, WITHOUT THE WRITTEN CONSENT OF C.W.B. DESIGNS. UPON CONTACT WITH THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

REVISIONS
REV. DATE
NEW 05.09.22
ENG 05.25.22
SUB 06.17.22

DRAWING FILE
P1 CHOWCHILLA
PLAN 1.APA

DATE: 06-17-2022

CWB DESIGNS

3838 N. CHICKADEE AVE.
SANGER, CA 93657
PHONE: 559.294.6534

CWB

STANDARD PLAN #1 FOR:

CITY OF CHOWCHILLA

130 S 2ND STREET
CHOWCHILLA, CA 93610
PHONE: 559-665-8615

PLUMBING

SHEET

P1

OF 19

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2019 CALIFORNIA GREEN BUILDING STANDARDS

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
3. METHOD, WATER SHALL BE FILTERED BY USE OF A BARRIER SYSTEM, WATTLE OR OTHER METHOD APPROVED BY THE ENFORCING AGENCY.
4. COMPLIANCE WITH A LAWFULLY ENACTED STORM WATER MANAGEMENT ORDINANCE.

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 AND 4.106.4.2 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: ON A CASE-BY-CASE BASIS, WHERE THE LOCAL ENFORCING AGENCY HAS DETERMINED EV CHARGING AND INFRASTRUCTURE ARE NOT FEASIBLE OR ONE OR MORE OF THE FOLLOWING CONDITIONS:

1. WHERE THERE IS NO COMMERCIAL POWER SUPPLY,
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.

4.106.4.1 ONE NEW- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES WITH ATTACHED PRIVATE GARAGES. FOR EACH DISTINGUISHABLE UNIT, PROVIDE A LISTED RATED 208/120VOLT 1 BRANCH CIRCUIT, 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 AT 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 SPACES 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. WHERE 17 OR MORE MULTIFAMILY DWELLING UNITS ARE CONSTRUCTED ON A BUILDING SITE, 3 PERCENT OF THE TOTAL NUMBER OF PARKING SPACES PROVIDED FOR ALL TYPES OF PARKING FACILITIES, BUT IN NO CASE LESS THAN ONE, 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.

NOTE: CONSTRUCTION DOCUMENTS ARE INTENDED TO DEMONSTRATE THE PROJECT'S CAPABILITY AND CAPACITY FOR FACILITATING FUTURE EV CHARGING. THERE IS NO REQUIREMENT FOR EV SPACES TO BE CONSTRUCTED OR AVAILABLE UNTIL EV CHARGERS ARE PROVIDED FOR ALL TYPES OF PARKING FACILITIES, BUT IN NO CASE LESS 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. AT LEAST ONE EV SPACE SHALL BE LOCATED IN COMMON USE AREAS AND AVAILABLE FOR USE BY ALL RESIDENTS, WHEN EV CHARGERS ARE INSTALLED. EV SPACES REQUIRED BY SECTION 4.106.4.2.2, 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.

4.106.4.2.2 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 (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, SHALL ALSO 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).
4. SURFACE SLOPE FOR THIS EV SPACE AND AISLE SHALL NOT EXCEED 1 UNIT VERTICAL IN 48 UNITS HORIZONTAL (.2083 PERCENT SLOPE) IN ANY DIRECTION.

4.106.4.2.3 SINGLE EV SPACE REQUIRED. INSTALL A LISTED RACEWAY CAPABLE OF ACCOMMODATING A 208/120VOLT 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 SPACES. 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. 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."

NOTES:

1. THE CALIFORNIA DEPARTMENT OF TRANSPORTATION ADOPTS AND PUBLISHES THE "CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CALIFORNIA MUTCD)" TO PROVIDE UNIFORM STANDARDS AND SPECIFICATIONS FOR ALL OFFICIAL TRAFFIC CONTROL DEVICES IN CALIFORNIA. ZERO EMISSION VEHICLE SIGNS AND PAVEMENT MARKINGS CAN BE FOUND IN THE NEW POLICIES & DIRECTIVES NUMBER 13-01, WEBSITE: [HTTP://WWW.DOT.CA.GOV/TRAFFICOPS/POLICY13-01.PDF](http://www.dot.ca.gov/trafficops/policy13-01.pdf)
2. SEE VEHICLE CODE SECTION 22511F OR EV CHARGING SPACE SIGNAGE IN OFF-STREET PARKING FACILITIES AND FOR USE OF EV CHARGING SPACES
3. THE GOVERNOR'S OFFICE OF PLANNING AND RESEARCH (OPR) PUBLISHED A "ZERO-EMISSION VEHICLE COMMUNITY READINESS GUIDEBOOK" WHICH PROVIDES HELPFUL INFORMATION FOR LOCAL GOVERNMENTS, RESIDENTS AND BUSINESSES. WEBSITE: [HTTP://OPR.CA.GOV/DOCS/ZEV-GUIDEBOOK.PDF](http://opr.ca.gov/docs/ZEV-GUIDEBOOK.PDF).

SECTION 4.303

INDOOR WATER USE

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. PLUMBING FIXTURES, (WATER CLOSETS & URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH THE FOLLOWING:

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 2.0 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 SHOWERHEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 2.0 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO 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 A RESIDENTIAL LAVATORY FAUCET 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 0.25 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 DEFUSE 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.

SECTION 4.304

OUTDOOR WATER USE

4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS.

ALL OUTDOOR POTABLE WATER USE SHALL COMPLY WITH AN AGGREGATE LANDSCAPE AREA EQUAL TO OR GREATER THAN 500 SQUARE FEET SHALL COMPLY WITH ONE OF THE FOLLOWING OPTIONS:

1. A LOCAL WATER EFFICIENT LANDSCAPE ORDINANCE OR THE CURRENT CALIFORNIA DEPARTMENT OF WATER RESOURCES' MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO), WHICHEVER IS STRINGENT, OR
2. PROJECTS WITH AGGREGATE LANDSCAPE AREAS LESS THAN 2,500 SQUARE FEET MAY COMPLY WITH THE MWELO'S APPENDIX D PRESCRIPTIVE COMPLIANCE OPTION.

NOTES:

1. THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO) AND SUPPORTING DOCUMENTS ARE AVAILABLE AT [HTTP://WWW.WATER.CA.GOV/WATERUSEEFFICIENCY/LANDSCAPORDINANCE/](http://www.water.ca.gov/wateruseefficiency/landscapordinance/)
2. A WATER BUDGET CALCULATOR IS AVAILABLE AT: [HTTP://WWW.WATER.CA.GOV/WATERUSEEFFICIENCY/LANDSCAPORDINANCE/](http://www.water.ca.gov/wateruseefficiency/landscapordinance/)

SECTION 4.406

ENHANCED DURABILITY

AND REDUCED MAINTENANCE

4.406.1 RODENT PROOFING. ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN SOLID 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.

SECTION 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 NONHAZARDOUS 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.

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 OR 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 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 POUNDS PER SQUARE FOOT OF THE BUILDING AREA SHALL MEET THE MINIMUM 65 PERCENT 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-PERCENT 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 SOUND IN "A GUIDE TO THE CALIFORNIA GREEN BUILDING STANDARDS CODE (RESIDENTIAL)" LOCATED AT [WWW.HCD.CA.GOV/CALGREEN.HTML](http://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) PROCESSOR-S CAN BE LOCATED AT THE CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY (CALRECYCLE).

SECTION 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.
 - f. INFORMATION FROM LOCAL UTILITY, WATER AND WASTE RECOVERY PROVIDERS ON METHODS TO FURTHER REDUCE RESOURCE CONSUMPTION, INCLUDING RECYCLE PROGRAMS AND LOCATIONS.
 - g. PUBLIC TRANSPORTATION AND/OR CARPOOL OPTIONS AVAILABLE IN THE AREA.
 - h. 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.
 - i. INFORMATION ABOUT WATER-CONSERVING LANDSCAPE AND IRRIGATION DESIGN AND CONTROLLERS WHICH CONSERVE WATER.
 - j. INSTRUCTIONS FOR MAINTAINING GUTTERS AND DOWNSPOUT AND THE IMPORTANCE OF DIVERTING WATER AT LEAST 5 FEET AWAY FROM THE FOUNDATION.
 - k. INFORMATION ON REQUIRED ROUTINE MAINTENANCE MEASURES, INCLUDING, BUT NOT LIMITED TO, CAULKING, PAINTING, GRADING AROUND THE BUILDING, ETC.
 - l. INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS AVAILABLE.
 - m. A COPY OF ALL SPECIAL INSPECTION 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 IS 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, AND METALS, OR MEET A LAWFULLY ENACTED 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 ORGANIC WASTE PORTION OF THIS SECTION.

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.

SECTION 4.504

POLLUTANT CONTROL

4.504.1 COVERING OF DUCT OPENINGS AND 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, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF WATER, DUST AND 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, SEALANTS 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 SCAQMD 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, OF 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 SECTION 94522(A)(2) AND (F)(1) OF CALIFORNIA CODE OF REGULATIONS. 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.

4.504.3 CARPET SYSTEMS. ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF 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 PERCENT 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).
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 BUILDING SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD (17CCR 93.120 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 ASINZS 2269, EUROPEAN 636 3S, AND CANADIAN CSA 0121, CSA 0151, CSA 0153 AND CSA 0325 STANDARDS.
5. OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY.

SECTION 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 THE 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-THICK (101.6 MM) BASE OF ½ INCH (12.7 MM) OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR RETARDER 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-08.
2. OTHER EQUIVALENT 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 TO 4 FEET FROM THE GRADE STAMPED END METERS.
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 FLOOR INSULATION PRODUCTS SHALL FOLLOW THE MANUFACTURERS' DRYING RECOMMENDATIONS PRIOR TO ENCLOSURE.

SECTION 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:

ENERGY CONSERVATION NOTES:

THE INSULATION SHALL CONFORM TO FLAME-SPREAD INDEX AND SMOKE DEVELOPMENT INDEX REQUIREMENTS OF CRC R302.0

ALL HEATHER STRIPPING, CAULKING, AND SEALING OF EXTERIOR DOORS, WINDOWS, AND BUILDING ENVELOPE PENETRATIONS ARE REQUIRED BY THE STANDARDS SHALL BE SUBJECT TO FIELD INSPECTION, JOINTS AND PENETRATIONS IN THE EXTERIOR OF THE BUILDING ENVELOPE SHALL BE CAULKED AND SEALED TO LIMIT AIR INFILTRATION.

ALL EXHAUST FANS SHALL HAVE BACK-DRAFT OR AUTOMATIC DAMPERS TO PREVENT AIR LEAKAGE.

ALL MANUFACTURED DOORS AND WINDOWS SHALL BE CERTIFIED AND LABELED, THEY ALSO SHALL BE DUAL PANE UNLESS NOTED, SEE ENERGY DOCUMENTATION FOR WINDOW U-VALUES, AND/OR FRAME MATERIALS.

REFRIGERATORS, FREEZERS, ROOM OR CENTRAL AIR CONDITIONERS, GAS SPACE HEATERS, WATER HEATERS, SHOWER HEADS, FAUCETS, AND FLOURESCENT LAMP BALLAST SHALL BE C.E.C. CERTIFIED AND INSTALLED ACCORDING TO MANUFACTURERS SPECS.

THE BUILDER SHALL PROVIDE THE ORIGINAL OCCUPANT WITH A LIST OF HEATING, COOLING, WATER HEATING, LIGHTING SYSTEMS AND CONSERVATION OF SOLAR DEVICES INSTALLED AND INSTRUCTIONS ON HOW TO USE THEM EFFICIENTLY.

THERMOSTATICALLY CONTROLLED HEATINGS SYSTEMS SHALL HAVE AN AUTOMATIC NIGHT SET-BACK THERMOSTAT.

GAS COOKING APPLANCES SHALL HAVE AN INTERMITTENT IGNITION DEVICE.

FOR THE IGNITION OF GAS APPLIANCES, A CONTINUOUSLY BURNING FLIT IS NOT PERMITTED ON:
A) FAN TYPE CENTRAL 4 WALL FURNACES
B) RESIDENTIAL TYPE CLOTHES DRYERS AND COOKING APPLIANCES;
C) POCK HEATERS.

LIGHT FIXTURES SHALL HAVE AN EFFICIENCY OF NOT LESS THAN 40 LUMENS PER WATT.

MASORY AND FACTORY-BUILT FIREPLACES SHALL HAVE:
A) TIGHT FITTING CLOSEABLE METAL OR GLASS DOORS COVERING THE ENTIRE OPENING OF THE FIREBOX
B) A COMBUSTION AIR INTAKE TO DRAIN AIR FROM THE OUTSIDE OF THE BUILDING DIRECTLY INTO THE FIREBOX WITH AT LEAST 6 SQ. IN. AREA
C) EQUIPPED WITH A READILY ACCESSIBLE, OPERABLE, AND TIGHT FITTING DAMPER;
D) NO PART OF INTAKE SHALL BE GREATER THAN 12" ABOVE BOTTOM OF FIRE BOX
E) OUTSIDE AIR INTAKE TO BE CONSTRUCTED OF NON-COMBUSTIBLE AND NON-CORROSIVE MATERIALS.
F) TIGHT FITTING FLUE DAMPER WITH A READILY ACCESSIBLE CONTROL.

CONTINUOUS BURNING GAS PILOT OF LPG GAS LIGHTER IS PROHIBITED.

PLUMBING NOTES:

PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND ROUTING OF ALL WASTE, VENT, WATER, GAS AND A/C CONDUITS AND LINES, CONDUITS AND LINES FOR SERVICE LINES.

ALL PLUMBING MATERIALS AND WORKMANSHIP SHALL BE IN STRICT ACCORDANCE WITH THE CALIFORNIA BUILDING CODE, CALIFORNIA PLUMBING CODE, AND AMERICAN GAS ASSOCIATION, AS AMENDED BY LOCAL GOVERNING AGENCIES.

ALL FIXTURES ARE TO BE FINISHED BY THE PLUMBING CONTRACTOR UNLESS OTHERWISE NOTED ON PLANS. ALL FIXTURES TO BE INSTALLED COMPLETE WITH RESPECTS TO TRIM SEALS, ETC. AS REQUIRED TO MAKE JOB READY FOR SERVICE AND USE.

PLUMBING CONTRACTOR TO TAKE OUT AND PAY FOR ALL PERMITS AND INSPECTION FEES AS REQUIRED FOR HIS WORK.

ALL WATER LINES TO BE STANDARD WEIGHT SCHEDULE 40 GALVANIZED OR COPPER PIPING, PROVIDE APPROVED WRAPPING TO WATER PIPING UNDER CONCRETE FLOORS.

ALL BATHTUBS SHALL HAVE AN APPROVED PLASTIC OR BRASS FERRULE SOLID TRAP AND OVERFLOW FITTING OR PROVIDE 12" X 12" MINIMUM ACCESS PANEL.

ALL TUB-SHOWER OPENINGS SHALL BE ROOFED-PRIOR WITH 1" CEMENT COVERING IN AN APPROVED MANNER.

CUTTING, NOTCHING, OR BORING OF FLATES OR STUDS SHALL CONFORM TO THE CURRENT CALIFORNIA BUILDING CODE EDITION AND ANY OTHER APPLICABLE STANDARDS.

ALL FIXTURES TO BE WHITE UNLESS OTHERWISE NOTED IN PLANS, PLUMBING CONTRACTOR SHALL SUBMIT FIXTURE SPECIFICATIONS FOR OWNERS APPROVAL.

PROVIDE SHUTOFF VALVE FOR COLD WATER SUPPLY TO BUILDING.

PROVIDE TWO-WAY CLEANOUTS AT THE CONNECTION OF THE HOUSE DRAIN AND THE BUILDING SEWER. ALL HORIZONTAL DRAIN LINES OVER 3' IN LENGTH SHALL BE PROVIDED WITH A CLEAN-OUT.

THE OWNER SHALL COORDINATE ALL SERVICE CONNECTIONS FOR THE WORK WITH THE APPROPRIATE AGENCIES.

CONTRACTOR TO DETERMINE WATER, SEWER AND GUTS LINES SIZES IN CONFORMANCE WITH THE CALIFORNIA PLUMBING CODE AND COORDINATE WITH PLUMBER AS TO ANY VARIATION AND/OR CONFLICT FROM DRAWINGS.

ALL ROOF PENETRATIONS WITH PIPES TO BE INSTALLED WITH "DECK-TITE" PIPE FLASHING INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS, EACH VENT PIPE OR STACK SHALL EXTEND THROUGH ITS FLASHING AND SHALL TERMINATE VERTICALLY NOT LESS THAN SIX (6) INCHES ABOVE THE ROOF NOR LESS THAN ONE (1) FOOT FROM ANY VERTICAL SURFACE.

VENT PIPES OR STACKS SHALL TERMINATE NOT LESS THAN 10 FEET FROM OR AT LEAST THREE (3) FEET ABOVE ANY WINDOW, DOOR OPENINGS, AIR INTAKE OR VENT SHANK, NOR LESS THAN THREE (3) FEET IN EVERY DIRECTION FROM ANY LOT LINE, ALLEY OR STREET.

DRAINAGE PIPE MATERIALS SHALL BE CAST IRON, GALVANIZED STEEL, PVC OR ABS SCHEDULE 40 DN. PLASTIC PIPE, EXCEPT THAT NO GAS GALVANIZED STEEL PIPE SHALL BE USED UNDERGROUND AND SHALL BE KEPT AT LEAST 6" ABOVE GROUND.

CHANGES IN DIRECTION OR SIZE OF DRAINAGE PIPING SHALL BE MADE BY THE APPROPRIATE USE OF APPROVED FITTINGS AND SHALL BE OF THE ANGLES PRESENTED BY ONE-SIXTEENTH BEND, ONE-EIGHT BEND, ONE-FOURTH BEND, OR OTHER APPROVED FITTINGS OR EQUIVALENT SHANK.

AN ACCESSIBLE SHUTOFF VALVE SHALL BE INSTALLED IN THE FUEL SUPPLY PIPING OUTSIDE OF EACH APPLANCE, SHUTOFF VALVES SHALL BE WITHIN 3' OF THE APPLANCE.

WATER METER MUST BE INSTALLED PRIOR TO FINAL INSPECTION, WATER METER CAN SHALL NOT BE LOCATED IN DRIVE OR APPROACH.

PROVIDE LOW FLOW WATER CLOSETS WITH MAXIMUM OF 1.28 GALLONS PER FLUSH.

SOLDERS AND FLUXES WITH A LEAD CONTENT WHICH EXCEEDS TWO-TENTH OF ONE PERCENT (.002) ARE PROHIBITED IN PIPING SYSTEMS USED TO CONVEY WASTE OR WATER.

LISTED METAL APPLIANCE CONNECTORS FOR RANGES AND CLOTHES DRYERS SHALL HAVE AN OVERALL LENGTH NOT TO EXCEED SIX (6) FEET.

CONDENSATE DRAINS FROM AIR CONDITIONING UNITS SHALL BE APPROVED GALVANIZED OR COPPER MATERIAL, APPROVED PVC MATERIAL SHALL BE USED ONLY ON RESIDENTIAL CONSTRUCTION NOT OVER TWO STOREYS IN HEIGHT.

UNDERGROUND FERROUS GAS PIPING SHALL BE ELECTRICALLY ISOLATED FROM THE REST OF THE GAS SYSTEM WITH LISTED ISOLATED FITTINGS AND INSTALLED A MINIMUM OF SIX INCHES ABOVE GRADE.

ALL SHOWER HEADS SHALL BE CERTIFIED AND EQUIPPED WITH FLOW RESTRICTORS.

ALL TUB AND SHOWER VALVES ARE TO BE SINGLE CONTROL PRESSURE BALANCING OR THERMOSTATIC ANTI - SCALD TYPE.

PROVIDE A NON-REMOVABLE TYPE BACK FLOW PREVENTION DEVICE ON ALL HOSE BIBS.

WATER HEATING NOTES:

WATER HEATING EQUIPMENT, SHOWER HEADS, AND FAUCETS SHALL BE CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION.

NO WATER HEATER SHALL BE INSTALLED IN ANY ROOM USED OR DESIGNED TO BE USED FOR SLEEPING, PURSUES, BATHROOMS, CLOTHES CLOSETS, OR IN ANY CORRIDOR CORPSE TO THE OUTSIDE OF THE BUILDING.

APPLIANCES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS WITH PROPER CLEARANCES TO COMBUSTIBLE MATERIALS.

FOR WATER HEATERS LOCATED IN CLOSETS OR CONFINED SPACES, PROVIDE MIN. 2 SQ. INCHES OF COMBUSTION AIR VENTILATION FOR EACH 1000 BTU/H. WATER HEATER (NUT. BOX OR REQUIRED VENTILATION SHALL BE LOCATED WITHIN 12" OF THE CEILING AND 20" SHALL BE LOCATED WITHIN 12" OF THE FLOOR, FURR CEILING TO 1'-0" AND PROVIDE 5/8" TYPE 'X' GYPSUM WALL BOARD AT CEILING AND ALL WALLS.

APPLIANCES INSTALLED IN GARAGES SHALL BE LOCATED SUCH THAT IT IS PROPERLY GUARDED AGAINST INJURY, AND ELEVATED SO THAT ANY GLOW OR SPARK EMITTED SHALL BE AT LEAST 18" ABOVE THE FLOOR OF THE GARAGE.

PROVIDE ADEQUATE EARTHQUAKE BRACING FOR WATER HEATER, WHEN NOT LOCATED IN A CLOSET USED EXCLUSIVELY FOR THE WATER HEATER, USE A 2" WIDE X 26 GA. SHEET METAL STRAP AT TOP AND BOTTOM 1/3 OF TANK, SECURE WITH (2) 16d AT EACH END TO FRAMING.

THE WATER HEATER SHALL BE PROVIDED WITH A TEMPERATURE AND PRESSURE RELIEF VALVE HAVING A FULL SIZED DRAIN OR GALVANIZED STEEL OR HARD DRAWN COPPER TO THE OUTSIDE OF THE BUILDING WITH THE END OF THE PIPE NOT MORE THAN 24" NOR LESS THAN 6" ABOVE GRADE, POINTING DOWNWARD WITH THE TERMINAL END BEING UNRESTRAINED.

PIPING IN UNCONDITIONED SPACE LEADING TO AND FROM WATER HEATER SHALL BE INSULATED WITH AN INSTALLED THERMAL RESISTANCE OF R-3 OR GREATER FOR THE FIRST FIVE FEET OF PIPE CLOSEST TO THE WATER HEATER, OR WHATEVER SHORTER LENGTH IS LOCATED IN UNCONDITIONED SPACE.

FULL SIZED, DOUBLE WALLED METAL VENT PIPING FROM WATER HEATERS SHALL BE ROUTED THROUGH THE ROOF AND PROVIDED WITH A WEATHERPROOF CAP, INSTALLATION AND REQUIRED CLEARANCES SHALL BE IN ACCORDANCE WITH APPLICABLE CODES.

STORAGE TYPE WATER HEATERS AND STORAGE AND BACKUP TANKS FOR SOLAR WATER HEATING SYSTEM SHALL BE EXTERNALLY WRAPPED WITH INSULATION HAVING AN INSTALLED THERMAL RESISTANCE OF R-4 OR GREATER.

ELECTRICAL NOTES:

ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), ELECTRICAL SAFETY ORDERS, AND ALL APPLICABLE CODES.

ELECTRICAL CONTRACTOR SHALL CHECK POWER AND PHONE SERVICES AT SITE PRIOR TO BIDDING. SERVICES NOT AVAILABLE OR REQUIRED BY THE STANDARDS SHALL BE SUBJECT TO FIELD INSPECTION. FOR SERVICE INSTALLATION, RELOCATION AND/OR REMOVAL PER UTILITY COMPANY REQUIREMENTS, CONTRACTOR SHALL DEFRAY COSTS FOR SERVICE, VERIFY OVERHEAD OR UNDERGROUND SERVICE.

ELECTRICAL CONTRACTOR SHALL VERIFY ALL LIGHTING AND CONVENIENCE OUTLETS AND ELECTRICAL PANEL LOCATION WITH OWNER PRIOR TO BIDDING. CONTRACTOR SHALL BE RESPONSIBLE FOR PANEL SIZING CIRCUITS, WIRE SIZES AND CIRCUIT BREAKER SIZES.

PROVIDE AN ILLUMINATED ADDRESS SIGN LOCATED SO THAT IT CAN BE CLEARLY SEEN FROM THE STREET, PROVIDE 10 VOLT DIRECT WIRE.

ELECTRICAL SERVICE TO BE 100 AMPS UNLESS NOTED OTHERWISE IN THE DRAWINGS).

PRIOR TO COMMENCING CONSTRUCTION, ELECTRICAL CONTRACTOR SHALL ARRANGE A CONFERENCE WITH THE MECHANICAL AND PLUMBING CONTRACTORS AND SHALL VERIFY ELECTRICAL CHARACTERISTICS, SIZES, LOCATION REQUIREMENTS, CONTROLS TYPES AND DIAGRAMS OF ALL EQUIPMENT FURNISHED BY THESE CONTRACTORS.

ELECTRICAL SERVICE AND/OR SUB-PANELS SHALL NOT BE LOCATED IN CLOTHES CLOSETS.

LIGHTING FIXTURES IN CLOTHES CLOSETS SHALL BE 18" MIN. FROM COMBUSTIBLE MATERIALS AND SHALL COMPLY WITH CEC 402.1.

PROVIDE APPROVED SMOKE DETECTOR (PIRE X100 #9429 OR EQUAL) BETWEEN KITCHEN AND FIRST BEDROOM, AT ALL CHANGES OF CEILING ELEVATIONS, AND IN ALL BEDROOMS AND SLEEPING AREAS, USE 110VOLT DIRECT WIRE WITH BATTERY BACK-UP, LOCATED AT CEILING AND MINIMUM 24" FROM AIR OUTLET OR RETURN, (ALL DETECTORS SHALL BE ELECTRICALLY INTERCONNECTED AND SHALL EXIT A SIGNAL WHEN THE BATTERIES ARE LOW).

PROVIDE AN APPROVED HEAT DETECTOR IN ATTIC ABOVE ANY MECHANICAL EQUIPMENT WITH AN ALARM LOCATED IN THE LIVING AREA.

PROVIDE AT LEAST ONE SWITCHED LIGHT IN ATTIC AND AN ELECTRICAL OUTLET WITHIN 25' OF ATTIC MOUNTED EQUIPMENT, VERIFY LOCATION WITH MECHANICAL CONTRACTOR.

RECEPTACLES SHALL BE INSTALLED SUCH THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET FROM A RECEPTACLE OUTLET PER CEC 210.52 (A) A WALL SPACE SHALL INCLUDE:
(1) ANY SPACE 2 FEET OR MORE IN WIDTH (INCLUDING SPACE MEASURED AROUND CORNERS) AND KEYSWITCH ALONG THE FLOOR LINE BY DOORWAYS, FIREPLACES, FIREPLACES, AND SHOWER OPENINGS.
(2) SPACE OCCUPIED BY FIXED PANELS IN EXTERIOR WALLS IN EXCLUDING SLIDING PANELS
(3) THE SPACE OCCUPIED BY FIXED ROOM DIVIDERS SUCH AS FREESTANDING BAR-TYPE COUNTERS OR RAILINGS.

ALL ELECTRICAL OUTLETS IN BATHS, GARAGES, AND EXTERIOR LOCATIONS, AND WITHIN 6' OF SINKS OR OTHER WATER SOURCES SHALL BE ON GROUND-FALL INTERRUPTING CIRCUITS.

ANY APPLIANCES OR ELECTRICAL OUTLETS LOCATED IN GARAGE THAT GENERATE A SPARK OR GLOW SHALL BE ELEVATED AT LEAST 18" ABOVE THE FLOOR.

PROVIDE AN ELECTRODE (UPPER GROUND) ENCASED BY AT LEAST 3" OF CONCRETE FOOTING OR FOUNDATION THAT IS IN DIRECT CONTACT WITH THE EARTH, CORRODING OF AT LEAST 20" OF ONE OR MORE STEEL REINFORCING BARS NOT LESS THAN 1/2 INCH DIAMETER OR AT LEAST 20' BARE SOLID COPPER CONDUCTOR NOT SMALLER THAN 14 AWG.

SWITCHES MAY BE RELOCATED AS DESIRED BY THE OWNER ON THE JOBSITE.

LIGHT FIXTURES TO BE SELECTED BY THE OWNER (SEE CONTRACT FOR ALLOWANCE), ALL TV, AND TELEPHONE OUTLETS SHOWN ON THESE PLANS TO BE FIELD VERIFIED WITH THE OWNER, ALL LOCATIONS AS REQUIRED BY OWNER, SHALL BE FIELD MARKED ON THE FRAMING PRIOR TO ANY INSTALLATION. TV ANTENNAE SHALL BE TIED TOGETHER IN ATTIC SPACE AND WIRE RUN THROUGH PLASTIC CONDUIT WITH ROOF JACK, (CHECK WITH OWNER WITH REGARDS TO CABLE TV).

APPLIANCES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

ALL SWITCHES SHALL BE A MAXIMUM OF 48" AND A MINIMUM OF 48" FROM FLOOR TO THE CENTER OF OUTLET.

ALL RECEPTACLES SHALL BE A MINIMUM OF 12" FROM FLOOR TO CENTER OF OUTLET.

PROVIDE MINIMUM 36" HOOK CLEARANCE IN FRONT OF PANELS AND FLOOR SERVICE EQUIPMENT, WITH 30" MIN WIDE WORK SPACE, PROVIDE 30" FROM BUS BARS TO CONSTRUCTION.

INCANDESCENT LIGHTING FIXTURES THAT ARE RECESSED INTO INSULATED CEILINGS SHALL BE APPROVED ZERO-CLEARANCE INSULATION COVER (L.C.) BY UL, OR OTHER TESTING LABORATORY RECOGNIZED BY L.C.B.O.

MECHANICAL NOTES:

ALL MECHANICAL EQUIPMENT AND RELATED WORK SHALL CONFORM TO THE CURRENT EDITION OF THE CALIFORNIA MECHANICAL CODE AS AMENDED BY THE LOCAL GOVERNING AGENCIES.

ALL WORK SHALL BE DONE IN A NEAT AND PROPER MANNER AS PRACTICED BY THOSE SKILLED IN THE PARTICULAR TRADE. ALL PIPES, FIXTURES, EQUIPMENT, GRILLES, REGISTERS AND OTHER COMPONENTS SHALL BE INSTALLED LEVEL, SQUARE AND IN A NEAT AND WORKMANLIKE MANNER.

ALL EQUIPMENT SHALL BE INSTALLED WITH STRICT CONFORMANCE TO THE MANUFACTURERS RECOMMENDATIONS.

MECHANICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES.

CONTRACTOR SHALL TEST EQUIPMENT ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS TO INSURE SYSTEM IS FREE OF ANY DEFECTS, OBJECTIONABLE NOISES, AND VIBRATION OR ANY OTHER DEFECTIVE CONDITIONS.

CONTRACTOR SHALL PROVIDE OWNER WITH ANY NECESSARY OPERATION AND MAINTENANCE INSTRUCTIONS, WARRANTIES, OR OTHER DOCUMENTATION SUPPLIED WITH THE EQUIPMENT.

MECHANICAL CONTRACTOR SHALL VERIFY ALL SYSTEM VOLUMES PRIOR TO BIDDING AND/OR ORDERING EQUIPMENT.

THE ARRANGEMENT OF EQUIPMENT, PIPING, DUCT WORK, AND OTHER MATERIALS INDICATED ON THE DRAWINGS AND/OR IN THE FOLLOWING DRAWINGS ARE TO BE AS NEARLY AS POSSIBLE AND AHEAD OF A NEAT ARRANGEMENT, WHILE STILL OVERCOMING OBSTRUCTIONS.

ANY CHANGE OF H/W OR WATER HEATING UNITS FROM THAT LISTED IN THE DRAWINGS (MOTOR, CAPACITIES, OR EFFICIENCIES), ARE REQUIRED TO BE DONE BY PLAN ADDENDUM, ADDENDUMS MAY REQUIRE REVISED ENERGY CALCULATIONS AND SHALL BE SUBJECT AS TO THE CHANGES, AND SHALL BE ACCOMPANIED BY A COPY OF THE EQUIPMENT PAGE FROM THE CEC DIRECTORY OF CERTIFIED EQUIPMENT.

LOCATION OF HVAC UNITS AND THE THERMOSTAT AS SHOWN IN THE DRAWINGS SHALL BE VERIFIED WITH THE MECHANICAL CONTRACTOR.

INDOOR TEMPERATURES AND AIR SUPPLY REQUIREMENTS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITIONS OF THE CALIFORNIA BUILDING CODE AND THE CALIFORNIA MECHANICAL CODE.

ALL EXHAUST SYSTEMS SHALL BE VENTED TO THE OUTSIDE AIR.

ALL REST ROOMS AND LAUNDRY ROOMS SHALL BE PROVIDED WITH MECHANICAL VENTILATION SYSTEMS WITH A MINIMUM OF 5 CFM OF 3 AIR CHANGES PER HOUR. ALL OTHER ROOMS SHALL BE PROVIDED WITH A MINIMUM OF 2 AIR CHANGES PER HOUR.

ALL EXHAUST FANS SHALL BE PROVIDED WITH BACK-DRAFT OR AUTOMATIC DAMPERS TO PREVENT AIR LEAKAGE. ALL EXHAUST FANS SHALL PROVIDE 5 AIR CHANGES PER HOUR.

COMBUSTION AIR FOR GAS BURNING EQUIPMENT (FURNACES AND/OR WATER HEATERS) SHALL BE FROM THE EXTERIOR OF THE BUILDING.

ALL HEATING AND COOLING EQUIPMENT SHALL BEAR A PERMANENT IDENTIFICATION AS TO THE AREA OF SPACE SERVED BY THE EQUIPMENT.

WHEN HVAC EQUIPMENT AND/OR EVAPORATIVE COOLERS ARE LOCATED ON THE ROOF, AND THE PITCH OF THE ROOF EXCEEDS 4 IN 12, IT SHALL BE PROVIDED WITH A PLATFORM, RAILINGS AND CATAWK, THAT COMPLIES WITH THE CALIFORNIA MECHANICAL CODE.

ALL ROOF MOUNTED EQUIPMENT WITH ROTATING COMPONENTS SHALL BE MOUNTED ON RUBBER VIBRATION ISOLATORS UNLESS NOTED OTHERWISE IN DRAWINGS.

IF HVAC EQUIPMENT IS LOCATED ON A TILE ROOF, PROVIDE AN ACCESS TO HVAC UNITS SO THAT TRAVERSAL OF THE ROOF TILES ARE NOT REQUIRED, (COMPOSITION SHINGLES UNDER UPST AND EXTENDING TO HAVE MAY BE USED).

PROVIDE DOUBLE CEILING JOISTS OR RAFTERS UNDER ALL ATTIC AND/OR ROOF MOUNTED EQUIPMENT, IF TRUSSES ARE USED, TRUSS MANUFACTURER SHALL PROVIDE CALCULATION FOR ADDITIONAL LOADS APPLIED DUE TO ATTIC AND/OR ROOF MOUNTED EQUIPMENT.

FOR WARM AIR FURNACES LOCATED IN ATTIC SPACES, PROVIDE THE FOLLOWING:
A) 30" X 30" (MINIMUM) ATTIC ACCESS WITHIN 20' OF EQUIPMENT
B) A MINIMUM 24" WIDE SOLID FLOORING PASSAGE FROM THE ACCESS TO A 30" WIDE WORKING PLATFORM ON THE CONTROL SIDE OF THE FURNACE
C) A PERMANENT ELECTRICAL OUTLET AND A LIGHT CONTROLLED BY A SWITCH LOCATED AT THE ACCESS
D) AN APPROVED HEAT DETECTOR LOCATED IN THE ATTIC WITH AN ALARM LOCATED IN THE LIVING AREA OF THE RESIDENCE.

ETHE COMBUSTION AIR OPENING SHALL BE PROVIDED WITH A MIN. 26 GA. STEEL SLEEVE EXTENDING 6" MIN ABOVE THE TOP OF THE INSULATION

THERMOSTATICALLY CONTROLLED HEATING SYSTEMS SHALL HAVE AN AUTOMATIC NIGHT SETBACK THERMOSTAT. THERMOSTATS SHALL BE ADJUSTABLE TO PROVIDE A TEMP. RANGE OF UP TO 10 DEGREES BETWEEN FULL HEATING AND FULL COOLING.

ALL DUCTS SHALL BE CONSTRUCTED, INSTALLED AND INSULATED IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE. ALL DUCTS CONVEYING AIR FROM OUTSIDE THE BUILDING OR FROM EVAPORATIVE COOLERS SHALL BE MADE OF GALVANIZED STEEL OR NON-CORROSIVE METAL. ALL DUCTS SHALL BE EXTERNALLY WRAPPED OR HAVE AN INSTALLED THERMAL RESISTANCE AS SHOWN ON THE DRAWINGS OR THE ATTACHED ENERGY CALCULATION.

DOMESTIC CLOTHES DRYER EXHAUST DUCTS SHALL NOT EXCEED A COMBINED HORIZONTAL AND VERTICAL LENGTH OF 14'-0" INCLUDING (2) 90 DEGREE ELBOWS.

ALL ATTIC INSTALLED APPLIANCES SHALL HAVE A SHEET METAL SECONDARY PAN AND 1 1/2" DIAMETER DRAIN TO AN APPROVED LOCATION AT THE EXTERIOR.

AFTER INSTALLING HVAC EQUIPMENT AND WATER HEATING SYSTEMS, THE INSTALLER SHALL POST, IN A CONSPICUOUS LOCATION AT THE BUILDING SITE, AN "INSTALLATION CERTIFICATE" (FORM F001), SIGNED BY THE INSTALLER, LISTING THE EQUIPMENT INSTALLED, (MAKE, MODEL, AND EFFICIENCIES) AND THAT IT MEETS OR EXCEEDS THE REQUIREMENTS OF THE ENERGY CONSERVATION DOCUMENTATION.

ALL AIR MOVING EQUIPMENT USED TO MEET EITHER THE WHOLE BUILDING OR LOCAL EXHAUST VENTILATION REQUIREMENTS SHALL BE RATED IN TERMS OF AIRFLOW AND SOUND.

A) ALL CONTINUOUSLY OPERATED FANS SHALL BE RATED AT A MAXIMUM OF 10 SONE.
B) INTERMITTENTLY OPERATED WHOLE-BUILDING VENTILATION FANS SHALL BE RATED AT A MAXIMUM OF 10 SONE.
C) INTERMITTENTLY OPERATED LOCAL EXHAUST FANS SHALL BE RATED AT A MAXIMUM OF 3 SONE.
D) REMOTELY LOCATED AIR MOVING EQUIPMENT NEED NOT MEET SOUND REQUIREMENTS IF THERE IS AT LEAST 4 FEET OF DUCTWORK BETWEEN THE FAN AND THE INTAKE GRILLE.

FRAMING NOTES:

ALL WOOD FRAMING SHALL COMPLY WITH THE WORKING DRAWINGS AND THE REQUIREMENTS OF THE LATEST EDITION OF THE CALIFORNIA RESIDENTIAL CODE. IF THE WORKING DRAWINGS ARE INCORRECT OR AN ERROR IS FOUND, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SUCH INFORMATION WITH THE DESIGNER PRIOR TO CONTINUING WITH ANY WORK AFFECTED.

FRAMING CLIPS, POST CAPS, TRIST STRAPS, AND HANGERS AS REQUIRED FOR PROPER EXECUTION OF THIS JOB SHALL BE SHIMPOF OR EQUAL. (OR AS NOTED IN DRAWINGS).

ALL NAILS USED FOR CONSTRUCTION SHALL BE APPROVED FOR THE APPLICATION FOR WHICH THE NAILS ARE BEING USED.

FINGER JOINTED STUDS SHALL NOT BE USED IN ANY STRUCTURAL WALLS (BEARING OR SHEAR WALLS) WITHOUT ANALYSIS OR APPROVAL TO SUBSTANTIATE EQUIVALENCY.

ALL STUDS SHALL BE MINIMUM 2X4 IN SIZE AND SPACED NOT MORE THAN 16" O.C. UNLESS NOTED CLEARLY IN THE DRAWINGS.

ALL STUDS SHALL HAVE FULL BEARING ON A SILL PLATE NOT LESS THAN 2 IN THICKNESS AND HAVING A WIDTH NOT LESS THAN THAT OF THE SILL STUDS. ALL SILL PLATES IN CONTACT WITH CONCRETE SHALL BE FOUNDATION GRADE REDWOOD OR PRESSURE TREATED DOUGLAS FIR.

ALL BEARING WALLS AND EXTERIOR WALL STUDS SHALL BE CAPPED WITH DOUBLE TOP PLATES. END JOINTS AND SPLICES SHALL BE OFFSET MINIMUM 48".

EXTERIOR STUD WALLS WITHOUT CEILINGS OR OTHER APPROVED LATERAL BRACING AT THE 8' FOOT PLATE HEIGHT SHALL BE CONTINUOUS STUDS AND/OR COLUMNS.

FIRE BLOCKING IS REQUIRED AT 10'-0" INTERVALS AT CONTINUOUS WALLS OVER 10'-0" HIGH.

PIPPES EXCEEDING 1/8RD OF THE PLATE WIDTH SHALL NOT BE TAPPED IN PARTITIONS USED AS BEARING OR LATERAL FORCE RESISTING WALLS, UNLESS FURRED ENTIRELY, CLEAR OF STUDS, WHERE ALLOWED, PIPES SHALL BE PLACED IN THE CENTER OF THE PLATES, LEAVING A NEAT HOLE, NO NOTCHING OF THE PLATES ARE ALLOWED.

ALL BEAMS AND/OR GIRDER STUDS66555 SHALL HAVE SUFF SUPPORT TO THE FOUNDATION, PROVIDE MINIMUM 6X STUDS (MINIMUM OR 6X STUDS AS CALLED OUT IN DRAWINGS).

ALL SHEAR WALLS SHALL EXTEND TO THE ROOF SHEATHING UNLESS CLEARLY SPECIFIED OTHERWISE IN THESE DRAWINGS. ALL WOOD SHEAR WALLS AND DIAPHRAGMS SHALL CONFORM TO THE FOLLOWING:

a) SHEETS USED IN THE CONSTRUCTION OF DIAPHRAGMS AND SHEAR WALLS SHALL BE LESS THEN 4" X 8" IN SIZE.
b) MINIMUM SPACE SET AT BOUNDARIES AND CHANGES IN FRAMING SHALL BE 24" UNLESS ALL EDGES ARE BLOCKED AND NAILLED.
c) PROVIDE FRAMING MEMBERS OR BLOCKING AT ALL PANEL EDGES IN SHEAR WALLS.

NAILING OF PLYWOOD SHEAR WALLS OR PLYWOOD DIAPHRAGMS SHALL BE DONE WITH COMMON NIRE CENTRE, SHOULD THE CONTRACTOR DESIRE TO USE ANY OTHER FASTENER TYPES, HE SHALL, OBTAIN WRITTEN APPROVAL FROM THE PROJECT ENGINEER AND/OR THE DESIGNER PRIOR TO THE USE OF SUCH FASTENERS IN THE FIELD.

PROVIDE FIRE BLOCKING AT FLOORS, CEILING COVES AND SOFFITS AND AT 10'-0" INTERVALS AND AT STUD WALLS ADJACENT TO THE STAIR STRINGERS.

CONTRACTOR TO CONFIRM IF ALL AREAS ARE PROVIDED WITH POSITIVE DRAINAGE PRIOR TO SHEATHING OF THE ROOF.

ALL ELEVATIONS ARE GIVEN FROM TOP OF FLOOR SLAB.

VERIFY SIZES AND LOCATIONS OF ALL ROOF OPENINGS, PLATFORMS, ETC. WITH THE RESPECTIVE CONTRACTORS.

PROVIDE SOLID BLOCKING AT ALL ENDS OF JOISTS AND RAFTERS AND AT ALL SUPPORTS PER THE CALIFORNIA BUILDING CODE.

WHERE RAFTERS ARE NOT PARALLEL, WITH CEILING JOISTS, THE RAFTERS SHALL BE TIED TOGETHER WITH MINIMUM 1X4 RAFTER TIES AT 48" O.C.

PROVIDE DOUBLE ROOF RAFTERS AT ANY ROOF MOUNTED MECHANICAL EQUIPMENT.

ALL ROOF COVERINGS SHALL CONFORM TO THE REQUIREMENTS OF THE CEC.

ALL ROOF MOUNTED EQUIPMENT (I.E. HOODS, VENTILATORS, ETC.) SHALL REQUIRE A MINIMUM OF 2 COATS OF PAINT, COLOR TO BE SELECTED BY OWNER.

ALL PLYWOOD ROOF SHEATHINGS SHALL BE LAID PERPENDICULAR TO THE RAFTERS WITH STAGGERED END JOINT PATTERNS.

PROVIDE MINIMUM 36" HOOK CLEARANCE IN FRONT OF PANELS AND FLOOR SERVICE EQUIPMENT, WITH 30" MIN WIDE WORK SPACE, PROVIDE 30" FROM BUS BARS TO CONSTRUCTION.

WOOD SCREDS, BEAMS, JOISTS OR RAFTERS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN 1/6TH OF THE BEAM DEPTH FROM THE TOP, LOCATIONS NOT FARTHER FROM THE BEAM END THAN THREE TIMES THE BEAM DEPTH.

WOOD SCREDS AND LAG BOLTS SHALL BE TURNED, NOT DRIVEN, INTO PLACE, FOR SCREW THREADS INTO ROOF BORE A PILOT HOLE THE SAME DIAMETER AND DEPTH AS THE SHANK OF THE SCREW.

BOLT HOLES IN WOOD SHALL BE BORED 1/8" INCH LARGER THAN THE NET SIZE OF THE BOLT, PROVIDE STANDARD STEEL WASHERS UNDER BOLT HEAD AND NUTS WHEN BEARING AGAINST WOOD, ALL NUTS SHALL BE RE-TIGHTENED AT THE COMPLETION OF THE JOB OR JUST PRIOR TO CLOSING IN WITH FINISH CONSTRUCTION.

ALL BOLTS IN WOOD SHALL BE SPACED MIN. 4 BOLT DIAMETERS EDGE DISTANCE, AND MIN. 1 BOLT DIAMETERS END DISTANCE, (UNLESS NOTED OTHERWISE IN DRAWINGS).

MAXIMUM SIZE OF OPENINGS IN HORIZONTAL DIAPHRAGMS SHALL NOT EXCEED 24" WITHOUT SOLID BLOCKING AT OPENING.

THE ENTIRE PERIMETER OF HORIZONTAL DIAPHRAGM (FLOORS AND FLOORS) SHALL HAVE SOLID BLOCKING.

TRUSS NOTES:

ALL TRUSSES SHALL BE DESIGNED FOR THE LOADS SHOWN IN ACCORDANCE WITH THE CURRENT CALIFORNIA BUILDING CODE, AS AMENDED BY THE LOCAL GOVERNMENT, AND THE DESIGN SPECIFICATION FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES BY THE TRUSS PLATE INSTITUTE (CURRENT EDITIONS).

TRUSS MANUFACTURER SHALL HAVE "IN PLANT" INSPECTION BY AN APPROVED ASSESSOR, CERTIFICATE SHALL BE SUBMITTED TO THE DEVELOPMENT DEPARTMENT, BUILDING AND SAFETY SERVICES.

TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS OF THE TRUSSES TO THE DESIGNER AND/OR PROJECT ENGINEER, AND DRAWINGS SHALL BE APPROVED BY THE LOCAL BUILDING DEPARTMENT PRIOR TO FABRICATION OF AND TRUSSES SHOP DRAWINGS SHALL INCLUDE VERIFYING CALCULATIONS SIGNED BY A CIVIL ENGINEER REGISTERED IN CALIFORNIA.

ALL TRUSS SPANS, QUANTITY AND OTHER DIMENSIONS SHALL BE VERIFIED BY THE TRUSS MANUFACTURER PRIOR TO FABRICATION.

JOB SITE STORAGE OF TRUSSES SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS, TRUSSES STORED HORIZONTALLY SHOULD BE SUPPORTED ON BLOCKING TO PREVENT EXCESSIVE LATERAL BENDING AND LESSEN MOISTURE GAIN.

ANY DAMAGE TO TRUSSES SHALL BE BROUGHT TO THE ATTENTION OF THE TRUSS MANUF. AND FIELD REPAIRS SHALL NOT BE DONE WITHOUT PRIOR APPROVAL FROM THE TRUSS MANUFACTURER.

CUTTING, NOTCHING AND/OR DRILLING OF ANY TRUSS IS PROHIBITED UNLESS SPECIFIED IN TRUSS DRAWINGS. ALL CUTTING, NOTCHING AND/OR DRILLING SHALL BE VERIFIED WITH THE TRUSS MANUFACTURER PRIOR TO STARTING WORK.

THE CONTRACTOR SHALL PROVIDE TEMPORARY HORIZONTAL AND CROSS BRACINGS TO HOLD TRUSSES PLUMB AND IN SAFE CONDITION UNTIL PERMANENT BRACING IS INSTALLED. ALL PERMANENT BRACINGS AND RELATED COMPONENTS SHALL BE IN PLACE PRIOR TO LOADS BEING APPLIED TO TRUSSES.

ALL INTERIOR NON-BEARING PARTITIONS SHALL HAVE 1/2" CLEARANCE FROM TOP PLATE TO BOTTOM CHORD OF TRUSS, USE METAL TRUSS CLIPS AT 6'-0" O.C. TO TRUSS BOTTOM CHORD OR BLOCKING BETWEEN TRUSSES (REFER TO DRAWINGS AND DETAILS).

TRUSSES SHALL BE ADEQUATELY ATTACHED TO TOP PLATES, REFER TO DRAWINGS AND ACCOMPANYING DETAILS AS WELL AS ATTACHED TRUSS CALCULATIONS FOR SPECIFIC REQUIREMENTS.

PROVIDE 2X4 RIDGE BLOCKING AT ALL TRUSSES AS REQUIRED.

PROVIDE 2X4 CONTINUOUS BOTTOM CHORD LATERAL BRACINGS AT 1/3 SPAN NOT TO EXCEED 15'-0" O.C., SPLICES SHALL BE LAPPED AT LEAST 2 TRUSSES.

PROVIDE 2X4 CROSS BRACINGS AT EACH END OF BUILDING AND AT 20'-0" O.C. (MINIMUM).

ALL FILL FRAMING SHALL BE DONE PER TRUSS MANUFACTURER'S RECOMMENDATIONS, REFER TO TRUSS CALCULATIONS AND DETAILS.