TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIMOVC DESIGN CRITERA

GROUND SNOW LOAD	WIND DESIGN: SPEED[d] (MPH)	WIND DESIGN: TOPOGRAPHIC EFFECTS[k]	WIND DESIGN: SPECIAL WIND REGION	WIND DESIGN: WIND-BORNE DEBRIS ZONE	SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM: WEATHERING	SUBJECT TO DAMAGE FROM: FROST LINE DEPTH	SUBJECT TO DAMAGE FROM: TERMITE	WINTER DESIGN TEMP	ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
N/A	110	N/A	N/A	B/C	D0	NEGLIGABLE	N/A	✓	25F	NONE	SEE NOTE	1500	60

SOIL BEARING CAPACITY: CITE TABLE R401.4.1 1500psi
CONCRETE DESIGN STRENGTH: CITE CRC TABLE R402.2 Negligible weathering potemtial 2500 psi
ROOF LIVE LOAD: 20psf
ROOF DEAD LOAD: 20psf
SOIL CLASS (CBC 1603.1.5.1)
SEISMIC IMPORTANCE FACT
FLOOD HAZARDS REFER TO

EXAMPLE OF PRE-APPROVED PLANS. PLANS AVAILABLE FOR 498, 749, OR 1,190 SF. LAYOUTS IN THREE ARCHITECTURAL STYLES THROUGH THE CITY OF MERCED PRE-APPROVED ADU PROGRAM. CONTACT INSPECTION SERVICES DIVISION AT (209) 385-4773 OR INSPECTIONSERVICESWEB@CITYOFMERCED.ORG FOR MORE INFORMATION.

REQUIREMENTS FOR WOO

MINIMUM NAIL		M							
Size	Penetration (inches)	STR							
		PA							
6d Common (2.0" × 0.113")	1.5								
8d Common (2.5" × 0.131")	1.75			24	6	12	140	115	110

For SI: 1 inch = 25.4 mm, 1 mile per hour = 0.447 m/s.

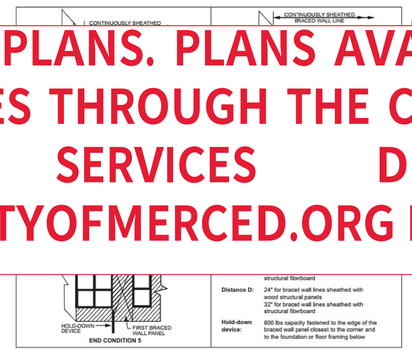
a. Panel strength axis parallel or perpendicular to supports. Three-ply plywood sheathing with studs spaced more than 16 inches on center shall be applied with panel strength axis perpendicular to supports.

b. Table is based on wind pressures acting toward and away from building surfaces in accordance with Section R301.2. Lateral bracing requirements shall be in accordance with Section R602.10.

c. Wood structural panels with span ratings of Wall-16 or Wall-24 shall be permitted as an alternate to panels with a 24/0 span rating. Plywood siding rated 16 OC or 24 o.c. shall be permitted as an alternate to panels with a 24/16 span rating. Wall-16 and Plywood siding 16 o.c. shall be used with studs spaced not more than 16 inches on center.

TABLE R602.10.3(3)
BRACING REQUIREMENTS BASED ON SEISMIC DESIGN CATEGORY

• SOIL CLASS D[b]					
40	NP	21.0	21.0	15.0	12.8
50	NP	26.3	26.3	18.8	16.0
10	NP	7.3	7.3	5.3	4.5
20	NP	14.5	14.5	10.5	9.0
30	NP	21.8	21.8	15.8	13.4
40	NP	29.0	29.0	21.0	17.9
50	NP	36.3	36.3	26.3	22.3



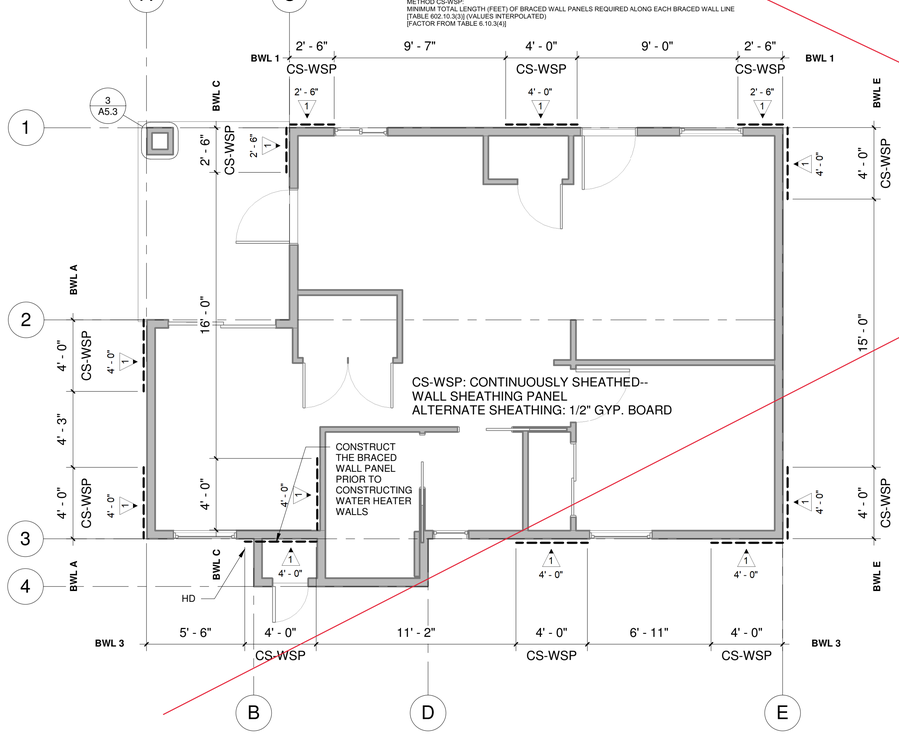
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 4.45 N.

FIGURE R602.10.7
END CONDITIONS FOR BRACED WALL LINES WITH CONTINUOUS SHEATHING

BRACE WALL LINE	BWL LENGTH	MIN REQ.	FACTOR	TOTAL REQ.	PROVIDED	NOTE:
BWL 1	35.75	5.46	1.2	6.55	10.5	INCLUDES 1.5 FT. CSPF FRAME
BWL 3	35.75	5.46	1.2	6.55	12	
BWL A	23	3.55	---	3.55	9.5	INCLUDES 1.5 FT. CSPF FRAME
BWL C	23	3.55	---	3.55	6.5	
BWL E	23	3.55	---	3.55	8	
1/2" GYP BD						
BWL 1	35.75	11.82	1.2	14.18	MIN 14.18	INCLUDES 1.5 FT. CSPF FRAME
BWL 3	35.75	11.82	1.2	14.18	MIN 14.18	
BWL A	23	6.13	---	6.13	MIN 6.13	INCLUDES 1.5 FT. CSPF FRAME
BWL C	23	6.13	---	6.13	MIN 6.13	
BWL E	23	6.13	---	6.13	MIN 6.13	

TAG	MINIMUM NAIL	MINIMUM SPAN RATING	MINIMUM NOMINAL PANEL THICKNESS	STUD SPACING	PANEL NAIL SPACING: EDGES	PANEL NAIL SPACING: FIELD
1 X FT (PANEL LENGTH IN FEET)	8d COMMON	24/16	7/16 inch	16inch o.c.	6 inch o.c.	12 inch o.c.

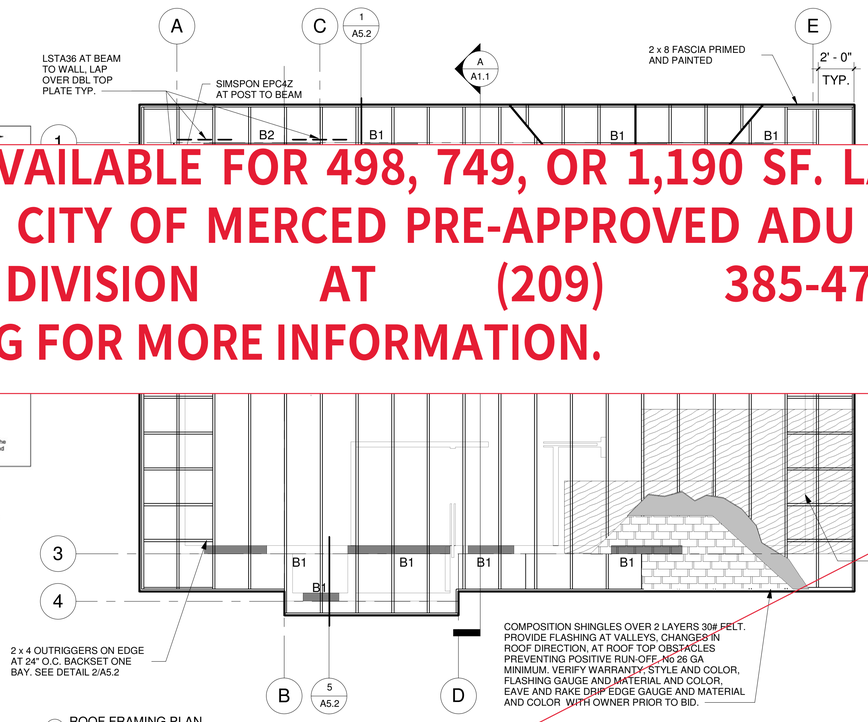
METHOD CS-WSP:
MINIMUM TOTAL LENGTH (FEET) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE
[TABLE 602.10.3(3)] (VALUES INTERPOLATED)
[FACTOR FROM TABLE 6.10.3(4)]



7 WALL BRACING
1/4" = 1'-0"

IN LIEU OF PROVIDING A SOILS REPORT, ALL FOOTINGS AND SLABS SHALL BE AS FOLLOWS:
EXTERIOR AND INTERIOR WALLS FOOTINGS SHALL BE A MINIMUM 18" EMBEDMENT DEPTH W/1 #4 RE-BAR CONTINUOUS TOP AND BOTTOM WITH A MINIMUM 3" CONCRETE COVER SEPARATING THE REBAR FROM SOIL IN ANY DIRECTION.
CONCRETE SLABS INSIDE THE STRUCTURE SHALL BE 4" MINIMUM THICKNESS WITH #3 RE-BAR AT 18" ON CENTER OR 6X6X10 WWM. INCLUDE A MINIMUM 10 MIL VAPOR BARRIER UNDER THE SLAB.
ADDITIONAL NOTE: "IF APPLICANT DOES NOT WISH TO COMPLY WITH THIS:
1. A SOILS REPORT SHALL BE PROVIDED, ALONG WITH THEIR DESIGN OR
2. STRUCTURAL ENGINEER SHALL VERIFY THAT THE EXISTING PRIMARY DWELLING UNIT ON THE PROPERTY SUFFERS NO STRUCTURAL
DETERIORATION AND THEREFORE, THE SAME FOOTING WIDTH, DEPTH, RE-BAR SIZES, SLAB THICKNESS WITH RE-BAR SIZE & SPACING MAY BE USED AS THE MINIMUMS FOR THE ADU, AND PROVIDE STRUCTURAL CALCULATIONS AND STRUCTURAL PLANS TO REPLACE THE BRACED WALL PLANS CURRENTLY INCLUDED IN THESE PLANS.
3. IF THE ENGINEER'S STRUCTURAL CALCULATIONS FOR THE STRUCTURE REQUIRES MORE THAN THESE MINIMUMS, THE STRUCTURAL
CALCULATIONS SHALL PREVAIL AND BE REFLECTED ON THE STRUCTURAL PLANS PROVIDED BY THE ENGINEER.

1. MAXIMUM PRESCRIPTIVE VALUE FOR ALLOWABLE SOIL BEARING PRESSURE IS 1500 PSF IF A GEOTECHNICAL INVESTIGATION REPORT IS NOT PROVIDED. PROVIDE A GEOTECHNICAL INVESTIGATION REPORT FOR HIGHER VALUES OR REDUCE THE VALUE USED FOR ALLOWABLE FOUNDATION PRESSURE IN DESIGN CALCULATIONS
2. ALL HOLDOWNS MUST BE TIES IN PLACE PRIOR TO FOUNDATION INSPECTION.
ALL CONTINUOUS FOOTINGS SHALL HAVE A MINIMUM OF ONE #4 BAR AT TOP AND BOTTOM OR A SINGLE #5 BAR IN THE MIDDLE THIRD OF THE FOOTING. PERIODIC
3. NOT USED
DF 4X4 POSTS W/ SIMPSON CBSQ44 POST BASES AND PC44 POST CAPS (USE ECCLQ44 @ CORNER POST) TYP @ PATIO POSTS.
4. PROVIDE CONCRETE LANDING AT DOORS, MINIMUM 36" PERPENDICULAR FROM FACE OF WALL.
5. CONC. SLAB ON GRADE PROVISIONS FOR DIMENSIONAL CHANGES:
CONTRACTOR OF RECORD SHALL PROVIDE EXPANSION JOINTS, COLD JOINTS, AND CRACK CONTROL JOINTS AS REQUIRED FOR CREEP, SHRINKAGE, TEMPERATURE, CRACK AND MOVEMENT CONTROL FOR PROJECT SPECIFIC SLAB GEOMETRY ACCORDING TO ACI AND SITE-SPECIFIC CONDITIONS, AND REVIEW LAYOUT WITH OWNER TO APPRISE OWNER OF FOUNDATION AND SLAB PERFORMANCE. PRIOR TO PLACING CONCRETE.
6. REFER TO NOTES AND SYMBOLS SHT G.01 FOR PARAMETERS FOR FASTENERS IN PRESERVATIVE-TREATED WOOD.



2 ROOF FRAMING PLAN
1/4" = 1'-0"

BEAM SCHEDULE

B1	HEADERS & BEAMS 6x10 DF1 OR AS NOTED
B2	BEAMS AT PORCH AND PATIO AREAS: 4x12 DF1 OR AS NOTED, BEARING ON MIN (2) 2x4 STUDS OR 4x4 POST FRAMED INTO WALL.

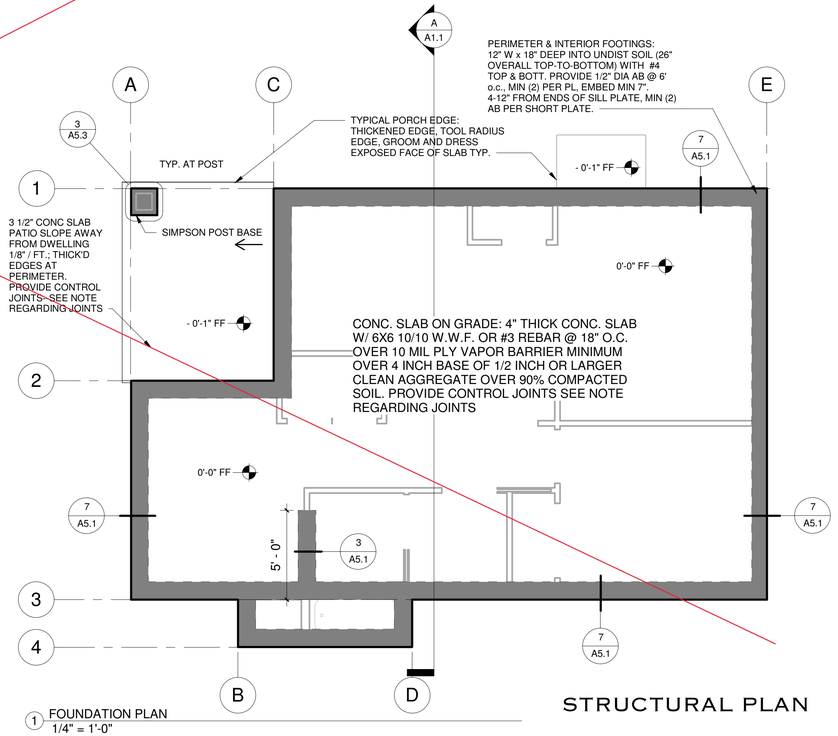
CERTIFICATION:
6. TRUSS DIAGRAMS AND ENGINEERING SHALL BE PROVIDED W/ PERMIT APPLICATION.

REFER TO PRE-ENGINEERED PRE-FABRICATED TRUSS ENGINEERING AND DIAGRAMS FOR COMPLETE PROFILES OF TRUSS CONFIGURATIONS

2X8 RAKE FASCIA PRIMED AND PAINTED

TYPICAL ROOF SHEATHING: PROVIDE 1/2" C.D.X. OR O.S.B., UNBLOCKED PLYWOOD SHEATHING NAILED W/ 8d @ 6" O.C. @ EDGE, 6" O.C. FIELD. GAP 1/8" AT ALL EDGES. MAXIMUM SIZE OF OPENINGS IN HORZONTAL DIAPHRGMS ARE NOT TO EXCEED 24" WITHOUT BLOCKING. INDIVIDUAL SHEETS USED IN THE CONSTRUCTION OF DIAPHRAGMS SHALL BE NOT LESS THAN 4' x 8'. REFER TO DETAIL 8/A5.2 FOR ADDTIONAL PARAMETERS AND MINIMUM CONDITIONS

ALL CONCRETE SHALL BE f' = 2500 PSI AT 28 DAYS
ALL FOOTINGS AND SLAB MONOLITHIC POUR
REINFORCING SHALL BE 40 ksi (No 4 OR SMALLER; 60 ksi (No 5 ANDLARGER; MISC STEEL Gr A36; BOLTS ASTM A307



1 FOUNDATION PLAN
1/4" = 1'-0"

STRUCTURAL PLAN

CITY OF MERCED
ACCESSORY DWELLING UNIT
PROGRAM

749
LENA

No.	Description	DATE
A	SITE PLAN REVIEW	5/11/2022
B	SITE PLAN REVIEW	6/13/2022
C	DRAFT RELEASE	8/31/2022
D	DRAFT RELEASE	9/29/2022
1		
2		
3		

Project Number
2210.2

S1.1

set date:
09/29/2022

6/9/2023 3:09:39 PM