GENERAL REQUIREMENTS

- 1- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE AND REPORT ANY DISCREPANCIES TO THE BUILDING AND SAFETY DEPARTMENT.
- 2-CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR FURNISHING AND INSTALLING ADEQUATE SHORING, BRACING OR ANY OTHER MEANS THAT ARE REQUIRED TO SAFELY EXECUTE ALL WORK.
- 3-DETAILS NOTED AS TYP. OR TYPICAL APPLY IN ALL CASES WHETHER OR NOT SPECIFICALLY REFERENCED.
- 4-ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE.
- 5-PIPES AND SLEEVES SHALL NOT BE PLACED IN THE CONCRETE SLAB. OBTAIN APPROVAL FROM BUILDING AND SAFETY SHOULD SUCH INSTALLATION BE REQUIRED.
- 6- SLOPE DRAINAGE 6" WITHIN THE FIRST 10FT. FROM THE FOUNDATION WALL. IF PHYSICAL OBSTRUCTIONS OR LOT LINES PROHIBIT THE 10FT DISTANCE, A 2-5 PERCENT SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATIVE METHOD OF DIVERTING THE WATER AWAY FROM THE FOUNDATION. IMPERVIOUS SURFACES SHALL ALSO BE SLOPED A MINIMUM OF 2 PERCENT FOR 10FT AWAY FROM STRUCTURES TO AN APPROVED DRAINAGE WAY, (CRC R401.3)
- 7- PROVIDE EMERGENCY EGRESS EXIT DOOR OR WINDOWS FROM SLEEPING ROOMS. THE NET CLEAR WINDOW OPENING AREA SHALL BE A MINIMUM 5.0 SQ.FT. THE MINIMUM WINDOW OPENING SIZE IS 24" CLEAR IN HEIGHT, AND 20" CLEAR IN WIDTH. THE FINISHED SILL HEIGHT IS 44" MAX ABOVE THE FLOOR (CRC R310.1).
- 9-WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING OR SLEEPING UNIT, THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. 22-PROVIDE ATTIC VENTING EQUAL IN AREA TO 1SQ. FT./150SQ.FT. OF ATTIC AREA.

8- SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING.

- 10-EXHAUST FANS PROVIDED FOR HUMIDITY CONTROL SHALL BE ENERGY STAR COMPLIANT AND CONTROLLED BY HUMIDITY CONTROL UNLESS FUNCTION AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM. THE HUMIDITY CONTROL SHALL OPERATE AS FOLLOWS:
- HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF GREATER THAN OR EQUAL TO 50% TO MAXIMUM OF 80%. THE HUMIDITY CONTROL MAY UTILIZE MANUAL AUTOMATIC MEANS OF ADJUSTMENT, AND
- 11-A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL.

12-THE PLUMBING FIXTURE AND PLUMBING FITTINGS SHALL MEET THE FLOW

- STANDARDS NOTED BELOW: WATER CLOSET=1.28 GALLONS PER FLUSH MAX
- SHOWERHEADS= 1.8 GPM
- KITCHEN FAUCETS=1.8 GPM
- LAVATORY FAUCETS=1.5 GPM
- 13-GUTTERS AND DOWNSPOUTS ARE REQUIRED WHEN THE EXPANSION INDEX EXCEEDS

FOUNDATION

- 1-FOOTINGS AND SLABS: ON FIRM UNDISTURBED NATURAL SOILS OR APPROVED COMPACTED SOILS.
- 2-ALLOWABLE SOIL BEARING FOR CONTINUOUS FOOTINGS: 1,500 PSF UNLESS SUBSTANTIATED OTHERWISE BY A SOILS INVESTIGATION REPORT.
- 3-ISOLATED FOOTINGS: NOT ALLOWED UNLESS SUBSTANTIATED OTHERWISE BY A SOILS INVESTIGATION REPORT.
- 4-ROOF AND AREA DRAINAGE. SHALL BE DIRECTED AWAY FROM THE FOUNDATIONS. 5-CONCRETE TO BE 2,500 PSI NORMAL WEIGHT, WITH TYPE II CEMENT, ASTM C150. 6-ALL REINFORCING BARS SHALL CONFORM TO ASTM A-615, GRADE 60.

WOOD

- 1-ALL LUMBER SHALL BE DOUGLAS FIR LARCH CONFORMING TO THE STANDARDS OF WCLIB.
- 2-JOISTS, RAFTERS, SUDS, PLATES AND BLOCKING TO BE No.2 3-BEAMS AND POSTS TO BE No1.
- 4- ALL LUMBER (SILL PLATES, LEDGERS, ETC.) WHICH ARE IN DIRECT CONTACT WITH CONCRETE OR EARTH SHALL BE PRESERVATIVE TREATED WOOD. NEWLY EXPOSED SURFACES RESULTING FROM FIELD CUTTING, BORING OR HANDLING SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M-4. USE ONLY SODIUM BORATE TREATED WOOD FOR INTERIOR USE.
- 5-FASTENERS, INCLUDING NUTS AND WASHERS, FOR PRESERVATIVE-TREATED WOOD SHALL BE OF HOT-DIPPED, ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. COATING TYPES AND WEIGHTS FOR CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE IN ACCORDANCE WITH THE CONNECTOR MANUFACTURER'S RECOMMENDATIONS. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, A MINIMUM OF ASTM A653 TYPE G185 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED.
- 6-PLUMBING WALLS TO BE FRAMED WITH 2X6 STUDS.

AGING IN PLACE/FALL PREVENTION

- a. Reinforcement for grab bars shall be provided at least one bathroom on the entry level:
 - i. Reinforcement shall be solid lumber ii. Reinforcement shall not be less than 2X8 nominal lumber. iii. Reinforcement shall be located between 32-inches and 391/4-inches above the
 - finished floor flush with the wall framing. iv. Water closet reinforcement shall be installed on both side walls of the fixture, or
 - one side wall and the back wall. 1. Where the water closet is not placed adjacent to a side wall capable of accommodating a grab bar, the bathroom shall have provisions for installation of floor-mounted, foldaway, or similar alternate grab bar
 - reinforcements v. Shower reinforcement shall be continuous where wall framing is provided. 1. Reinforcement shall not be required in wall framing for pre-fabricated shower enclosures and bathtub wall panels with integral factory-installed grab bars or when factory-installed reinforcement for grab bars is
 - vi. Bathtub and combination bathtub/shower reinforcement shall be continuous on each end of the bathtub and the back wall. Additionally, back wall reinforcement for a lower grab bar shall be provided with the bottom edge located no more than 6-inches above the bathtub rim."
- b. Add this note to the plans: "Documentations for grab bar reinforcement by information and/or drawings identifying the location of grab bar reinforcement shall be placed in the
- operation and maintenance manual. c. Electrical receptacle outlets, switches and controls intended to be used by occupants shall be located no more than 48-inches measured from the top of the outlet box and not less than 15-inches measured from the bottom of the outlet box above the finish floor. d. At least one bathroom and one bedroom on the entry level of a single-story dwelling shall
- door positioned at an angle of 90 degrees from the closed position. e. At least one bathroom and one bedroom on the second or third floor of a two- or threestory dwelling shall provide a doorway with a net clear opening not less than 32-inches measured with the door positioned at an angle of 90 degrees from the closed position if a

provide a doorway with a net clear opening not less than 32-inches measured with the

f. Doorbell buttons or controls shall not exceed 48-inches above exterior floor or landing, measured from the top of the doorbell button assembly.

bathroom or bedroom is not located on the entry level.

NAILING SCHEDULE

THE CONNECTIONS LISTED BELOW ARE THE MINIMUM PERMISSIBLE. USE COMMON WIRE NAILS FOR ALL NAILED CONNECTIONS. WHERE POSSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOE NAILS. SEE THE DRAWINGS FOR ADDITIONAL NAILING REQUIREMENTS.

JOIST TO SILL (PLATE) OR GIRDER, TOENAIL	3-8d
BRIDGING TO JOIST, TOENAIL EACH END	2-8d
1"x6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2-8d
2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE N	AIL 2-16d
SOLE PLATE TO JOIST OR BLOCKING: TYPICAL FACE NAIL BRACED WALL PANELS	16d © 16"0.C. 3–16d © 16"0.C.
TOP PLATE TO STUD, END NAIL	2-16d
STUD TO SOLE PLATE: TOENAIL END NAIL	4-8d 2-16d
DOUBLE STUDS, FACE NAIL	16d 9 24"0.C.
DOUBLED TOP PLATES: TYPICAL FACE NAIL LAP SPLICE	16d © 16"0.C. 16—16d
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3-8d
RIM JOIST TO TOP PLATE, TOENAIL	8d 96" 0.C.
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2-16d
CONTINUOUS HEADER, TWO PIECES (ALONG EDGE)	
CEILING JOISTS TO PLATE, TOENAIL	3-8d
CONTINUOUS HEADER TO STUD, TOENAIL	4-8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3-16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3-16d
RAFTER TO PLATE, TOENAIL	3-8d
1" DIAG. BRACE TO EACH STUD AND PLATE, FACE NAIL	2-8d
1"x8" SHEATHING OR LESS TO EACH BEARING, FACE NA	
WIDER THAN 1"x8" SHEATHING TO EACH BEARING, FACE NAIL	3-8d
BUILT-UP CORNER STUDS	16d ©24 *0.C.
BUILT-UP GIRDERS AND BEAMS (FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES)	20d 9 32*0.C.
BUILT-UP GIRDERS AND BEAMS (FACE NAIL AT ENDS AND AT EACH SPLICE)	2-20d
2" PLANKS, EACH END AND EACH BEARING	2-16d
LEDGER STRIP, FACE NAIL AT EACH JOIST	3-16d

TITLE 24 ENERGY REQUIREMENTS

- 1. ALL LUMINAIRES MUST BE HIGH EFFICACY (150.0(K)1A)
- RECESSED DOWNLIGHT LUMINAIRES IN INSULATED CEILINGS MUST MEET FIVE
- THEY MUST BE RATED FOR DIRECT INSULATION CONTACT (IC).
- THEY MUST BE CERTIFIED AS AIRTIGHT (AT) CONSTRUCTION. THEY MUST HAVE A SEALED GASKET OR CAULKING BETWEEN THE HOUSING AND CEILING TO PREVENT FLOW OF HEATED OR COOLED AIR OUT OF LIVING AREAS AND INTO
- THE CEILING CAVITY HARDWIRED BALLASTS OR DRIVERS, ALLOW BALLAST OR DRIVER MAINTENANCE AND REPLACEMENT TO BE READILY ACCESSIBLE FROM BELOW THE CEILING WITHOUT
- REQUIRING CUTTING HOLES IN CEILING. THEY MAY NOT CONTAIN A SCREW BASE SOCKETS IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS, AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES SHALL BE CONTROLLED BY A VACANCY SENSOR OR OCCUPANT
- SENSOR PROVIDED THE OCCUPANT SENSOR IS INITIALLY PROGRAMMED LIKE A VACANCY SENSOR (MANUAL-ON OPERATION), (150.0(K)2I) 3. JOINT APPENDIX A (JA8) CERTIFIED LAMPS SHALL BE CONSIDERED HIGH EFFICACY. JA8 COMPLIANT LIGHT SOURCES SHALL BE CONTROLLED BY A VACANCY SENSOR OR
- DIMMER. (EXCEPTION: <70SF CLOSETS AND HALLWAY) (150.0(K)2K) 4. UNDER-CABINET LIGHTING SHALL BE SWITCHED SEPARATELY FROM OTHER LIGHTING SYSTEMS, (150.0(K)2L)
- 5. ALL EXTERIOR LIGHTING SHALL BE HIGH EFFICACY, BE CONTROLLED BY A MANUAL ON/OFF SWITCH AND HAVE ONE OF THE FOLLOWING CONTROLS (THE MANUAL SWITCH SHALL NOT OVERRIDE THE AUTOMATIC CONTROL DEVICE): (150.0(K)3A) PHOTO-CONTROL AND MOTION SENSOR
 - PHOTO-CONTROL AND AUTOMATIC TIME SWITCH CONTROL
- ASTRONOMICAL TIME CLOCK CONTROL TURNING LIGHTS OFF DURING THE DAY 7. ALL HIGH EFFICACY LIGHT FIXTURES SHALL BE CERTIFIED AS "HIGH-EFFICACY" LIGHT FIXTURES BY THE CALIFORNIA ENERGY COMMISSION.
- 8. CONTRACTOR SHALL PROVIDE THE HOMEOWNER WITH A LUMINAIRE SCHEDULE GIVING THE LAMPS USED IN THE LUMINAIRES INSTALLED. (10-103(B)) 9. THE NUMBER OF BLANK ELECTRICAL BOXES MORE THAN 5 FEET ABOVE THE FINISHED FLOOR SHALL NOT BE GREATER THAN THE NUMBER OF BEDROOMS. THESE
- ELECTRICAL BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR, OR FAN SPEED CONTROL. (150(K)1B) 10. PROVIDE A GASKET/ INSULATION ON ALL INTERIOR ATTIC/UNDER-FLOOR ACCESSES.
- (110.7)11. PROVIDE VERIFICATION ON THE PLANS HOW THE BUILDING WILL MEET THE MINIMUM VENTILATION AND ACCEPTABLE INDOOR AIR QUALITY REQUIREMENTS PER ASHRAE STANDARD 62.2. WINDOW OPERATION IS NOT A PERMISSIBLE METHOD OF PROVIDING THE WHOLE BUILDING VENTILATION AIRFLOW REQUIRED. THIS IS SUBJECT TO HERS TESTING. THE FOLLOWING LABEL MUST BE ATTACHED TO THE FAN SWITCH: "TO MAINTAIN MINIMUM LEVELS OF OUTSIDE AIR VENTILATION REQUIRED FOR GOOD HEALTH, THE FAN CONTROL SHOULD BE ON AT ALL TIMES WHEN THE BUILDING IS OCCUPIED, UNLESS THERE IS SEVERE OUTDOOR AIR CONTAMINATION." (CALIFORNIA ENERGY CODE 150.0(O)) A MINIMUM 100 CFM INDOOR AIR QUALITY FAN IS REQUIRED IN THE KITCHEN AND SHALL BE
- 12. MINIMUM 50 CFM INDOOR AIR QUALITY FAN IS REQUIRED AT BATHROOMS. 13. THERMOSTATS. ALL HEATING OR COOLING SYSTEMS, INCLUDING HEAT PUMPS, NOT CONTROLLED BY A CENTRAL ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) SHALL HAVE A SETBACK THERMOSTAT, AS SPECIFIED IN SECTION 110.2(C)

ELECTRICAL/PLUMBING/MECHANICAL

- No electrical panels in closets or bathrooms. Maintain a clearance of 36" inches in front of panels, 30" wide or width of equipment and 6'-6" high for headroom. (CEC 110.26) Provide a minimum 3 lug intersystem bonding bus bar at the main electrical service.(CEC
- 3. A concrete-encased electrode (ufer) consisting of 20' of rebar or #4 copper wire placed in the bottom of a footing is required for all new construction. (CEC 250.52(A) (3)) Bond all metal gas and water pipes to ground. All ground clamps shall be accessible and of an approved type.
- 4. All 15/20 ampere receptacles installed per CEC 210.52 shall be listed tamper-resistant receptacles. (CEC 406.12)
- 5. All branch circuits supplying 15/20 ampere outlets in family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, kitchens, laundry room or similar rooms/areas shall be protected by a listed combination type
- arc-fault circuit interrupter. (CEC 210.12) 6. Provide a minimum of one 20A circuit to be used for the laundry receptacle.
- (CEC210.11(C)(2)) Provide a minimum of one 20A circuit for bathroom receptacle outlets. (CEC
- Provide at least 1 outlet at porches and within 3' of the outside of each bathroom basin. (CEC 210.52 (D), (F) &(G)). All dwellings must have one exterior outlet at the front and the back of the dwelling. (CEC
- 9. At least one wall switched lighting outlet or fixture shall be installed in every habitable room, bathroom, hallways, stairways, attached garages and detached garages with electrical power, equipment spaces (attics, basements, etc.). (CEC 210.70) 13. Kitchens, dining rooms, pantries, breakfast nooks, and similar areas must have a minimum of two 20A circuits. Kitchen, pantry, breakfast nooks, dining rooms, work surfaces and similar areas counter outlets must be installed in every counter space 12" inches or wider, not greater than 4' o.c., within 24" inches of the end of any counter space and not higher than 20" above counter. (CEC 210.52 (C)) Island counter spaces shall have at least 1 receptacle outlet unless a range top or sink is installed than 2 receptacles may be required. 1 receptacle is required for peninsular counter spaces. Receptacles shall be located behind kitchen sinks if the counter area depth behind the sink is more than 12" for straight counters and 18" for corner installations. (CEC Figure 210.52(C)(1)) 10. The main service disconnect shall have a rating of not less than 100 amps. C.E.C. Article
- 11. Receptacles shall be installed at 12' o.c. maximum in walls starting at 6' maximum from the wall end. Walls longer than two feet shall have a receptacle. Hallway walls longer than 10 ft. shall have a receptacle in hallways. (CEC 210.52(A))
- 12. Receptacles shall not be installed within or directly over a bathtub or shower stall. (CEC 406.9(C) Light pendants, ceiling fans, lighting tracks, etc. shall not be located within 3ft horizontally and 8ft vertically above a shower and/or bathtub threshold. (CEC 410.10(D)) 13. All lighting/fan fixtures located in wet or damp locations shall be rated for the application. (CEC 410.10)
- 14. GFCI outlets are required: for all kitchen receptacles that are designed to serve countertop surfaces, dishwashers, bathrooms, in under-floor spaces or below grade level, in unfinished basements, crawl space lighting outlets, in exterior outlets, within 6' of a laundry/utility/wet bar sinks, laundry areas, and in all garage outlets including outlets dedicated to a single device or garage door opener. (CEC 210.8)
- 15. All 15/20 ampere receptacles in wet locations shall have in-use (bubble) covers installed. All receptacles in wet locations shall also be listed weather-resistant type. (CEC 406.9(B)(1)) 16. ABS piping shall not be exposed to direct sunlight unless protected by water based synthetic latex paints. (CPC 312.13)
- 17. PVC piping shall not be exposed to direct sunlight unless protected by water based synthetic latex paint, .04" thick wrap or otherwise protected from UV degradation. (CPC 312.14) 18. Underground water supply lines shall have a 14 awg blue tracer wire. (CPC 604.10.1) 19. Showers and tubs with showers require a non- absorbent surface up to 6' above the floor. (CRC R307.2) Minimum shower receptor slope is 1/8" per foot. (CPC 408.5) Provide curtain rod
- or door a minimum of 22" in width. (CPC 408.5). 20. Provide pressure relief valve with drain to outside for water heater. (CPC 504.6) Provide seismic strapping in the upper and lower third of the water heater a minimum of 4" above controls. (CPC 507.2) The water heater shall be of an instantaneous type or the following shall be provided (new construction only) (CEC 150(n)): A 120V receptacles provided within 3ft; A category III or IV vent, or a straight (without bends) Type B vent; Condensate drain that is no more than 2 inches higher than the base of the water heater; Gas supply line with a minimum 200,000 Btu/hr dedicated capacity for the water heater; A dedicated 120/240, 3 wire circuit with 10AWG wire to a receptacle out- let within 3' of the water heater. The unused conductor shall be electrically isolated and have a reserved circuit breaker space. Both ends of the conductor shall be labeled "spare" and be electrically isolated. A reserve single-pole circuit breaker space near this circuit labeled "Future 240V Use." (CEC 150.0(n))
- 21. Domestic hot water lines shall be insulated. Insulation shall be the thickness of the pipe diameter up to 2" in size and minimum 2" thickness for pipes larger than 2" in diameter. (CPC 22. Provide anti-siphon valves on all hose bibs. (CPC 603.5.7) Shall be protected by a
- onremovable hose bib-type vacuum breaker installed not less than 6 inches (152 mm) above the highest point of usage located on the discharge side of the last valve. 23. Provide combustion air for all gas fired appliances per CMC Chapter 7.
- 24. Gas vents passing through an insulated assembly shall have a metal insulation shield a minimum 2" above insulation. (CMC 509.6.2.7) 25. Gas water heater and furnace are not allowed in areas opening into bathrooms, closets or bedrooms unless installed in a closet equipped with a listed gasketed door assembly and a
- listed self-closing device with all combustion air obtained from the outdoors. (CPC 504) 26. Exhaust openings terminating to the outdoors shall be covered with a corrosion resistant screen ½"-1/2" in opening size (not required for clothes dryers). (CMC 502.1) 27. Vent dryer to exterior of building (not to under-floor area). The vent diameter shall not be less than 4 inches nominal (100 mm), and the thickness shall be not less than 0.016 of an inch
- (0.406 mm), exhaust ducts shall not exceed a total combined horizontal and vertical length of 14 feet (4267 mm), including two 90 degrees (1.57 rad) elbows. clearances: installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least 5 feet (1.5 meters) from the outlet of any dryer vent. Vents shall terminate a minimum of 3' from the property line and any opening into the building. (C MC 504.4.2) 28. Provide minimum 100 square inches make-up air for clothes dryers installed in closets.
- (CMC 504.4.1(1)) 29. Heating system is required to maintain 68 degrees at 3 ft. above floor level and 2ft from exterior walls in all habitable rooms. (CRC R303.10)

SHEET INDEX

GENERAL NOTES OWNER-SUPPLIED SITE PLAN 1.2 TYPICAL DETAILS

2.1 FLOOR AND ROOF PLANS, SECTION

2.2 FOUNDATION AND ROOF FRAMING PLANS

3.1 **ELEVATIONS**

4.1 **DETAILS** GN1 GREEN BUILDING NOTES **GREEN BUILDING NOTES** CA ENERGY COMPLIANCE

PROJECT DATA

APN:ADDRESS:SCOPE: (FARM WORKER DWELLING / ACCESSORY OCCUPANCY: R-3 CONSTRUCTION TYPE: V - B SPRINKLERS (NFPA 13-D):	 DWELLING UNIT)
SCOPE: (FARM WORKER DWELLING / ACCESSORY OCCUPANCY: R-3 CONSTRUCTION TYPE: V - B	DWELLING UNIT)
OCCUPANCY: R-3 CONSTRUCTION TYPE: V - B	DWELLING UNIT)
CONSTRUCTION TYPE: V - B	
SPRINKLERS (NFPA 13-D):	
	
FIRE HAZARD SEVERITY ZONE:	
SOIL DATA	
EXPANSION INDEX (E.I.):	
91-130 FOR 700 SF AND 900 SF PLANS	
PER GEOTECHNICAL REPORT FOR	1188 SF PLAN
SEISMIC AND WIND DATA	
WIND EXPOSURE: EXPOSURE C	
WIND SPEED (ULT): 95 MPH (CATEGORY II)	
STRUCTURAL DATA	
ROOF DEAD LOAD: 15 PSF (6 PSF MAX. LIGHT-W	EIGHT TILE ROOF
ROOF LIVE LOAD: 20 PSF	
ELEVATION FEET	
NOTE: THIS PLAN CANNOT BE USED ABOVE 4000'	ELEVATION.

PHOTOVOLTAIC SYSTEM REQUIRED. REFER TO ENERGY DESIGN FOR SIZE AND ORIENTATION.

(SEE SPECIAL REQUIREMENTS FOR CZ= 3 AND 16)

FLOOD DATA

FLOOD ZONE:

DESIGN FLOOD ELEVATION: _

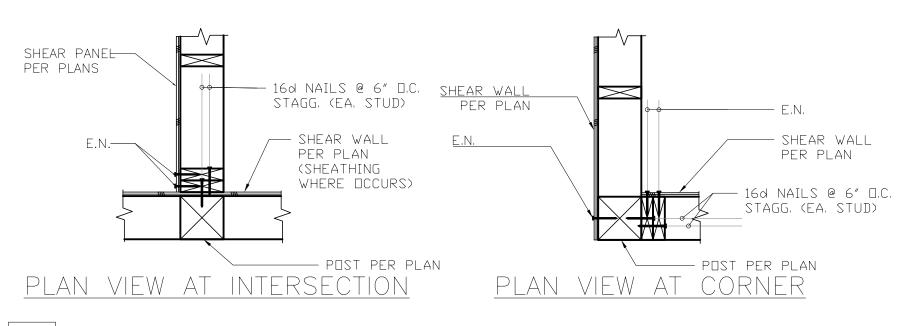
TE: 04/20/2023

RAWN BY: COUNTY OF VENTURA

PLICABLE CODE: 2022 VCBC & CRC

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TYPICAL HORIZONTAL DIAPHRAGM NAILING



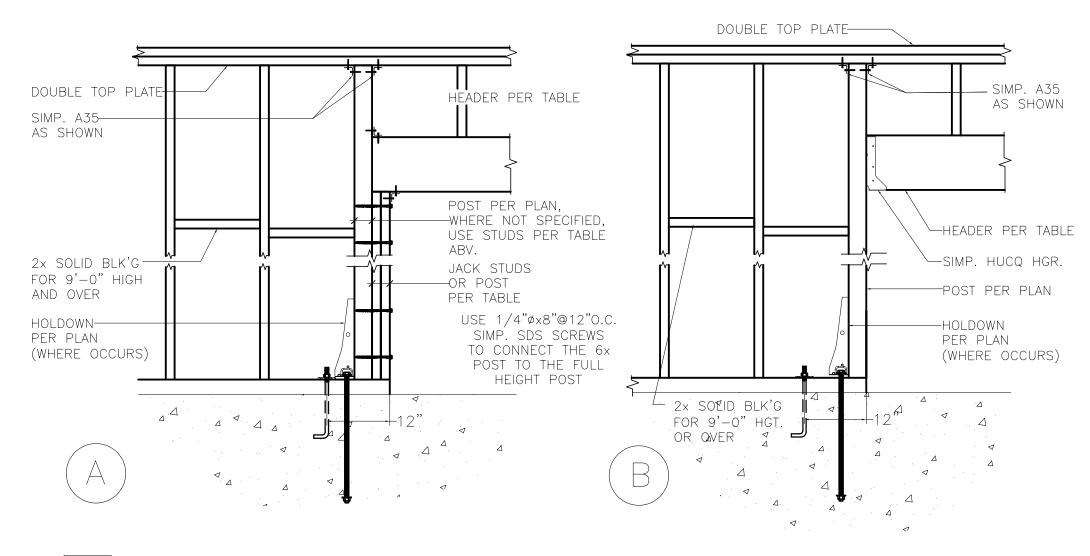
10 SHEAR WALL INTERSECTIONS AT WALLS

TYPE	MINIMUM NOMINAL PANEL THICKNESS ⁽¹⁾	FACES		SILL ANCHORS (HEX HEAD BOLT)	TOP PL. CONNECTION A35	SHEAR CAPACITY #/FT.
A	1/2"	1	10d @ 6" O.C.	5/8" @ 2'-8" O.C.	A35 @ 16" O.C.	340

- 1 WOOD STRUCTURAL PANELS SHALL BE 1/2 PERFORMANCE CATEGORY, APA STRUCTURAL I RATED SHEATHING, SPAN RATING 32/16, EXPOSURE 1, 3-PLY/3-LAYERS.
- 2 STUDS SPACING TO BE @ 16" O.C. MIN.
- 3 NAILS @ 2" O.C. TO BE STAGGERED.
- 4 ALL FIELD NAILING TO BE AT 12" O.C. 5 - USE HEX HEAD BOLT WITH WASHER SILL ANCHORS. PROVIDE 7" MIN. EMBEDMENT INTO FOOTING.
- $6 USE COMMON NAILS ONLY. (8d = 0.131" DIA. <math>\times 2 1/2$ " LONG, 10d = 0.148" DIA. $\times 3$ " LONG) 7 - MIN. 1/2" EDGE NAILING DISTANCE @ PANEL ENDS AND EDGES.
- 9 FASTENERS, INCLUDING NUTS AND WASHERS, FOR PRESERVATIVE-TREATED WOOD SHALL BE OF HOT-DIPPED, ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.
- COATING TYPES AND WEIGHTS FOR CONNECTORS IN CONTACT WITH PRESERVATIVE—TREATED WOOD SHALL BE IN ACCORDANCE WITH THE CONNECTOR MANUFACTURER RECOMMENDATIONS. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, A MINIMUM OF ASTM A653 TYPE G185 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED.

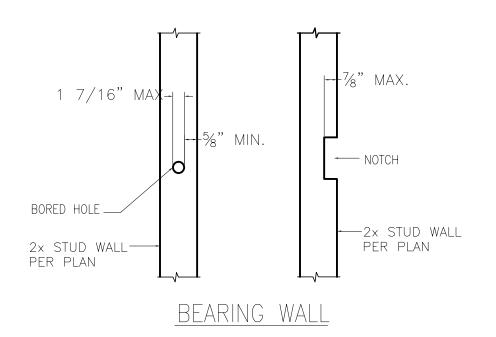
- 3"SQ.×1/4" THICK 8 - USE 3" SQ. x 1/4" WASHERS FOR SILL ANCHORS. PLATE WASHER SHALL EXTEND TO WASHER MAX. WITHIN 1/2 INCH OF THE EDGE OF THE BOTTOM PLATE ON THE SHEATHED SIDE MIN. EMBED. 11 SHEAR WALL SCHEDULE

12 HEADER FRAMING & SCHEDULE

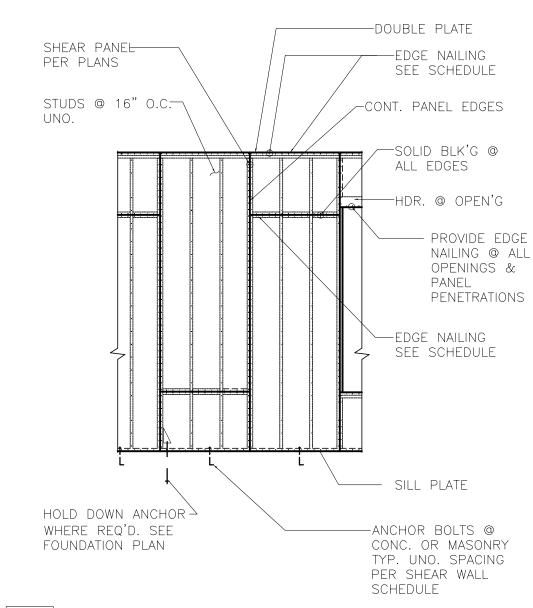


MIN. 4'-0" LAP W/16-16d FACE NAILS (STAG'D.). ALIGN PLATE ENDS ─ MIN. 2-2X CONT. TOP W/ STUD BELOW TYP. & BOTTOM PLATE

6 TOP PLATE LAP SPLICE



TYPICAL STUD **BORING & NOTCHING**



8 SHEAR WALL PANEL

	HEADER SCHED	ULE
SIZE	MAX. SPAN	KING & JACK STUDS
4×6	4'	SINGLE 2x STUD
4×8	8'	SINGLE 2x STUD
4×10	10'	2-2× STUDS
4×12	12'	2-2× STUDS
PSL HEADERS	SEE PLAN	SEE PLAN
NOTF.		

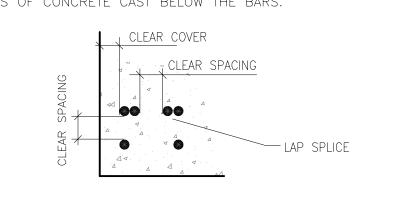
- USE 4x HEADERS AT 2x4 STUD WALL

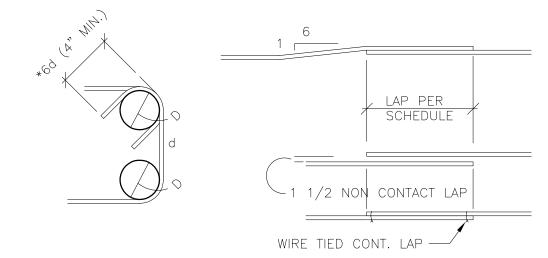
SPLICES (STANDARD LAPS) SCHEDULE

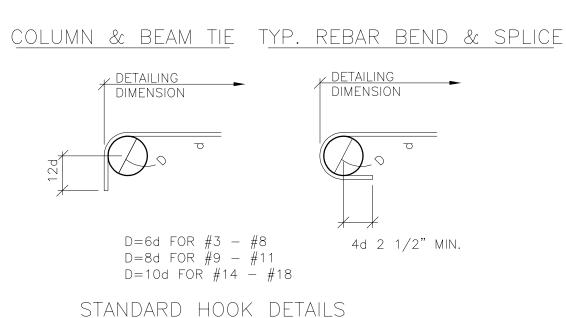
REBAR SPLICES IN INCHES									
REBAR SIZE (GRADE 60)		4	5	6	7	8	9	10	11
REBAR DIAMETER (IN)		0.5	0.62	0.75	0.87	1.0	1.12	1.27	1.41
f'c=2,500	OTHER BAR	24	30	36	53	60	68	75	83
	TOP BAR	36	45	54	79	90	101	113	124
f'c=3,000	OTHER BAR	22	27	33	48	55	66	81	97
	TOP BAR	33	41	49	72	82	92	105	125
f'- 1 000	OTHER BAR	19	24	28	42	47	57	70	84
f'c=4,000	TOP BAR	28	36	43	62	71	80	91	109
1— REBAR LENGTHS SHOWN IN THE SCHEDULE SHALL BE INCREASED 50% WHEN COVER IS < OR = 1 BAR DIAMETER OR CLEAR SPACING BETWEEN BARS IS LESS THAN 2									

BAR DIAMETERS.

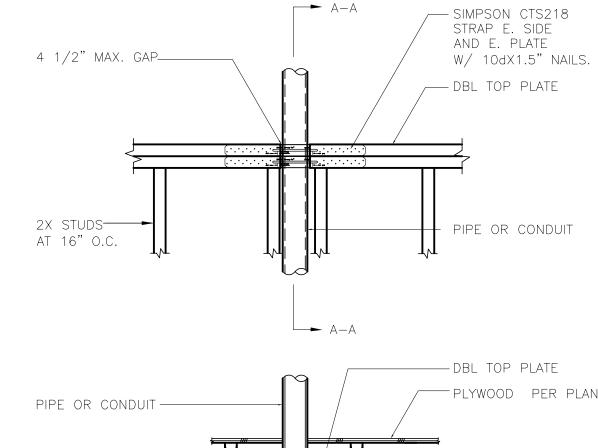
- 2- 75% OF REBAR LENGTHS SHOWN IN THE SCHEDULE MAY BE USED WHEN COVER IS > 2 BAR DIAMETERS AND CLEAR SPACING BETWEEN BARS IS GREATER THAN 3 BAR DIAMETERS.
- 3- LAP SPLICE IN MASONRY SHALL BE 40d. 4- REBAR LENGTHS SHOWN IN THE SCHEDULE SHALL BE INCREASED 50% WHEN USING EPOXY COATED REBARS.
- 5-TOP BARS ARE HORIZONTAL BARSWITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.

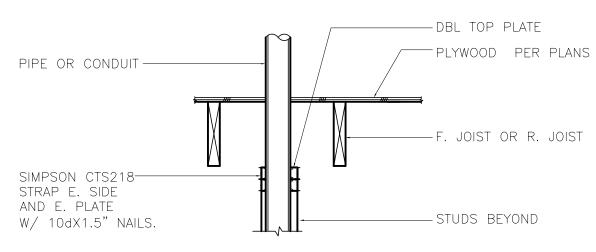






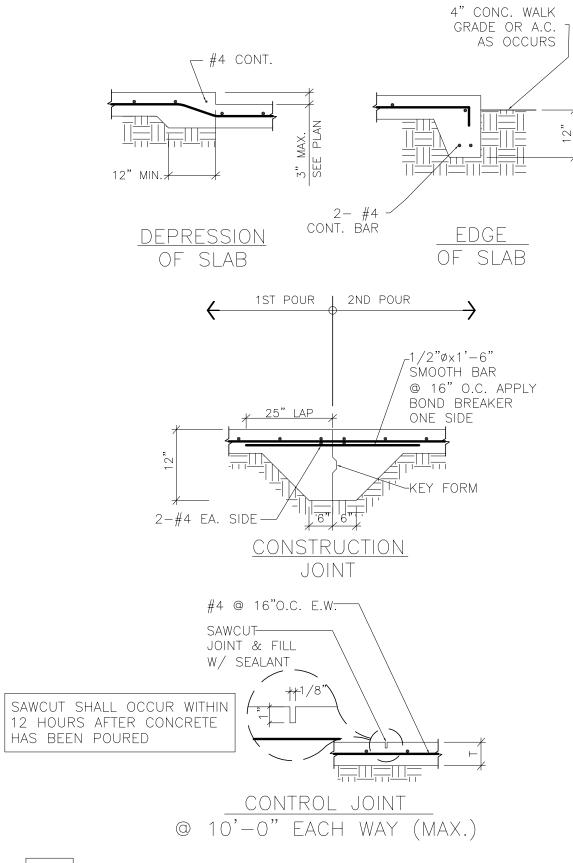
4 REBAR PLACEMENT



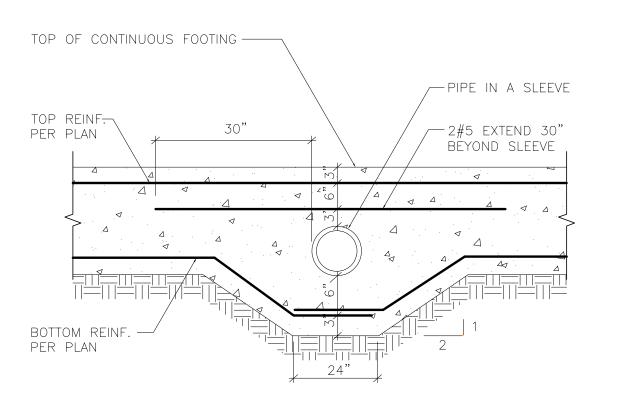


SECTION A-A

5 PIPE AT TOP PLATE

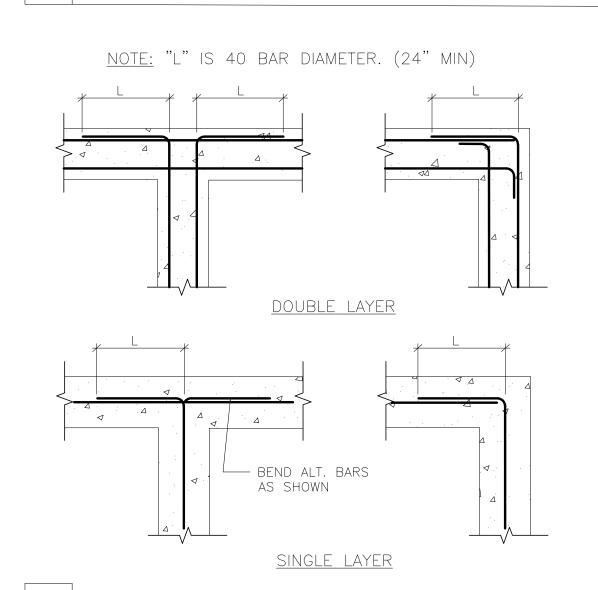


SLAB CONDITIONS



-SLEEVE SHALL BE 2" DIAMETER LARGER THAN PIPE -PIPE SHALL NOT BE LOCATED BELOW A HOLDOWN OR BELOW A

2 PIPE IN FOOTING



3 FOOTING INTERSECTION

Ш ARMWORKE の E E (N

ПП

8

0

DATE: 04/20/2023 SCALE: 1" = 1'-0"RAWN BY: COUNTY OF VENTURA PPLICABLE CODE: 2022 VCBC & CRC

SHEET NO.

SHEET TITLE

DETAILS

Building Permit Set - Not for Construction Before Issuance of Ventura County Building Permit and Stamped Approved and Signed by Ventura County Building and Safety

2. PROVIDE RECTANGLE VENT AT EACH GABLE END. ADDITIONAL VENTS WILL BE REQUIRED TO MEET ROOF VENTILATION REQUIREMENTS. 900 SF/150 = 6 SF MIN. NET FREE VENT AREA

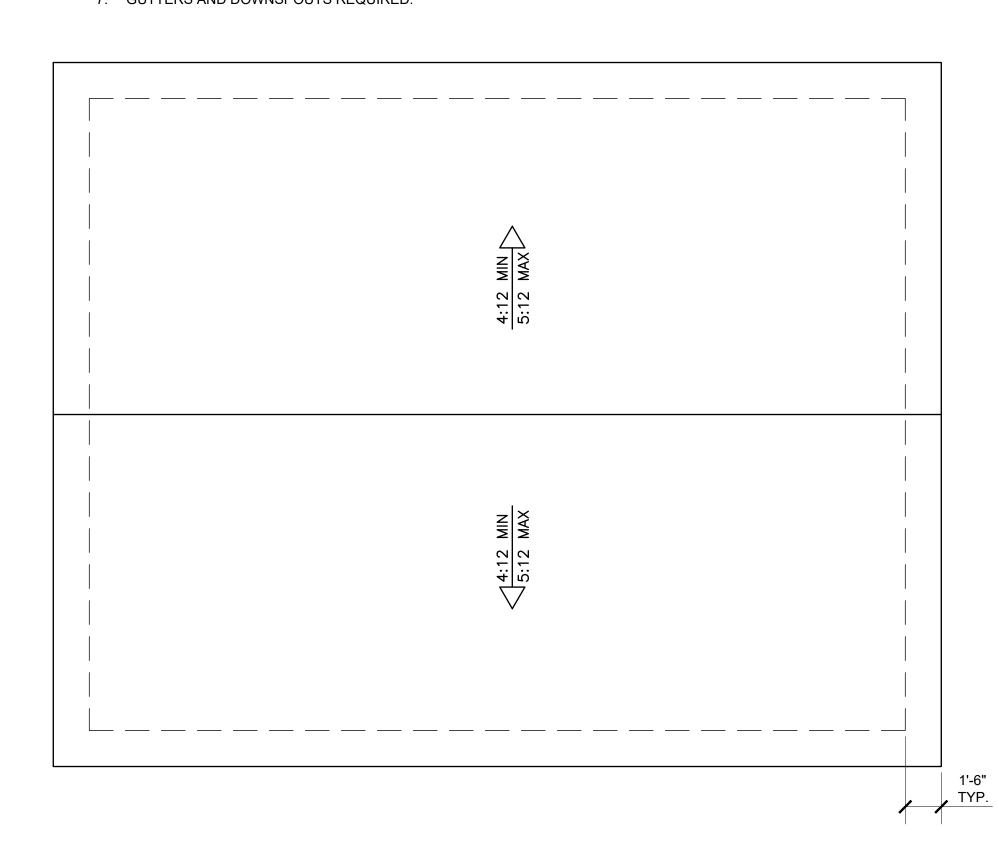
3. WHERE USED, PROVIDE BLOCKING AROUND DORMER AND EAVE VENTS AT THE ROOF FRAMING UNDER THE ROOF DIAPHRAGM

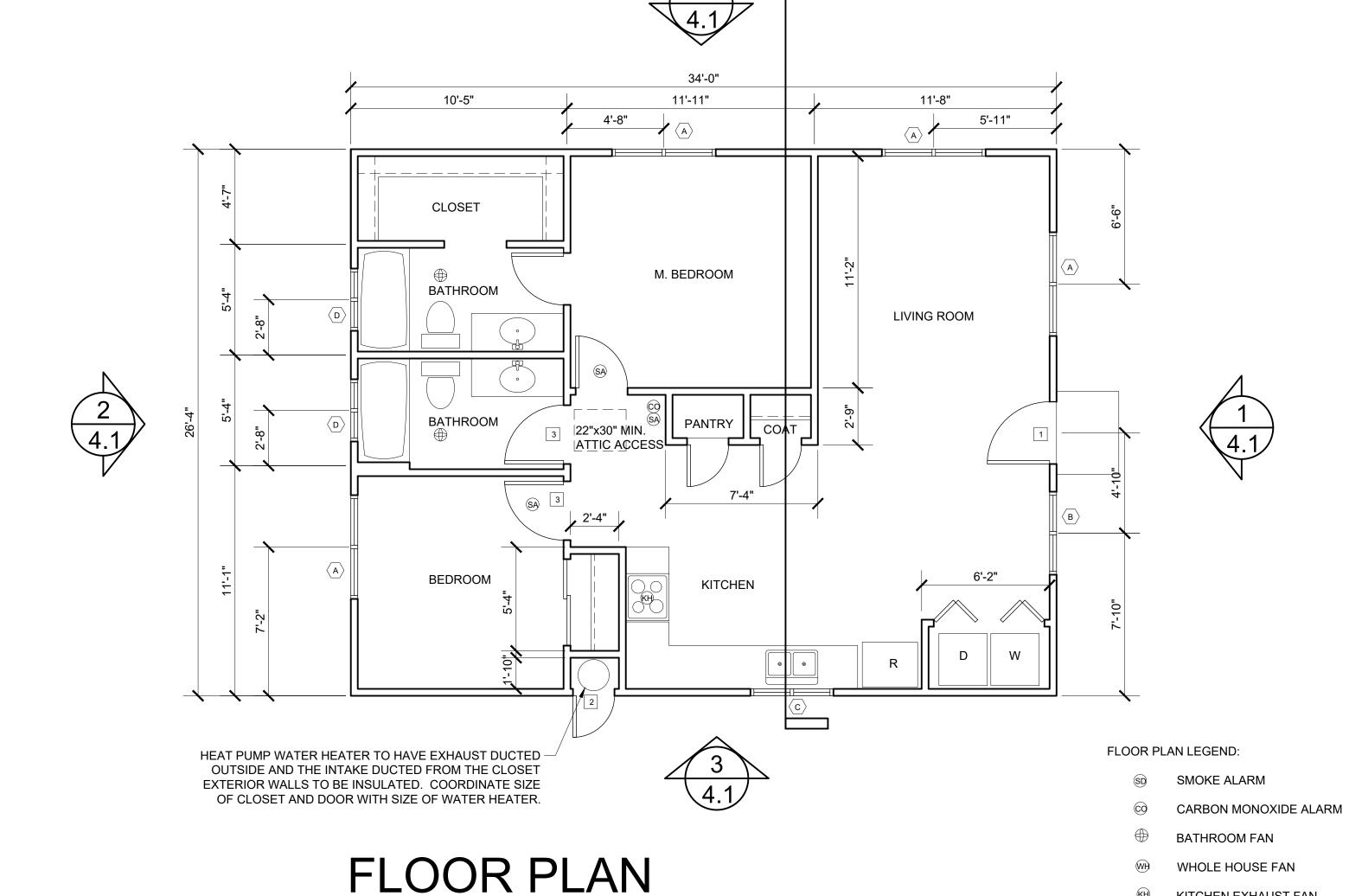
4. INSULATIONS TO BE SNUG AROUND VENT OPENINGS.

5. ATTIC VENTS SHALL BE COVERED WITH MESH FOR PROTECTION

6. FOR HIGH-FIRE SEVERITY ZONE, ATTIC VENT MESH SHALL NOT BE

MORE THAN1/8", BUT NOT LESS THAN 1/16". 7. GUTTERS AND DOWNSPOUTS REQUIRED.





ROOF PLAN

WINDOW AND DOOR SCHEDULE

SYMBOL	TYPE	SIZE (W x H)	OPERATION	REMARKS
A	WINDOW	5'-0"x4'-0"	SLIDING	*
B	WINDOW	4'-0"x5'-0"	SLIDING	*
C	WINDOW	4'-0"x3'-0"	SLIDING	*
D	WINDOW	3'-0"x2'-0"	SLIDING	*
1	DOOR	3'-0"x6'-8"		
2	DOOR	2'-0"x6'-8"		HI/LO LOUVER
3	DOOR	2'-10"x6'-8"		**

* USE DUAL TEMPERED GLAZING IN HIGH FIRE HAZARD AREAS ** REQUIRED WIDTH BASED ON CRC R327.1 "AGING IN PLACE"

FENESTRATION VALUES

CLIMATE ZONE 6: U-FACTOR = 0.30 SHGC = 0.23 CLIMATE ZONE 9: U-FACTOR = 0.25 SHGC = 0.15 CLIMATE ZONE 16: U-FACTOR = 0.25 SHGC = 0.40

ALL-ELECTRIC RESIDENTIAL BUILDING VCBC SECTION 4.509 AMENDMENT TO THE CA GREEN BUILDINGS STANDARDS CODE "REDUCTION OF GREEN HOUSE GASE

ALL NEWLY CONSTRUCTED DWELLINGS SHALL BE ALL-ELECTRIC BUILDINGS HAVING NO NATURAL GAS BURNING APPLIANCES OR EQUIPMENT. EXCEPTIONS INCLUDE THE FOLLOWING ITEMS: FIREPLACES, FIRE PITS, OUTDOOR COOKING GRILLS AND BARBECUES, POOLS AND SPAS, AND STANDBY GENERATORS.

MECHANICAL AND PLUMBING NOTES

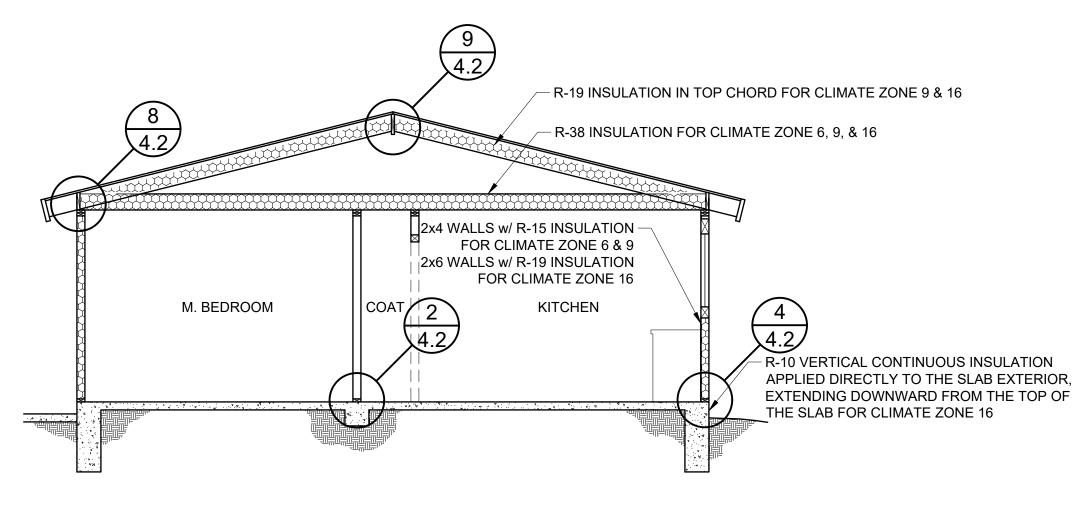
INDOOR FAN-COIL AND OUTDOOR CONDENSER DUCTLESS HEAT-PUMP TO BE LOCATED AND CALLED OUT ON THE FLOOR PLAN. A 1-TON, CODE MINIMUM EFFICIENCY SPECIFICATION WAS USED FOR ALL UNITS.

ALTERATIONS IN QUANTITY OR TONNAGE REQUIRED A REVISED PERFORMANCE T24

VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION TAKEN, VERIFIED PER VCHP STAFF REPORT, APPENDIX B, AND RA3

NEAA RATED HEAT PUMP WATER HEATER TO BE LOCATED INSIDE THE CONDITIONED ENVELOPE.

ALL HOT WATER PIPES TO BE INSULATED (HERS) SEE ENERGY FORMS FOR EQUIPMENT SIZING.



SECTION A

Building Permit Set - Not for Construction Before Issuance of Ventura County Building Permit and Stamped Approved and Signed by Ventura County Building and Safety

WHOLE HOUSE FAN

1 DOOR

KITCHEN EXHAUST FAN

900 SF DWELLING

DATE: 04/20/2023 SCALE: 1/4" = 1'-0"

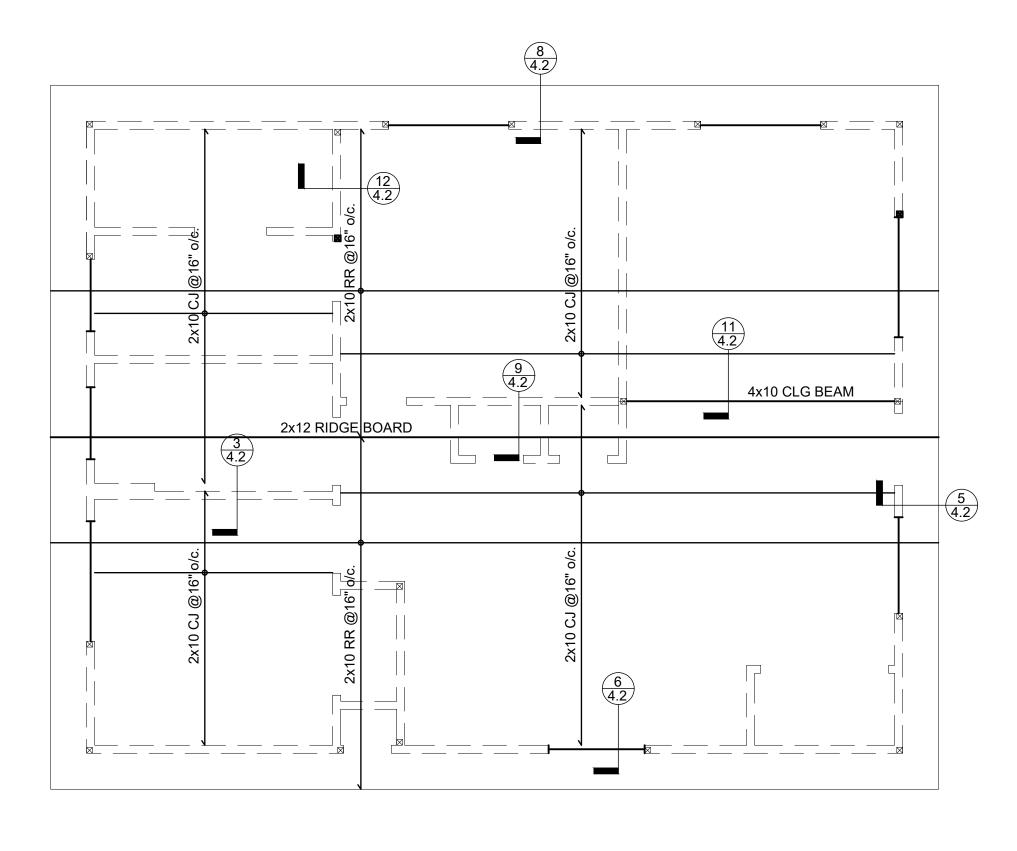
RAWN BY: COUNTY OF VENTURA

PPLICABLE CODE: 2022 VCBC & CRO

SHEET NO.

SCALE: 1/4" = 1'-0"RAWN BY: COUNTY OF VENTURA

PPLICABLE CODE: 2022 VCBC & CRO



ROOF FRAMING PLAN

ROOF: 15/32 PERFORMANCE CATEGORY, APA STRUCTURAL I RATED SHEATHING, 40/20, EXPOSURE 1.

NAILING: 10d @ 6" O.C. @ BOUNDARIES AND SUPPORTED EDGES, 12" O.C. FIELD. UNBLOCKED. ALL NAILS ARE COMMON.

LEGEND

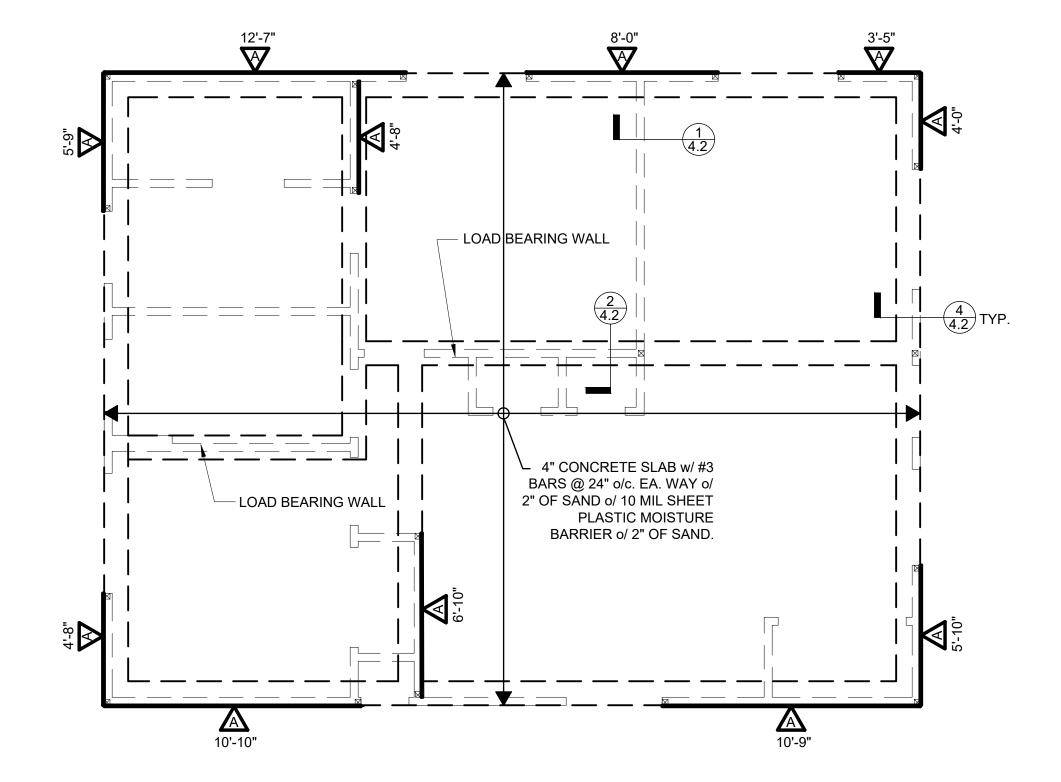
- POST (4x6 U.N.O.)
- 2−2x STUDS
- □□□□ 2x4@16<u>"</u> o/c WALL 2x6@16" o/c AT PLUMBING WALLS

SHEAR WALL (SHT'G PER SCHEDULE)

ROOF RAFTERS PER PLAN

CEILING JOISTS PER PLAN

- FOR SHEAR WALL SCHEDULE SEE 1/1.2
 FOR HEADERS FRAMING AND SCHEDULE SEE 8/1.2 (U.N.O.).
 NEW EXTERIOR WALLS SHALL BE SHEATHED WITH 15/32" PLYWOOD AND NAILED W/ 10d @ 6", 12". (U.N.O.)
 HOLD-DOWNS SHALL BE RE-TIGHTENED PRIOR TO COVERING THE WALL FRAMING.
- 5. MANUFACTURED ROOF TRUSSES ARE ALLOWED IN LIEU OF FRAMING SHOWN. SUBMIT TRUSS PLAN AND CALCULATIONS FOR REVIEW BY BUILDING AND SAFETY.



FOUNDATION PLAN

LEGEND

 POST (4x6 U.N.O.) ■ 2-2x STUDS = = = 2x4@16" o/c WALL 2x6@16" o/c AT PLUMBING WALLS

SHEAR WALL (SHT'G PER SCHEDULE)

SOILS INVESTIGATION REPORT IS OPTIONAL. IF THE SOILS INVESTIGATION REPORT IS USED, THE RECOMMENDATIONS OF THE SOILS INVESTIGATION REPORT SHALL BE FOLLOWED AND ARE PART OF THIS

Building Permit Set - Not for Construction Before Issuance of Ventura County Building Permit and Stamped Approved and Signed by Ventura County Building and Safety

ALE: 1/4" = 1'-0" AWN BY: COUNTY OF VENTU

CABLE CODE: 2022 VCBC & CRC

SHEET NO.

4.1

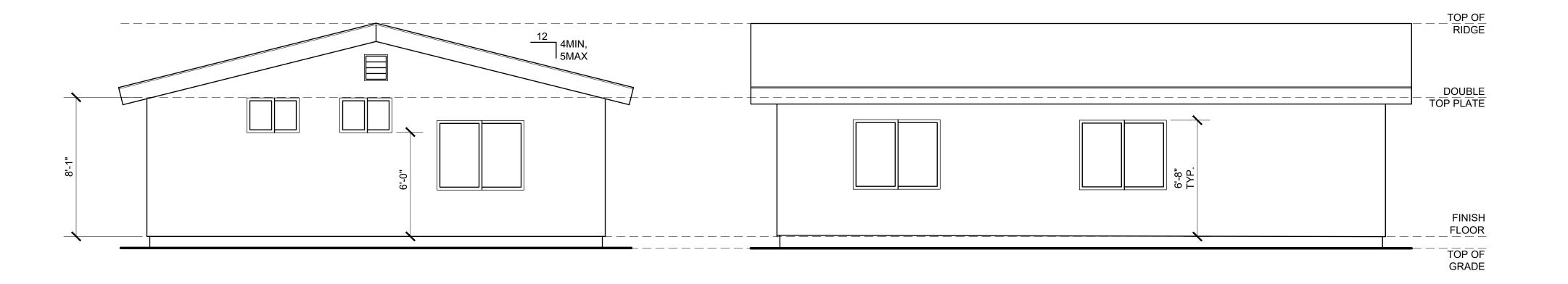
CLASS A ASPHALT SHINGLE ROOFING (ICC ESR 1388) OR
CONCRETE TILE ROOF (6PSF MIX IAPMO 1900)

TOP OF
RIDGE

SLOPE 6" FOR 10". SEE GENERAL
NOTES ON 1.1. TYP.

SEE NOTES FOR EXTERIOR
WALL COVERING, TYPICAL

ELEVATION 1 ELEVATION 3



ELEVATION 2 ELEVATION 4

EXTERIOR WALL COVERING

VOLUME, CEMENT TO SAND.

SIDING APPLIED OVER STUDS.

HARDIE SIDING (ICC ESR-1844)

7/8" CEMENT PLASTER (MEASURED FROM THE FACE OF THE STUDS). PLASTER MIX 1:4 FOR SCRATCH COAT AND 1:5 FOR BROWN COAT, BY

7/8" CEMENT PLASTER (MEASURED FROM THE

SCRATCH COAT AND 1:5 FOR BROWN COAT, BY VOLUME, CEMENT TO SAND.

SIDING OVER ONE LAYER OF 5/8" TYPE X GYPSUM SHEATHING APPLIED OVER STUDS.

FACE OF THE STUDS). PLASTER MIX 1:4 FOR

NO HIGH FIRE SEVERITY ZONE

OPTION 1:

OPTION 2:

HIGH FIRE SEVERITY ZONE

OPTION 1:

OPTION 2:

OPTION 3:

--- 0.118 SHOT PINS AT 24" O.C. INSTALL PER THE MANUFACTURER'S INSTRUCTIONS

- SLAB PER FOUNDATION PLAN

WALL PER PLAN

- SLAB PER PLAN

AWN BY: COUNTY OF VENTURA

HOLDOWN SCHEDULE ANCHOR MIN. EMBED. FASTENER TO BOLT DIA. de WD. MEMBER
 MARK
 BOLT DIA.
 de
 WD. MEMBER

 HDU2-SDS2.5
 5/8"
 12 5/8"
 6-SDS 1/4"x2.5"

PLYWOOD PER Shear Wall Sched. HOLDOWN PER Plan - POST OR DBL STUD PER PLAN THIS DETAIL APPLIES ONLY TO THE 700FT² AND 900FT² ANCHOR BOLT PER SCHED, — SLAB PER PLAN * VAPOR BARRIER IS REQUIRED FOR CLIMATE ZONE 16 ** SLAB EDGE INSULATION IS REQUIRED FOR CLIMATE ZONES 16. CONSTRUCTION JOINT (2) #4 TOP AND BOTTOM

NOTES:
-SIMPSON HDU HOLDOWN ICC ESR #2330.

-SIMPSON SSTB ANCHOR BOLTS ICC ESR #2611.

1 NON BEARING WALL DETAIL

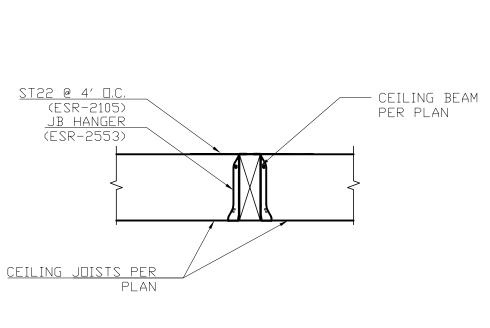
NON-BEARING WALL

2× P.T. SILL PLATE

NOTE: UNITS. FOR 1,188 FT² UNIT PLEASE REFER TO DETAIL

4 TYP. HOLD-DOWN DETAIL FOR 700 SQ.FT AND 900 SQ.FT UNITS

10 TYP. HOLD-DOWN DETAIL FOR 1,188 SQ.FT UNIT



11 JOIST AND BEAM CONN. DETAIL

12 INT. WALL CONN. DETAIL

PLYWOOD PER SHEAR WALL SCHED.

HOLDOWN PER Plan

ANCHOR BOLT PER SCHED.

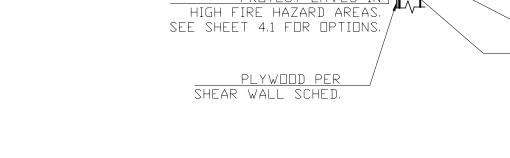
DEPTH OF FTG PER SOILS ---

INVESTIGATION REPORT

— A35 PER SHEAR WALL SCHED. PLYWOOD PER PLAN ____ 2X R.R. PER PLAN 2X SOLID BLK'G - 2X CEILING JOISTS --- 2-2× PLATE PROTECT EAVES IN HIGH FIRE HAZARD AREAS. SEE SHEET 4.1 FOR OPTIONS. — 2X STUDS @ 16" O.C. PLYWOOD PER Shear Wall Sched.

FOR REMAINING INFORMATION

 * VAPOR BARRIER IS REQUIRED
 FOR CLIMATE ZONES 16 * VAPOR BARRIER IS REQUIRED FOR CLIMATE ZONES 16



POST OR DBL STUD PER PLAN

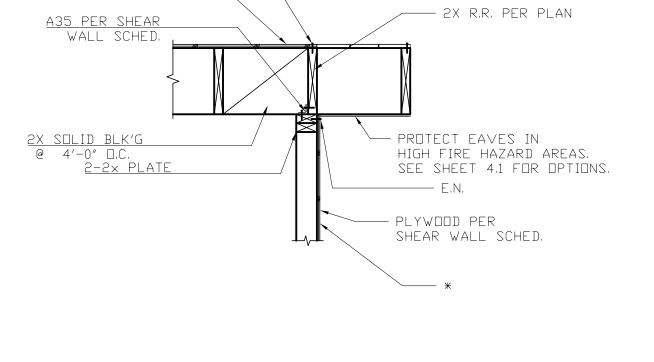
- SLAB PER PLAN

CONSTRUCTION JOINT

SEE 4/-

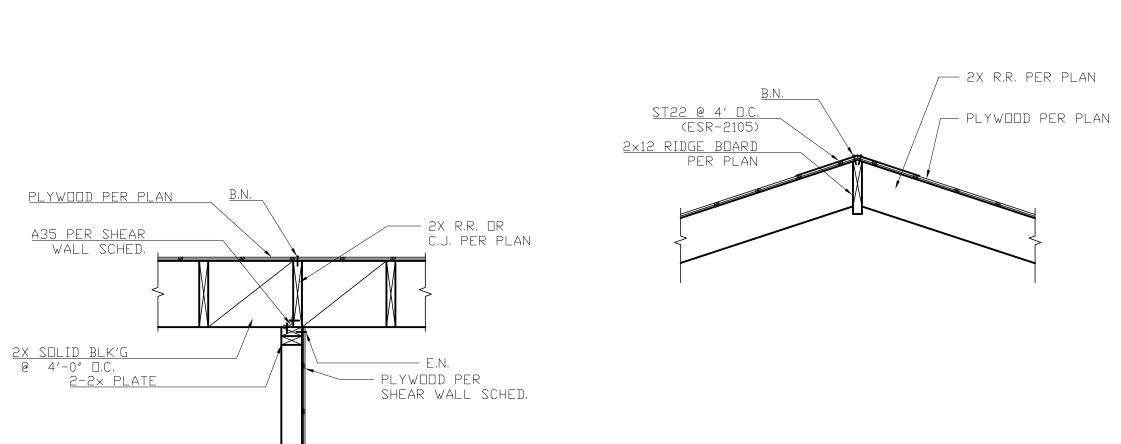
(2) #4 TOP AND

8 EXT. WALL CONN. DETAIL



5 EXT. WALL CONN. AT GABLE END DETAIL

PLYWOOD PER PLAN



- A35 PER SHEAR WALL SCHED. - 2X R.R. PER PLAN PLYWOOD PER PLAN 2X SOLID BLK'G — 2X CEILING JOISTS PER PLAN - 2X SOLID BLK'G @ 16" O.C. OPENING 2-2x PLATE HEADER PER PLAN

6 HDR AT EXT. WALL DETAIL

- 2X BLOCKING CEILING JOISTS PER PLAN WALL PER PLAN

3 CEILING JOIST SPLICE DETAIL

2 BEARING WALL FOUNDATION

9 RIDGE DETAIL

ATE: 04/20/2023 CALE: N/A

PPLICABLE CODE: 2022 VCBC & CRC

RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023) **CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL 301.1 SCOPE.** Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code. but are not required unless adopted by a city, county, or city and county as specified in Section 101.7. than 20 sleeping units or quest rooms. 301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration. The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section EVs at all required EV spaces at a minimum of 40 amperes. Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section. for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate 1.When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, of EV capable spaces. et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates. 301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used. b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or **SECTION 302 MIXED OCCUPANCY BUILDINGS** EV chargers are installed for use. 302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building 2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power shall comply with the specific green building measures applicable to each specific occupancy. 1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable. Exception: Areas of parking facilities served by parking lifts. 2. [HCD] For purposes of CALGreen, live/work units, complying with Section 419 of the California Building Code, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable. DIVISION 4.1 PLANNING AND DESIGN ABBREVIATION DEFINITIONS: Department of Housing and Community Development California Building Standards Commission DSA-SS Division of the State Architect, Structural Safety OSHPD Office of Statewide Health Planning and Development EVs at all required EV spaces at a minimum of 40 amperes. Low Rise High Rise Additions and Alterations for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. **CHAPTER 4** RESIDENTIAL MANDATORY MEASURES **SECTION 4.102 DEFINITIONS** a. Construction documents shall show locations of future EV spaces. 4.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference) EV chargers are installed for use. FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials dwelling unit when more than one parking space is provided for use by a single dwelling unit. such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also Exception: Areas of parking facilities served by parking lifts. **4.106 SITE DEVELOPMENT** 4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, area and shall be available for use by all residents or quests.

management of storm water drainage and erosion controls shall comply with this section.

I.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

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

3. Compliance with a lawfully enacted storm water management ordinance.

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

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

I.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:

. Water collection and disposal systems

French drains . Water retention gardens

parking facilities.

5. Other water measures which keep surface water away from buildings and aid in groundwater

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 or 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.

1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions: 1.1 Where there is no local utility power supply or the local utility is unable to supply adequate

1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project. 2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main

service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the California Electrical Code.

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, hotels and motels and new residential parking facilities. When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2

4.106.4.2.1Multifamily development projects with less than 20 dwelling units; and hotels and motels with less The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved

2. When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of

a. Construction documents are intended to demonstrate the project's capability and capacity for facilitating

Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved

Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required.

b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per

3.EV Chargers. Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking

When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces.

4.106.4.2.2.1 Electric vehicle charging stations (EVCS). Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable

4.106.4.2.2.1.1 Location. EVCS shall comply with at least one of the following options:

1. The charging 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 charging space shall be located on an accessible route, as defined in the California Building Code,

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section

4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions. The charging 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 charging 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

a.Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section

4.106.4.2.3 EV space requirements.

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

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code.

2.Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE raceway method(s) wiring schematics and electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in oncealed areas and spaces shall be installed at the time of original construction.

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING VERIFICATION WITH THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

installed in close proximity to the location or the proposed location of the EV space at the time of original construction in accordance with the California Electrical Code. 4.106.4.2.4 Identification.

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

Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its

4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or

1.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future

altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE.

2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL

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

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION 4.303 INDOOR WATER USE

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

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

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

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume

of two reduced flushes and one full flush. **4.303.1.2 Urinals.** The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads. **4.303.1.3.2 Multiple showerheads serving one shower**. When a shower is served by more than one

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

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

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

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

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

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

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

When installed, shall meet the requirements in the California Code of Regulations, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the California Code of Regulations, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2			
STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALUES MANUFACTURED ON OR AFTER JANUARY 28, 2019			
PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)		
Product Class 1 (≤ 5.0 ozf)	1.00		
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20		
Product Class 3 (> 8.0 ozf)	1 28		

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)]

4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the California Plumbing Code.

4.303.3 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code.

THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE			
FIXTURE TYPE	FLOW RATE		
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI		
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI		
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI		
KITCHEN FAUCETS	1.8 GPM @ 60 PSI		
METERING FAUCETS	0.2 GAL/CYCLE		
WATER CLOSET	1.28 GAL/FLUSH		
URINALS	0.125 GAL/FLUSH		

4.304 OUTDOOR WATER USE

available at: https://www.water.ca.gov/

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

1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code Regulations, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE **EFFICIENCY**

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

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

management ordinance.

 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

3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

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

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale. 2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or

bulk mixed (single stream). 3. Identify diversion facilities where the construction and demolition waste material collected will be

4. Identify construction methods employed to reduce the amount of construction and demolition waste 5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

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

enforcing agency, which can provide verifiable documentation that the percentage of construction and

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the

materials will be diverted by a waste management company.

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

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

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

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.

2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle). 4.410 BUILDING MAINTENANCE AND OPERATION 4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact

disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building: 1. Directions to the owner or occupant that the manual shall remain with the building throughout the

life cycle of the structure. 2. Operation and maintenance instructions for the following: a. Equipment and appliances, including water-saving devices and systems, HVAC systems,

photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.

b. Roof and yard drainage, including gutters and downspouts. Space conditioning systems, including condensers and air filters. d. Landscape irrigation systems. e. Water reuse systems.

3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations. 4. Public transportation and/or carpool options available in the area. 5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent

and what methods an occupant may use to maintain the relative humidity level in that range. 6. Information about water-conserving landscape and irrigation design and controllers which conserve

7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation 8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.

9. Information about state solar energy and incentive programs available. 10. A copy of all special inspections verifications required by the enforcing agency or this code. 11. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.

12. Information and/or drawings identifying the location of grab bar reinforcements. **4.410.2 RECYCLING BY OCCUPANTS.** Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the

depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper,

corrugated cardboard, glass, plastics, organic waster, 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 note required to comply with the organic waste portion of

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

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

SECTION 4.502 DEFINITIONS 5.102.1 DEFINITIONS

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

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements. COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated

wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section

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

Building Permit Set - Not for Construction Before Issuance of Ventura County Building Permit and Stamped Approved and Signed by Ventura County Building and Safety

RAWN BY: COUNTY OF VENTURA

SHEET NO.

California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

NOT APPLICABLE RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER,

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to nundredths of a gram (g O³/g ROC). Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood. PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a). REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain nydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a). **4.503 FIREPLACES 4.503.1 GENERAL**. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances. 4.504 POLLUTANT CONTROL 4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system. 4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section. 4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply: 1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or 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 tricloroethylene), 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, **4.504.2.2 Paints and Coatings.** Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in 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

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the

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

enforcing agency. Documentation may include, but is not limited to, the following:

TABLE 4.504.1 - ADHESIVE VOC LIM	IT _{1,2}
Less Water and Less Exempt Compounds in Gram	s per Liter)
ARCHITECTURAL APPLICATIONS	VOC LIMIT
NDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
NOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

(Less Water and Less Exempt Compounds in Gr	ams per Liter)
SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT

ARCHITECTURAL COATINGS23

COATING CATEGORY

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS1	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

 GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.5 - FORMALDEHYDE LIMITS				
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION				
PRODUCT	CURRENT LIMIT			
HARDWOOD PLYWOOD VENEER CORE	0.05			
HARDWOOD PLYWOOD COMPOSITE CORE	0.05			
PARTICLE BOARD	0.09			
MEDIUM DENSITY FIBERBOARD	0.11			
THIN MEDIUM DENSITY FIBERBOARD2	0.13			
1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED				

BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued) 4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of 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 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of 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 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

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

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed, at least 80% of floor area receiving resilient flooring shall meet the requirements of 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 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs. hhtps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx

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

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

- 1. Product certifications and specifications.
- 2. Chain of custody certifications. 3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see
- 4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered
- Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA
- 0121, CSA 0151, CSA 0153 and CSA 0325 standards. 5. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL

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

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

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

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

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

- 1. Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements
- found in Section 101.8 of this code. 2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end 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. nsulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying

4.506 INDOOR AIR QUALITY AND EXHAUST **4.506.1 Bathroom exhaust fans.** Each bathroom shall be mechanically ventilated and shall comply with the

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

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

4.507 ENVIRONMENTAL COMFORT

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

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

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

Equipment Selection), or other equivalent design software or methods.

INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems.

Other programs acceptable to the enforcing agency.

other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be

- performance contractors, and home energy auditors.
- 4. Other programs acceptable to the enforcing agency.

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

homes in California according to the Home Energy Rating System (HERS).

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

Note: Special inspectors shall be independent entities with no financial interest in the materials or the

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

Examples of acceptable HVAC training and certification programs include but are not limited to the following:

- State certified apprenticeship programs.
- 2. Public utility training programs. . Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
- . Programs sponsored by manufacturing organizations.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to considered by the enforcing agency when evaluating the qualifications of a special inspector:

- 1. Certification by a national or regional green building program or standard publisher. 2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building
- 3. Successful completion of a third party apprentice training program in the appropriate trade.

2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate

project they are inspecting for compliance with this code.

703 VERIFICATIONS

ATE: 04/20/2023

RAWN BY: COUNTY OF VENTURA

PPLICABLE CODE: 2022 VCBC & CRC

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THOSE INDIVIDUAL PROJECT BY THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THOSE INDIVIDUAL PROJECT BY THOSE INDIVIDUAL PRO Building Permit Set - Not for Construction Before Issuance of Ventura County Building Permit and Stamped Approved and Signed by Ventura County Building and Safety