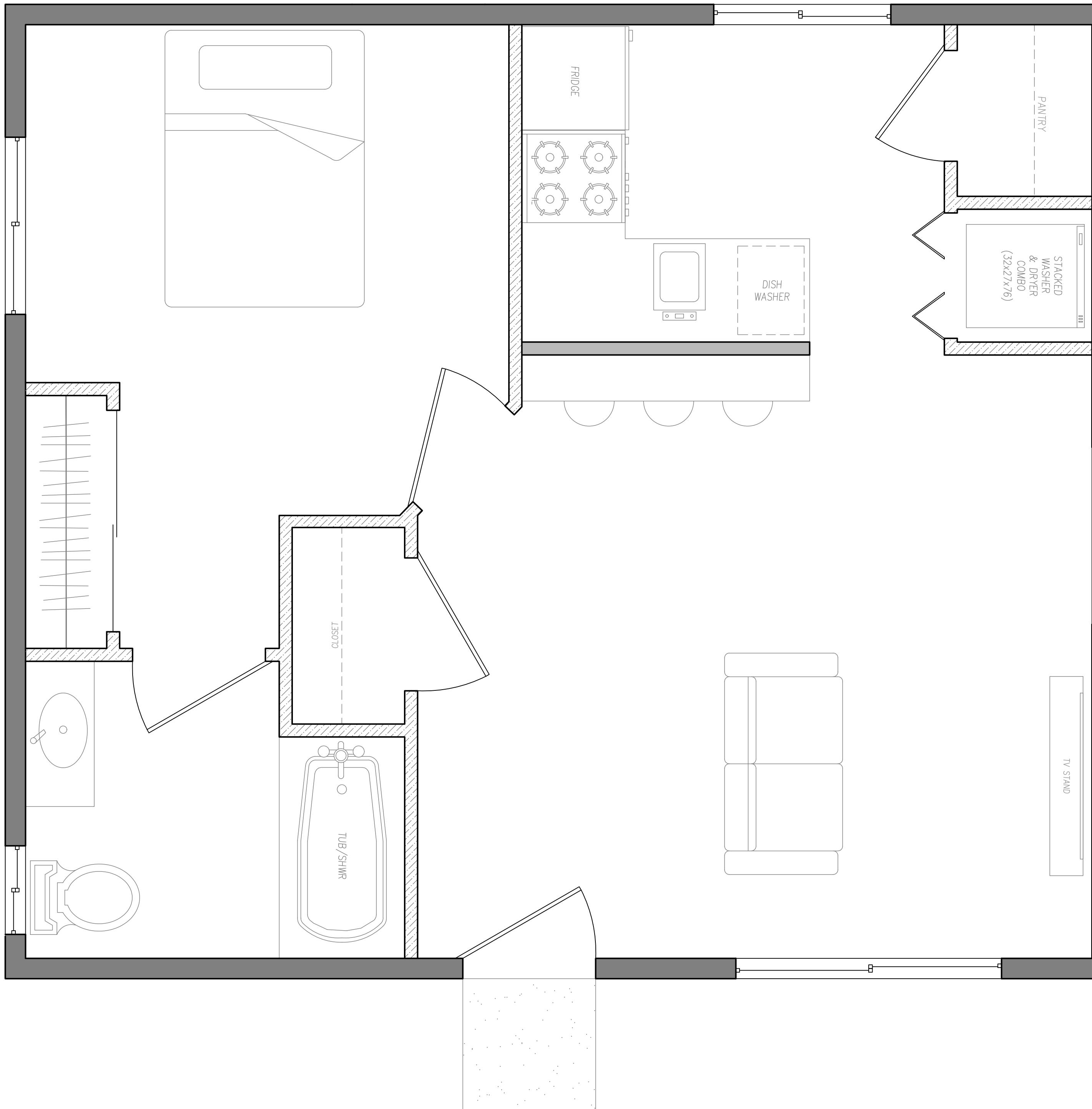


**CITY OF HANFORD
PRE-REVIEWED
ACCESSORY DWELLING UNIT PROGRAM**



**550 SQ. FT.
1 BED 1 BATH
ACCESSORY DWELLING UNIT
DETACHED**

MASTER PLAN DESIGN

ADU550

2022 CBC LOCK UNDER HSC 18938.5(d)(AB130)

APPROVAL DATE: 12/11/2025

EXPIRES: 12/11/2035

**10 YEAR LOCK IS NOT APPLICABLE TO THE CALIFORNIA ENERGY CODE, PV
REQUIREMENTS, OR CALGREEN AND LANDSCAPE WATER-EFFICIENCY STANDARDS**

**CITY OF HANFORD BUILDING DIVISION
APPROVED**

**THIS SET OF PLANS AND SPECIFICATIONS
MUST BE KEPT ON THE JOB AT ALL TIMES AND
NO CHANGES OR ALTERATIONS SHALL BE
MADE EXCEPT BY THE BUILDING DIVISION.**

**THE STAMPING OF THIS PLAN AND
SPECIFICATIONS SHALL NOT BE HELD TO
PERMIT OR TO BE AN APPROVAL OF THE
VIOLATION OF ANY PROVISIONS OF ANY CITY
ORDINANCE OR STATE LAW. "REVIEWED FOR
CODE COMPLIANCE."**

**BY: Mitchell Couch
12/11/2025**

DISCLAIMER:
BY USING THESE STANDARD PLANS, THE USER AGREES TO
RELEASE THE CITY OF HANFORD FROM ANY AND ALL CLAIMS,
LIABILITIES, SUITS AND DEMANDS ON ACCOUNT OF ANY
INJURY, DAMAGE, OR LOSS TO PERSONS OR PROPERTY,
OUT OF THE USE OF THESE, OR CONSTRUCTION DOCUMENTS, ARISING
OUT OF THE USE OF THESE PLANS DOES NOT ELIMINATE OR REDUCE THE
USER'S RESPONSIBILITY TO VERIFY ANY AND ALL INFORMATION.

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PLUMBING SHEETS

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These plans and documents have been reviewed
for compliance with the applicable codes
requirements of the jurisdiction. The stamping
of these plans shall not be held to permit or be
an approval of any violation of applicable codes
and standards nor relieve the owner, design
professional of record or contractor of
compliance with applicable codes and standards

ROD CARSEY CONSULTING & PLAN CHECK
SERVICE 11/8/2024

CITY OF HANFORD



REVISIONS

PROJECT TITLE	CITY OF HANFORD – PRE-REVIEWED ADU PROGRAM	COVER
ADU SQFT	SHEET DESCRIPTION	DATE
550	S.JV REAP	10/28/2024
	DRAWING SCALE	---

SHEET

C0

ADDITIONAL REQUIREMENTS DUE AT TIME OF SUBMITTAL

TRUSS DRAWINGS AND ANALYSIS

FIRE SPRINKLER PLAN - **if applicable**

SOLAR PHOTOVOLTAIC (PV) PLAN:

GEOTECHNICAL SOILS AND FOUNDATION INVESTIGATION

Current CalGreen Forms - if submitted after 12/31/2025

Current Energy Compliance Sheets - if submitted after 12/31/2025

BUILDING CODE:

2022 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.

2022 CALIFORNIA RESIDENTIAL CODE (CRC) PART 2, TITLE 24 PART 2.5 (2021 INTERNATIONAL BUILDING CODE WITH CALIFORNIA AMENDMENTS).

2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2020 NATIONAL ELECTRICAL CODE OF THE NATIONAL FIRE PROTECTION ASSOCIATION)

2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (2021 UNIFORM MECHANICAL CODE AND CA AMENDMENTS)

2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2020 UNIFORM PLUMBING CODE AND AMENDMENTS)

2022 CALIFORNIA ENERGY CODE AND ENERGY COMMISSION STANDARDS (CECS), PART 6, TITLE 24 C.C.R.

2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 C.C.R. (2021 INTERNATIONAL FIRE CODE)

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11 TITLE 24 C.C.R.

2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12 TITLE 24 C.C.R.

2022 TITLE 19 C.C.R. PUBLIC SAFETY, STATE FIRE MARSHAL

CONTRACTOR SHALL REFER TO THE ABOVE CITED CODES AND LOCAL REGULATIONS
WHERE SPECIFIC DETAILS ARE REQUIRED BUT NOT DEPICTED IN THE APPROVED
PLANS.

A.

GENERAL

1. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER THESE NOTES. THE DETAILS ON THE DRAWINGS SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY SHOWN OTHERWISE, WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED, DETAILS OF A CHARACTER SIMILAR TO THOSE SHOWN SHALL BE USED, SUBJECT TO REVIEW.

B. ELECTRICAL, PLUMBING, AND MECHANICAL

1. EXTERIOR LIGHTING. ALL PROJECTS SHALL COMPLY WITH THE RESPECTIVE CITY'S MUNICIPAL CODE.
 2. DETECTORS. ALL DETECTORS MUST BE HARD WIRED TO THE BUILDING'S ELECTRICAL SYSTEM, INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SHALL BE INTERCONNECTED, WITH BATTERY BACKUP [CRC R314.1]
 2.1. SMOKE DETECTORS. SMOKE DETECTORS ARE REQUIRED IN EACH EXISTING SLEEPING ROOM, OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF SLEEPING ROOMS, AND ON EACH STORY OF A DWELLING INCLUDING BASEMENTS. (CRC R314.3)
 2.2. CARBON MONOXIDE DETECTORS. CARBON MONOXIDE DETECTORS ARE REQUIRED OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF SLEEPING ROOMS AND ON EACH STORY OF A DWELLING INCLUDING BASEMENTS. (CRC R315.3)
 3. WATER HEATER SEISMIC STRAPPING. MINIMUM TWO 3/4-INCH-BY-24-GAUGE STRAPS REQUIRED AROUND WATER HEATERS, WITH 1/4-INCH-BY-3-INCH LAG BOLTS ATTACHED DIRECTLY TO FRAMING. STRAPS SHALL BE AT POINTS WITHIN UPPER THIRD AND LOWER THIRD OF WATER HEATER VERTICAL DIMENSION. LOWER CONNECTION SHALL OCCUR MINIMUM 4 INCHES ABOVE CONTROLS. (CPC 507.2)
 4. WATER CLOSET CLEARANCE. MINIMUM 30-INCH-WIDE BY 24-INCH-DEEP CLEARANCE REQUIRED AT FRONT OF WATER CLOSETS. (CPC 402.5)
 5. SHOWER SIZE. SHOWER COMPARTMENTS SHALL HAVE MINIMUM AREA OF 1024 SQUARE INCHES AND BE ABLE TO ENCOMPASS A 30-INCH-DIAMETER CIRCLE. SHOWER DOORS SHALL HAVE A MINIMUM 22-INCH UNOBSTRUCTED WIDTH. (CPC 408.5 AND CPC 408.6)

C. MECHANICAL VENTILATION AND INDOOR AIR QUALITY (ASHRAE 62.2-2010)

1. TRANSFER AIR. VENTILATION AIR SHALL BE PROVIDED DIRECTLY FROM THE OUTDOORS AND NOT AS TRANSFER AIR FROM ADJACENT DWELLING UNITS OR OTHER SPACES, SUCH AS GARAGES, UNCONDITIONED CRAWLSPACES, OR UNCONDITIONED ATTICS. (CBEES 150.0(O))
 2. INSTRUCTIONS AND LABELING. VENTILATION SYSTEM CONTROLS SHALL BE LABELED AND THE HOME OWNER SHALL BE PROVIDED WITH INSTRUCTIONS ON HOW TO OPERATE THE SYSTEM. (CBEES 150.0(O))
 3. COMBUSTION AND SOLID-FUEL BURNING APPLIANCES. COMBUSTION APPLIANCES SHALL BE PROPERLY VENTED AND AIR SYSTEMS SHALL BE DESIGNED TO PREVENT BACK DRAFTING. (CBEES 150.0(O))
 4. MINIMUM FILTRATION. MECHANICAL SYSTEMS SUPPLYING AIR TO OCCUPABLE SPACE THROUGH DUCTWORK SHALL BE PROVIDED WITH A FILTER HAVING A MINIMUM EFFICIENCY OF MERV 13 OR BETTER. (CBEES 150.0(O))
 5. AIR INLETS. AIR INLETS (NOT EXHAUST) SHALL BE LOCATED AWAY FROM KNOWN CONTAMINANTS. (CBEES 150.0(O))
 6. AIR MOVING EQUIPMENT. AIR MOVING EQUIPMENT USED TO MEET EITHER THE WHOLE-BUILDING VENTILATION REQUIREMENT OR THE LOCAL VENTILATION EXHAUST REQUIREMENT SHALL BE RATED IN TERMS OF AIRFLOW AND SOUND. (CBEES 150.0(O))
 6.A. ALL CONTINUOUSLY OPERATING FANS SHALL BE RATED AT A MAXIMUM OF 1.0 SONE.
 6.B. INTERMITTENTLY OPERATED WHOLE-BUILDING VENTILATION FANS SHALL BE RATED AT A MAXIMUM OF 1.0 SONE.
 6.C. INTERMITTENTLY OPERATED LOCAL EXHAUST FANS SHALL BE RATED AT MAXIMUM OF 3.0 SONE.
 6.D. REMOTELY LOCATED AIR-MOVING EQUIPMENT (MOUNTED OUTSIDE OF HABITABLE SPACES) NEED NOT MEET SOUND REQUIREMENTS IF AT LEAST 4 FEET OF DUCTWORK BETWEEN FAN AND INTAKE GRILL.
 7. LOCAL EXHAUST FANS TO EXTERIOR TO PROVIDE MINIMUM 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS VENTILATION OR AS SPECIFIED IN ENERGY REPORT.
 8. AN INTERMITTENTLY OR CONTINUOUSLY OPERATING LOCAL MECHANICAL EXHAUST VENTILATION SYSTEM SHALL BE INSTALLED IN EACH BATHROOM WITH A BATHTUB, SHOWER, OR SIMILAR MOISTURE SOURCE AND IN EACH KITCHEN IN COMPLIANCE WITH ASHRAE STANDARD 62.2 AS ADOPTED BY THE CALIFORNIA ENERGY COMMISSION.
 8.1. BATHROOMS: INTERMITTENT LOCAL EXHAUST VENTILATION AIRFLOW RATES SHALL NOT BE LESS THAN 50 CFM. CONTINUOUS OPERATION SHALL NOT BE LESS THAN 20 CFM. (CMC 405.3.1)
 8.2. KITCHENS: INTERMITTENT CONTROLLED OPERATIONS, THE EXHAUST RATE SHALL NOT BE LESS THAN 100 CFM FOR RANGE HOODS OR 300 CFM FOR MECHANICAL EXHAUST FANS INCLUDING DOWNDRAFT APPLIANCES. CONTINUOUS OPERATED VENTILATION, THE EXHAUST RATE SHALL NOT BE LESS THAN 5CFM OR 4% OF THE OCCUPIED FLOOR AREA. (CMC 405.4.1)

D. FOUNDATION

1. PROJECTS DETERMINED TO BE IN SEISMIC DESIGN CATEGORY (SDC) "D" REQUIRE A GEOTECHNICAL SOILS AND FOUNDATION INVESTIGATION [CBC 1803.2 & 1803.5.12] UNLESS WAIVED BY THE BUILDING OFFICIAL. THE SOILS ENGINEER SHALL BE RESPONSIBLE FOR REVIEWING AND COORDINATING THE SITE PLAN AND THE FOUNDATION PLAN PREPARED BY OTHERS FOR CONFORMITY WITH THE RECOMMENDATIONS OF HIS SOILS REPORT AND SHALL SIGNIFY HIS REVIEW BY CERTIFYING THE FIRST SHEET OF SAID PLANS [CRC R301.1.3.1].
 1.1. SAMPLE CERTIFICATION.
 THESE PLANS CONFORM TO THE GEOTECHNICAL REPORT # _____ DATED _____ AS PREPARED UNDER MY SUPERVISION. WE MAKE NO REPRESENTATION AS TO THE ACCURACY OF DIMENSIONS, MEASUREMENTS, CALCULATIONS OR ANY PORTION OF THE DESIGN.
 2. FOUNDATION REINFORCEMENT. CONTINUOUS FOOTINGS AND STEM WALLS SHALL BE PROVIDED WITH A MINIMUM TWO LONGITUDINAL NO. 4 BARS, ONE AT THE TOP AND ONE AT THE BOTTOM OF THE FOOTING. (CRC R403.1.3.)
 3. INTERIOR BRACED WALL FOUNDATION SUPPORT. BRACED WALLS SHALL BE SUPPORTED BY CONTINUOUS FOUNDATIONS. (CRC 403.1.3.4)
 4. HORIZONTAL REINFORCEMENT SHALL BE THE LONGEST LENGTHS PRACTICAL. WHERE SPLICES ARE NECESSARY IN REINFORCEMENT, THE LENGTH OF LAP SPLICE SHALL BE 40 BAR DIAMETERS. THE MAXIMUM GAP BETWEEN NONCONTACT PARALLEL BARS AT A LAP SPLICE SHALL NOT EXCEED THE SMALLER OF ONE-FIFTH THE REQUIRED LAP LENGTH AND 6 INCHES [SEE FIGURE R608.5.4(1)]
 5. ANCHOR BOLTS AND SILLS. FOUNDATION PLATES OR SILLS SHALL BE BOLTED OR ANCHORED TO THE FOUNDATION OR FOUNDATION WALL PER THE FOLLOWING (CRC R403.1.6 AND CRC R602.11.1):
 5.A. MINIMUM 1/2-INCH-DIAMETER STEEL BOLTS, ASTM F1554, GR36
 5.B. BOLTS EMBEDDED AT LEAST 7 INCHES INTO CONCRETE OR MASONRY
 5.C. THE BOLTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE PLATE.
 5.D. BOLTS SPACED MAXIMUM 6 FEET ON CENTER
 5.E. MINIMUM TWO BOLTS PER PLATE/SILL PIECE WITH ONE BOLT LOCATED MAXIMUM 12 INCHES AND MINIMUM 7 BOLT DIAMETERS FROM EACH END OF EACH SILL PLATE/PIECE
 5.F. MINIMUM 3-INCH BY 3-INCH BY 0.229-INCH STEEL PLATE WASHER BETWEEN SILL AND NUT ON EACH BOLT EXCEPT WHERE APPROVED ANCHOR STRAPS ARE USED. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO $\frac{1}{8}$ INCH LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1-3/4 INCHES, PROVIDED STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT.
 6. HOLD-DOWNS. ALL HOLD-DOWNS MUST BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION.
 7. FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE RETARDANT TREATED WOOD SHALL BE HOT-DIPPED ZINC COATED GALVANIZED, STAINLESS STEEL OR COPPER (CRC R317.3)
 8. VAPOR RETARDER.
 8.1. A VAPOR RETARDER INSPECTION WILL BE REQUIRED PRIOR TO PLACEMENT OF THE SAND TO CONFIRM PROPER INSTALLATION (VAPOR RETARDER IS TO BE ASTM E1745 CLASS A COMPLIANT AND MANUFACTURER'S INSTALLATION REQUIREMENTS MUST BE AVAILABLE FOR INSPECTION PURPOSES).
 8.2. A MINIMUM 10-MIL VAPOR RETARDER CONFORMING TO ASTM E1745 CLASS A REQUIREMENTS WITH JOINTS LAPPED NOT LESS THAN 6' IS REQUIRED.
 8.3. PROVIDE 4" NOMINAL THICK CONCRETE SLAB WITH #3 REBAR AT 24" O.C. EACH WAY, PLACED MID-HEIGHT OF SLAB OVER 2" SAND BLOTTER INSTALLED OVER 10 MIL VAPOR RETARDER CONFORMING TO ASTM E1745 OVER AN ADDITIONAL 2" SAND OVER COMPAKTED FILL COMPLYING WITH SITE SOILS REPORT.

E. WOOD FRAMING

1. FASTENER REQUIREMENTS. THE NUMBER, SIZE, AND SPACING OF FASTENERS CONNECTING WOOD MEMBERS/ELEMENTS SHALL NOT BE LESS THAN THAT SET FORTH IN CRC TABLE R602.3(1). (CRC R602.3)
 2. SILL PLATE. STUDS SHALL HAVE FULL BEARING ON NOMINAL 2-INCH THICK OR LARGER SILL PLATE WITH WIDTH AT LEAST EQUAL TO STUD WIDTH. (CRC R602.3.4)
 3. BEARING STUDS. WHERE JOISTS, TRUSSES, OR RAFTERS ARE SPACED MORE THAN 16 INCHES ON CENTER AND THE BEARING STUDS BELOW ARE SPACED 24 INCHES ON CENTER, SUCH MEMBERS SHALL BEAR WITHIN 5 INCHES OF THE STUDS BEHIND. (CRC R602.3.3) EXCEPTION: THE TOP PLATES ARE TWO 2-INCH BY 6-INCH OR TWO 3-INCH BY 4- INCH MEMBERS.

4. DRILLING AND NOTCHING OF STUDS. ANY STUD IN AN EXTERIOR WALL OR BEARING PARTITION MAY BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25% OF ITS WIDTH. STUDS IN NONBEARING PARTITIONS MAY BE NOTCHED TO A DEPTH NOT TO EXCEED 40% OF A SINGLE STUD WIDTH. ANY STUD MAY BE BORED OR DRILLED, PROVIDED THE DIAMETER OF THE RESULTING HOLE IS NO MORE THAN 60% OF THE STUD WIDTH, THE EDGE OF THE HOLE IS NO MORE THAN 5/8 INCH TO THE EDGE OF THE STUD, AND THE HOLE IS NOT LOCATED IN THE SAME SECTION AS A CUT OR NOTCH. STUDS LOCATED IN EXTERIOR WALL OR BEARING PARTITIONS DRILLED OVER 40% AND UP TO 60% SHALL ALSO BE DOUBLED WITH NO MORE THAN TWO SUCCESSIVE STUDS BORED. (CRC R602.6) EXCEPTION: USE OF APPROVED STUD SHOES IS PERMITTED WHERE THEY ARE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

5. TOP PLATE. WOOD STUD WALLS SHALL BE CAPPED WITH A DOUBLE TOP PLATE INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND AT INTERSECTIONS WITH OTHER PARTITIONS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 24 INCHES. JOINTS IN PLATES NEED NOT OCCUR OVER STUDS. PLATES SHALL BE MINIMUM NOMINAL 2 INCHES THICK AND HAVE WIDTH AT LEAST EQUAL TO WIDTH OF STUDS. (CRC R602.3.2)

6. TOP PLATE SPLICES. TOP PLATE LAP SPLICES SHALL BE FACE-NAILED WITH MINIMUM 8 16D NAILS ON EACH SIDE OF SPLICE. (CRC R602.10.8.1)

7. DRILLING AND NOTCHING OF TOP PLATE. WHEN PIPING OR DUCTWORK IS PLACED IN OR PARTLY IN AN EXTERIOR WALL OR INTERIOR LOAD-BEARING WALL, NECESSITATING CUTTING, DRILLING, OR NOTCHING OF THE TOP PLATE BY MORE THAN 50% OF ITS WIDTH, A GALVANIZED METAL TIE NOT LESS THAN 0.054-INCH THICK AND 1-1/2-INCHES WIDE SHALL BE FASTENED ACROSS AND TO THE PLATE AT EACH SIDE OF THE OPENING WITH NOT LESS THAN 8 10D NAILS HAVING A MINIMUM LENGTH OF 1-1/2 INCHES AT EACH SIDE OR EQUIVALENT. THE METAL TIE MUST EXTEND MINIMUM 6 INCHES PAST THE OPENING. (CRC R602.6.1)

8. SHEAR WALL AND DIAPHRAGM NAILING. ALL SHEAR WALLS, ROOF DIAPHRAGMS, AND FLOOR DIAPHRAGMS SHALL BE NAILED TO SUPPORTING CONSTRUCTION PER CRC TABLE R602.3(1). (CRC R604.3)

9. SHEAR WALL JOINTS. ALL VERTICAL JOINTS IN SHEAR WALL SHEATHING SHALL OCCUR OVER, AND BE FASTENED TO, COMMON STUDS. HORIZONTAL JOINTS IN SHEAR WALL SHEATHING SHALL OCCUR OVER, AND BE FASTENED TO, MINIMUM 1-1/2-INCH-THICK BLOCKING. (CRC R602.10.10)

10. FRAMING OVER OPENINGS. HEADERS, DOUBLE JOISTS, OR TRUSSES OF ADEQUATE SIZE TO TRANSFER LOADS TO VERTICAL MEMBERS SHALL BE PROVIDED OVER WINDOW AND DOOR OPENINGS IN LOAD-BEARING WALLS AND PARTITIONS. (CBC 2304.3.2)

11. ROOF TRUSSES. TRUSSES SHALL BE BRACED TO PREVENT ROTATION AND PROVIDE LATERAL STABILITY IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE INDIVIDUAL TRUSS DESIGN DRAWINGS. IN THE ABSENCE OF SPECIFIC BRACING REQUIREMENTS, TRUSSES SHALL BE BRACED IN ACCORDANCE WITH ACCEPTED INDUSTRY PRACTICE SUCH AS THE SBIA BUILDING COMPONENT SAFETY INFORMATION (BCSI) GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.

12. ROOF DIAPHRAGM UNDER FILL FRAMING. ROOF PLYWOOD SHALL BE CONTINUOUS UNDER CALIFORNIA FILL FRAMING.

13. ROOF DIAPHRAGM AT RIDGES. MINIMUM 2-INCH NOMINAL BLOCKING REQUIRED FOR ROOF DIAPHRAGM NAILING AT RIDGES.

14. BLOCKING OF ROOF TRUSSES. MINIMUM 2-INCH NOMINAL BLOCKING REQUIRED BETWEEN TRUSSES AT RIDGE LINES AND AT POINTS OF BEARING AT EXTERIOR WALLS.

15. TRUSS CLEARANCE. MINIMUM 1-1/2-INCH CLEARANCE REQUIRED BETWEEN TOP PLATES OF INTERIOR NON-BEARING PARTITIONS AND BOTTOM CHORDS OF TRUSSES.

16. FIREBLOCKING. FIREBLOCKING SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS (CRC R302.11 AND CRC R1003.19):
 16.A. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:
 16.A.1. VERTICALLY AT THE CEILING AND FLOOR LEVELS
 16.A.2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET
 16.B. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS, AND COVE CEILINGS
 16.C. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN
 16.D. AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION
 16.E. AT CHIMNEYS AND FIREPLACES PER ITEM E-49
 16.F. CORNICES OF A TWO-FAMILY DWELLING AT THE LINE OF DWELLING-UNIT SEPARATION
 17. FIREBLOCKING MATERIALS. EXCEPT AS OTHERWISE SPECIFIED IN ITEMS E-48 AND E-49, FIREBLOCKING SHALL CONSIST OF THE FOLLOWING MATERIALS WITH THE INTEGRITY MAINTAINED (CRC R302.11.1):
 17.A. TWO-INCH NOMINAL LUMBER
 17.B. TWO THICKNESSES OF ONE-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS
 17.C. ONE THICKNESS OF 23/32-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 23/32-INCH WOOD STRUCTURAL PANEL
 17.D. ONE THICKNESS OF 3/4-INCH PARTICLEBOARD WITH JOINTS BACKED BY 3/4-INCH PARTICLEBOARD
 17.E. 1/2-INCH GYPSUM BOARD
 17.F. 1/4-INCH CEMENT-BASED MILLBOARD
 17.G. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OF OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE. BATT OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NON-RIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROWS OF STUDS OR STAGGERED STUDS. UNFACE FIBERGLASS BATT INSULATION USED AS FIREBLOCKING SHALL FILL THE ENTIRE CROSS-SECTION OF THE WALL CAVITY TO A MINIMUM HEIGHT OF 16 INCHES MEASURED VERTICALLY. WHEN PIPING, CONDUIT, OR SIMILAR OBSTRUCTIONS ARE ENCOUNTERED, THE INSULATION SHALL BE PACKED TIGHTLY AROUND THE OBSTRUCTION. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASES.

18. FIREBLOCKING AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES, AND WIRES AT CEILING AND FLOOR LEVEL. SUCH OPENINGS SHALL BE FIREBLOCKED WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION. (CRC R302.11)

19. FIREBLOCKING OF CHIMNEYS AND FIREPLACES. ALL SPACES BETWEEN CHIMNEYS AND FLOORS AND CEILINGS THROUGH WHICH CHIMNEYS PASS SHALL BE FIREBLOCKED WITH NONCOMBUSTIBLE MATERIAL SECURELY FASTENED IN PLACE. THE FIREBLOCKING OF SPACES BETWEEN CHIMNEYS AND WOOD JOISTS, BEAMS, OR Headers SHALL BE SELF-SUPPORTING OR BE PLACED ON STRIPS OF METAL OR METAL LATH LAID ACROSS THE SPACES BETWEEN COMBUSTIBLE MATERIAL AND THE CHIMNEY. (CRC R1003.19)

20. DRAFTSTOPPING. IN COMBUSTIBLE CONSTRUCTION WHERE THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR/CEILING ASSEMBLY, DRAFTSTOPPING SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1000 SQUARE FEET. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS. WHERE THE ASSEMBLY IS ENCLOSED BY A FLOOR MEMBRANE ABOVE AND A CEILING MEMBRANE BELOW, DRAFTSTOPPING SHALL BE PROVIDED IN FLOOR/CEILING ASSEMBLIES UNDER THE FOLLOWING CIRCUMSTANCES (CRC R302.12):
 20.A. CEILING IS SUSPENDED UNDER THE FLOOR FRAMING
 20.B. FLOOR FRAMING IS CONSTRUCTED OF TRUSS-TYPE OPEN-WEB OR PERFORATED MEMBERS
 21. DRAFTSTOPPING MATERIALS. DRAFTSTOPPING SHALL NOT BE LESS THAN 1/2-INCH GYPSUM BOARD, 3/8-INCH WOOD STRUCTURAL PANELS, OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED. DRAFTSTOPPING SHALL BE INSTALLED PARALLEL TO THE FLOOR FRAMING MEMBERS UNLESS OTHERWISE APPROVED BY THE BUILDING OFFICIAL. THE INTEGRITY OF DRAFTSTOPPING SHALL BE MAINTAINED. (CRC R302.12.1)

22. COMBUSTIBLE INSULATION CLEARANCE. COMBUSTIBLE INSULATION SHALL BE SEPARATED MINIMUM 3 INCHES FROM RECESSED LUMINAIRES, FAN MOTORS, AND OTHER HEAT-PRODUCING DEVICES. (CRC R302.14)

23. PROTECTION OF WOOD AGAINST DECAY. NATURALLY DURABLE OR PRESERVE-TREATED WOOD SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS (CRC R317.1):
 23.A. ALL WOOD IN CONTACT WITH GROUND, EMBEDDED IN CONCRETE IN DIRECT CONTACT WITH GROUND, OR EMBEDDED IN CONCRETE EXPOSED TO WEATHER
 23.B. WOOD FRAMING MEMBERS THAT REST ON CONCRETE OR MASONRY EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8 INCHES FROM EXPOSED EARTH SHALL BE OF NATURALLY DURABLE OR PRESERVE-TREATED WOOD
 23.C. WOOD FRAMING, SHEATHING, AND SIDING ON THE EXTERIOR OF THE BUILDING AND HAVING CLEARANCE LESS THAN 6 INCHES FROM THE EXPOSED GROUND OR LESS THAN 2 INCHES VERTICALLY FROM CONCRETE STEPS, PORCH SLABS, PATIO SLABS, AND SIMILAR HORIZONTAL SURFACE EXPOSED TO WEATHER
 23.D. SILLS AND SLEEPERS ON CONCRETE OR MASONRY SLAB IN DIRECT CONTACT WITH GROUND UNLESS SEPARATED FROM SUCH SLAB BY IMPERVIOUS MOISTURE BARRIER

F. BASIS OF DESIGN

NOTE: WINTER DESIGN TEMP, FLOOD HAZARDS, AIR FREEZING INDEX AND MEAN ANNUAL TEMP SECTIONS ARE REQUIRED BY APPLICANT AT TIME OF SUBMITTAL.

GROUND SNOW LOAD	WIND DESIGN Speed (mph)	SEISMIC DESIGN CAT	SUBJECT TO DAMAGE FROM			ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
			Weathering	Frost Line Depth	Termitic				
0	110	N	D	<5000=NEG	<5000=12	YES	74	<5000=NO	N/A
									1500
									64

G. GENERAL MATERIAL SPECIFICATIONS

1. LUMBERT. ALL JOISTS, RAFTERS, BEAMS, AND POSTS SHALL BE NO. 2 GRADE DOUGLAS FIR-LARCH OR BETTER. STUDS NOT MORE THAN 8 FEET LONG SHALL BE STUD-GRADE DOUGLAS FIR-LARCH OR BETTER WHEN SUPPORTING NOT MORE THAN ONE FLOOR, ROOF, AND CEILING. STUDS LONGER THAN 8 FEET SHALL BE NO. 2 GRADE DOUGLAS FIR-LARCH OR BETTER.

2. STRUCTURAL PLYWOOD SHALL CONFORM TO COMMERCIAL STANDARD DOC PS 1-09 AND HAVE A PANEL GRADE OF C-D. WOOD BASED STRUCTURAL-USE PANELS (I.E. ORIENTED STRAND BOARD) SHALL CONFORM TO THE APA PRP-108 PERFORMANCE STANDARD OF THE VOLUNTARY PRODUCT STANDARD DOC PS 2-10. "PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL-USE PANELS". PUBLISHED BY THE DEPARTMENT OF COMMERCE AND THE AMERICAN PLYWOOD ASSOCIATION. ALL PLYWOOD AND STRUCTURAL-USE PANELS SHALL BE APA RATED SHEATHING, EXPOSURE 1, SHEATHING EXPOSED TO WEATHER SHALL BE GRADE C-C EXTERIOR WITH A RANGE INDEX AS TO MATCH BODY OF DIAGRAM SPECIFIED.

3. CONCRETE. THE QUALITY AND DESIGN OF CONCRETE SHALL BE IN ACCORDANCE WITH 2022 CALIFORNIA BUILDING CODE (CBC), EXCEPT ITEMS NOT SPECIFICALLY COVERED THEREIN SHALL ALSO CONFORM TO ACI 318-14.

4. REINFORCING STEEL. REINFORCING STEEL USED IN CONSTRUCTION OF REINFORCED CONCRETE STRUCTURES SHALL BE DEFORMED AND COMPLY WITH ASTM A 615., GRADE 40 (CRC R403.1.3.5.1)

5. FASTENERS FOR PRESERVE-TREATED WOOD. FASTENERS FOR PRESERVE-TREATED AND FIRE-RETARDANT-TREATED WOOD - INCLUDING NUTS AND WASHERS -- SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER. (CRC R317.3.1)

EXCEPTION: 1/2-INCH DIAMETER OR GREATER STEEL BOLTS
 EXCEPTION: FASTENERS OTHER THAN NAILS AND TIMBER RIVETS MAY BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B 695, CLASS 55 MINIMUM
 EXCEPTION: PLAIN CARBON STEEL FASTENERS ACCEPTABLE IN SBX/DOT AND ZINC BORATE PRESERVE-TREATED WOOD IN

J. DRAINAGE NOTES

1. SURFACE DRAINAGE SHALL BE DIVERTED TO A STORM SEWER CONVEYANCE OR OTHER APPROVED POINT OF COLLECTION THAT DOES NOT CREATE A HAZARD [CRC R401.3].
2. LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS A MINIMUM OF 6 INCHES FOR A DISTANCE OF 10 FEET. EXCEPTION: WHERE SLOPES OR OTHER PHYSICAL BARRIERS PROHIBIT 6 INCHES OF FALL FOR 10 FEET, DRAINS OR SWALES SHALL BE CONSTRUCTED TO ENSURE DRAINAGE AWAY FROM THE STRUCTURE. WHEN DRAINS OR SWALES ARE USED FOR THIS PURPOSE:
 - 2.1. PROVIDE A MINIMUM 5% SLOPE FROM FOUNDATION TO DRAIN/SWALE,
 - 2.2. DRAIN/SWALE SHOULD BE LOCATED AS FAR AS IS PRACTICAL FROM THE FOUNDATION TO MAXIMIZE FALL AND
 - 2.3. DRAIN/SWALE IS TO SLOPE A MINIMUM OF 2%.
3. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED NOT LESS THAN 2 PERCENT AWAY FROM THE BUILDING.
4. ON GRADED SITES, THE TOP OF ANY EXTERIOR FOUNDATION (FINISH FLOOR ELEVATION) SHALL EXTEND ABOVE THE ELEVATION OF THE STREET GUTTER AT POINT OF DISCHARGE OR THE INLET OF AN APPROVED DRAINAGE DEVICE NOT LESS THAN 12 INCHES PLUS 2 PERCENT [CRC R403.1.7.3].
5. ALTERNATE SETBACKS AND CLEARANCES ARE PERMITTED, SUBJECT TO THE APPROVAL OF THE BUILDING OFFICIAL [CRC R403.1.7.4].

K. STREET ADDRESSING

1. SEPARATE STREET ADDRESSING IS REQUIRED FOR THE ADU. INSTALL STREET ADDRESS NUMERALS, AT LEAST FOUR INCHES HIGH WITH MINIMUM $\frac{1}{2}$ -INCH STROKE, MOUNTED ON A CONTRASTING BACKGROUND ON FRONT OF THE BUILDING [CRC R319.1].

HERS SPECIAL FEATURES

REQUIRED SPECIAL FEATURES

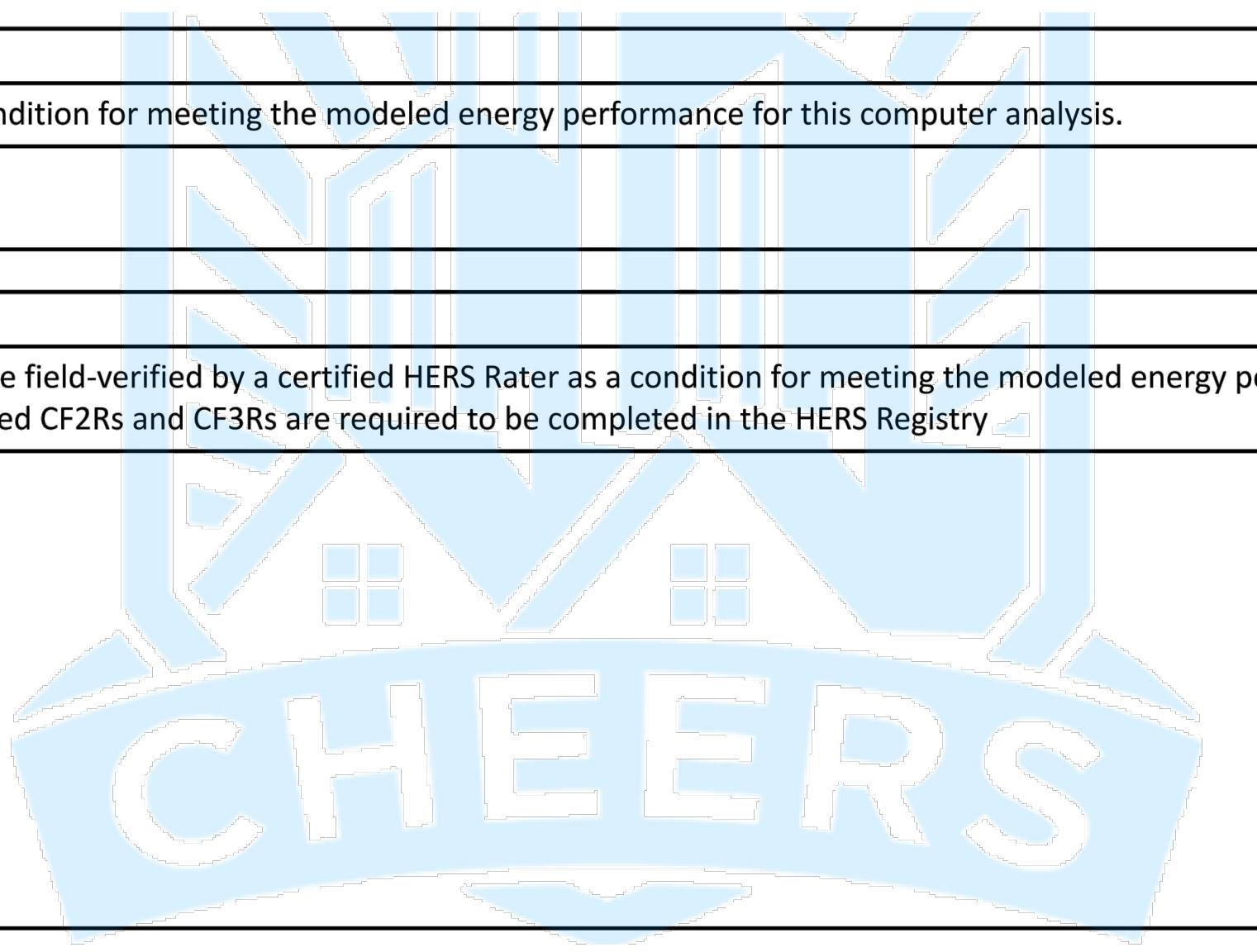
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- Insulation below roof deck
- Window overhangs and/or fins

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

- Quality insulation installation (QII)
- Indoor air quality ventilation
- Kitchen range hood
- Minimum Airflow
- Verified EER/EER2
- Verified SEER/SEER2
- Verified Refrigerant Charge
- Fan Efficacy Watts/CFM
- Verified HSPF2
- Verified heat pump rated heating capacity
- Duct leakage testing



These plans and documents have been reviewed for compliance with the applicable codes requirements of the jurisdiction. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards nor relieve the owner, design professional of record or contractor of compliance with applicable codes and standards

ROD CARSEY CONSULTING & PLAN CHECK SERVICE

TABLE R602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ^{a,b,c}	SPACING OF FASTENERS
Roof			
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2 $\frac{1}{2}$ " x 0.113")	—
2	Ceiling joists to plate, toe nail	3-8d (2 $\frac{1}{2}$ " x 0.113")	—
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	—
4	Collar tie to rafter, face nail or 1 $\frac{1}{4}$ " x 20 gage ridge strap	3-10d (3" x 0.128")	—
5	Rafter or roof truss to plate, toe nail	3-16d box nails (3 $\frac{1}{2}$ " x 0.135") or 3-10d common nails (3" x 0.148")	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss ^d
6	Roof rafters to ridge, valley or hip rafters: toe nail face nail	4-16d (3 $\frac{1}{2}$ " x 0.135") 3-16d (3 $\frac{1}{2}$ " x 0.135")	—
Wall			
7	Built-up studs-face nail	10d (3" x 0.128")	24" o.c.
8	Abutting studs at intersecting wall corners, face nail	16d (3 $\frac{1}{2}$ " x 0.135")	12" o.c.
9	Built-up header, two pieces with $\frac{1}{2}$ " spacer	16d (3 $\frac{1}{2}$ " x 0.135")	16" o.c. along each edge
10	Continued header, two pieces	16d (3 $\frac{1}{2}$ " x 0.135")	16" o.c. along each edge
11	Continuous header to stud, toe nail	4-8d (2 $\frac{1}{2}$ " x 0.113")	—
12	Double studs, face nail	10d (3" x 0.128")	24" o.c.
13	Double top plates, face nail	10d (3" x 0.128")	24" o.c.
14	Double top plates, minimum 24-inch offset of end joints, face nail in lapped area	8-16d (3 $\frac{1}{2}$ " x 0.135")	—
15	Sole plate to joist or blocking, face nail	16d (3 $\frac{1}{2}$ " x 0.135")	16" o.c.
16	Sole plate to joist or blocking at braced wall panels	3-16d (3 $\frac{1}{2}$ " x 0.135")	16" o.c.
17	Stud to sole plate, toe nail	2-16d (3 $\frac{1}{2}$ " x 0.135")	—
18	Top or sole plate to stud, end nail	2-16d (3 $\frac{1}{2}$ " x 0.135")	—
19	Top plates, laps at corners and intersections, face nail	2-10d (3" x 0.128")	—
20	1" brace to each stud and plate, face nail	2-8d (2 $\frac{1}{2}$ " x 0.113") 2 staples 1 $\frac{1}{4}$ "	—
21	1" x 6" sheathing to each bearing, face nail	2-8d (2 $\frac{1}{2}$ " x 0.113") 2 staples 1 $\frac{1}{4}$ "	—
22	1" x 8" sheathing to each bearing, face nail	2-8d (2 $\frac{1}{2}$ " x 0.113") 3 staples 1 $\frac{1}{4}$ "	—
23	Wider than 1" x 8" sheathing to each bearing, face nail.	3-8d (2 $\frac{1}{2}$ " x 0.113") 4 staples 1 $\frac{1}{4}$ "	—
Floor			
24	Joist to sill or girder, toe nail	3-8d (2 $\frac{1}{2}$ " x 0.113")	—
25	Rim joist to top plate, toe nail (roof applications also)	8d (2 $\frac{1}{2}$ " x 0.113")	6" o.c.
26	Rim joist or blocking to sill plate, toe nail	8d (2 $\frac{1}{2}$ " x 0.113")	6" o.c.
27	1" x 6" subfloor or less to each joist, face nail	2-8d (2 $\frac{1}{2}$ " x 0.113") 2 staples 1 $\frac{1}{4}$ "	—
28	2" subfloor to joist or girder, blind and face nail	2-16d (3 $\frac{1}{2}$ " x 0.135")	—
29	2" planks (plank & beam - floor & roof)	2-16d (3 $\frac{1}{2}$ " x 0.135")	—
30	Built-up girders and beams, 2-inch lumber layers	10d (3" x 0.128")	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.
31	Ledger strip supporting joists or rafters	3-16d (3 $\frac{1}{2}$ " x 0.135")	At each joist or rafter
Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing			
32	$\frac{3}{8}$ " - $\frac{1}{2}$ "	6d common (2" x 0.113") nail (subfloor, wall) 8d common (2 $\frac{1}{2}$ " x 0.131") nail (roof) ^e	6 12 ^e
33	$\frac{19}{32}$ " - 1"	8d common nail (2 $\frac{1}{2}$ " x 0.131")	6 12 ^e
34	1 $\frac{1}{8}$ " - 1 $\frac{1}{4}$ "	10d common (3" x 0.148") nail or 8d (2 $\frac{1}{2}$ " x 0.131") nail or formed nail	6 12
Other wall sheathing ^f			
35	$\frac{1}{4}$ " structural cellulose fiberboard sheathing	1 $\frac{1}{16}$ " galvanized roofing nail, 1 $\frac{1}{16}$ " crown or 1" crown staple 16 ga., 1 $\frac{1}{4}$ " long	3 6
36	$\frac{23}{32}$ " structural cellulose fiberboard sheathing	1 $\frac{1}{16}$ " galvanized roofing nail, 1 $\frac{1}{16}$ " crown or 1" crown staple 16 ga., 1 $\frac{1}{2}$ " long	3 6
37	$\frac{1}{2}$ " gypsum sheathing ^g	1 $\frac{1}{16}$ " galvanized roofing nail; staple galvanized, 1 $\frac{1}{2}$ " long; 1 $\frac{1}{4}$ screws, Type W or S	7 7
38	$\frac{5}{8}$ " gypsum sheathing ^g	1 $\frac{1}{16}$ " galvanized roofing nail; staple galvanized, 1 $\frac{1}{2}$ " long; 1 $\frac{1}{4}$ screws, Type W or S	7 7
Wood structural panels, combination subfloor underlayment to framing			
39	$\frac{3}{4}$ " and less	6d deformed (2" x 0.120") nail or 8d common (2 $\frac{1}{2}$ " x 0.131") nail	6 12
40	$\frac{7}{8}$ " - 1"	8d common (2 $\frac{1}{2}$ " x 0.131") nail or 8d deformed (2 $\frac{1}{2}$ " x 0.120") nail	6 12
41	1 $\frac{1}{8}$ " - 1 $\frac{1}{4}$ "	10d common (3" x 0.148") nail or 8d deformed (2 $\frac{1}{2}$ " x 0.120") nail	6 12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1 ksi = 6.895 MPa.

a. Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.

b. Staples are 16 gauge wire and have a minimum 7/16-inch on diameter crown width.

c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.

d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.

e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).

f. For wood structural panel roof sheathing attached to gable end roof framing and to intermediate supports within 48 inches of roof edges and ridges, nails shall be spaced at 6 inches on center where the ultimate design wind speed is less than 130 mph and shall be spaced 4 inches on center where the ultimate design wind speed is 130 mph or greater but less than 140 mph.

g. Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C208.

h. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.

i. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

j. RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.

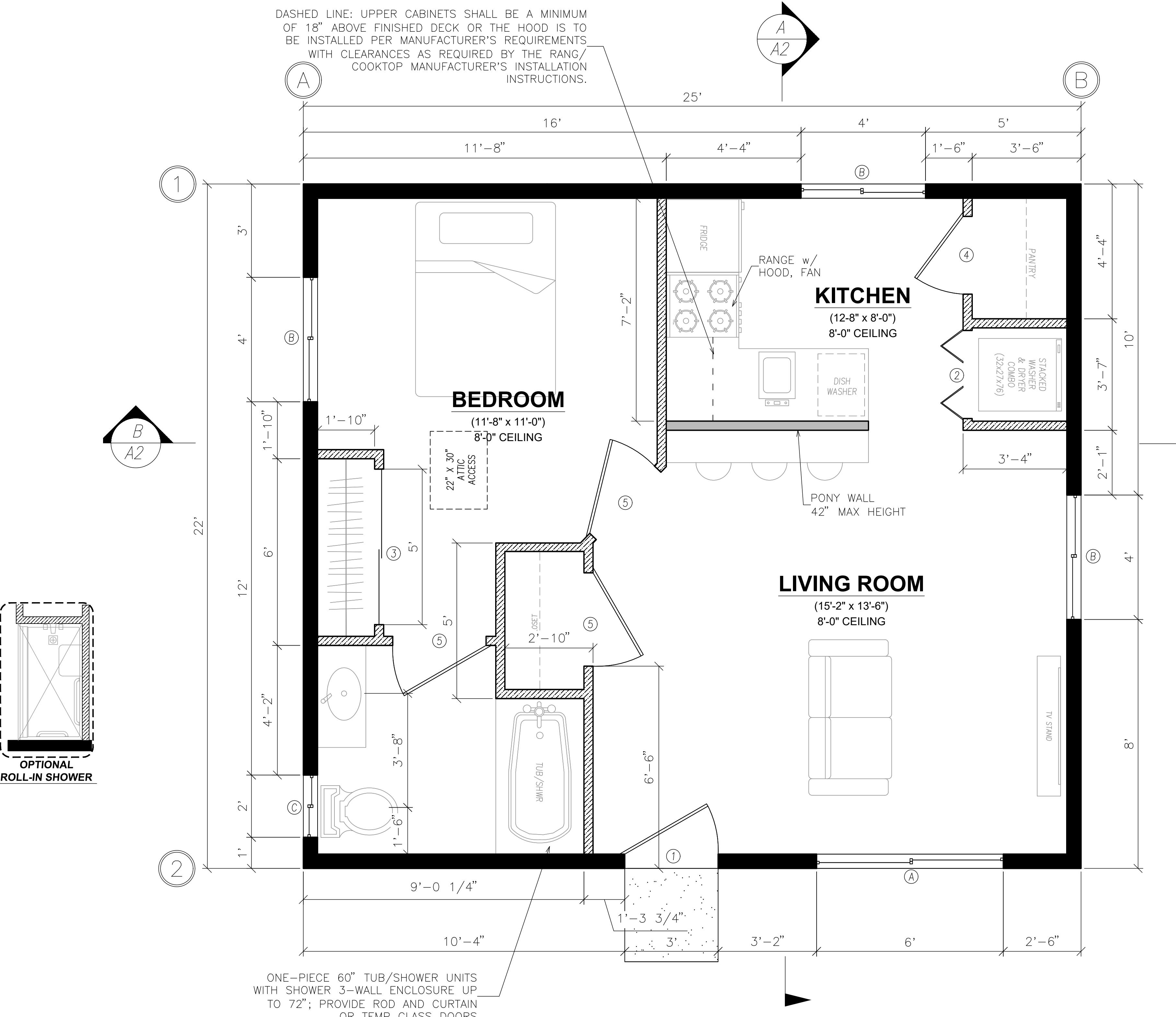
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PROJECT TITLE	CITY OF HANFORD - PRE-REVIEWED ADU PROGRAM	REVISIONS
ADU SQFT	COVER	DATE
550		10/28/2024

DRAWING SCALE
CITY OF HANFORD BUILDING DIVISION APPROVED
THIS SET OF PLANS AND SPECIFICATIONS MUST BE KEPT ON FILE AT ALL TIMES AND NO CHANGES OR ALTERATIONS SHALL BE MADE EXCEPT BY THE BUILDING DIVISION.

THE STAMPING OF THIS PLAN AND SPECIFICATIONS SHALL NOT BE CONSIDERED A PERMIT OR AN APPROVAL. IN THE EVENT OF VIOLATION OF ANY PLANS OR SPECIFICATIONS, THE CITY OF HANFORD MAY ISSUE AN ORDINANCE OR STATE LAW, OR REVOCATION FOR CODE COMPLIANCE.
By: *Mitchell Coach*
12/11/2025



WINDOW SCHEDULE

MARK	dimension	TYPE	TEMPERED	NOTES
(A)	6'-0" x 4'-0"	SLIDING	-	-
(B)	4'-0" x 4'-0"	SLIDING	-	-
(C)	2'-0" x 3'-0"	SLIDING	TEMP	-

MINIMUM LI = 0.32 SHGC = 0.28

THE BOTTOM OF THE CLEAR OPENING OF WINDOWS IN SLEEPING ROOMS SHALL NOT BE MORE THAN 44" ABOVE THE FLOOR (CRC R310.2.3)

ALL WINDOWS TO BE INSTALLED WITH OVERHANGS OR FINS TO MEET HERS ENERGY ANALYSIS REQUIREMENTS

DOOR SCHEDULE

MARK	dimension	TYPE	NOTES
(1)	3'-0" x 6'-8"	SWINGING	1-3/8" SOLID CORE
(2)	2'-6" x 6'-8"	BI-FOLD	LAUNDRY COVERING w/VENTILATION SLATS
(3)	5'-0" x 6'-8"	SLIDING	5'-6" CLOSET
(4)	2'-6" x 6'-8"	SWINGING	1-3/8" HOLLOW CORE
(5)	3'-0" x 6'-8"	SWINGING	1-3/8" HOLLOW CORE

LEGEND

EXTERIOR LOAD BEARING 2 x 6 @ 16" o.c., 9 ft PL HT; REFER TO EXTERIOR ELEVATIONS FOR EXTERIOR WALL COVERINGS; 1/2" WALLBOARD INTERIOR; R-21 BATT INSULATION IN STUD CAVITY; APA CDX PLYWD OR OSB SHEATHING ON EXTERIOR FACE OF STUDS; 2 LAYERS NO. 15 BUILDING PAPER OVER PLWD R-5 RIGID INSUL ON EXTERIOR FACE OF SHEATHING.

INTERIOR NON-LOAD-BEARING WALL 2 x 4 @ 16" o.c., 1/2" WALLBOARD INTERIOR

EXCERPT FROM R602.3.3 - BEARING STUDS
WHERE JOISTS, TRUSSES OR RAFTERS ARE SPACED MORE THAN 16 INCHES (406 MM) ON CENTER AND THE BEARING STUDS BELOW ARE SPACED 24 INCHES (610 MM) ON CENTER, SUCH MEMBERS SHALL BEAR WITHIN 5 INCHES (127 MM) OF THE STUDS BEHIND.

AGING-IN-PLACE

AGING-IN-PLACE DESIGN AND FALL PREVENTION. NEWLY CONSTRUCTED DWELLINGS SUBJECT TO THE REQUIREMENTS OF THIS CODE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTIONS R327.1.1 THROUGH R327.1.4.PAGE

AT LEAST ONE BATHROOM ON THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH THIS SECTION. WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL, AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE DWELLING SHALL COMPLY WITH THIS SECTION. [CRC R327.1.1]

INFORMATION AND/OR DRAWINGS IDENTIFYING THE LOCATION OF GRAB BAR REINFORCEMENT SHALL BE PLACED IN THE OPERATION AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS CODE, CHAPTER 4, DIVISION 4.4. [CRC R327.1.1]

ELECTRICAL RECEPTACLE OUTLET, SWITCH AND CONTROL HEIGHTS. ELECTRICAL RECEPTACLE OUTLETS, SWITCHES AND CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION AND AIR CONDITIONING) 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. [CRC R327.1.2]

EFFECTIVE JULY 1, 2024, AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL SHALL PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32 INCHES, MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM THE CLOSED POSITION; OR, IN THE CASE OF A TWO- OR THREE-STORY SINGLE FAMILY DWELLING, ON THE SECOND OR THIRD FLOOR OF THE DWELLING IF A BATHROOM OR BEDROOM IS NOT LOCATED ON THE ENTRY LEVEL. [CRC R327.1.3]

DOORBELL BUTTONS OR CONTROLS, WHEN INSTALLED, SHALL NOT EXCEED 48 INCHES (1219.2 MM) ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON ASSEMBLY. WHERE DOORBELL BUTTONS INTEGRATED WITH OTHER FEATURES ARE REQUIRED TO BE INSTALLED ABOVE 48 INCHES MEASURED FROM THE EXTERIOR FLOOR OR LANDING, A STANDARD DOORBELL BUTTON OR CONTROL SHALL ALSO BE PROVIDED AT A HEIGHT NOT EXCEEDING 48 INCHES ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON OR CONTROL. [CRC R327.1.4]

OPTIONAL ROLL-IN SHOWER PLAN NOTES

NOTE: OPTIONAL ROLL IN SHOWERS OFFERED FOR CONVENIENCE NOT FOR COMPLIANCE WITH ACCESSIBILITY STANDARDS.

1. SHOWER COMPARTMENT SEAT
-MUST BE FOLDING TYPE, NOT TO EXCEED MORE THAN 6 INCHES FROM MOUNTING WALL WHEN FOLDED
-LOCATED WITHIN 27 INCHES OF SHOWER CONTROLS
-MOUNTED MINIMUM 17 INCHES AND MAXIMUM 19 INCHES ABOVE BATHROOM FINISHED FLOOR.
-SEAT INSTALLED ON SIDE WALL ADJACENT TO CONTROLS AND EXTENDING FROM BACK WALL TO POINT WITHIN 3 INCHES OF SHOWER COMPARTMENT ENTRY
-STRUCTURAL ADEQUACY OF MOUNTING HARDWARE AND FASTENERS TO ACCOMMODATE 250 POUND POINT LOAD APPLIED AT ANY POINT ON THE GRAB BAR, FASTENER, MOUNTING DEVICE, OR SUPPORTING STRUCTURE

2. SHOWER GRAB BARS
-MOUNTED MINIMUM 33 INCHES AND MAXIMUM 36 INCHES ABOVE SHOWER FLOOR
-NOT EXTENDING OVER SHOWER SEAT
-IF CROSS SECTION IS CIRCULAR, MINIMUM 1-1/4" AND MAXIMUM 2" OUTSIDE DIAMETER
-IF CROSS SECTION IS NON-CIRCULAR, MINIMUM 4" AND MAXIMUM 4.8" PERIMETER AND MAXIMUM 2-1/4" CROSS SECTION DIMENSION
-GRAB BARS MOUNTED ADJACENT TO A WALL, 1-1/2" ABSOLUTE SPACE BETWEEN WALL AND GRAB BAR
-MINIMUM 1-1/2" SPACE BETWEEN GRAB BAR AND PROJECTIONS OBJECTS BELOW AND AT ENDS
-MINIMUM 12 INCH SPACE BETWEEN GRAB BAR AND PROJECTIONS OBJECTS ABOVE
-SURFACE MATERIAL OF ANY WALLS OR OBJECTS ADJACENT TO GRAB BARS MUST BE FREE OF SHARP OR ABRASIVE ELEMENTS AND HAVE ROUNDED EDGES
-STRUCTURAL ADEQUACY OF MOUNTING HARDWARE AND FASTENERS TO ACCOMMODATE 250 POUND POINT LOAD APPLIED AT ANY POINT ON THE GRAB BAR, FASTENER, MOUNTING DEVICE, OR SUPPORTING STRUCTURE
-WALL REINFORCEMENT TO BE PROVIDED AT LOCATION OF GRAB BARS (E.G. BLOCKING)
-REINFORCEMENT SHALL BE A SOLID LUMBER OR OTHER CONSTRUCTION MATERIALS APPROVED BY THE ENFORCING AGENCY
-REINFORCEMENT SHALL NOT BE LESS THAN 2x8" NOMINAL LUMBER (1-1/2" x 7-1/4" ACTUAL DIMENSION) OR OTHER CONSTRUCTION MATERIAL PROVIDING EQUAL HEIGHT AND LOAD CAPACITY. REINFORCEMENT SHALL BE LOCATED BETWEEN 32 INCHES AND 39-1/4 INCHES ABOVE THE FINISHED FLOOR FLUSH WITH THE WALL FRAMING.
-SHOWER REINFORCEMENTS SHALL BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED.

3. OPERABLE PARTS OF SHOWER CONTROLS AND FAUCETS:
-INSTALLED ON BACK WALL OF SHOWER COMPARTMENT ADJACENT TO SEAT WALL
-LOCATED MINIMUM 19 INCHES AND MAXIMUM 27 INCHES FROM SEAT WALL
-LOCATED ABOVE GRAB BAR BUT NO HIGHER THAN 48 INCHES ABOVE SHOWER FLOOR
-CENTERLINE AT MINIMUM 39 INCHES AND MAXIMUM 41 INCHES ABOVE SHOWER FLOOR
-SINGLE-LEVER DESIGN
-OPERABLE WITH MAXIMUM 5 POUNDS OF FORCE
-OPERABLE WITH ONE HAND AND WITHOUT TIGHT GRASPING, PINCHING, OR TWISTING OF WRIST

4. SPRAYER UNIT AND ASSOCIATED OPERABLE PARTS SHALL BE PROVIDED PER THE FOLLOWING:
-OPERABLE PARTS, INCLUDING HANDLE, TO BE INSTALLED ON BACK WALL OF SHOWER COMPARTMENT MINIMUM 19 INCHES AND MAXIMUM 27 INCHES FROM SEAT WALL
-OPERABLE PARTS LOCATED ABOVE GRAB BAR BUT NO HIGHER THAN 48 INCHES ABOVE SHOWER FLOOR, SECURED TO TOP OF MOUNTING BRACKET
-MINIMUM 59 INCH LONG HOSE
-CAPABLE FOR USE AS FIXED SHOWER HEAD AND HAND HELD SHOWER
-ON/OFF CONTROL WITH NON-POSITIVE SHUT OFF
-ADJUSTABLE -HEIGHT SHOWER HEADS ON VERTICAL BAR SHALL NOT OBSTRUCT USE OF BATHTUB GRAB BARS

5. WHERE SOAP DISHES ARE PROVIDED, MAXIMUM 40 INCHES ABOVE SHOWER FLOOR AND WITHIN REACH LIMITS FROM THE SHOWER SEAT
6. MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS OF ROLL-IN SHOWER FLOORS
7. MAXIMUM 1/2" HIGH THRESHOLDS WITH MAXIMUM 50% BEVELED SLOPE AT ROLL-IN SHOWERS
8. WHERE DRAINS ARE PROVIDED AT ROLL-IN SHOWERS, MAXIMUM 1/4" GRATE OPENINGS FLUSH WITH SHOWER FLOOR SURFACE

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PROJECT TITLE	CITY OF HANFORD - PRE-REVIEWED ADU PROGRAM	REVISIONS
ADU SQFT	550	
AGENCY	SJV REAP	DATE
		10/28/2024
		FLOOR PLAN

550

DRAWING SCALE

1/2" = 1'

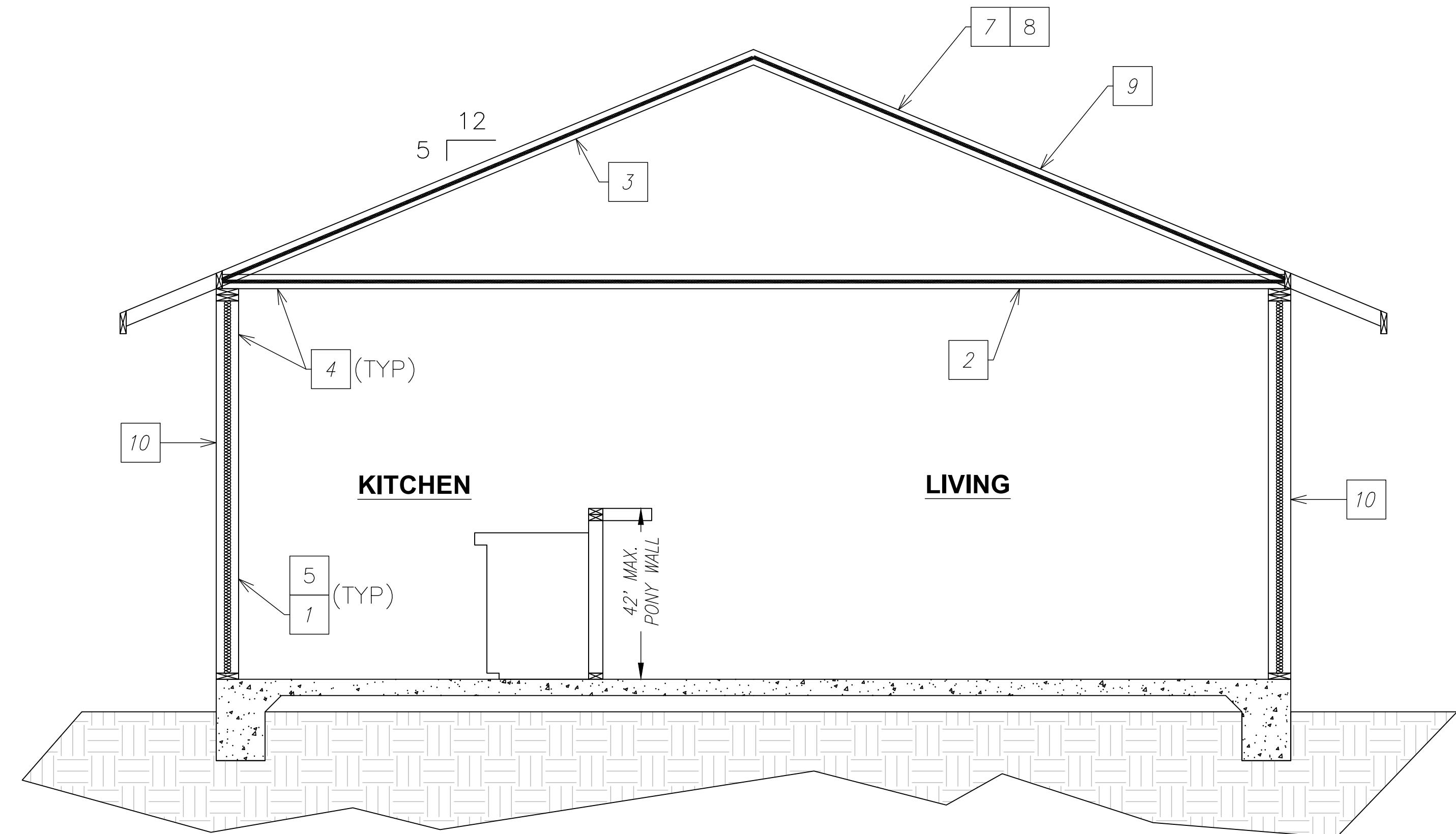
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BY: Mitchell Cook

12/11/2025



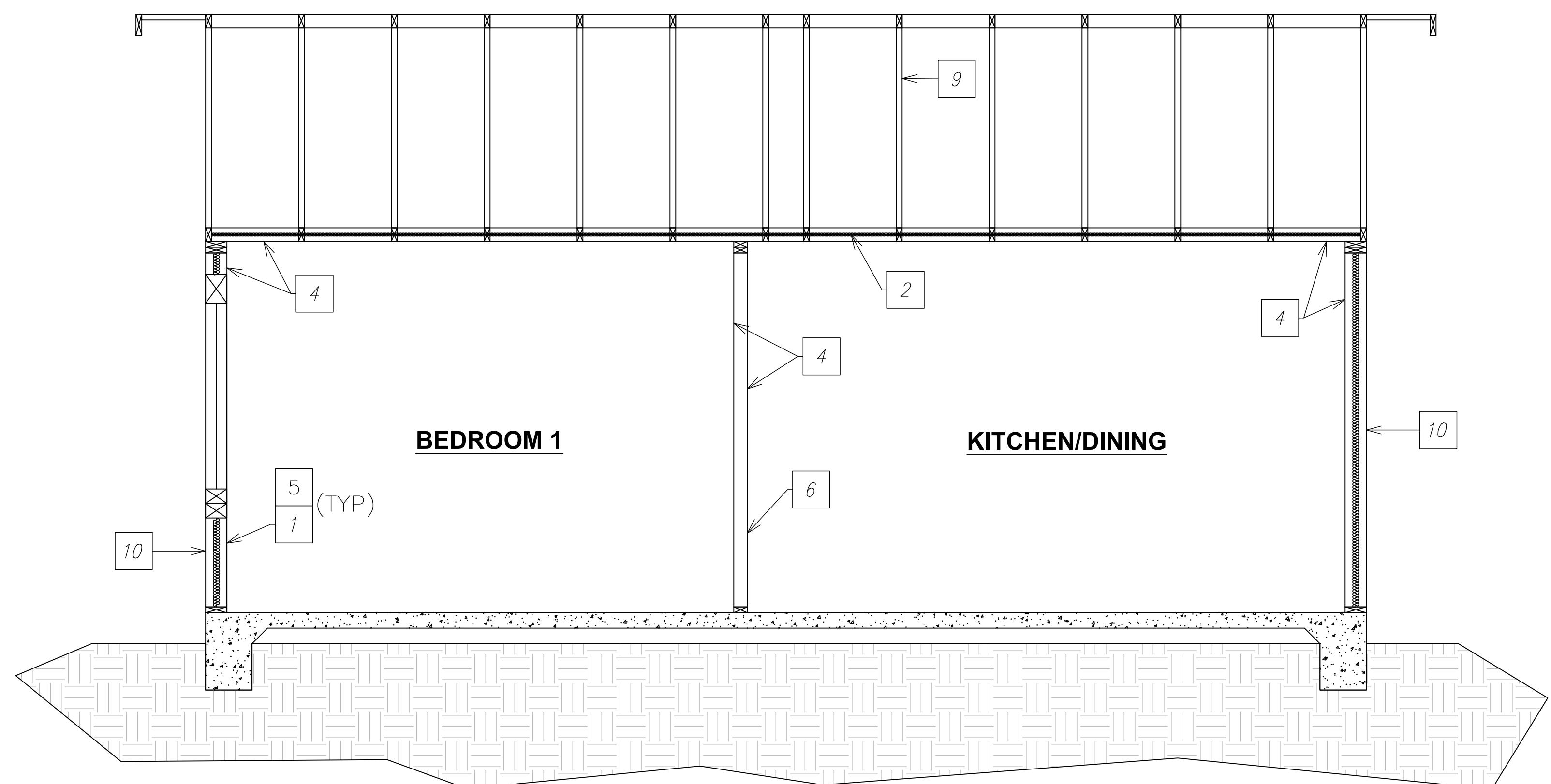
SECTION A - A

SECTION KEYNOTES

- 1 WALL INSULATION: R21
- 2 CEILING INSULATION: R38
- 3 ROOF INSULATION: R13
- 4 INTERIOR FINISH: $\frac{1}{2}$ " GYPSUM BOARD (UNLESS WALL IS FIRE RESISTANT ASSEMBLE)
- 5 EXTERIOR WALL: 2x6 STUD WALL @ 24" O.C.
- 6 INTERIOR WALL: 2x4 STUD WALL @ 24" O.C.
- 7 RADIANT BARRIER IS REQUIRED
- 8 ROOFING: REFER TO ELEVATIONS
- 9 PRE-ENGINEERED, PRE-FABRICATED ROOF TRUSSES (REQUIRED BY APPLICANT AT TIME OF SUBMITTAL)
- 10 EXTERIOR WALL COVERING AS DENOTED AT EXTERIOR ELEVATION. ALL WALL COVERINGS SHALL BE APPLIED OVER WATER RESISTIVE BARRIER APPLIED TO WOOD SHEATHING PER (CRC 703.7.3.1)

NOTE:

1. DESIGN OF ROOF TRUSSES SHALL ACCOMMODATE PHYSICAL DIMENSIONS AND GRAVITY LOAD OF ATTIC MOUNTED AIR HANDLER, AND PV PANEL WEIGHT.
2. VERIFY INSULATION VALUES WITH ENERGY COMPLIANCE REPORT.
3. FOR 1-HOUR FIRE RATED ASSEMBLY" AND "1-HOUR FIRE RATED GABLE END" DETAIL ON SHEETS S4 WHERE REQUIRED.



SECTION B - B

These plans and documents have been reviewed for compliance with the applicable codes requirements of the jurisdiction. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards nor relieve the owner, design professional of record or contractor of compliance with applicable codes and standards

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CODE COMPLIANCE
BY: *Mitchell Cook*
12/11/2025

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CITY OF HANFORD



PROJECT TITLE		CITY OF HANFORD – PRE-REVIEWED ADU PROGRAM	
SHEET DESCRIPTION		SECTIONS	
AGENCY	S.J.V REAP	DATE	10/28/2024
ADU SQFT	550		

550

DRAWING SCALE

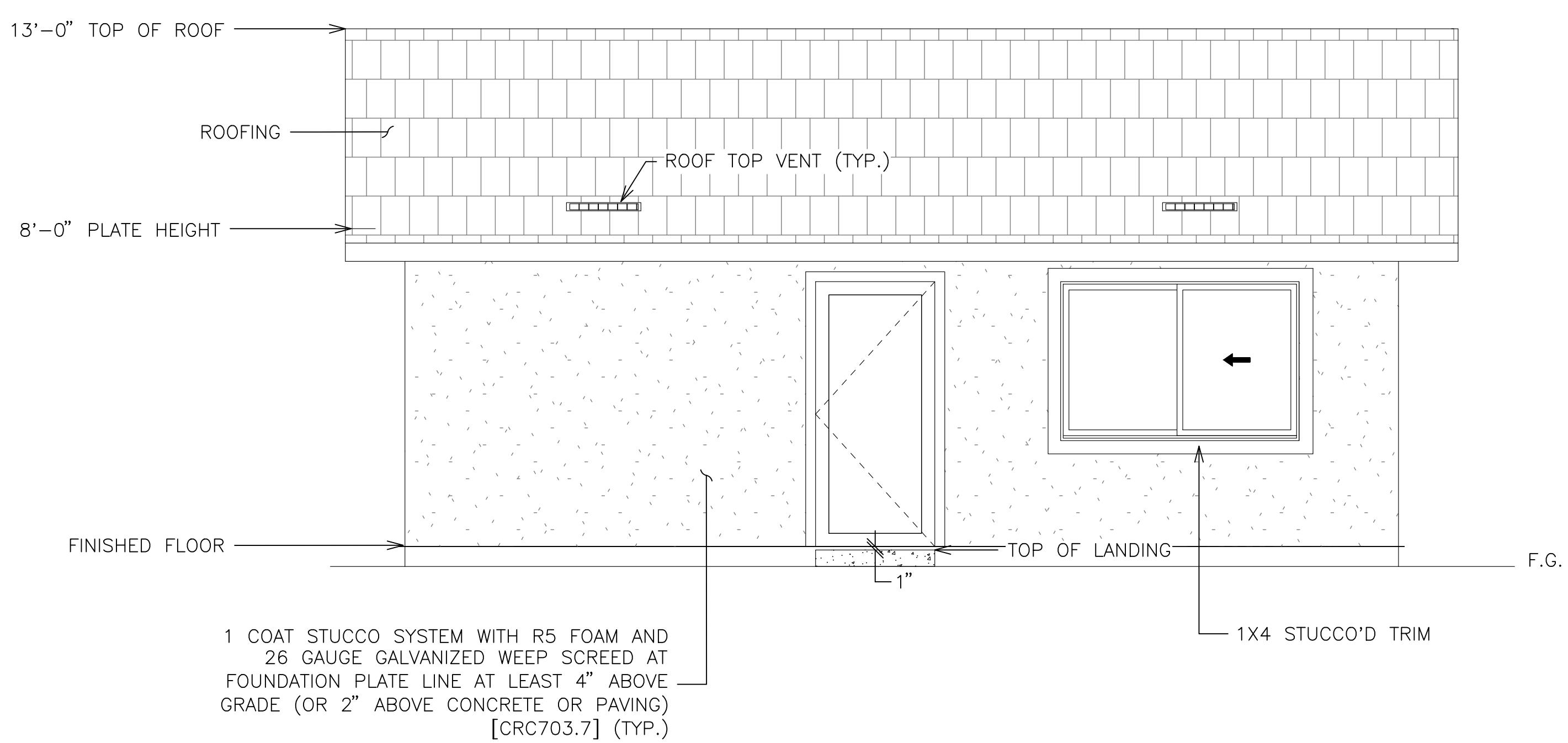
1/2" = 1'

APPROVED

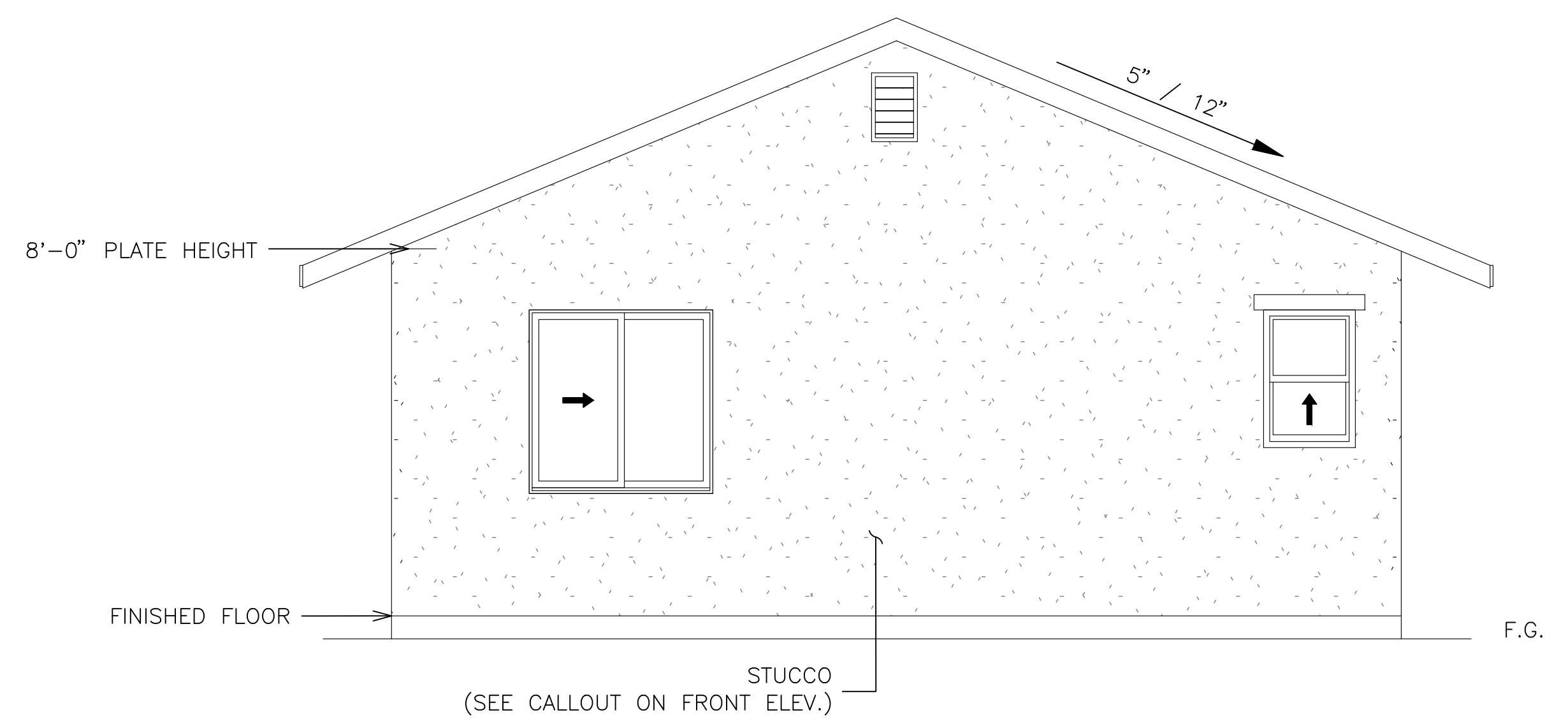
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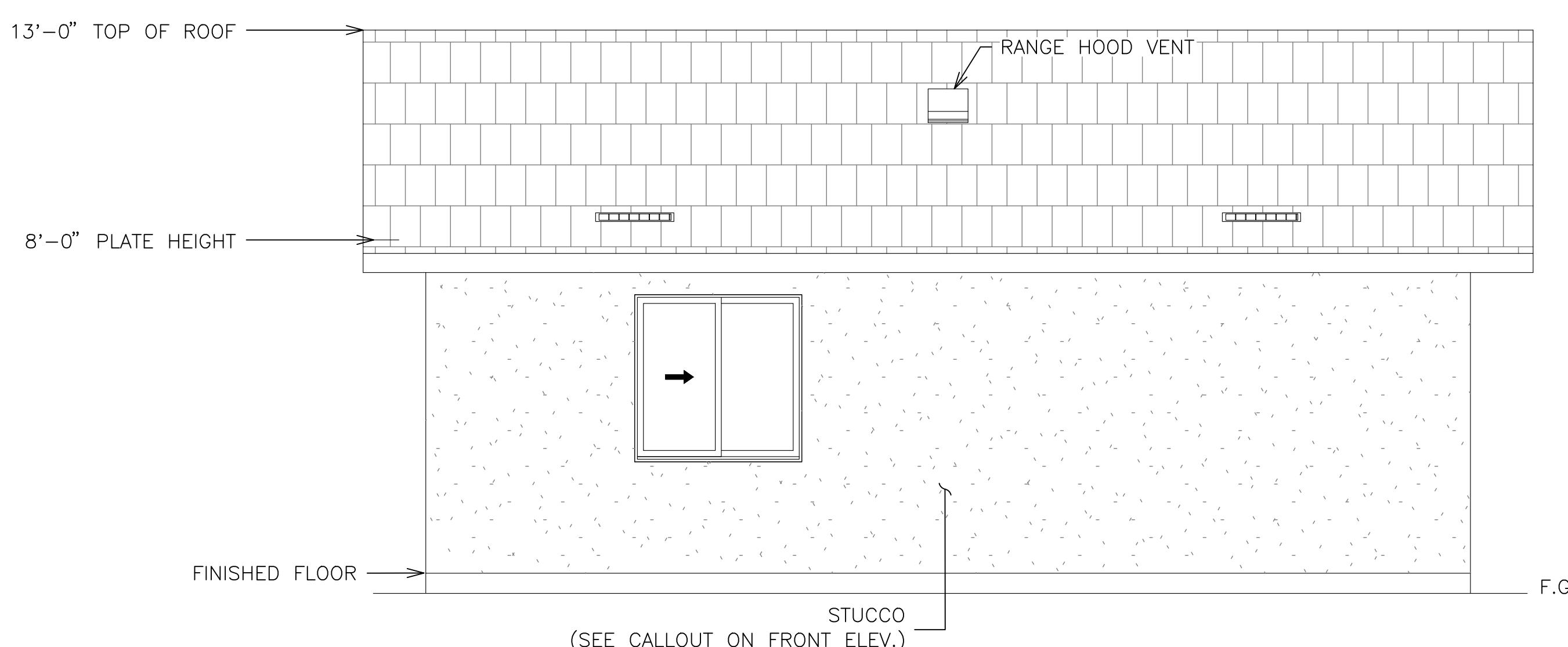
BY: *Mitchell Cook*
12/11/2025



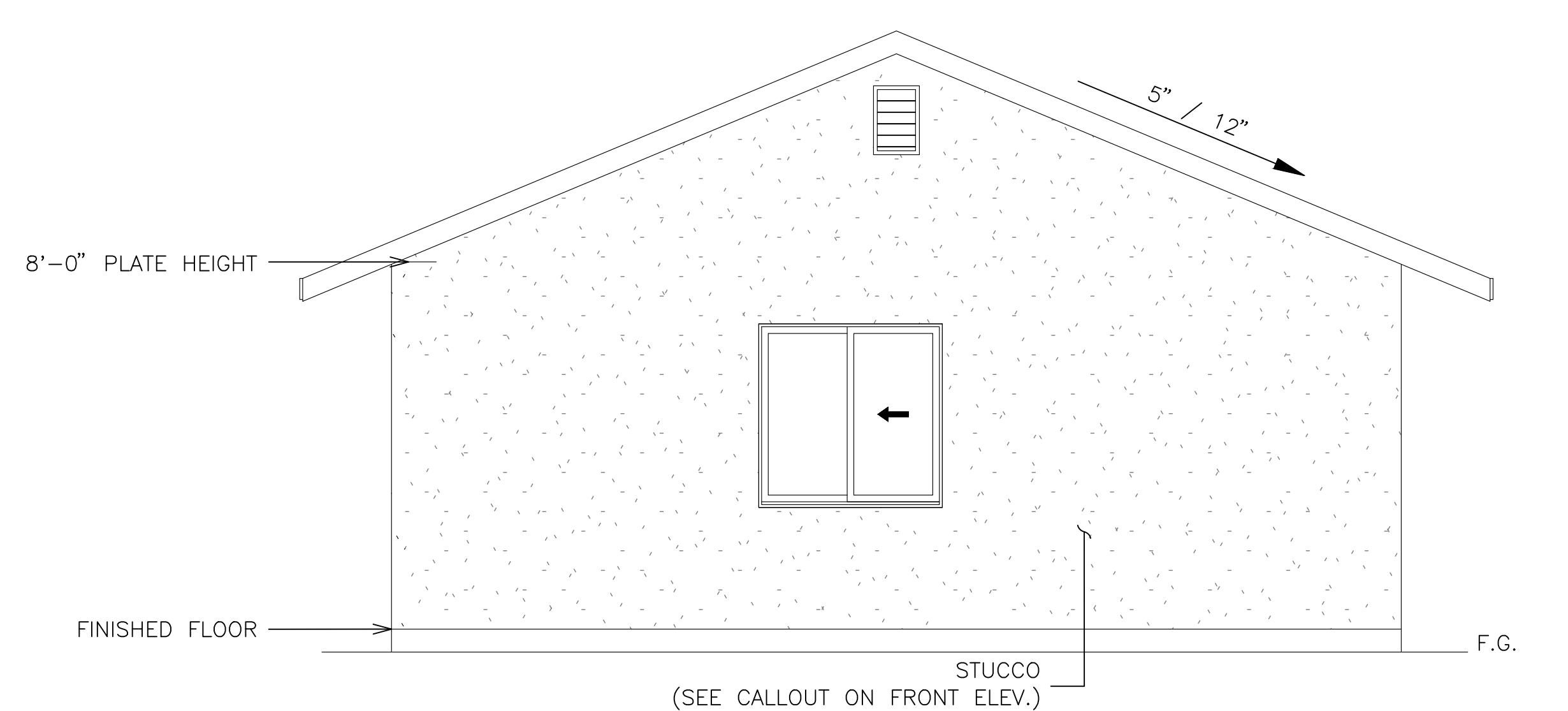
FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION



RIGHT ELEVATION

CITY OF HANFORD



REVISIONS

PROJECT TITLE	CITY OF HANFORD - PRE-REVIEWED ADU PROGRAM	ELEVATION A
ADU SQFT	SHEET DESCRIPTION	DATE
550	S.JV REAP	10/28/2024

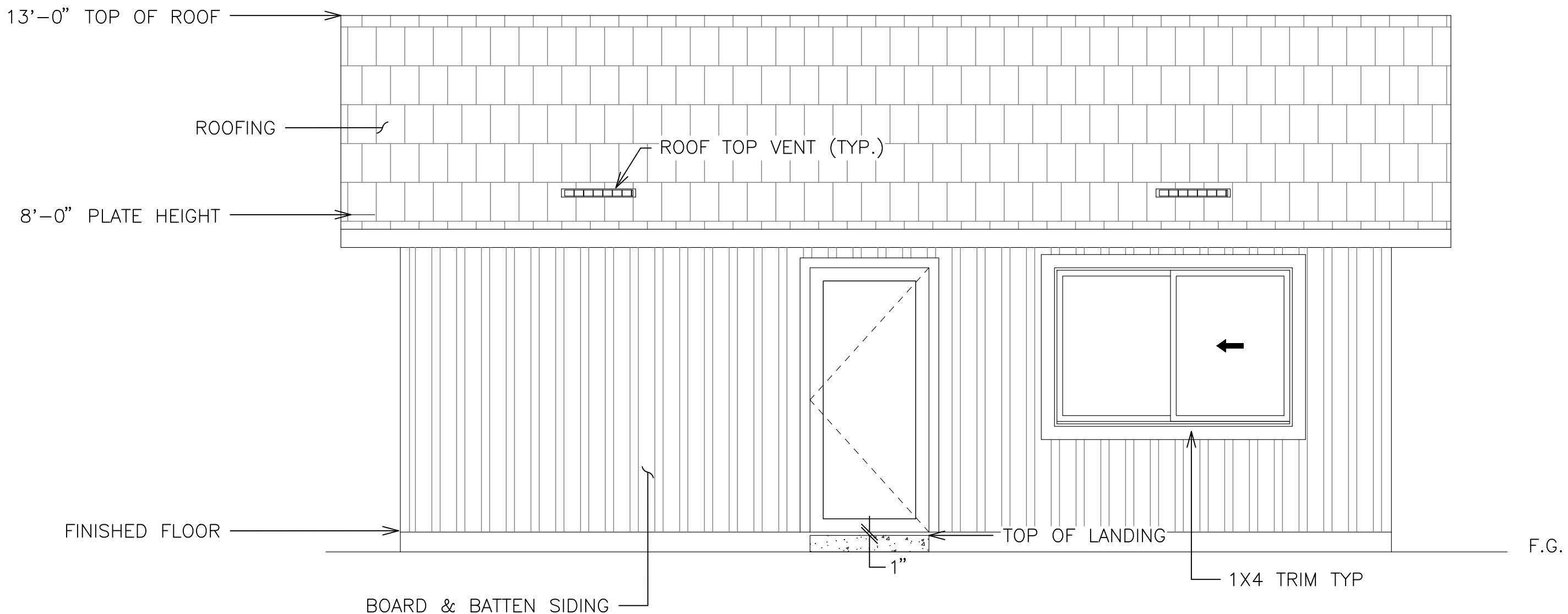
3/8" = 1'
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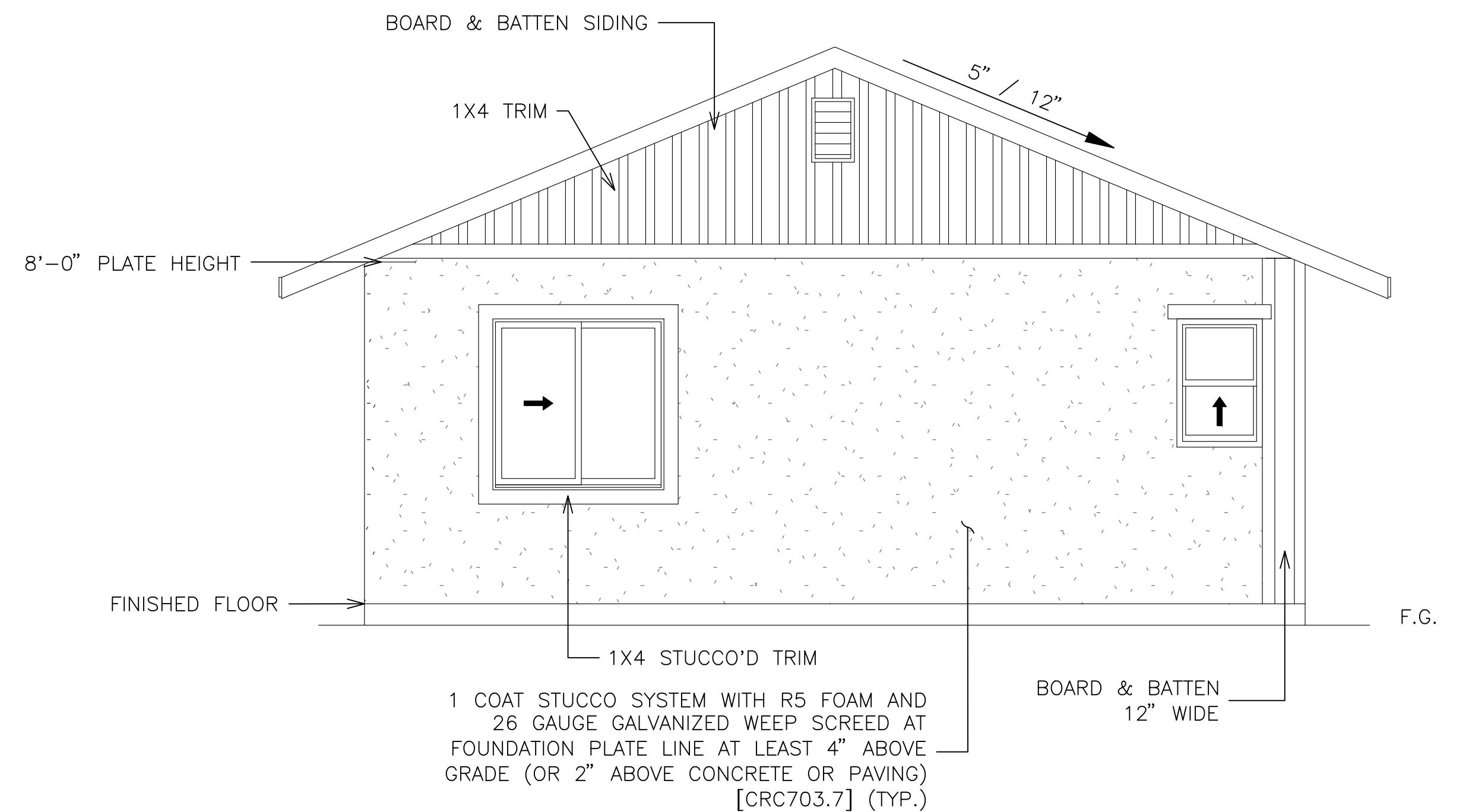
By: *Mitchell Cook*
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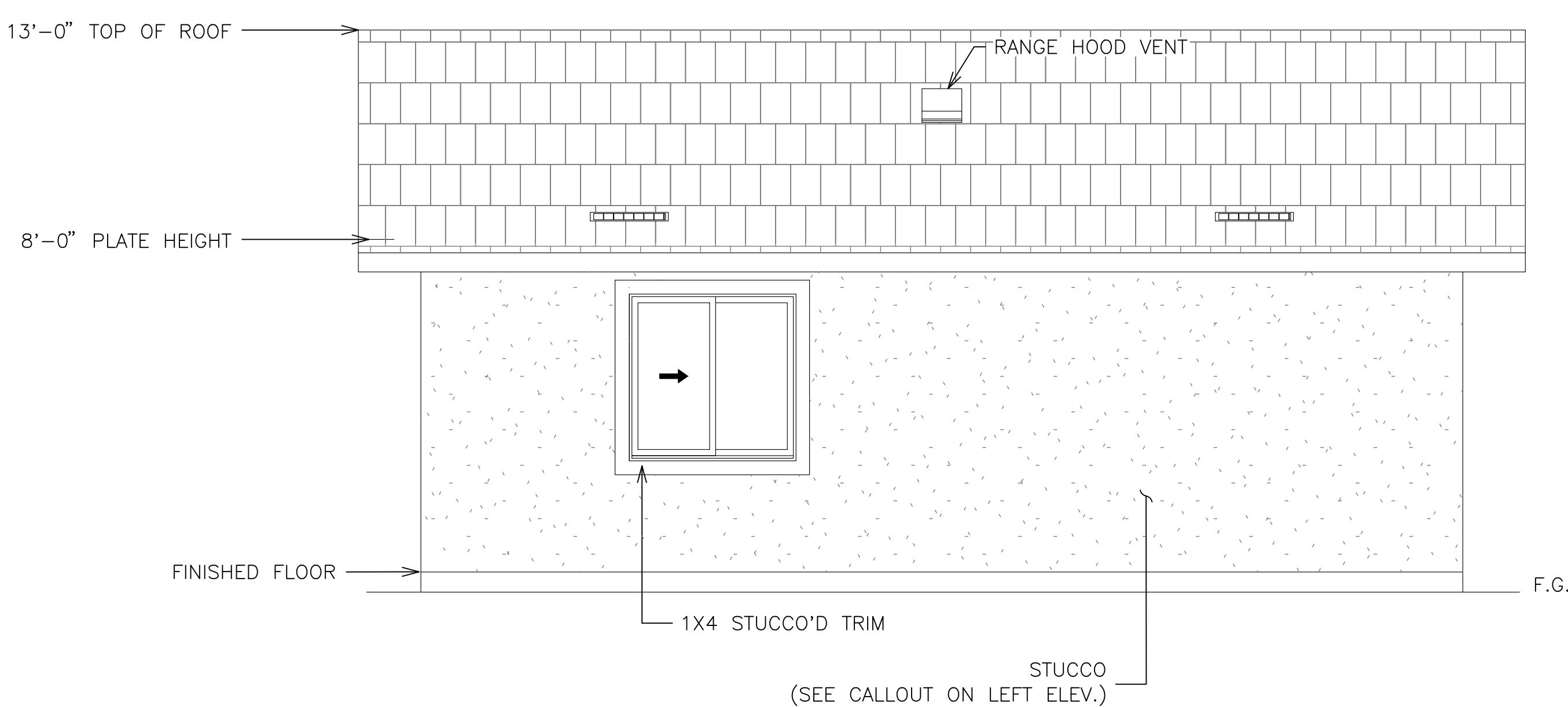
F.G.

FRONT ELEVATION



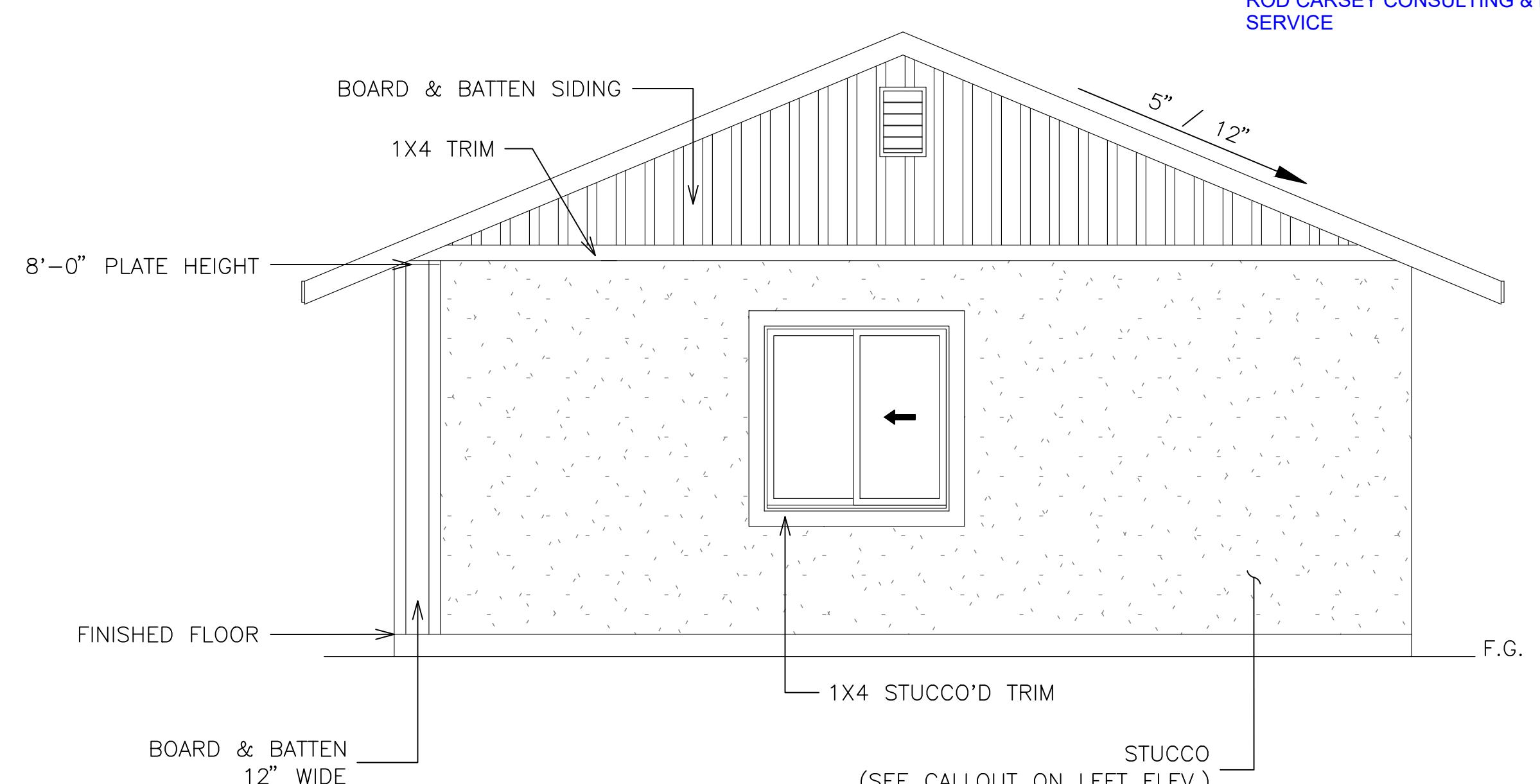
F.G.

LEFT ELEVATION



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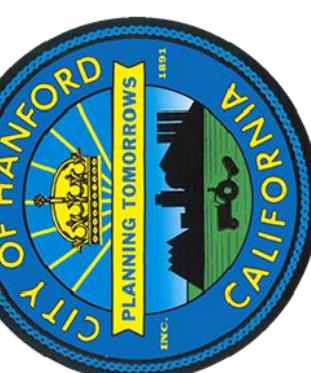
REAR ELEVATION



F.G.

RIGHT ELEVATION

CITY OF HANFORD



REVISIONS

PROJECT TITLE

CITY OF HANFORD -

PRE-REVIEWED ADU PROGRAM

SHEET DESCRIPTION

ELEVATION B

AGENCY

SJV REAP

DATE

10/28/2024

PROJECT NUMBER

550

DRAWING SCALE

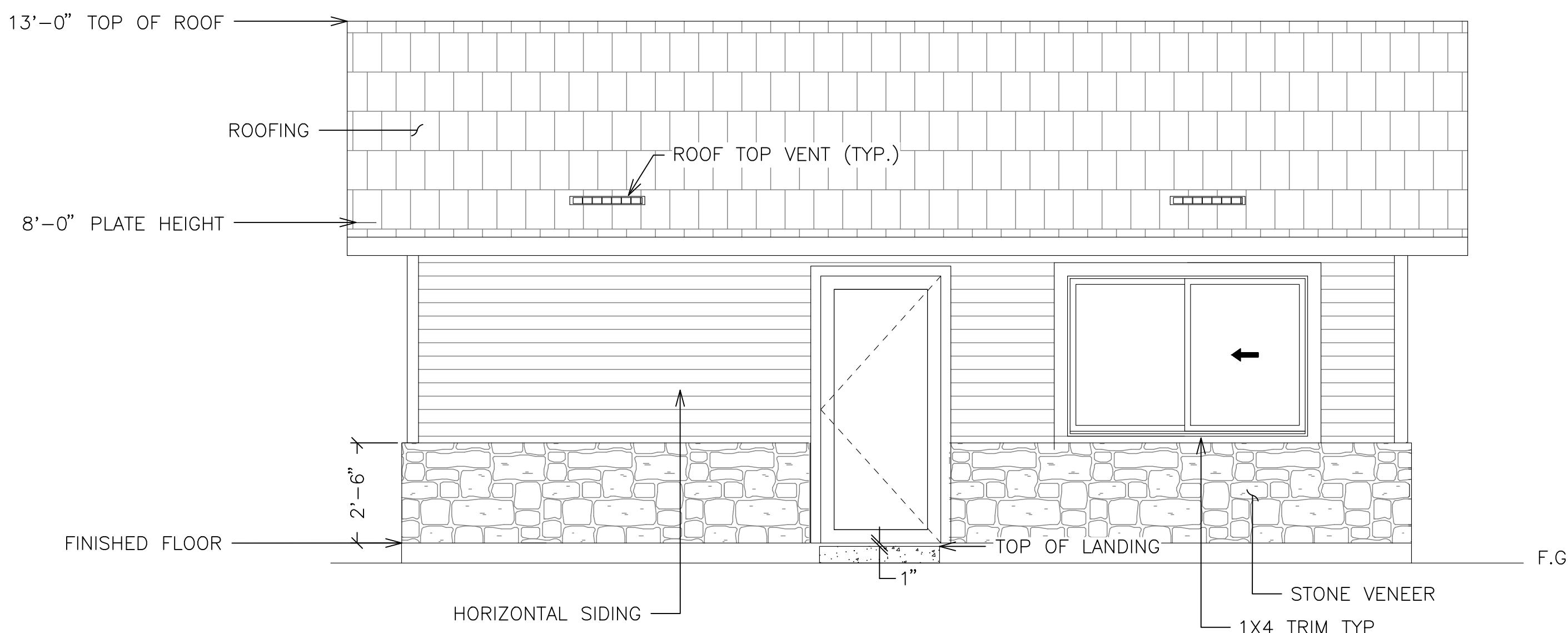
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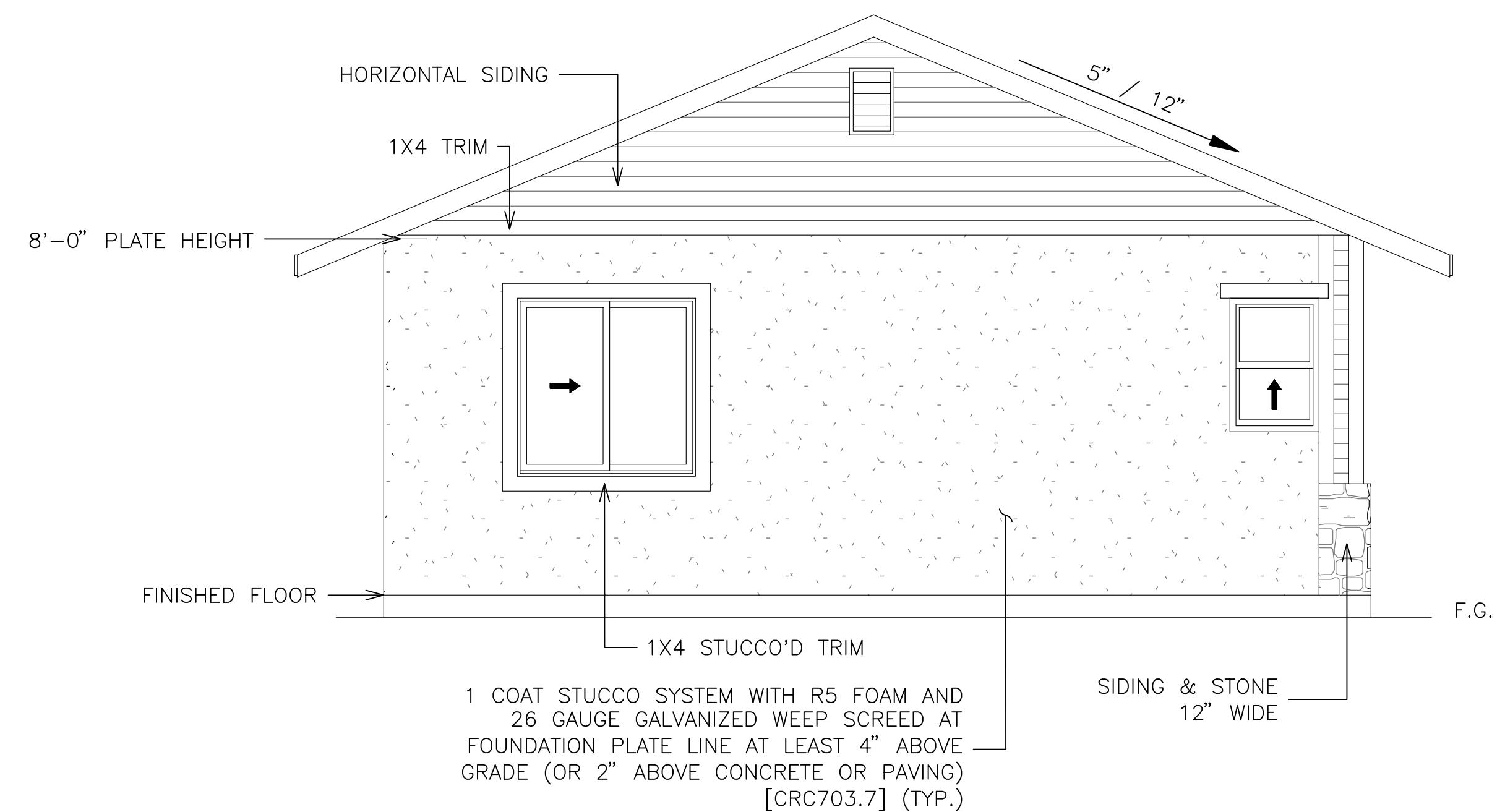
BY:

Mitchell Cook
12/11/2025

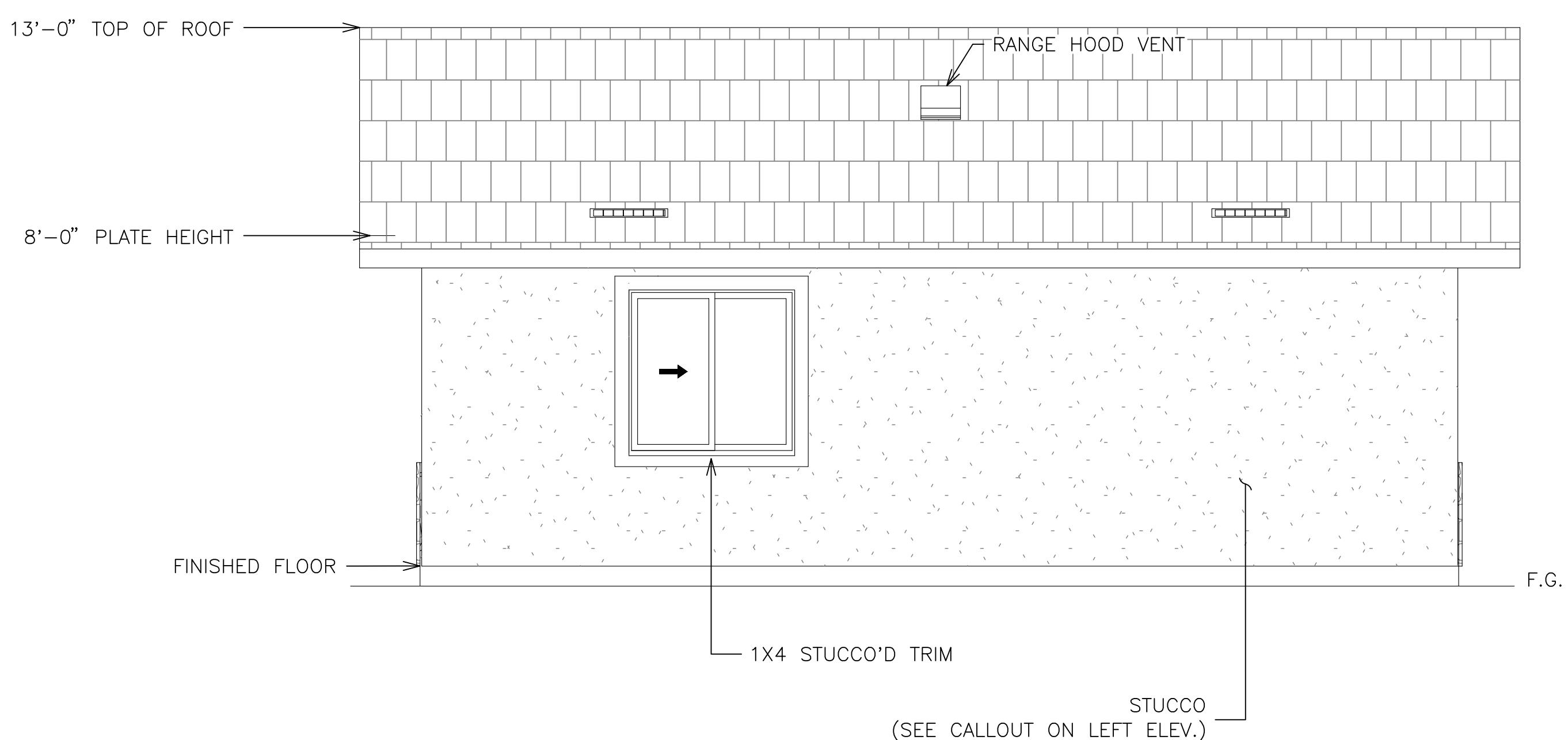
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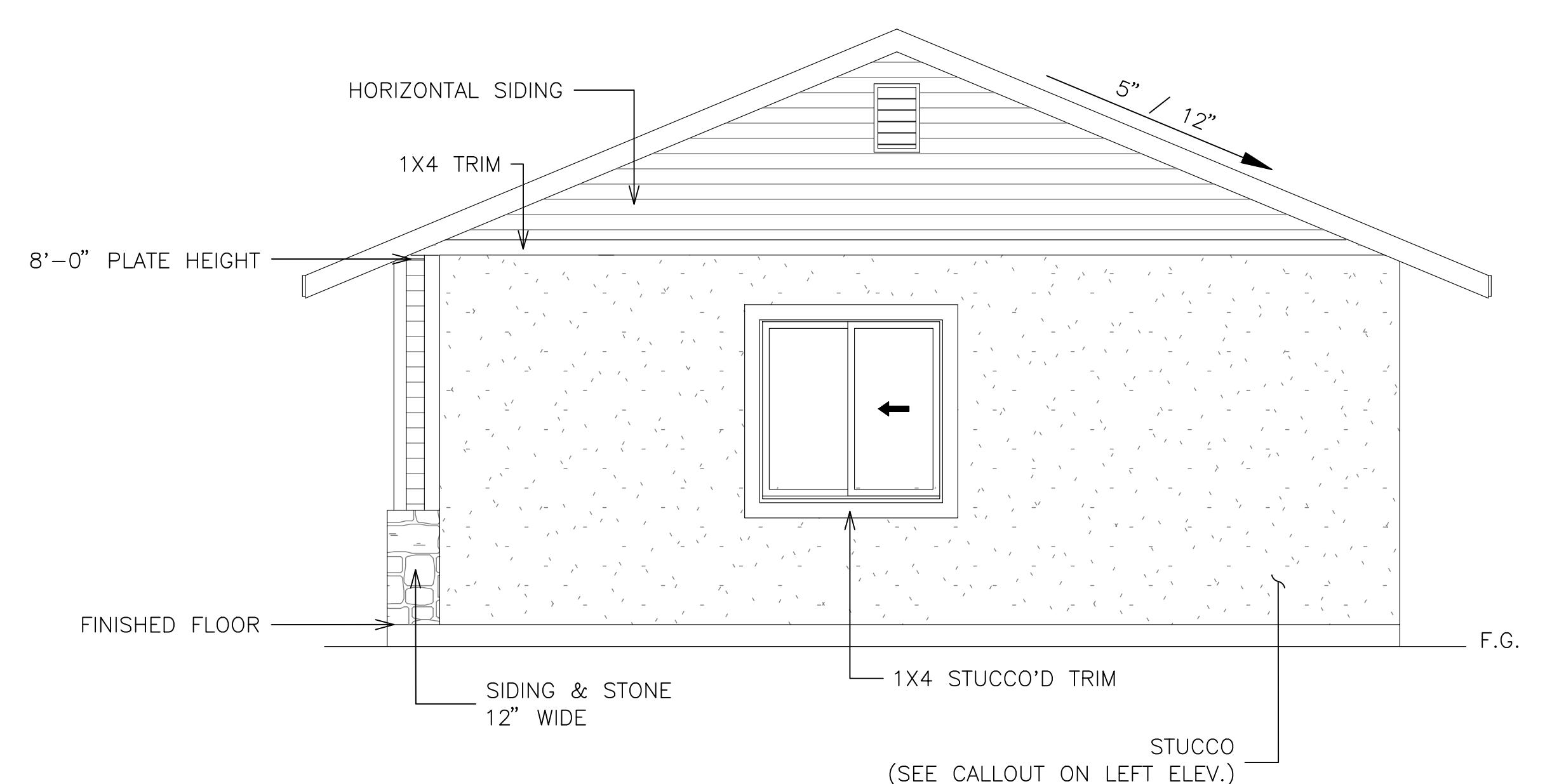
FRONT ELEVATION



LEFT ELEVATION

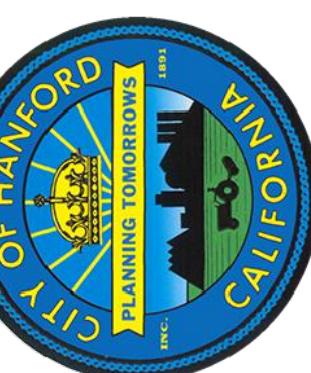


REAR ELEVATION



RIGHT ELEVATION

CITY OF HANFORD



REVISIONS

PROJECT TITLE

CITY OF HANFORD -

PRE-REVIEWED ADU PROGRAM

SHEET DESCRIPTION

ELEVATION C

AGENCY

SJV REAP

DATE

10/28/2024

PROJECT TITLE

ADU SQFT

550

DRAWING SCALE

CITY OF HANFORD

BUILDING DIVISION

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15

BY: Mitchell Cook

12/11/2025

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ARCHITECTURAL DETAILS

CRAFTSMAN / BUNGALOW



CRAFTSMAN ARCHITECTURE IS KNOWN FOR ITS EMPHASIS ON SIMPLICITY, FUNCTIONALITY, SOLIDLY MADE WITH NATURAL MATERIALS AND NATURE-INSPIRED COLORS AND MOTIFS.



WINDOWS

DOORS

COLORS



BRACKETS

EXPOSED EAVES AND SHAPED RAFTER TAILS (2 FT OVERHANG & GREATER)

GABLE END VENT



STUCCO

HORIZONTAL SIDING

SHINGLE

STONE VENEER



LIGHT FIXTURES

MODERN / FARMHOUSE



MODERN FARMHOUSE ARCHITECTURE BLENDS THE SIMPLICITY AND CHARM OF TRADITIONAL FARMHOUSES WITH CONTEMPORARY DESIGN ELEMENTS AND COLOR SCHEMES.



WINDOWS

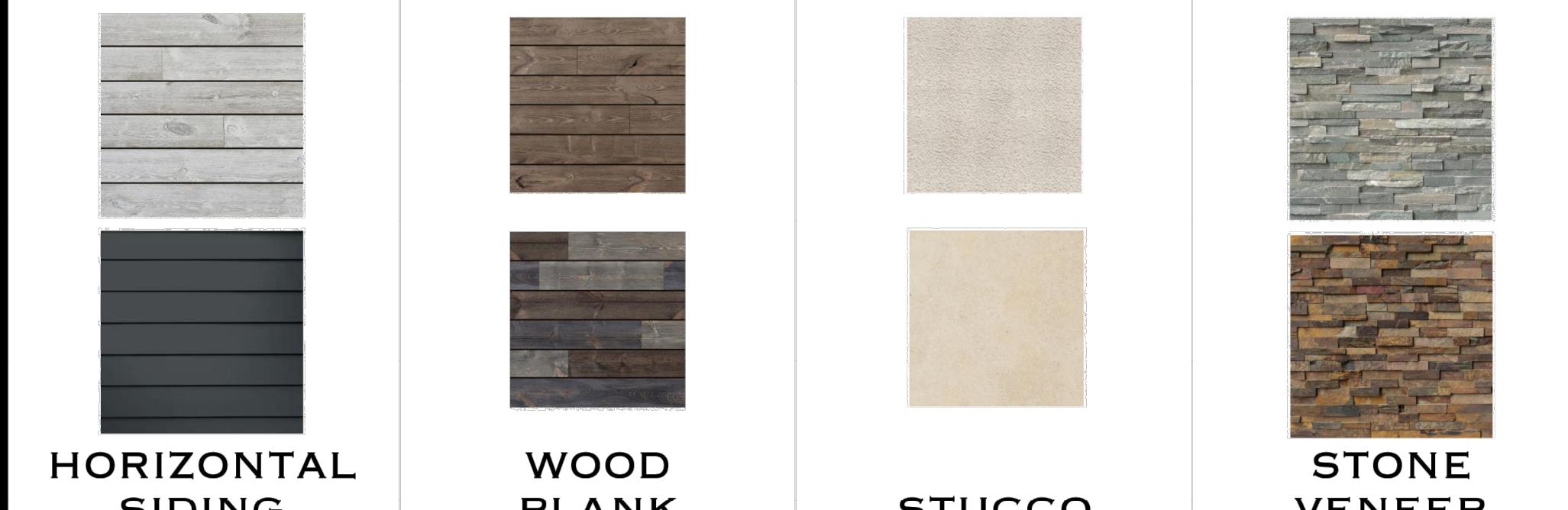
DOORS

COLORS



EXPOSED EAVES WITH BEAM TAILS (2 FT OVERHANG & GREATER OVERHANG)

GABLE END VENT

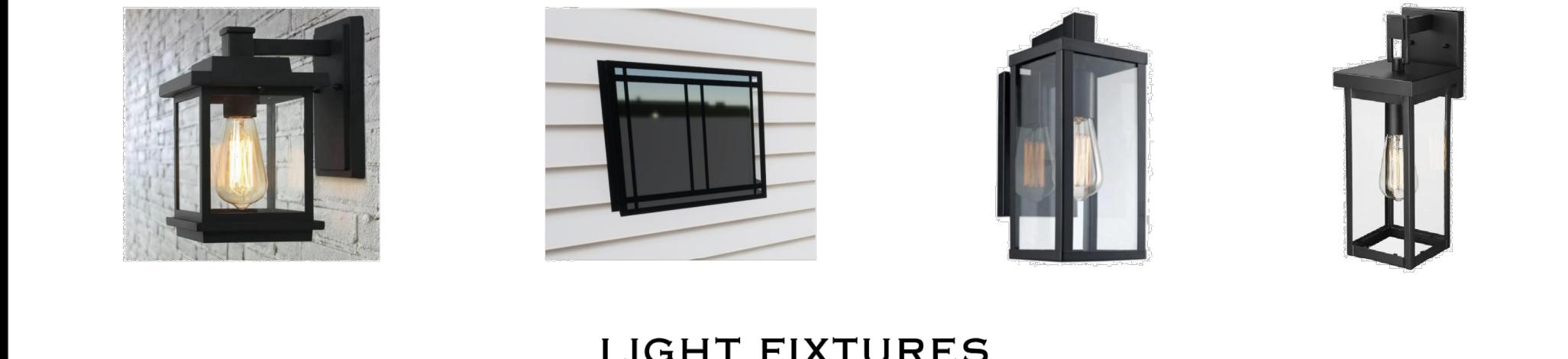


HORIZONTAL SIDING

WOOD PLANK

STUCCO

STONE VENEER



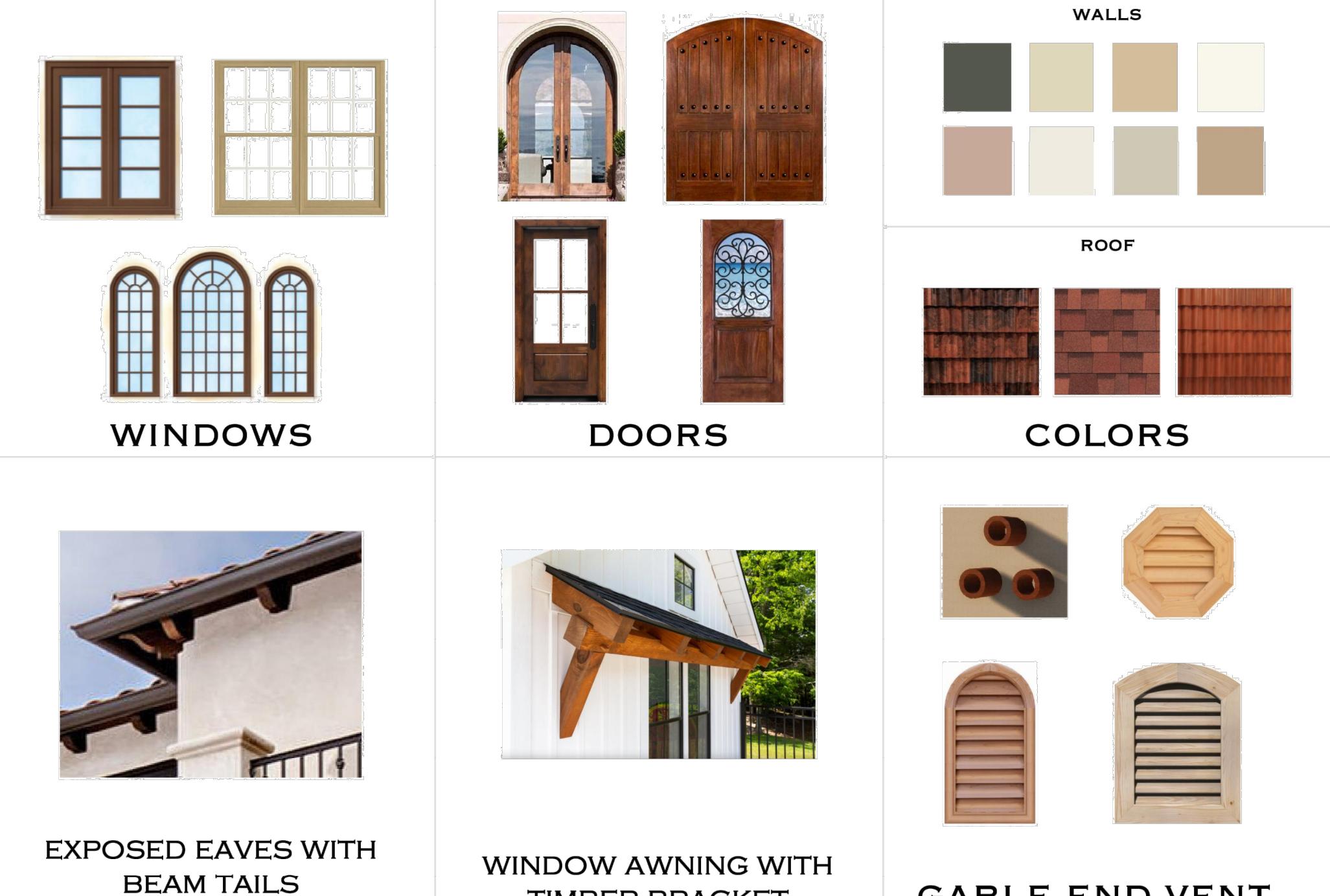
LIGHT FIXTURES

SPANISH / MEDITERRANEAN

LOW SLOPE ROOFS 2 1/2:12 AND STEEPER



SPANISH MEDITERRANEAN ARCHITECTURE IS CHARACTERIZED BY ITS WARM AND INVITING AESTHETIC, THE ARE GENERALLY FREE ADAPTATIONS IN THE MISSION STYLE.



WINDOWS

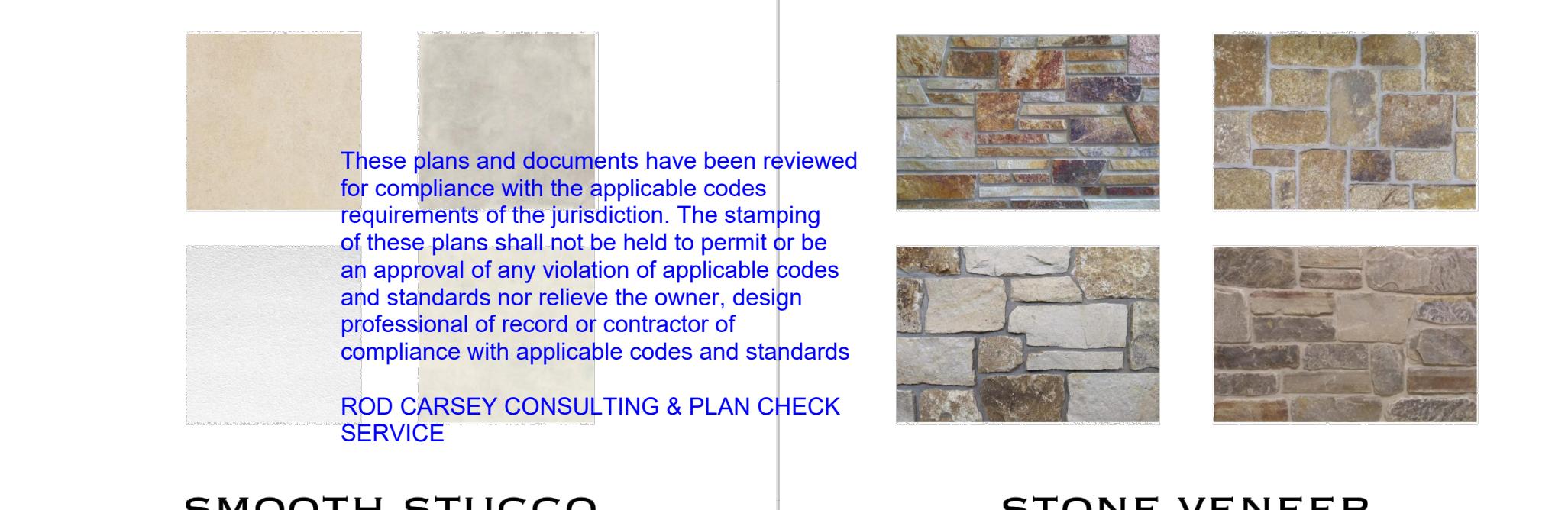
DOORS

COLORS

EXPOSED EAVES WITH BEAM TAILS (12 INCHES OR LESS)

WINDOW AWNING WITH TIMBER BRACKET

GABLE END VENT



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ROD CARSEY CONSULTING & PLAN CHECK SERVICE

SMOOTH STUCCO

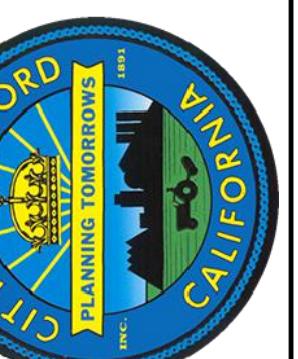
STONE VENEER



LIGHT FIXTURES

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CITY OF HANFORD



REVISIONS

PROJECT TITLE

CITY OF HANFORD –

PRE-REVIEWED ADU PROGRAM

SHEET DESCRIPTION

ARCHITECTURAL DETAILS

ADU SQFT

550

DRAWING SCALE

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CITY OF
HANFORD



REVISIONS

PROJECT TITLE	CITY OF HANFORD – PRE-REVIEWED ADU PROGRAM	
SHEET DESCRIPTION	FOUNDATION PLAN	DATE
ADU SQFT	550	10/28/2024

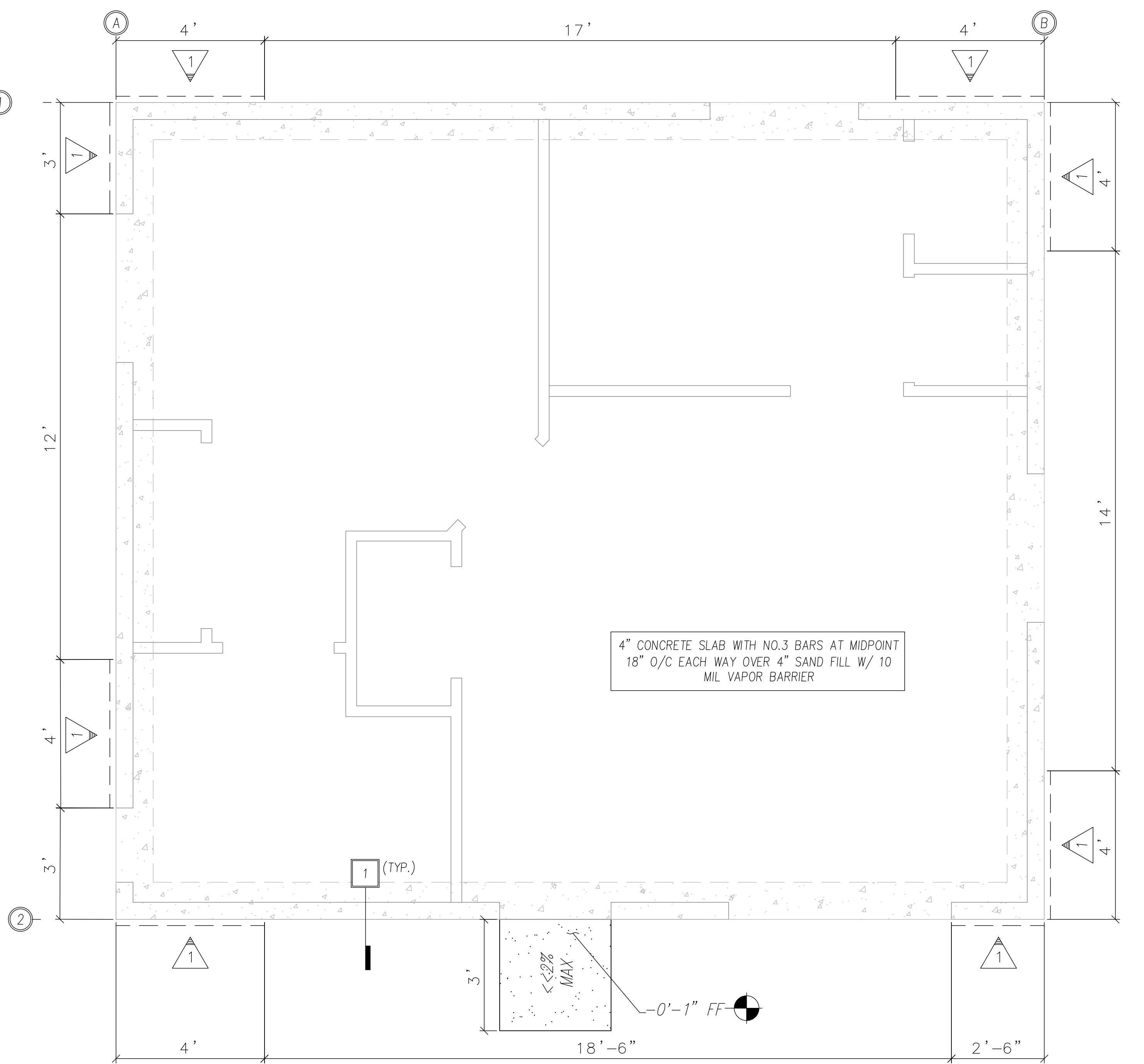
DRAWING SCALE

1/2" = 1'

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BY: *Mitchell Cook*
12/11/2025



KEYNOTES/LEGEND

- BRACED WALL LINE
- FOUNDATION PLAN DETAIL FOUND ON SHEET S3
- INDICATES CONCRETE FOOTING AREA

WALL BRACING SCHEDULE		
TYPE	MATERIAL	NAILING/STAPLING
1	3/8" PLYWD ²	6d NAILS; EDGES @ 6" O.C., FIELD NAIL @ 12" O.C.

- EXPANDED METAL OR WOVEN WIRE LATH STAPLED TO ALL STUDS, TOP AND BTM.
- STRUCTURAL PANEL SHEATHING TO BE USED ON ALL EXTERIOR SURFACES INCLUDING AREAS ABOVE AND BELOW OPENINGS.

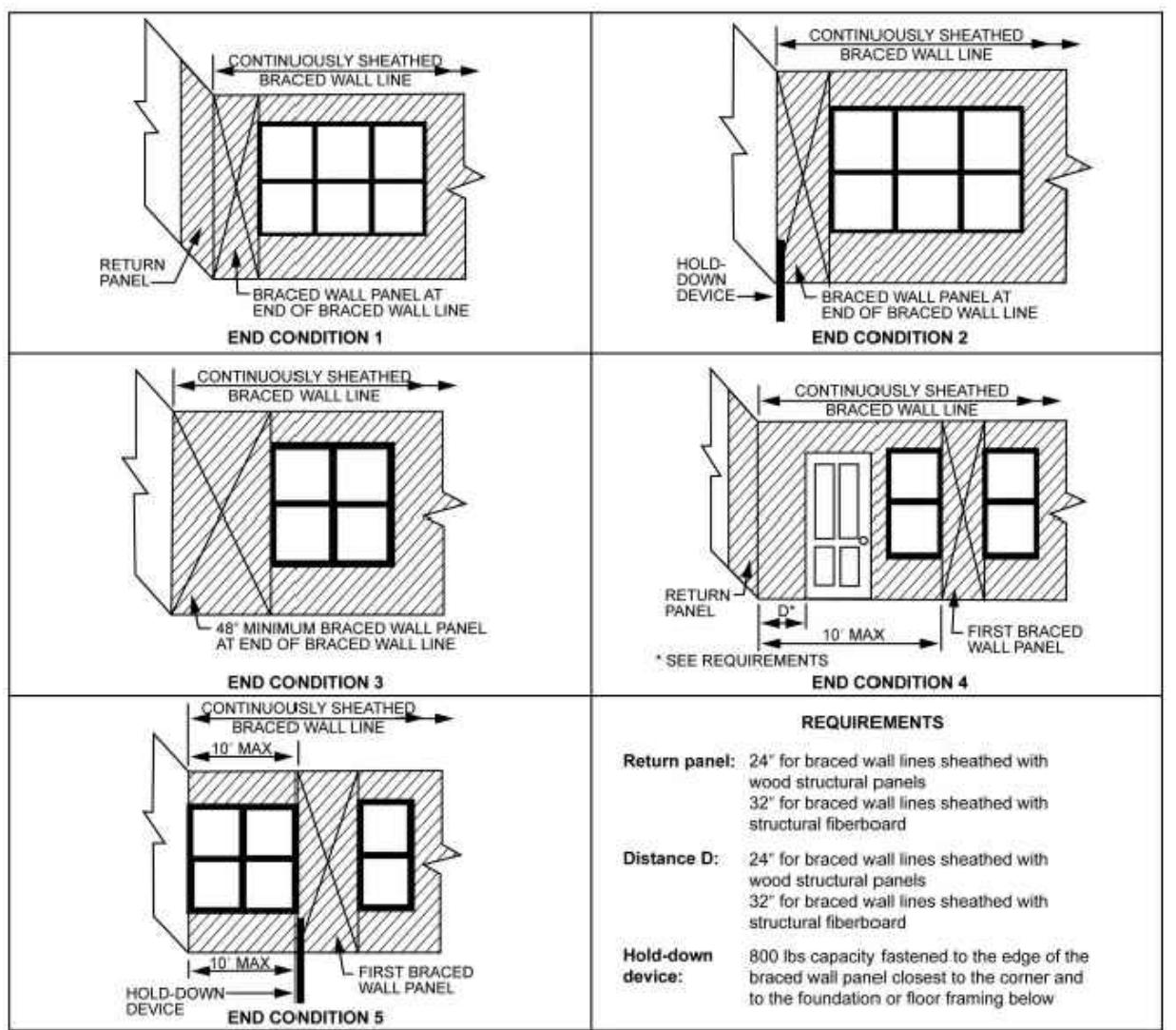
TABLE R602.3(3)
REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES^{a,b,c}

MINIMUM NAIL		MINIMUM WOOD STRUCTURAL PANEL SPAN RATING	MINIMUM NOMINAL PANEL THICKNESS (inches)	MAXIMUM WALL STUD SPACING (inches)	PANEL NAIL SPACING		ULTIMATE DESIGN WIND SPEED V_{ult} (mph)					
Size	Penetration (inches)				Edges (inches o.c.)	Field (inches o.c.)	Wind exposure category					
							B	C	D			
6d Common (2.0" x 0.113")	1.5	24/0	3/8	16	6	12	140	115	110			
8d Common (2.5" x 0.131")	1.75	24/16	7/16	16	6	12	170	140	135			
				24	6	12	140	115	110			

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa.

- 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.
- 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.
- 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 o.c. 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.

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



WALL BRACING NOTES

- FOR THE PURPOSE OF DETERMINING THE AMOUNT AND LOCATION OF BRACING REQUIRED IN EACH STORY LEVEL OF A BUILDING, BRACED WALL LINES SHALL BE DESIGNATED AS STRAIGHT LINES IN THE BUILDING PLAN PLACED IN ACCORDANCE WITH THIS SECTION. (CRC602.10.1)
- THE LENGTH OF A BRACED WALL LINE SHALL BE THE DISTANCE BETWEEN ITS ENDS. THE END OF A BRACED WALL LINE SHALL BE THE INTERSECTION WITH A PERPENDICULAR BRACED WALL LINE, AN ANGLED BRACED WALL LINE AS PERMITTED IN SECTION R602.10.1.4 OR AN EXTERIOR WALL AS SHOWN IN FIGURE R602.10.1.1. (CRC602.10.1.1)
- EACH BRACED WALL LINE SHALL BE LOCATED SUCH THAT NO MORE THAN TWO-THIRDS OF THE REQUIRED BRACED WALL PANEL LENGTH IS LOCATED TO ONE SIDE OF THE BRACED WALL LINE. BRACED WALL PANELS SHALL BE PERMITTED TO BE OFFSET UP TO 4 FEET (1219 MM) FROM THE DESIGNATED BRACED WALL LINE. BRACED WALL PANELS PARALLEL TO A BRACED WALL LINE SHALL BE OFFSET NOT MORE THAN 4 FEET (1219 MM) FROM THE DESIGNATED BRACED WALL LINE LOCATION AS SHOWN IN FIGURE R602.10.1.1. EXTERIOR WALLS PARALLEL TO A BRACED WALL LINE SHALL BE OFFSET NOT MORE THAN 4 FEET (1219 MM) FROM THE DESIGNATED BRACED WALL LINE AS SHOWN IN FIGURE R602.10.1.1. INTERIOR WALLS USED AS BRACING SHALL BE OFFSET NOT MORE THAN 4 FEET (1219 MM) FROM A BRACED WALL LINE THROUGH THE INTERIOR OF THE BUILDING AS SHOWN IN FIGURE R602.10.1.1. (CRC602.10.1.2)
- THE SPACING BETWEEN PARALLEL BRACED WALL LINES SHALL BE IN ACCORDANCE WITH TABLE R602.10.1.3. INTERMEDIATE BRACED WALL LINES THROUGH THE INTERIOR OF THE BUILDING SHALL BE PERMITTED. (CRC602.10.1.3)

TABLE R602.10.1.3
BRACED WALL LINE SPACING

APPLICATION	CONDITION	BUILDING TYPE	BRACED WALL LINE SPACING CRITERIA	
			Maximum Spacing	Exception to Maximum Spacing
Wind bracing	Ultimate design wind speed 100 mph to < 140 mph	Detached, townhouse	60 feet	None
	SDC A – C	Detached		Use wind bracing
	SDC A – B	Townhouse		Use wind bracing
Seismic bracing	SDC C	Townhouse	35 feet	Up to 50 feet when length of required bracing per Table R602.10.3(3) is adjusted in accordance with Table R602.10.3(4).
	SDC D ₀ , D ₁ , D ₂	Detached, townhouses, one- and two-story only	25 feet	Up to 35 feet to allow for a single room not to exceed 900 square feet. Spacing of all other braced wall lines shall not exceed 25 feet.
	SDC D ₀ , D ₁ , D ₂	Detached, townhouse	25 feet	Up to 35 feet when length of required bracing per Table R602.10.3(3) is adjusted in accordance with Table R602.10.3(4).

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m², 1 mile per hour = 0.447 m/s.

- BRACED WALL LINES WITH A LENGTH OF 16 FEET (4877 MM) OR LESS SHALL HAVE NOT LESS THAN TWO BRACED WALL PANELS OF ANY LENGTH OR ONE BRACED WALL PANEL EQUAL TO 48 INCHES (1219 MM) OR MORE. BRACED WALL LINES GREATER THAN 16 FEET (4877 MM) SHALL HAVE NOT LESS THAN TWO BRACED WALL PANELS. (CRC602.10.2.3)

- TABLE R602.10.3(1) AND THE APPLICABLE ADJUSTMENT FACTORS IN TABLE R602.10.2(2) (CRC602.10.3)

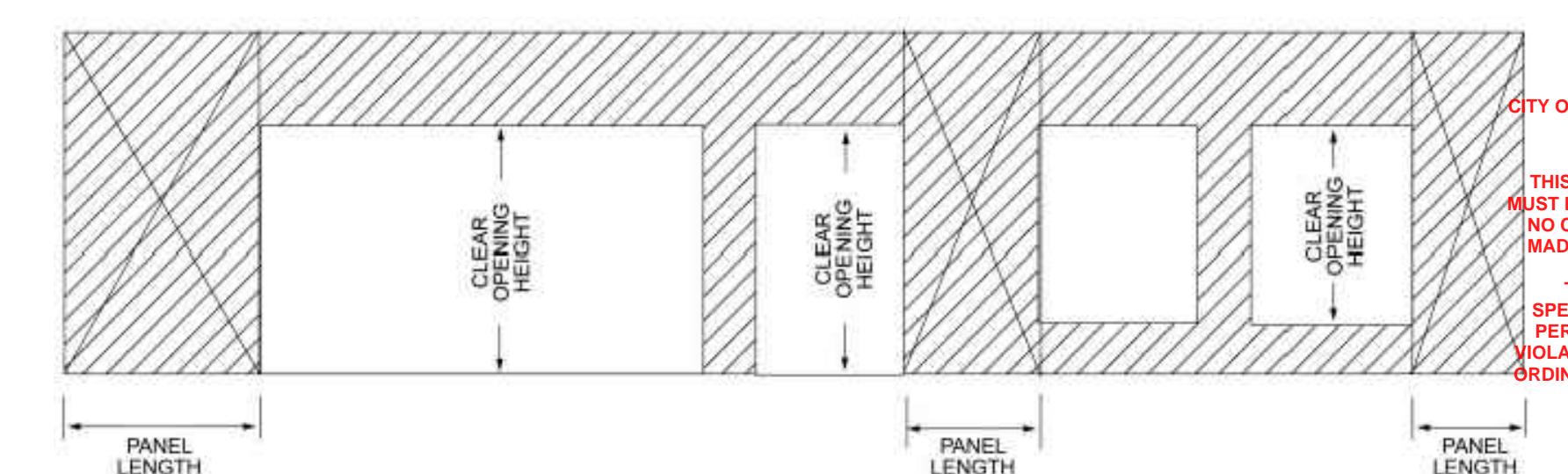
TABLE R602.10.3(3)
BRACING REQUIREMENTS BASED ON SEISMIC DESIGN CATEGORY

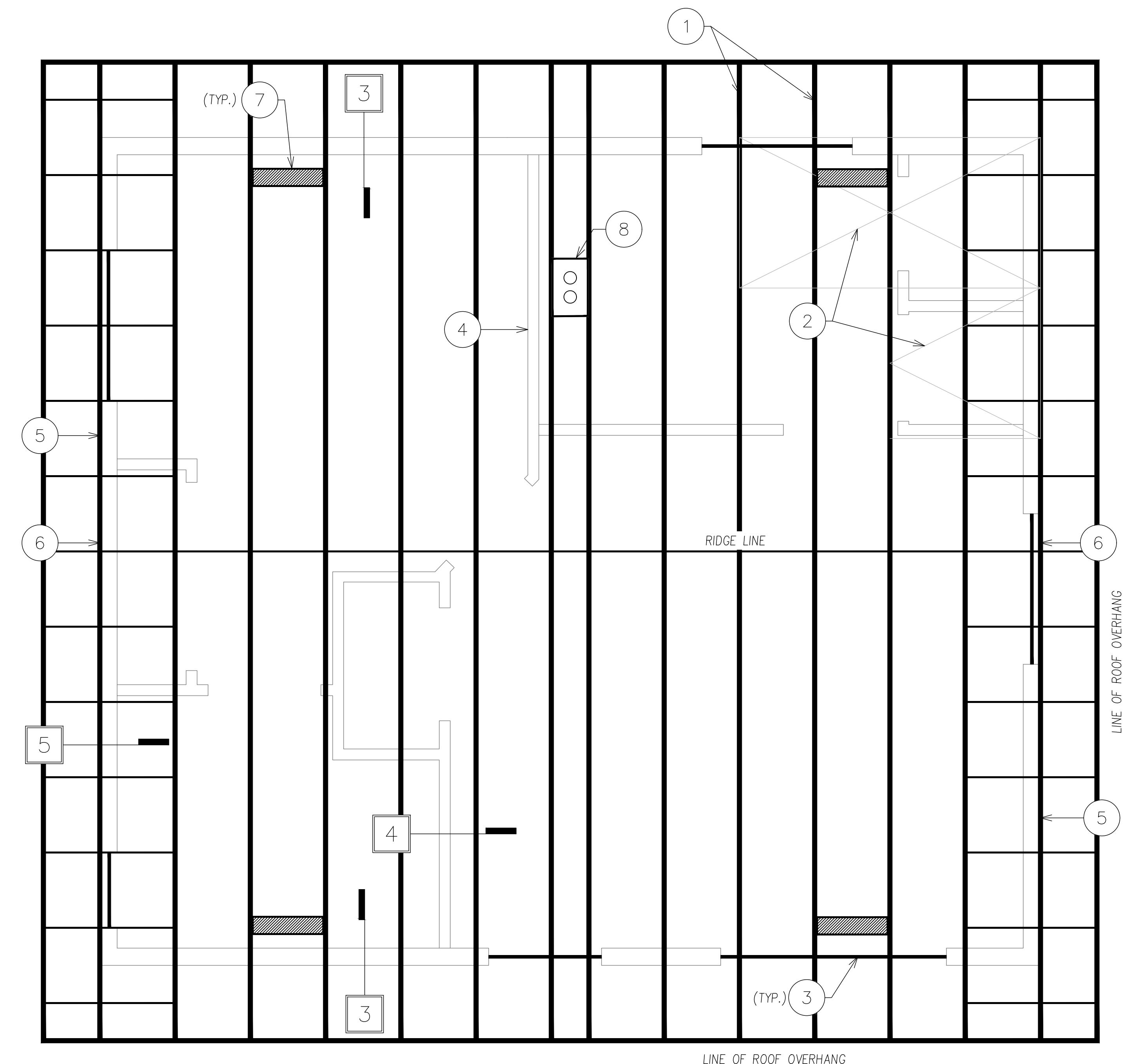
Seismic Design Category	Story Location	Braced Wall Line Length (feet) ^d	MINIMUM TOTAL LENGTH (FEET) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE ^{e,f}		
			Method LIB ^d	Method GB	Methods DWB, SFB, PBS, PCP, HPS, CS-SFB ^d
D ₀	10' x 10'	10	NP	2.8	2.8
		20	NP	5.5	5.5
		30	NP	8.3	8.3
		40	NP	11.0	11.0
		50	NP	13.8	13.8
	10' x 20'	10	NP	5.3	5.3
		20	NP	10.5	10.5
		30	NP	15.8	15.8
		40	NP	21.0	21.0
		50	NP	26.3	26.3
	20' x 20'	10	NP	7.3	7.3
		20	NP	14.5	14.5
		30	NP	21.8	21.8
		40	NP	29.0	29.0
		50	NP	36.3	36.3

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa.

- Linear interpolation shall be permitted.
- Wall bracing lengths are based on soil class "D." Interpolation of bracing length between the S_{br} values associated with the seismic design categories shall be permitted when a site-specific S_{br} value is determined in accordance with Section 1613.2 of the California Building Code.
- Where the braced wall line length is greater than 50 feet, braced wall lines shall be permitted to be divided into shorter segments having lengths of 50 feet or less, and the amount of bracing within each segment shall be in accordance with this table.
- Method LIB shall have gypsum board fastened to not less than one side with nails or screws in accordance with Table R602.3(1) for exterior sheathing or Table R702.3.5 for interior gypsum board. Spacing of fasteners at panel edges shall not exceed 8 inches.
- Methods PFG and CS-SFB do not apply in Seismic Design Categories D₀, D₁, and D₂.
- Where more than one bracing method is used, mixing methods shall be in accordance with Section R602.10.4.1.

FIGURE R602.10.5
BRACED WALL PANELS WITH CONTINUOUS SHEATHING





KEYNOTES

- ① PRE-MFR. TRUSSES @ 24" O.C.
- ② 15/32" APA RATED PLYW'D OR OSB, P.I. 32/16, EDGE NAIL W/BD @ 6" O.C. & FIELD NAIL @ 6" O.C.
- ③ 6X8 D.F. # 2
- ④ TOP OF NON-BEARING, NON-BRACED WALL. SEE DETAIL 5.
- ⑤ SEE DETAIL 3 FOR END WALL TRUSS SHEAR TRANSFER DESIGN REQUIREMENT
- ⑥ LOCATION OF 12"x18" GABLE END VENT
- ⑦ LOCATION OF 5 1/2" x 22 1/2" ROOF TOP VENT
- ⑧ LOCATION OF RANGE HOOD VENT
- # FRAMING PLAN DETAIL FOUND ON SHEET S3

NOTES

1. TRUSS CALCULATIONS (FROM THE TRUSS MANUFACTURER) SHALL BE PROVIDED TO THE BUILDING DEPARTMENT PRIOR TO A REQUEST FOR ROOF AND SHEAR INSPECTION

ATTIC VENTILATION REQUIREMENTS

$$\frac{550 \text{ SQFT}}{150} \cdot 144 \text{ in}^2/\text{ft}^2 = (528 \text{ in}^2)$$

PROVIDE:

$$\begin{aligned} 2 - 12"\text{x}18" \text{ GABLE END VENT } (140 \text{ in}^2) &= (280 \text{ in}^2) \\ 4 - 5-1/2" \times 22-1/2" \text{ ROOF TOP VENT } (83 \text{ in}^2) &= (283 \text{ in}^2) \\ \text{TOTAL PROVIDED: } &= (612 \text{ in}^2) \end{aligned}$$

These plans and documents have been reviewed for compliance with the applicable codes requirements of the jurisdiction. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards nor relieve the owner, design professional of record or contractor of compliance with applicable codes and standards

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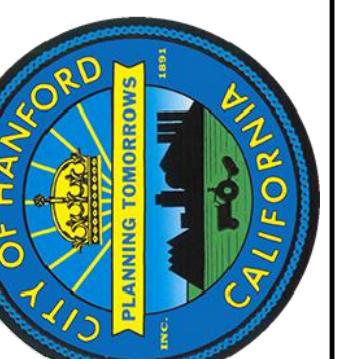
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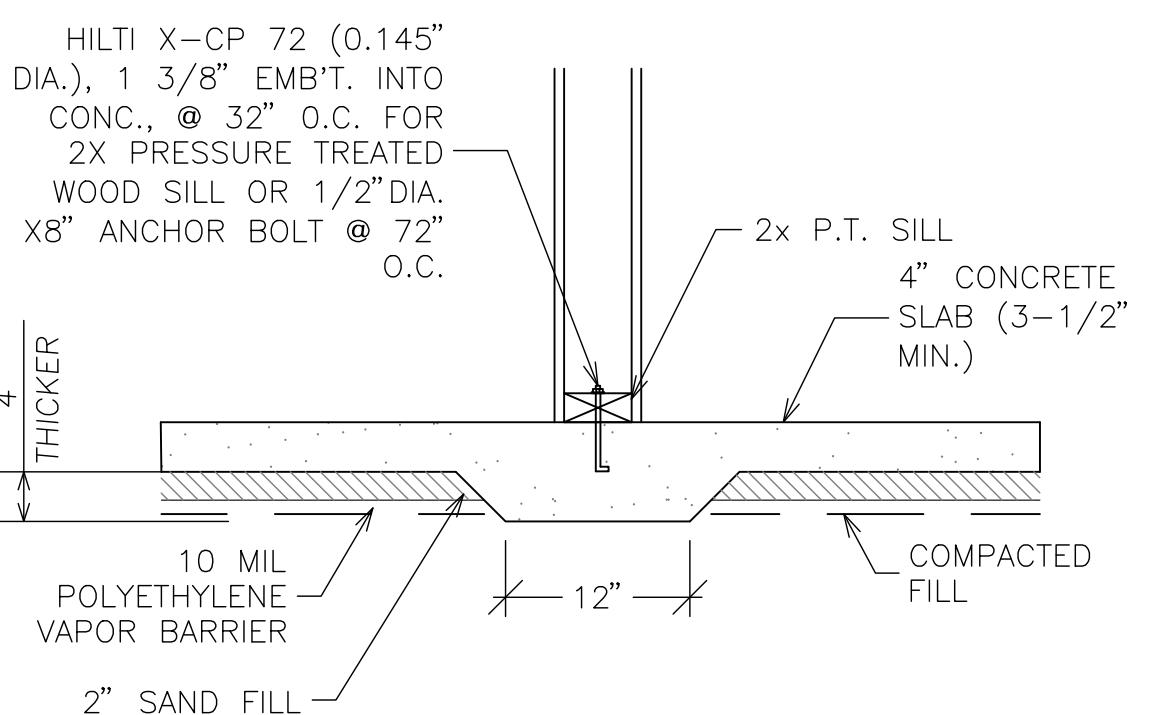
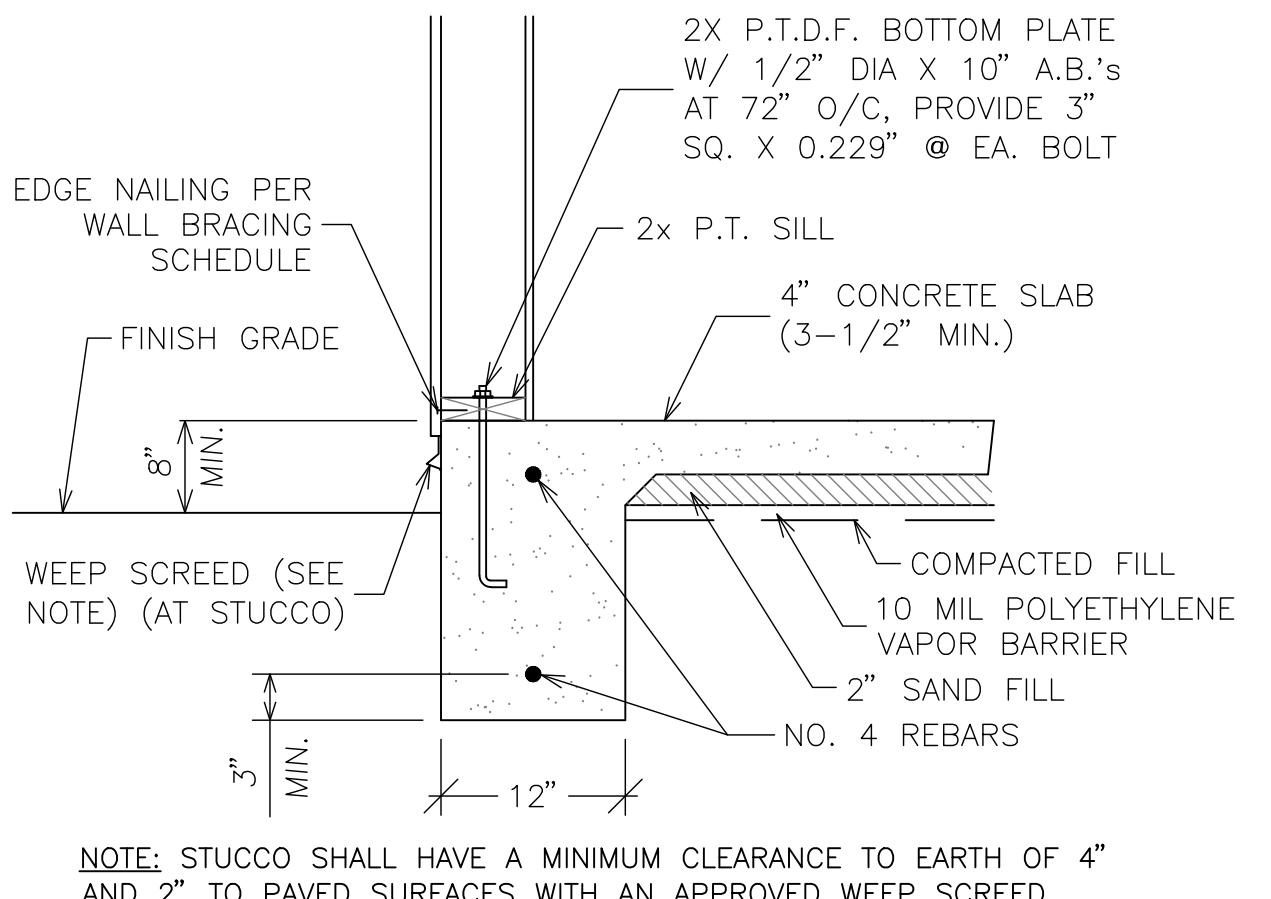
PROJECT TITLE	CITY OF HANFORD - PRE-REVIEWED ADU PROGRAM	DETAILS
AGENCY	SJN REAP	DATE
ADU SQFT	550	10/28/2024

DRAWING SCALE
1/2" = 1'
CITY OF HANFORD
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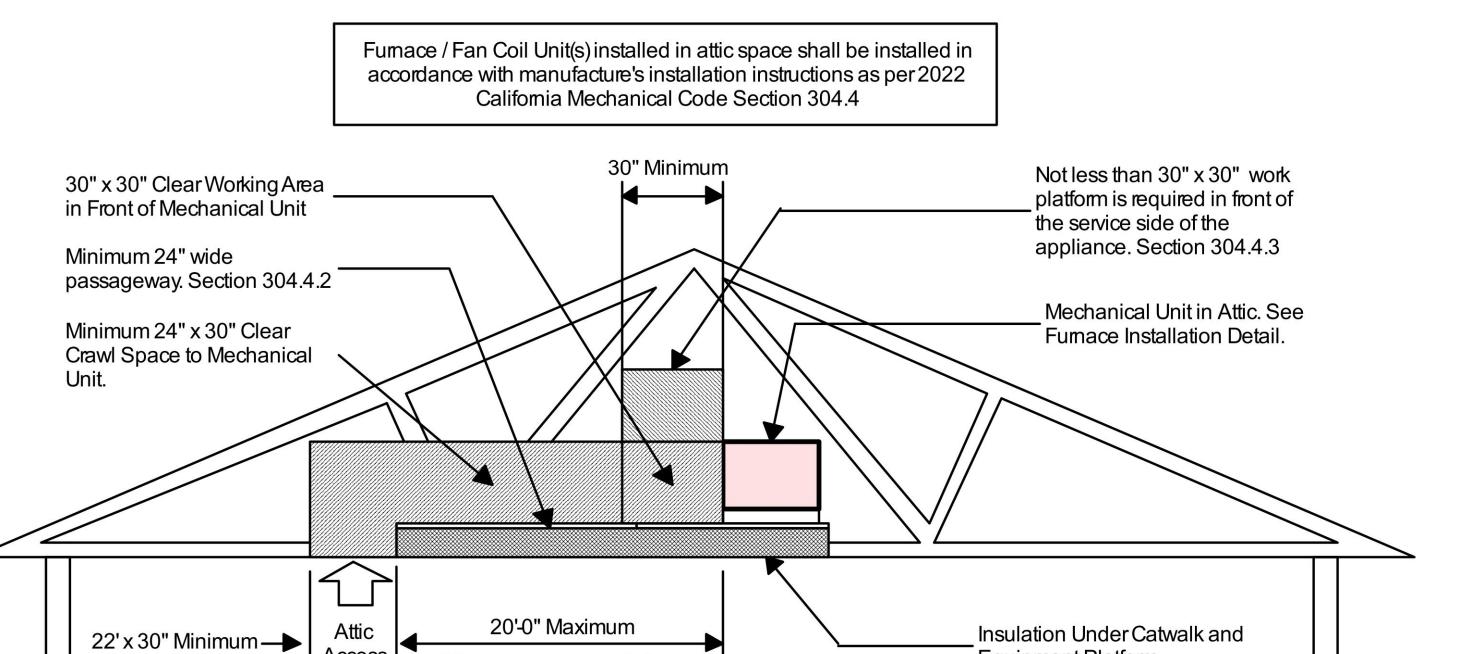
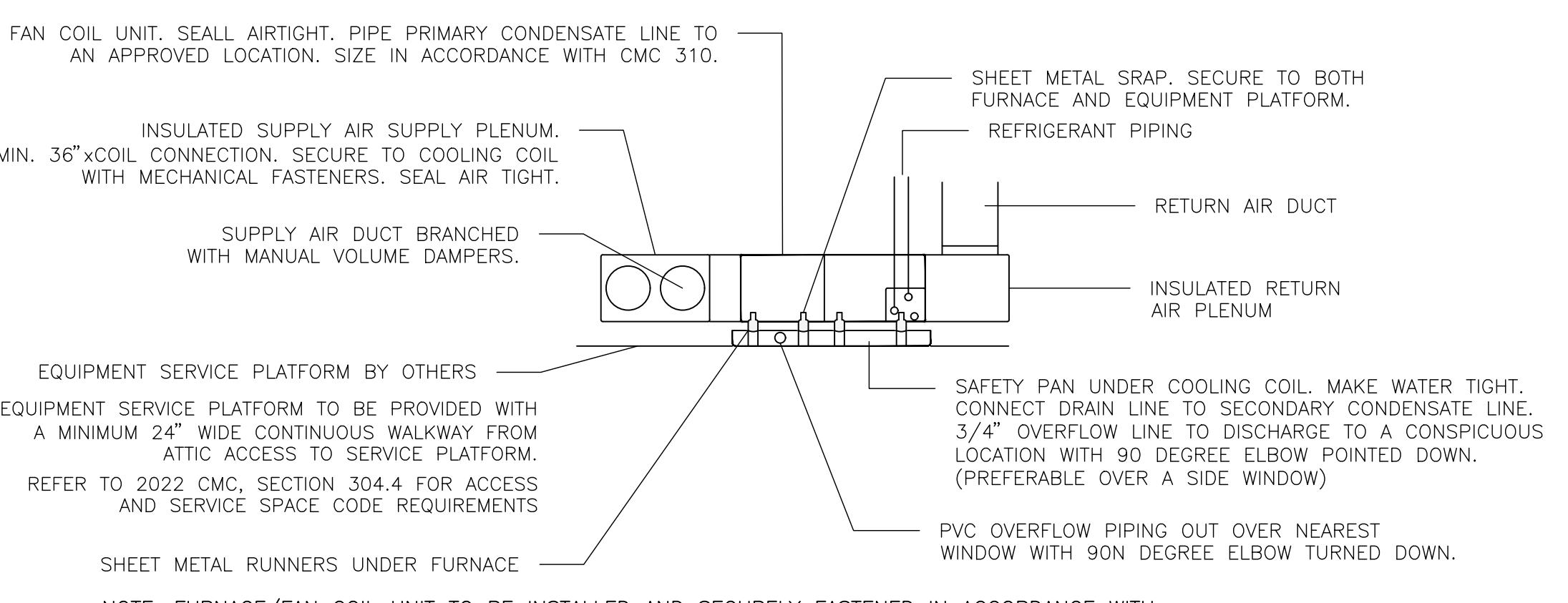
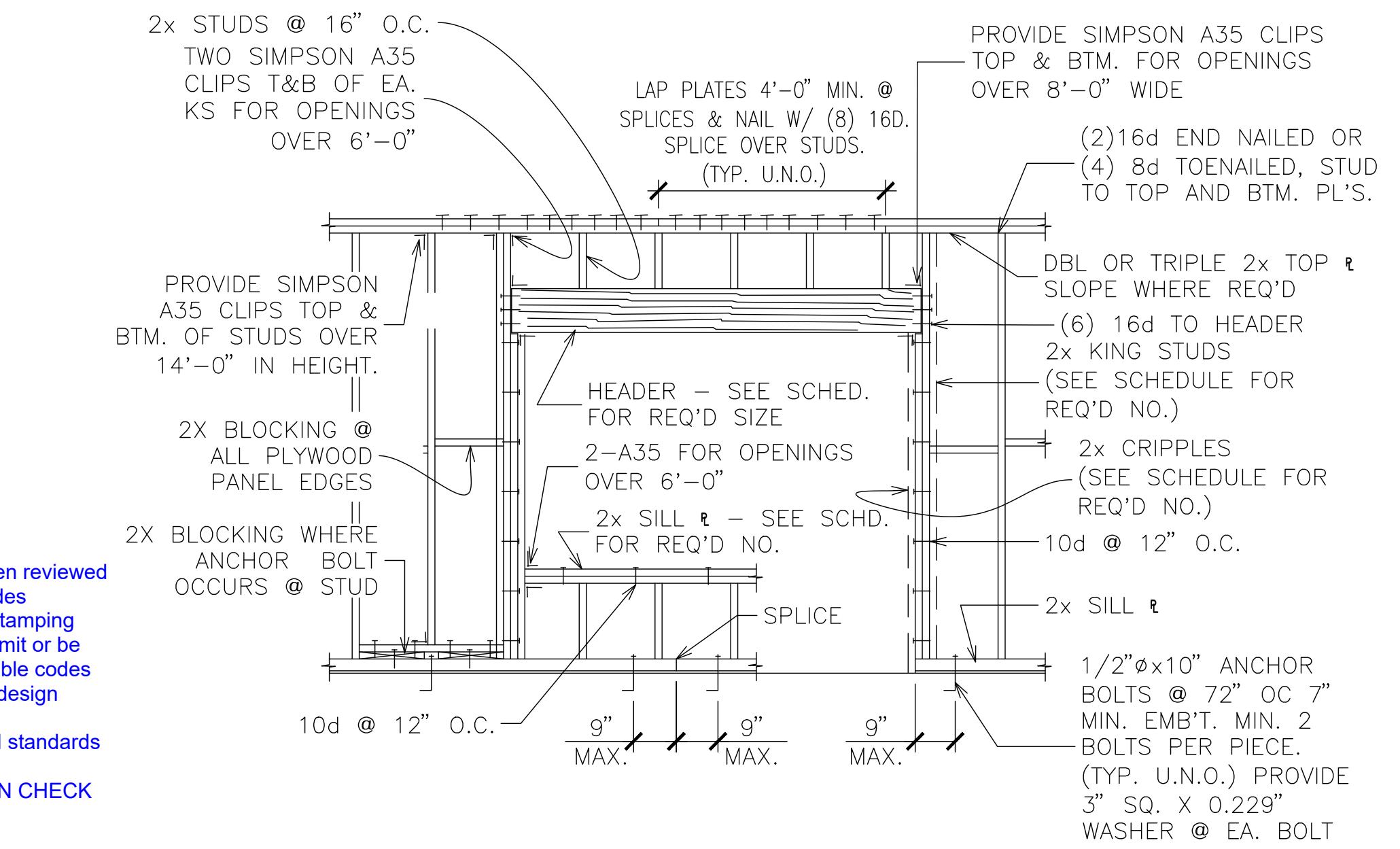
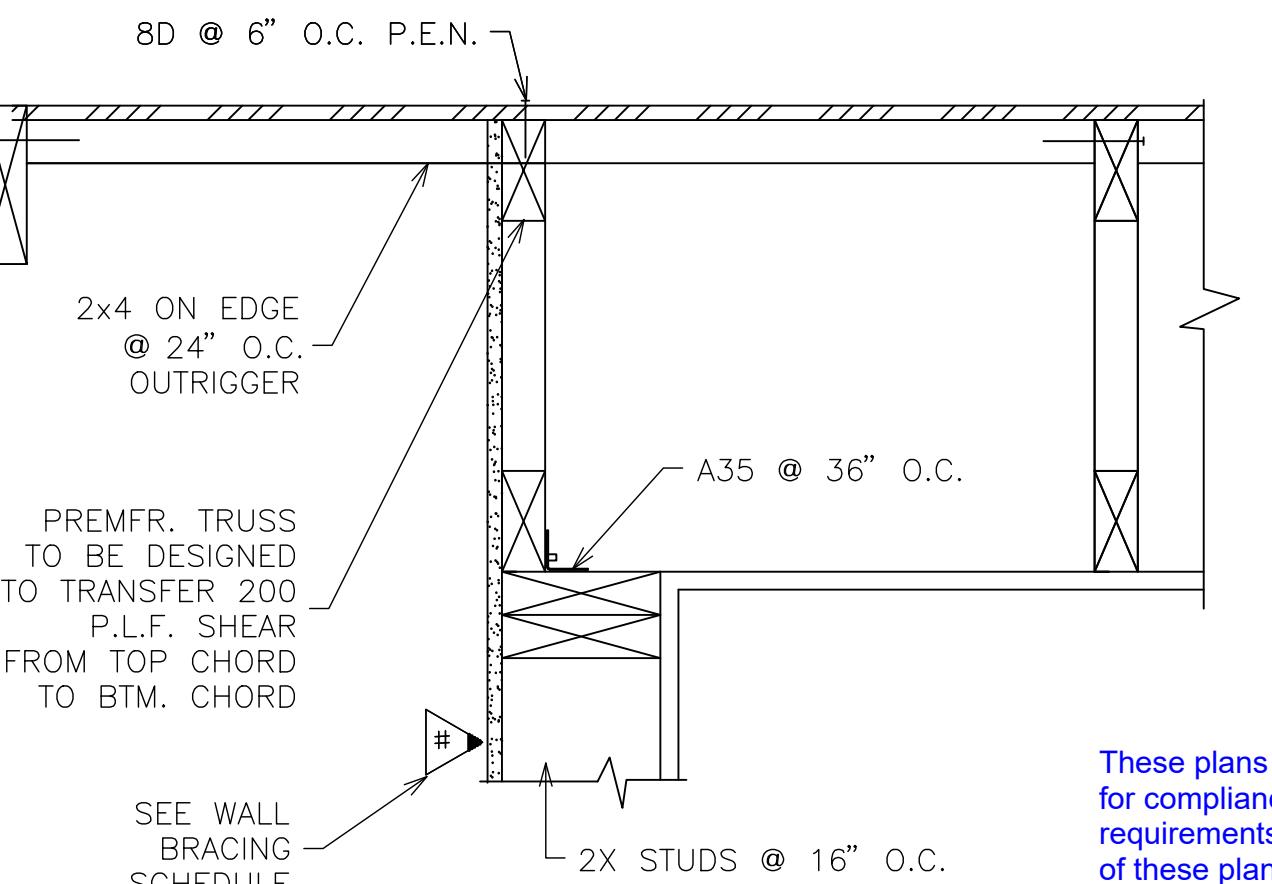
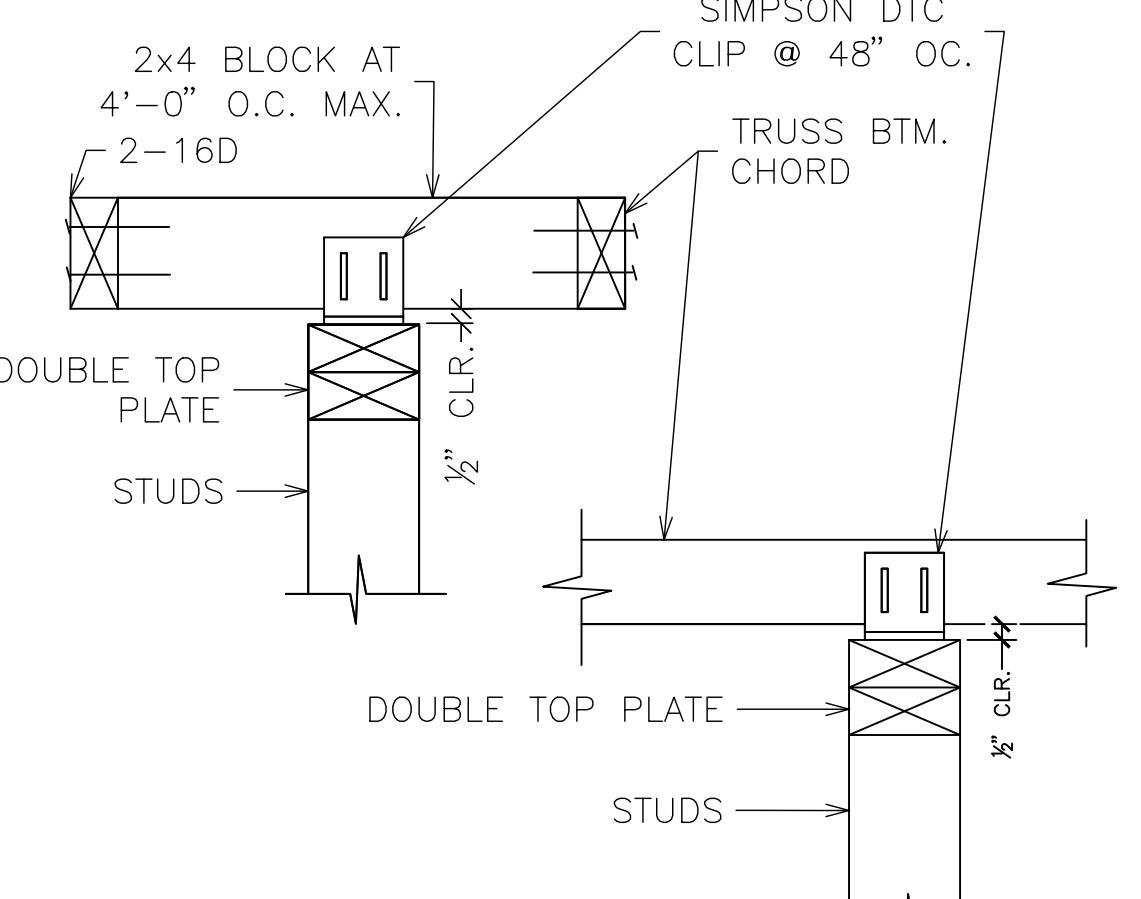
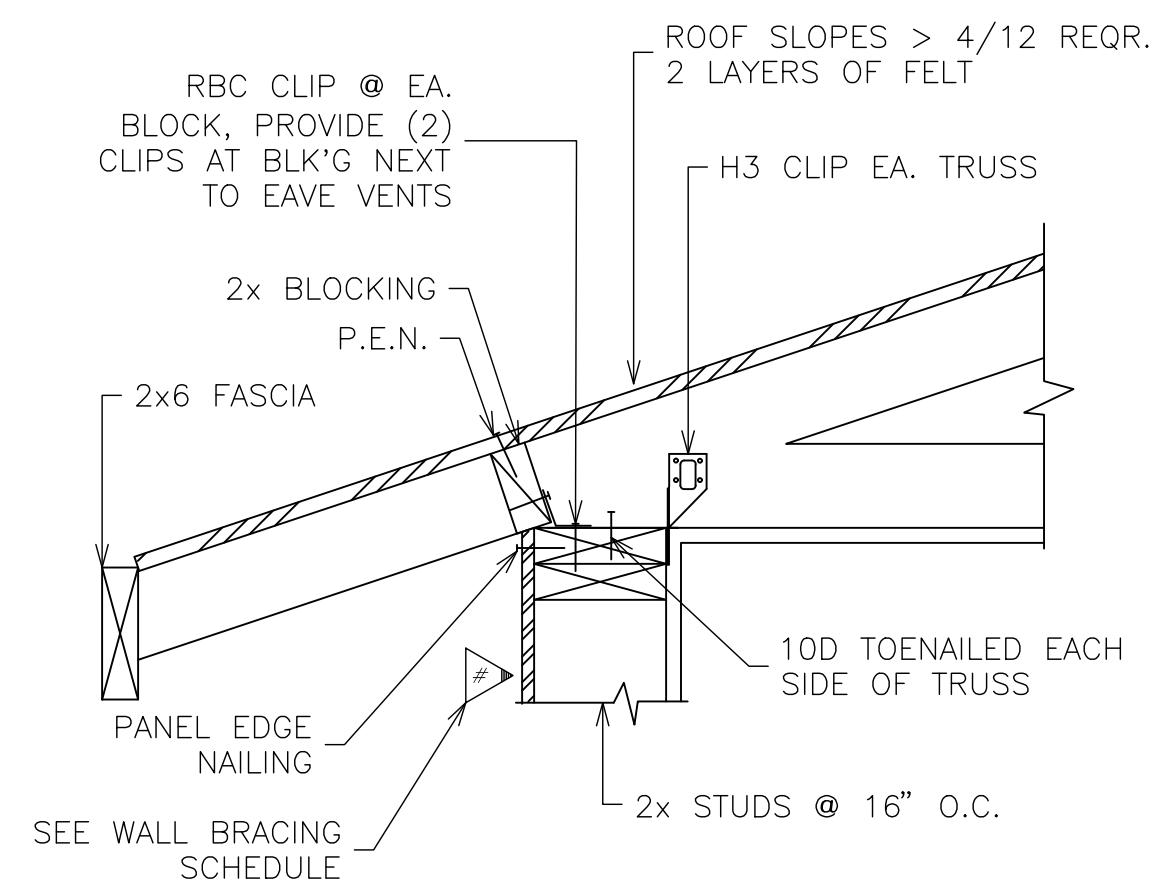
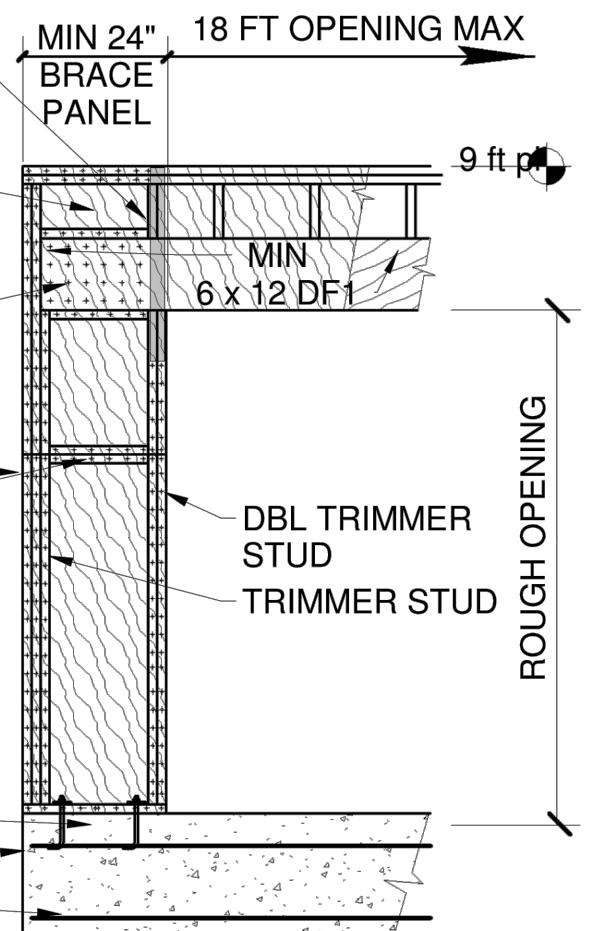
BY: *Mitchell Cook*
12/11/2025



TENSION STRAP AT INTERIOR FACE OF WALL, STRAP ACROSS HEADER AND JAMB STUDS:
SIMPSON MSTA 30 (2,050 lbs TENSION)

7/16" APA RATED SHEATHING CDX PLWD (OR EQUIV OSB), EXTERIOR FACE OF WALL, NAIL 8d 3" o.c IN ALL FRAMING (STUDS, BLOCKING, AND SILLS, TYP) SEE DETAIL SHEETS FOR MINIMUM PANEL SIZES AND NAILING PARAMETERS
FASTEN SHEATHING TO HEADER WITH 8d COMMON IN 3 INCH GRID PATTERN AS SHOWN
MIN DBL STUD AT CORNER
4 x BLOCKING AT ALL PANEL EDGES
2 x 6 PT SILL PL W/ MINIMUM (2 1/2" DIA AB W/ 3" x 3" x 1/4" CUT PL WASHER, EMBED BOLT 7" INTO FTG (CRC FIGURE R602.10.6.4)
4 TOP AND BOTT, LAPS MIN 15"
2 x 6 @ 24" o.c. WOOD FRAME WALL, PROVISIONS PER CHAPTER 6 CRC

DERIVED FROM CRC FIGURE R602.10.4.2



CLEAR SPAN OF OPENING	HEADER SIZE		NUMBER OF CRIPPLES		NUMBER OF KING STUDS		NUMBER OF SILL PLATES	
	BEARING WALL	NON-BRG WALL	BRG WALL	NON-BRG WALL	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR
UP TO 6'-0"	4 x 8	4 x 6	1	1	1	1	1	1

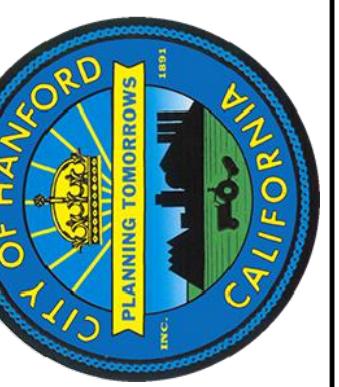
NOTES:

1. 4x HEADER SIZE SHOWN IS FOR 2x4 STUD WALL, REVISE TO 6x FOR 2x6 STUD WALLS AND 8x FOR 2x8 STUD WALLS.
2. DETAILS AND MEMBER SIZES ARE TYPICAL UNLESS OTHERWISE NOTED OR DETAILED.
3. NOTES AND MEMBER SIZES SHOWN ON FRAMING PLANS SHALL TAKE PRECEDENCE OVER SCHEDULE.

9 HEADER DETAIL
N.T.S.

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PROJECT TITLE CITY OF HANFORD –
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ADU SQFT

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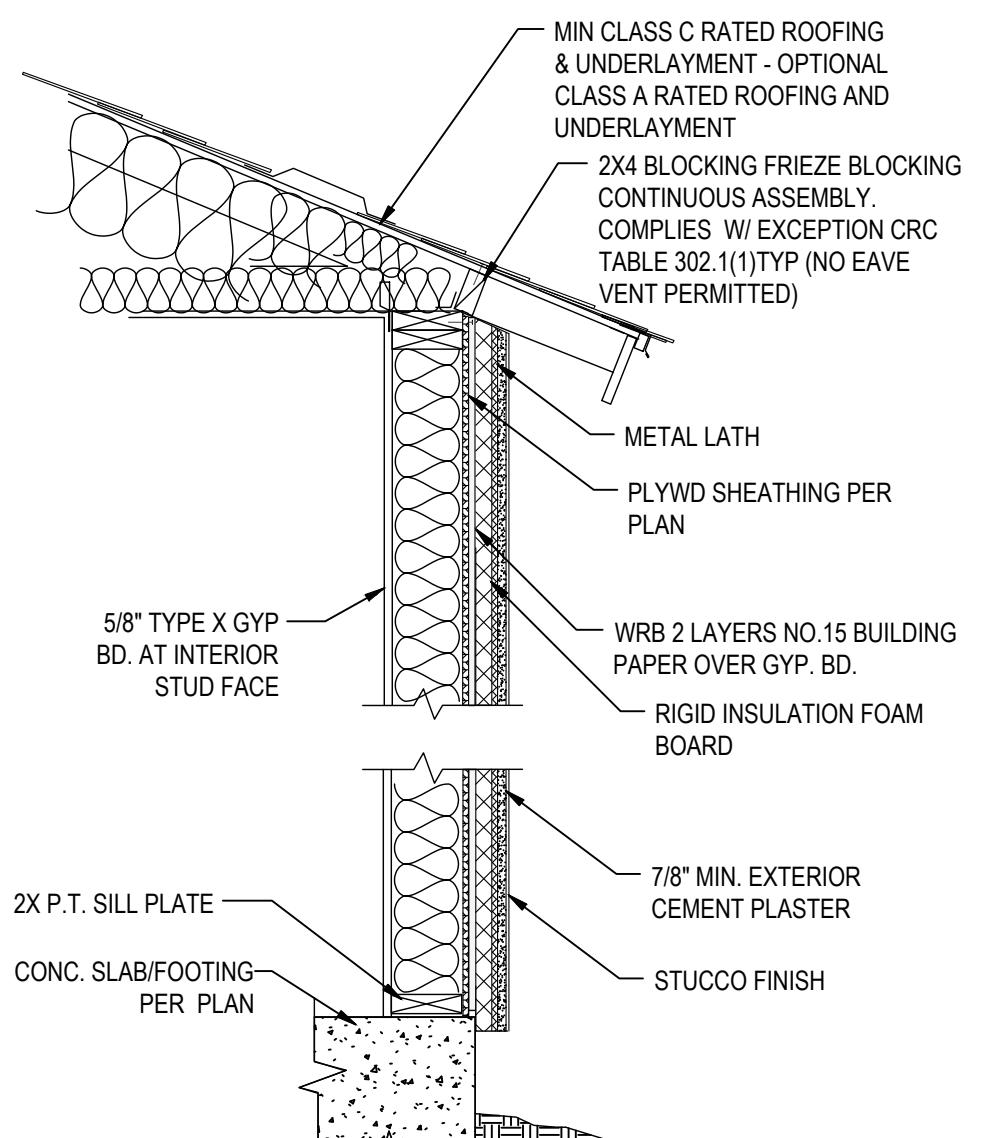
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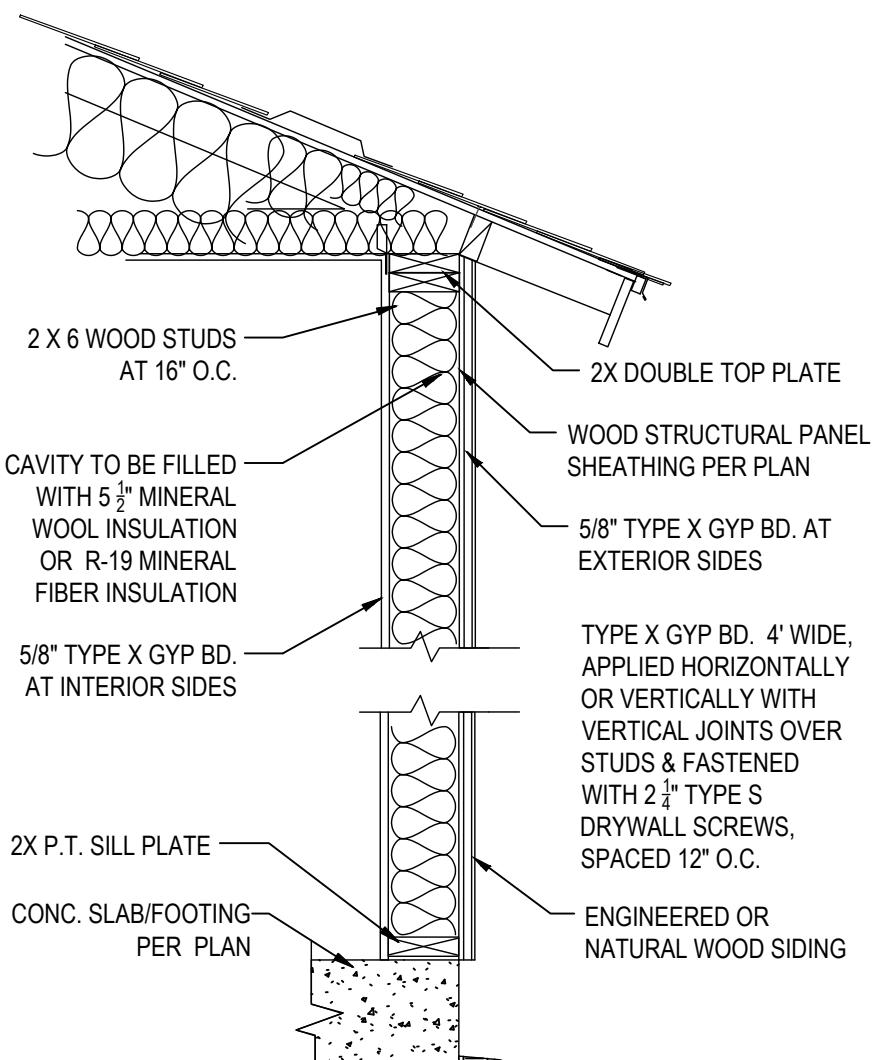
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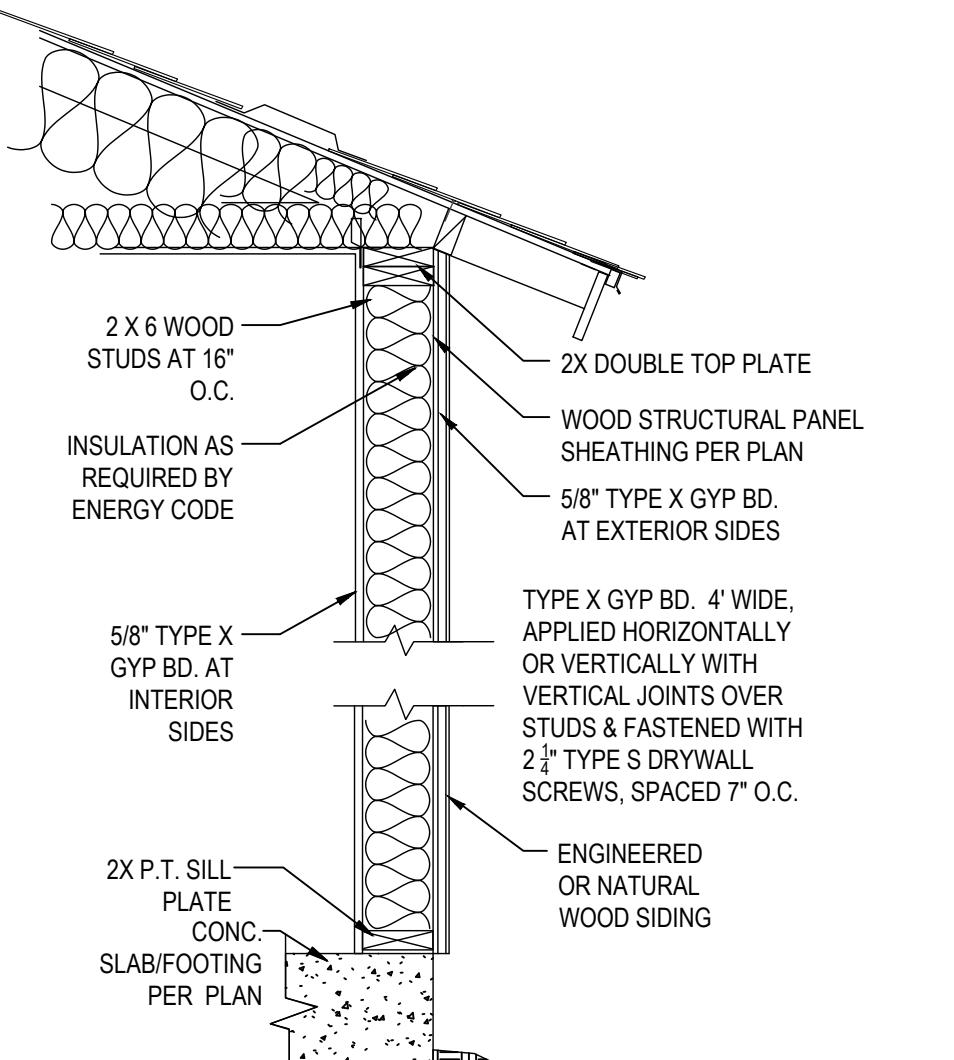
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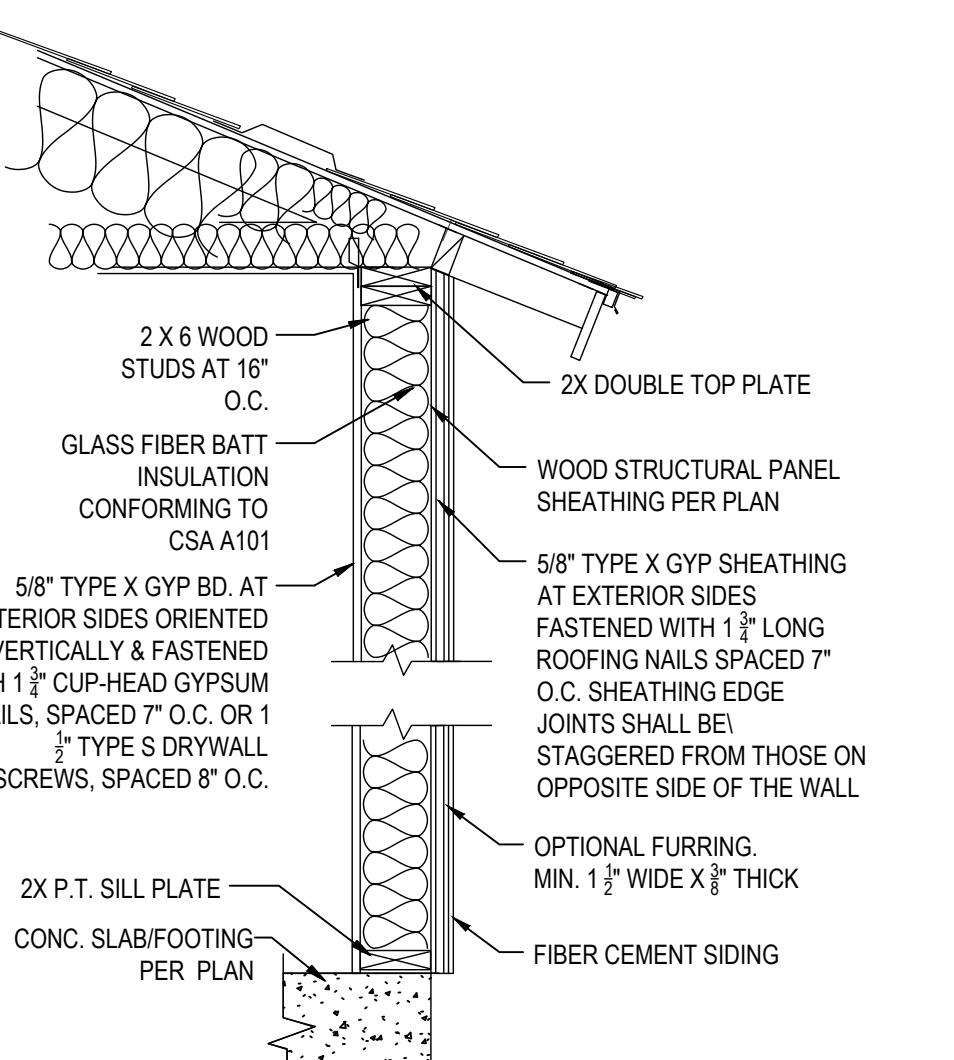
10 1-HOUR FIRE RATED ASSEMBLY FOR STUCCO FINISH
N.T.S.



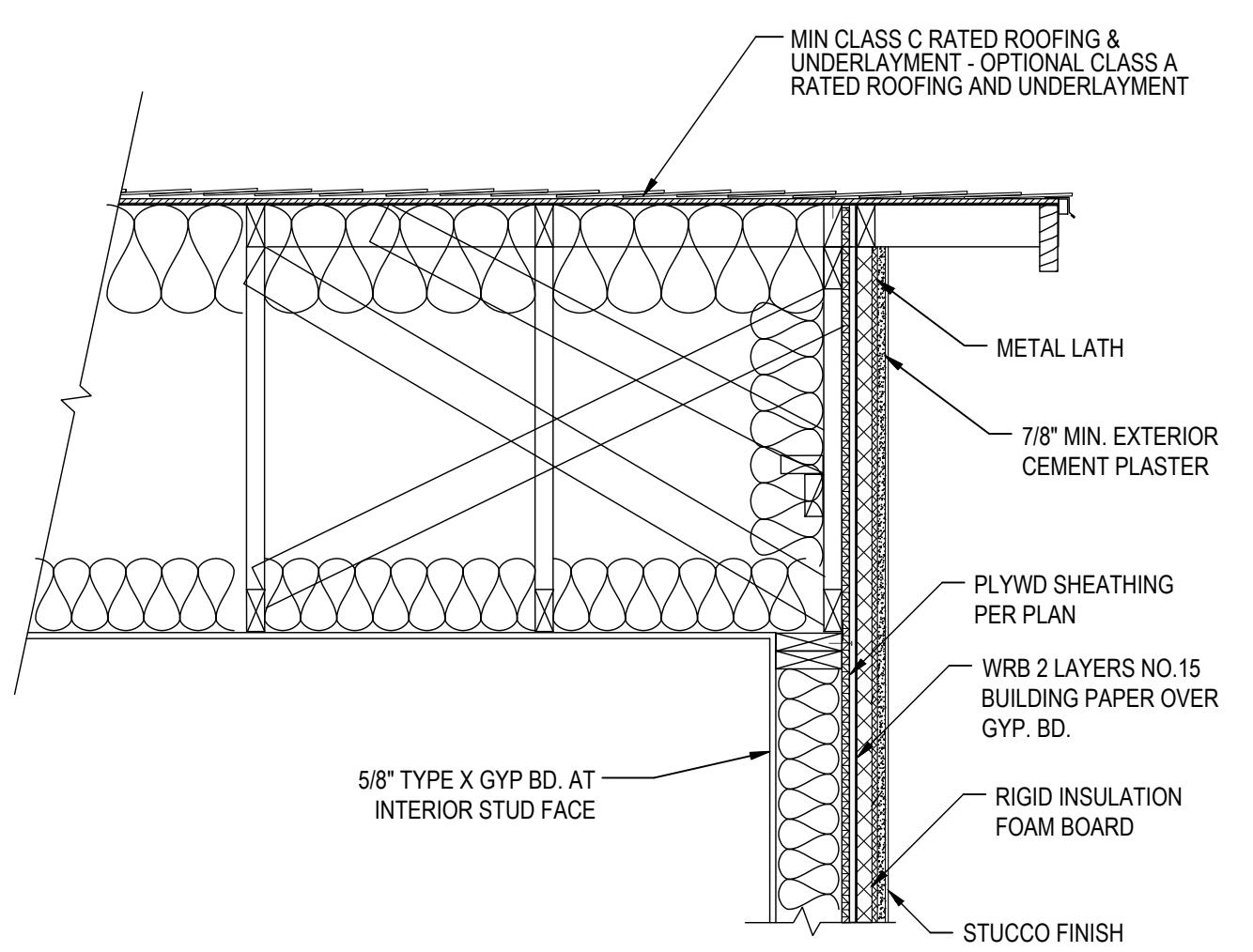
11 1-HOUR FIRE RATED ASSEMBLY FOR
ENGINEERED OR NATURAL WOOD SIDING
N.T.S.



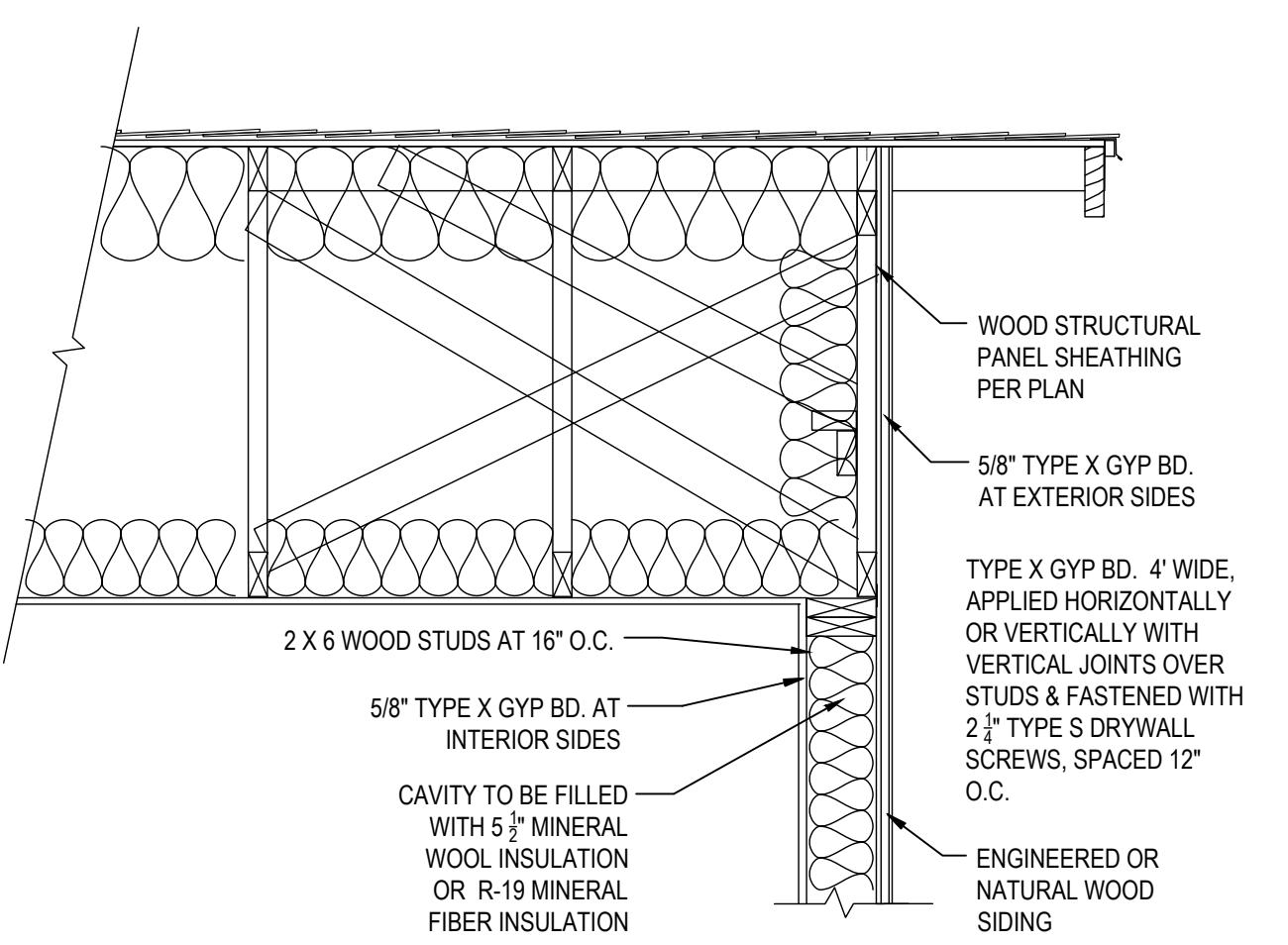
12 1-HOUR FIRE RATED ASSEMBLY FOR
ENGINEERED OR NATURAL WOOD SIDING
N.T.S.



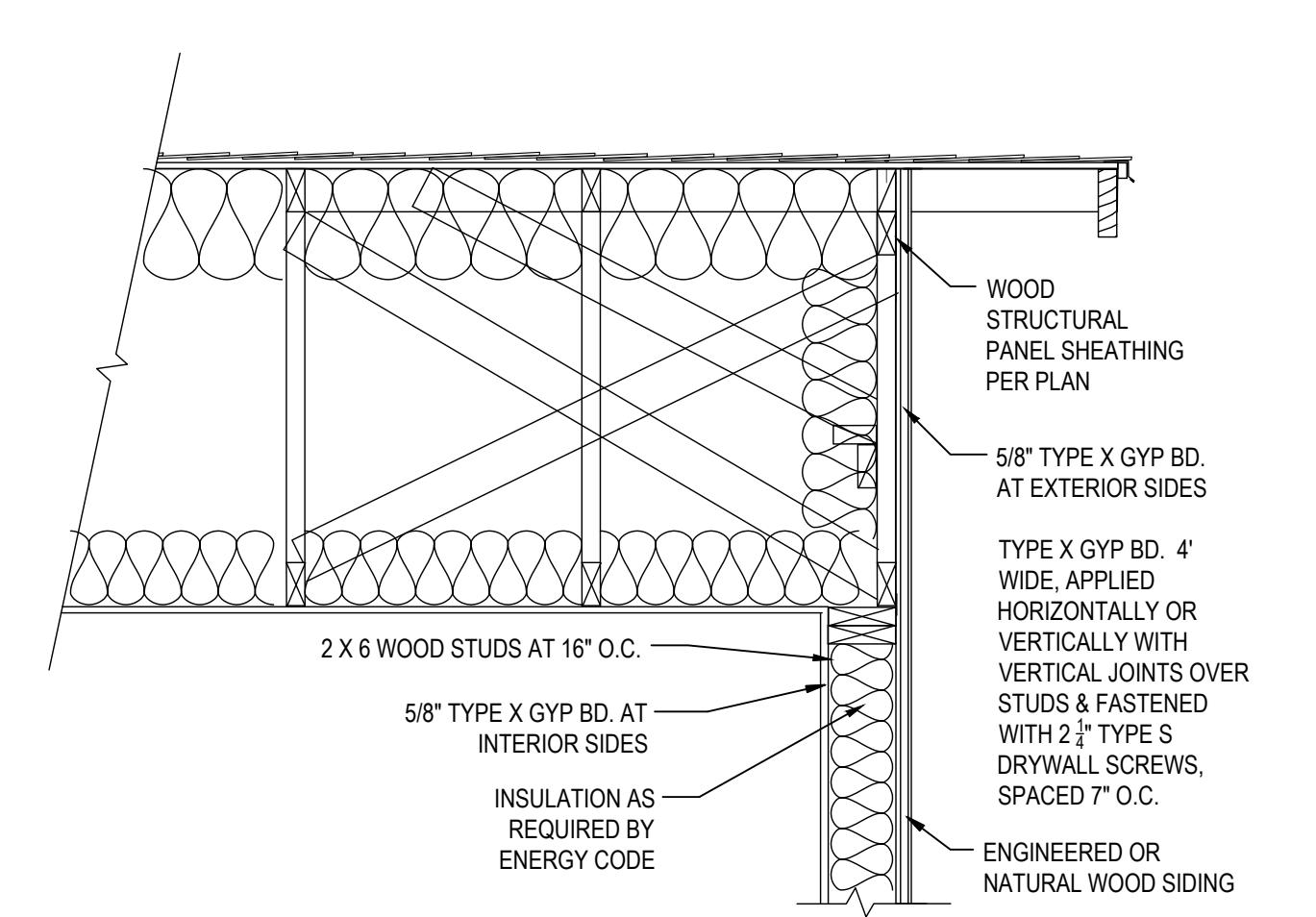
13 1-HOUR FIRE RATED ASSEMBLY FOR
FIBER CEMENT SIDING
N.T.S.



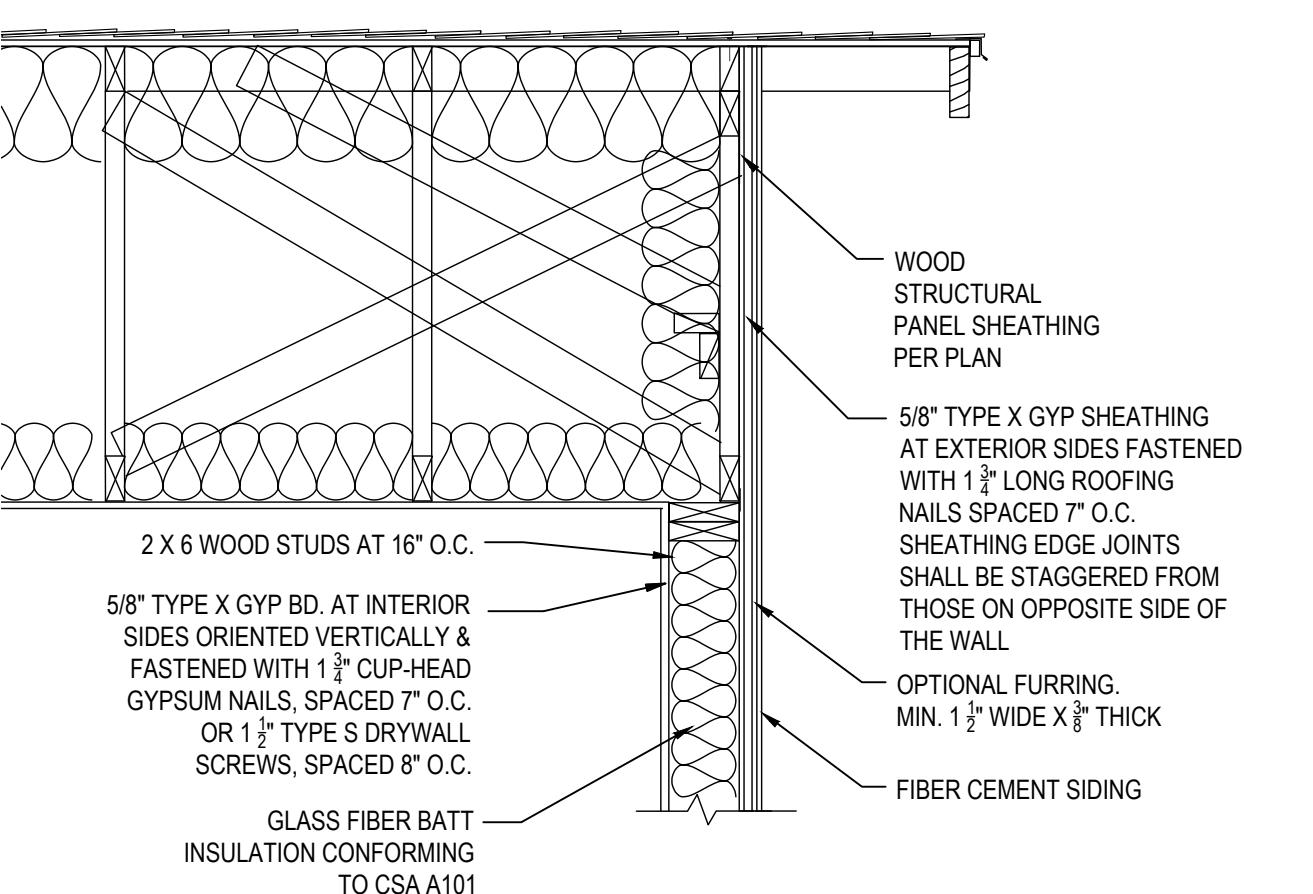
14 1-HOUR FIRE RATED GABLE END FOR STUCCO FINISH
N.T.S.



15 1-HOUR FIRE RATED GABLE END FOR ENGINEERED OR
NATURAL WOOD SIDING
N.T.S.



16 1-HOUR FIRE RATED GABLE END FOR ENGINEERED OR
NATURAL WOOD SIDING
N.T.S.



17 1-HOUR FIRE RATED GABLE END FOR FIBER CEMENT SIDING
N.T.S.

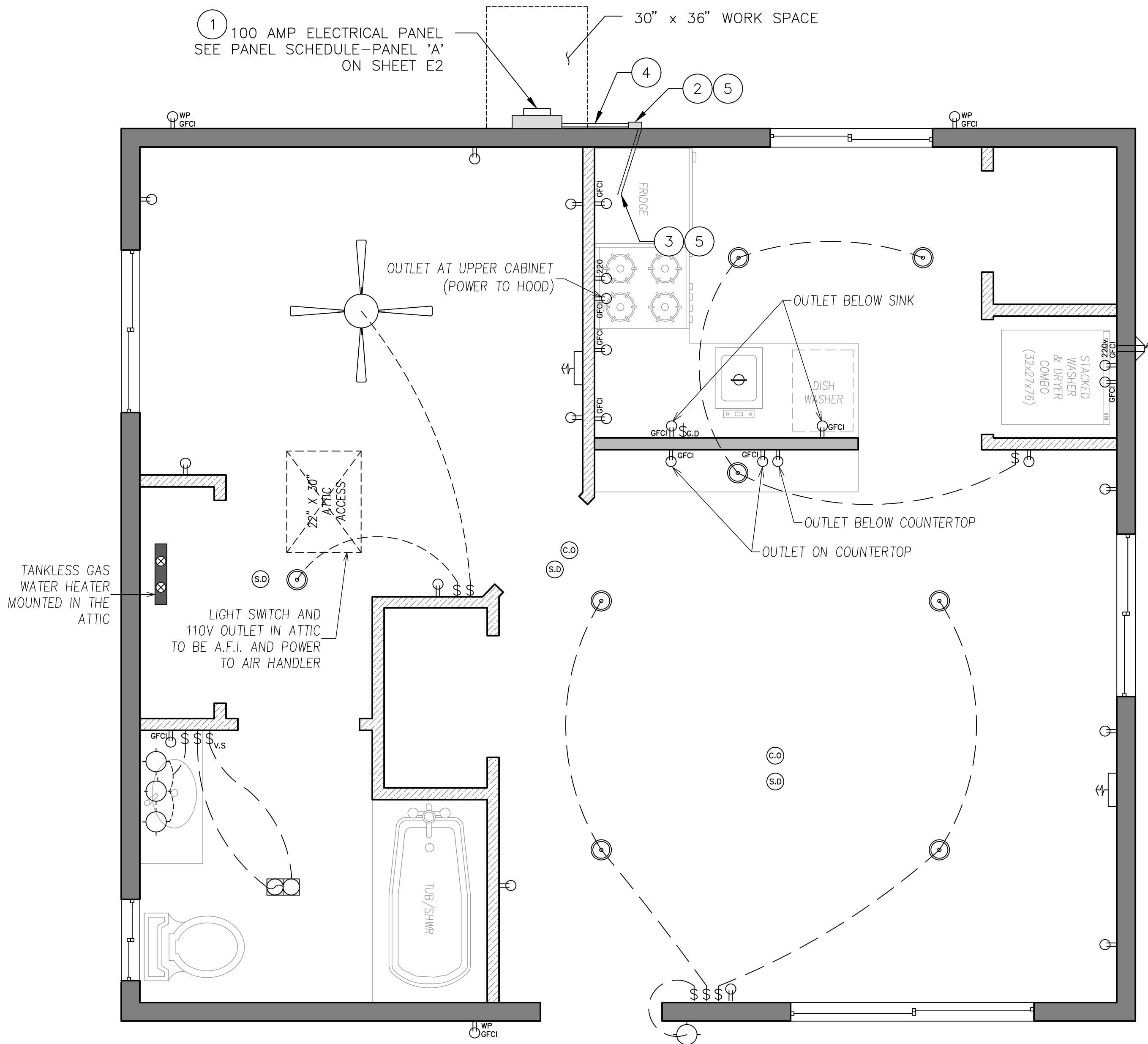
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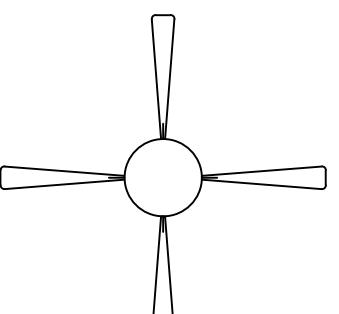
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By: *Mitchell Cook*

12/11/2025



ELECTRICAL LEGEND

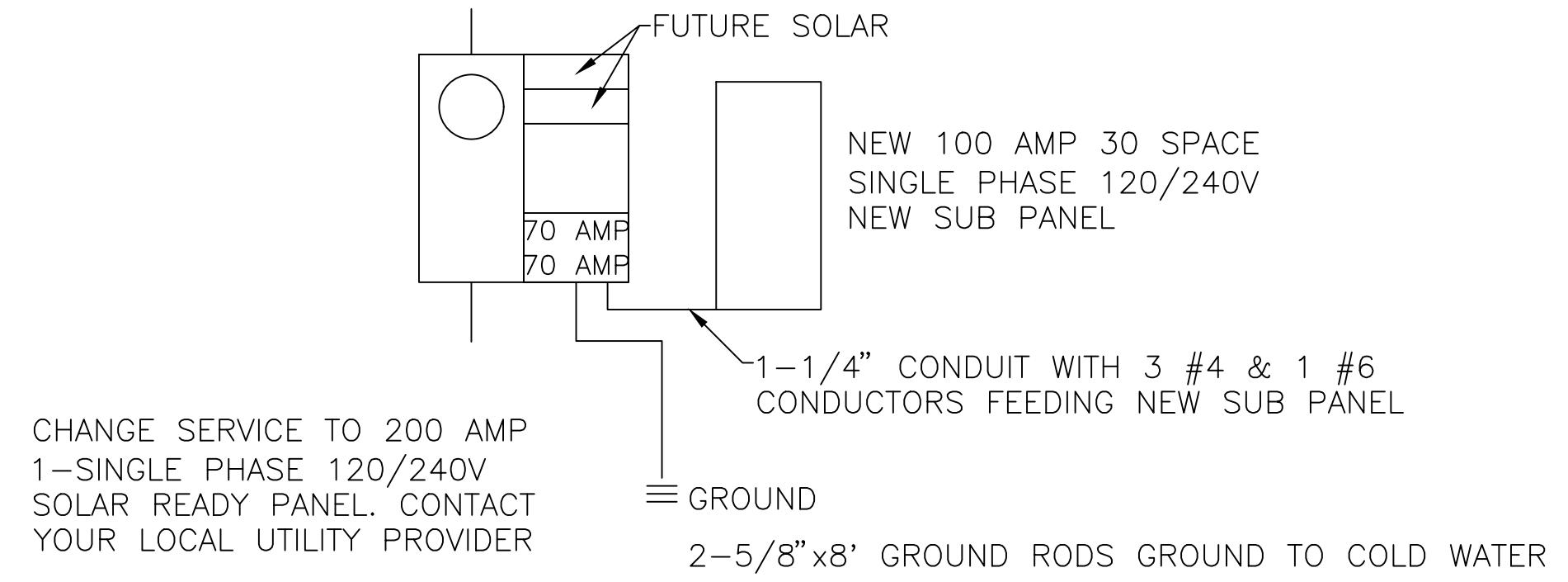
ELECTRICAL LEGEND	
 DUPLEX OUTLET	 FAN AND LIGHT COMBINATION (HE LIGHT)
 GFCI OUTLET	 HIGH EFFICACY LIGHT FIXTURE
 WEATHERPROOF GFCI OUTLET	 HIGH EFFICACY RECESSED LIGHT
\$ WALL SWITCH	 GARBAGE DISPOSAL
\$ _{G.D.} GARBAGE DISPOSAL SWITCH	 HVAC AIR DUCT LOCATION
\$ _{V.S.} VACANCY SENSOR	 FAN & LIGHT COMBO
 SMOKE DETECTOR	
 CARBON MONOXIDE ALARM	

SOLAR READY KEYNOTES

NOTE: SOLAR READY NOTES SHOWN TO DEMONSTRATE PLAN IS SOLAR READY. SEPARATE PERMIT AND FEES ARE REQUIRED. IF REQUIRED, CONTACT A PV/SOLAR PROVIDER FOR PLANS AND PERMITS.

1. THE MAIN ELECTRICAL SERVICE PANEL SHALL NOT BE OF A TYPE WITH A CENTER-FED MAIN CIRCUIT BREAKER AND SHALL INCLUDE RESERVED SPACE ALLOWING FOR INSTALLATION OF DOUBLE-POLE CIRCUIT BREAKERS FOR A FUTURE SOLAR PHOTOVOLTAIC SYSTEM. SUCH RESERVED SPACE SHALL BE POSITIONED AT THE OPPOSITE (LOAD) END FROM THE INPUT FEEDER OR MAIN CIRCUIT BREAKER LOCATION. THE RESERVED SPACE SHALL BE PERMANENTLY AND VISIBLY MARKED AS "FOR FUTURE SOLAR PHOTOVOLTAIC"
2. APPROVED MINIMUM 4-INCH SQUARE ELECTRICAL JUNCTION BOX LOCATED WITHIN 72 INCHES HORIZONTALLY AND 12 INCHES VERTICAL OF MAIN ELECTRICAL SERVICE PANEL
3. MINIMUM 1 INCH DIAMETER LISTED ELECTRICAL METALLIC RACEWAY ORIGINATING AT READILY ACCESSIBLE ATTIC LOCATION WITH PROXIMITY TO SOLAR ZONE AREA AND TERMINATING AT THE REQUIRED ELECTRICAL JUNCTION BOX

SUB-PANEL & SWITCH GEAR FOR FUTURE BATTERY STORAGE



CHANGE SERVICE TO 200 AMP
1-SINGLE PHASE 120/240V
SOLAR READY PANEL. CONTACT
YOUR LOCAL UTILITY PROVIDER

120/240V 1PH 3 WIRE 100 AMP

ML

NEMA-1 FLUSH MOUNT 30 CK **PANEL SCHEDULE -PANEL 'A'**

10KAIC

#49

DESCRIPTION	CKT	OCPD	PHASE A	PHASE B	OCPD	CKT	DESCRIPTION
RECEPTACLES	1	20 AMP	1800	1300	15 AMP	2	LIGHTING
WASHER	3	20 AMP	1800	2700	30 AMP	4	DRYER
RANGE	5	40 AMP	3700	2700	30 AMP	6	DRYER
RANGE	7	40 AMP	3700	1350	20 AMP	8	KITCHEN APPLIANCE
KITCHEN APPLIANCE	9	20 AMP	1350	1800	20 AMP	10	DISH WASHER
RECEPTACLES	11	20 AMP	1800	1800	20 AMP	12	DISPOSAL
EF #1 AND EF #2	13	20 AMP	600	4000	50 AMP	14	COOK TOP
	15			4000	50 AMP	16	COOK TOP
WATER HEATER	17	30 AMP	2400	2400	30 AMP	18	FURNACE
WATER HEATER	19	30 AMP	2400	2400	30 AMP	20	FURNACE
SPACE	21					22	SPACE
SPACE	23					24	SPACE
SPACE	25					26	SPACE
SPACE	27					28	SPACE
SPACE	29					30	SPACE
SPACE	31					32	SPACE
SPACE	33					34	SPACE
SPACE	35					36	SPACE
SPACE	37					38	SPACE
SPACE	39					40	SPACE
SPACE	41					42	SPACE
		TOTAL VA LOAD	14150	11650	<p>These plans and documents have been reviewed for compliance with the applicable codes requirements of the jurisdiction. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards nor relieve the owner, design professional of record or contractor of compliance with applicable codes and standards</p>		
		25% LCU/IML	3538	2913			
		TOTAL LOAD	17688	14563			
		TOTAL LOAD AMPS	64	53			

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CLOTHES DRYER VENT NOTES

1. 4" \varnothing DRYER VENT WITH MAXIMUM 14 FOOT COMBINED HORIZONTAL AND VERTICAL LENGTH WITH TWO 90 DEGREE ELBOWS.
2. SMALL APPLIANCE CIRCUIT LOAD
IN EACH DWELLING UNIT, THE LOAD SHALL BE CALCULATED AT 1500 VOLT-AMPERES FOR EACH 2-WIRE SMALL APPLIANCE BRANCH CIRCUIT AS COVERED BY 210.11(C)(1). WHERE THE LOAD IS SUBDIVIDED THROUGH TWO OR MORE FEEDERS, THE CALCULATED LOAD FOR EACH SHALL INCLUDE NOT LESS THAN 1500 VOLT-AMPERES FOR EACH 2-WIRE SMALL APPLIANCE BRANCH CIRCUIT. THESE LOADS SHALL BE PERMITTED TO BE INCLUDED WITH THE GENERAL LIGHTING LOAD AND SUBJECTED TO THE DEMAND FACTORS PROVIDED IN TABLE 220.42.
2.1. THE INDIVIDUAL BRANCH CIRCUIT PERMITTED BY 210.52(B)(1). EXCEPTION NO. 2, SHALL BE PERMITTED TO BE EXCLUDED FROM THE CALCULATION REQUIRED BY 220.52.
3. LAUNDRY CIRCUIT LOAD
A LOAD OF NOT LESS THAN 1500 VOLT-AMPERES SHALL BE INCLUDED FOR EACH 2-WIRE LAUNDRY BRANCH CIRCUIT INSTALLED AS COVERED BY 210.11(C)(2). THIS LOAD SHALL BE SUBJECTED TO THE DEMAND FACTORS PROVIDED IN TABLE 220.42. [CEC 220.43(B)]
4. APPLIANCE LOAD-DWELLING UNITS
IT SHALL BE PERMISSIBLE TO APPLY A DEMAND FACTOR OF 75 PERCENT TO THE NAMEPLATE RATING LOAD OF FOUR OR MORE APPLIANCES RATED $\frac{1}{4}$ HP OR GREATER, OR 500 WATTS OR GREATER, THAT ARE FASTENED IN PLACE AND THAT ARE SERVED BY THE SAME FEEDER OR SERVICE IN A ONE-FAMILY, TWO-FAMILY, OR MULTIFAMILY DWELLING. THIS DEMAND FACTOR SHALL NOT APPLY TO: HOUSEHOLD ELECTRIC COOKING EQUIPMENT THAT IS FASTENED IN PLACE, CLOTHES DRYERS, SPACE HEATING EQUIPMENT, AND AIR-CONDITIONING EQUIPMENT. [CEC 220.53]
5. ELECTRIC CLOTHES DRYER
THE LOAD FOR HOUSEHOLD ELECTRIC CLOTHES DRYERS IN A DWELLING UNIT SHALL BE EITHER 5,000 WATTS OR THE NAMEPLATE RATING, WHICHEVER IS LARGER, FOR EACH DRYER SERVED. THE USE OF THE DEMAND FACTORS IN TABLE 220.54 SHALL BE PERMITTED. WHERE TWO OR MORE SINGLE-PHASE DRYERS ARE SUPPLIED BY A 3-PHASE, 4-WIRE FEEDER OR SERVICE, THE TOTAL LOAD SHALL BE CALCULATED ON THE BASIS OF TWICE THE MAX. NUMBER CONNECTED BETWEEN ANY TWO PHASES.
KILOVOLT-AMPERES SHALL BE CONSIDERED EQUIVALENT TO KILOWATTS FOR LOADS CALCULATED IN THIS SECTION.

OUTLET NOTES

1. RECEPTACLES SHALL BE INSTALLED SUCH THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE OF ANY WALL SPACE IS MORE THAN 6 FEET FROM A RECEPTACLE OUTLET.[CEC 210.52(A)(1)]
2. GFCI OUTLETS. GROUND FAULT CIRCUIT INTERRUPTER (GFCI) OUTLETS ARE REQUIRED IN BATHROOMS, AT KITCHEN COUNTERTOPS, AT LAUNDRY AND WET BAR SINKS, IN GARAGES, IN CRAWLSPACES, IN UNFINISHED BASEMENTS, AND OUTDOORS. (CEC 210.8)
3. AFCI OUTLETS. ELECTRICAL CIRCUITS IN BEDROOMS, LIVING ROOMS, DINING ROOMS, DENS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS MUST BE PROTECTED BY ARC FAULT CIRCUIT INTERRUPTERS (AFCI). (CEC 210.12)
4. RECEPTACLE OUTLETS SHALL BE LOCATED IN ONE OR MORE OF THE FOLLOWING:
 - 4.1. ON OR ABOVE COUNTERTOP OR WORK SURFACES: ON OR ABOVE, BUT NOT MORE THAN 20 INCHES ABOVE, THE COUNTERTOP OR WORK SURFACE.
 - 4.2. IN COUNTERTOP OR WORK SURFACES: RECEPTACLE OUTLET ASSEMBLIES LISTED FOR USE IN COUNTERTOPS OR WORK SURFACES SHALL BE PERMITTED TO BE INSTALLED IN COUNTERTOPS OR WORK SURFACES.
 - 4.3. BELOW COUNTERTOP OR WORK SURFACES: NOT MORE THAN 12 INCHES BELOW THE COUNTERTOP OR WORK SURFACE. RECEPTACLES INSTALLED BELOW A COUNTERTOP OR WORK SURFACE SHALL NOT BE LOCATED WHERE THE COUNTERTOP OR WORK SURFACE EXTENDS MORE THAN 6 INCHES BEYOND ITS SUPPORT BASE. [CEC 210.52(C)(3)]
5. BATHROOMS
AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED IN BATHROOMS WITHIN 3FEET OF THE OUTSIDE EDGE OF EACH BASIN. THE RECEPTACLE OUTLET SHALL BE LOCATED ON A WALL OR PARTITION THAT IS ADJACENT TO THE BASIN OR BASIN COUNTERTOP, LOCATED ON THE COUNTERTOP, OR INSTALLED ON THE SIDE OR FACE OF THE BASIN CABINET. IN NO CASE SHALL THE RECEPTACLE BE LOCATED MORE THAN 12 INCHES BELOW THE TOP OF THE BASIN OR BASIN COUNTERTOP RECEPTACLE OUTLET ASSEMBLIES LISTED FOR USE IN THE COUNTERTOPS SHALL BE PERMITTED TO BE INSTALLED IN THE COUNTERTOP. [CEC 210.52(D)]
6. OUTDOOR OUTLETS
ALL EXTERIOR RECEPTACLES SHALL BE WP/GFCI PROTECTED.
FOR A ONE-FAMILY DWELLING THAT IS AT GRADE LEVEL, AT LEAST ONE RECEPTACLE OUTLET READILY ACCESSIBLE FROM GRADE AND NOT MORE THAN $6\frac{1}{2}$ FEET ABOVE GRADE LEVEL SHALL BE INSTALLED AT THE FRONT AND BACK OF THE DWELLING. [210.52(E)(1)]
CITY OF HAN
7. LAUNDRY AREAS
IN DWELLING UNITS, AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED IN AREAS DESIGNATED FOR THE INSTALLATION OF LAUNDRY EQUIPMENT. [210.52(F)]
THIS SET C
MUST BE KE
NO CHANG
MADE EXC
8. GFCI OUTLETS. GROUND FAULT CIRCUIT INTERRUPTER (GFCI) OUTLETS ARE REQUIRED IN BATHROOMS, AT KITCHEN COUNTERTOPS, AT LAUNDRY AND WET BAR SINKS, IN GARAGES, IN CRAWLSPACES, IN UNFINISHED BASEMENTS, AND OUTDOORS. (CEC 210.8)
THE ST
SPECIFICA
PERMIT OR
VIOLATION C
ORDINANCE
9. AFCI OUTLETS. ARC FAULT CIRCUIT INTERRUPTERS (AFCI) PROTECTION IS REQUIRED THROUGHOUT ALL 15 AND 20-AMP 120V CIRCUITRY THAT IS NOT GFCI PROTECTED. (CEC 210.12)



REVISION

PROJECT TITLE	CITY OF HANFORD – PRE-REVIEWED ADU PROGRAM	
SHEET DESCRIPTION	ELECTRICAL PLAN	
AGENCY	DATE	10/28/2024
SJV REAP		

550

DRAWING SCALE
OF HANFORD 1/2" = 1'
APPROVED

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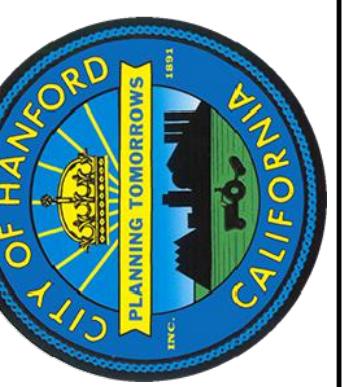
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BY: *Mitchell Coach*
12/11/2025

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PROJECT TITLE CITY OF HANFORD –
PRE-REVIEWED ADU PROGRAM
SHEET DESCRIPTION PLUMBING PLAN
AGENCY SJV REAP DATE 10/28/2024

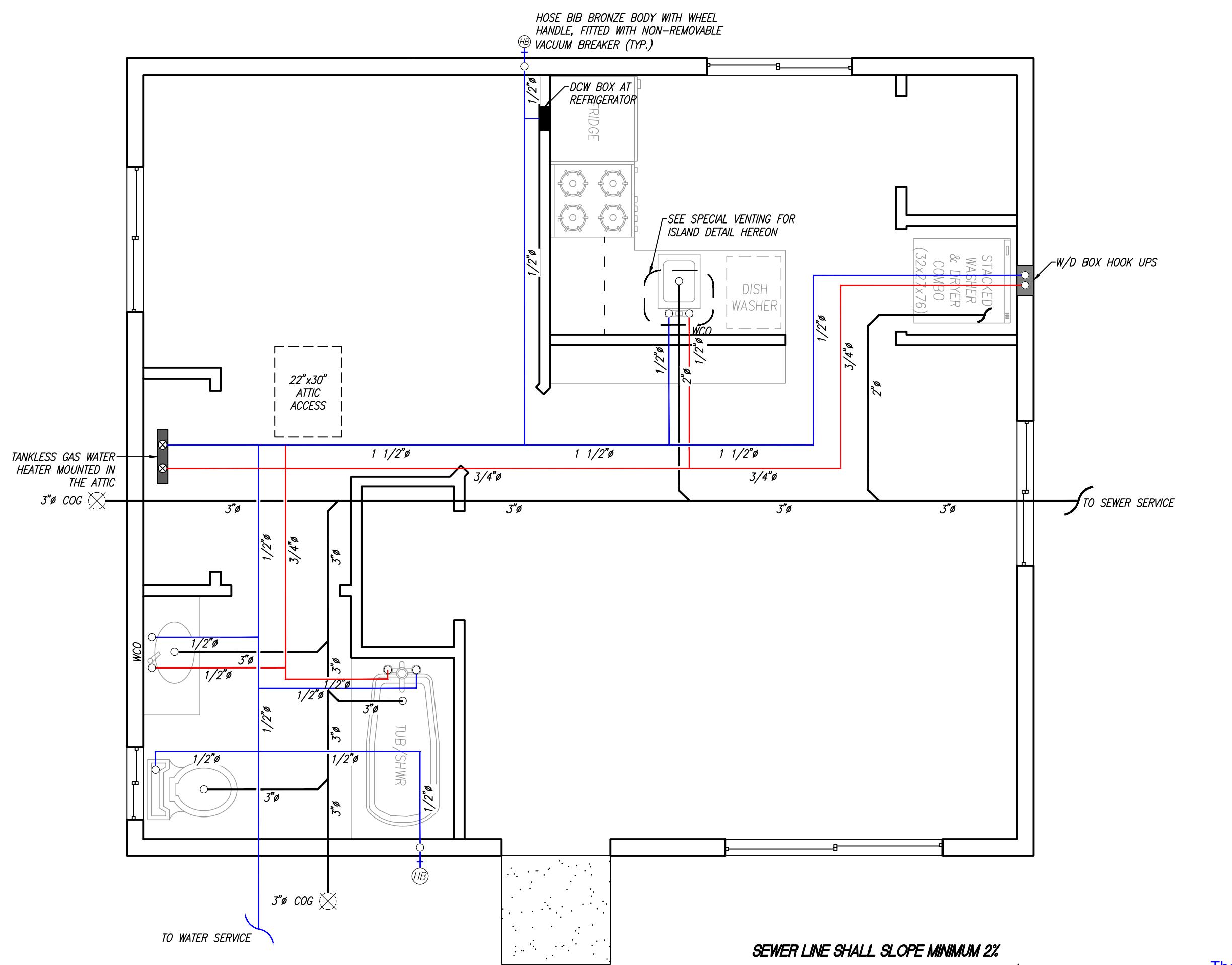
550
DRAWING SCALE

3/8" = 1'
CITY OF HANFORD BUILDING DIVISION
APPROVED

THIS SET OF PLANS AND SPECIFICATIONS
MUST BE KEPT ON FILE AT ALL TIMES AND
NO CHANGES OR ALTERATIONS SHALL BE
MADE EXCEPT BY THE BUILDING DIVISION.

THE STAMPING OF THIS PLAN AND
SPECIFICATIONS SHALL BE HELD TO
PERFECT AND APPROVED PRIOR TO
THE VIOLATION OF ANY PROVISION OF AN CITY
ORDINANCE OR STATE LAW, REVIEWED FOR
CODE COMPLIANCE.

By: *Mitchell Coach*
12/11/2025



SEWER LINE SHALL SLOPE MINIMUM 2%
UTILITY FEEDS, MPOE'S, AND METER/SERVICE
LOCATIONS ARE NOT LOCATED IN PLANS

These plans and documents have been reviewed
for compliance with the applicable codes
requirements of the jurisdiction. The stamping
of these plans shall not be held to permit or be
an approval of any violation of applicable codes
and standards nor relieve the owner, design
professional of record or contractor of
compliance with applicable codes and standards

ROD CARSEY CONSULTING & PLAN CHECK
SERVICE

610.3 Quantity of Water

The quantity of water required to be supplied to every plumbing fixture shall be represented by fixture units, as shown in Table 610.3. Equivalent fixture values shown in Table 610.3 include both hot and cold water demand.

TABLE 610.3
WATER SUPPLY FIXTURE UNITS (WSFU) AND MINIMUM FIXTURE BRANCH PIPE SIZES³

APPLIANCES, APPURTEANCES OR FIXTURES ²	MINIMUM FIXTURE BRANCH PIPE SIZE ^{1,4} (inches)	PRIVATE	PUBLIC	ASSEMBLY ⁵
Bathtub or Combination Bath/Shower (fill)	1/2	4.0	4.0	—
3/4 inch Bathtub Fill Valve	3/4	10.0	10.0	—
Bidet	1/2	1.0	—	—
Clothes Washer	1/2	4.0	4.0	—
Dental Unit, cuspidor	1/2	—	1.0	—
Dishwasher, domestic	1/2	1.5	1.5	—
Drinking Fountain or Water Cooler	1/2	0.5	0.5	0.75
Hose Bibb	1/2	2.5	2.5	—
Hose Bibb, each additional ⁶	1/2	1.0	1.0	—
Lavatory	1/2	1.0	1.0	1.0
Lawn Sprinkler, each head ⁵	—	1.0	1.0	—
Mobilehome or Manufactured Home, each (minimum) ⁹	—	6.0	—	—
Sinks	—	—	—	—
Bar	1/2	1.0	2.0	—
Clinical Faucet	1/2	—	3.0	—
Clinical Flushometer Valve with or without faucet	1	—	8.0	—
Kitchen, domestic with or without dishwasher	1/2	1.5	1.5	—
Laundry	1/2	1.5	1.5	—
Service or Mop Basin	1/2	1.5	3.0	—
Washup, each set of faucets	1/2	—	2.0	—
Shower, per head	1/2	2.0	2.0	—
Urinal, 1.0 GPF Flushometer Valve	3/4	See Footnote ⁷	—	—
Urinal, greater than 1.0 GPF Flushometer Valve	3/4	See Footnote ⁷	—	—
Urinal, flush tank	1/2	2.0	2.0	3.0
Urinal with Drain Cleansing Action	1/2	1.0	1.0	1.0
Wash Fountain, circular spray	3/4	—	4.0	—
Water Closet, 1.6 GPF Gravity Tank	1/2	2.5	2.5	3.5
Water Closet, 1.6 GPF Flushometer Tank	1/2	2.5	2.5	3.5
Water Closet, 1.6 GPF Flushometer Valve	1	See Footnote ⁷	—	—
Water Closet, greater than 1.6 GPF Gravity Tank	1/2	3.0	5.5	7.0
Water Closet, greater than 1.6 GPF Flushometer Valve	1	See Footnote ⁷	—	—

For SI units: 1 inch = 25 mm

Notes:

¹ Size of the cold branch pipe, or both the hot and cold branch pipes.

² Appliances, appurteances, or fixtures not referenced in this table shall be permitted to be sized by reference to fixtures having a similar flow rate and frequency of use.

³ The listed fixture unit values represent their load on the cold water building supply. The separate cold water and hot water fixture unit value for fixtures having both hot and cold water connections shall be permitted to be each taken as three-quarter of the listed total value of the fixture.

⁴ The listed minimum supply branch pipe sizes for individual fixtures are the nominal (LD) pipe size.

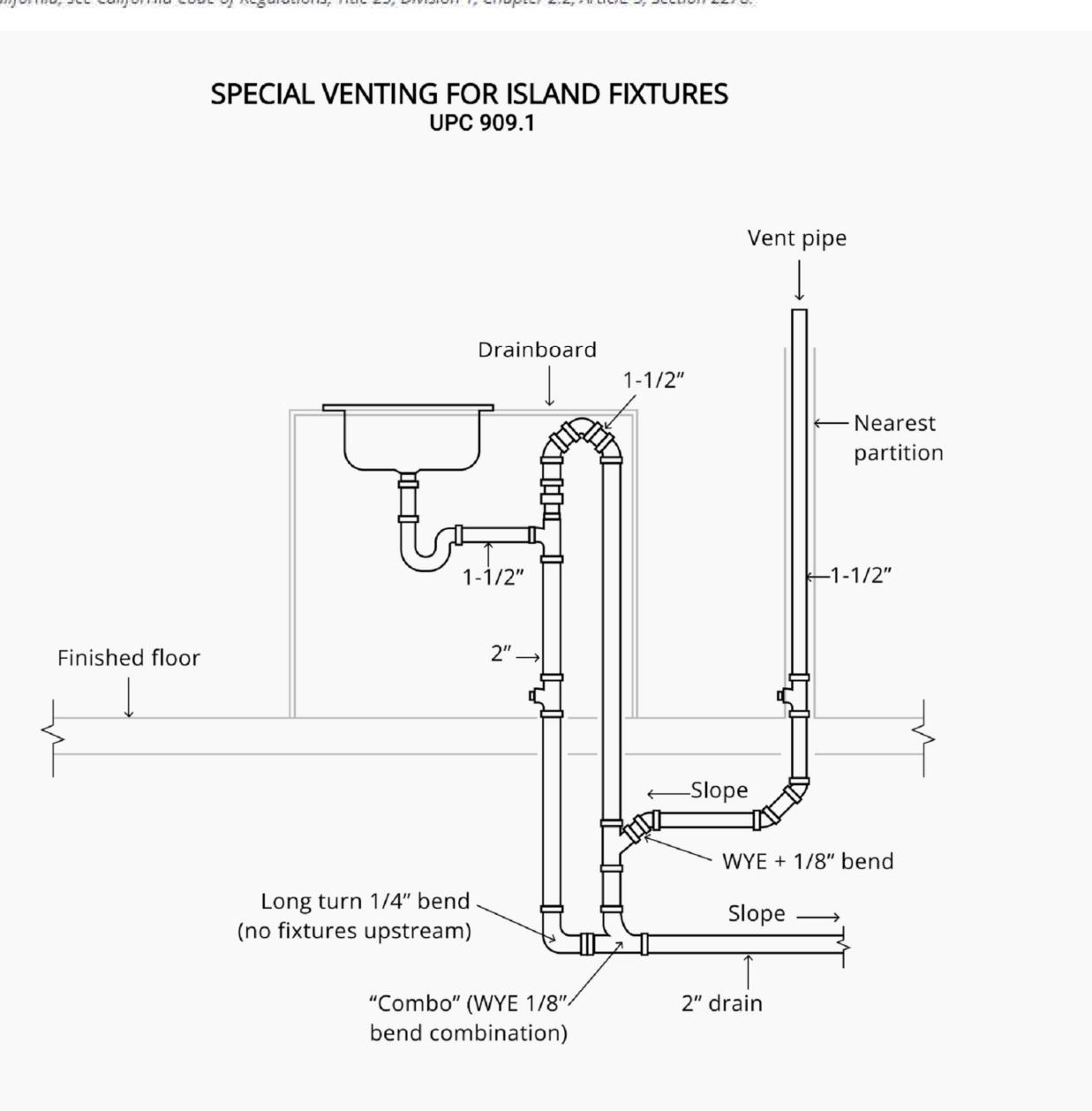
⁵ For fixtures or supply connections likely to impose continuous flow demands, determine the required flow in gallons per minute (gpm) (L/s), and add it separately to the demand in gpm (L/s) for the distribution system or portions thereof.

⁶ Assembly [Public Use (See Table 422.1)].

⁷ Where sizing flushometer systems, see Section 610.10.

⁸ Reduced fixture unit loading for additional hose bibs is to be used where sizing total building demand and for pipe sizing where more than one hose bib is supplied by a segment of water distribution pipe. The fixture branch to each hose bib shall be sized on the basis of 2.5 fixture units.

⁹ For water supply fixture unit values related to lots within mobilehome parks in all parts of the State of California, see California Code of Regulations, Title 25, Division 1, Chapter 2, Article 5, Section 1278. For water supply fixture unit values related to lots within special occupancy parks in all parts of the State of California, see California Code of Regulations, Title 25, Division 1, Chapter 2, Article 5, Section 2278.



METER AND STREET SERVICE (inches)	BUILDING SUPPLY AND BRANCHES (inches)	MAXIMUM ALLOWABLE LENGTH (feet)													
		40	60	80	100	150	200	250	300	400	500	600	700	800	900
PRESSURE RANGE — 30 to 45 psi ¹															
3/4	1/2	6	5	4	3	2	1	1	0	0	0	0	0	0	0
3/4	3/4	16	16	14	12	9	6	5	4	4	3	2	2	2	1
3/4	1	29	25	23	21	17	15	13	12	10	8	6	6	6	6
1	1	36	31	27	25	20	17	15	13	12	10	8	6	6	6
3/4	1 1/4	36	33	31	28	24	23	21	19	17	16	13	12	12	11
1	1 1/4	54	47	42	38	32	28	25	23	19	17	14	12	12	11
1 1/2	1 1/4	78	68	57	48	38	32	28	25	21	18	15	12	12	11
1	1 1/2	85	84	79	65	56	48	43	38	32	28	26	22	21	20
1 1/2	1 1/2	150	124	105	91	70	57	49	45	36	31	26	23	21	20
2	1 1/2	151	129	129	110	80	64	53	46	38	32	27	23	21	20
1	2	85	85	85	85	85	82	80	66	61	57	52	49	46	43
1 1/2	2	220	205	190	176	155	138	127	104	85	70	61	57	54	51
2	2	370	327	292	265	217	185	164	147	124	96	70	61	57	54
2	2 1/2	445	418	390	370	330	300	280	265	240	220	198	175	158	143
For SI units: 1 inch = 25 mm; 1 foot = 304.8 mm; 1 pound-force per square inch = 6.8947 kPa															
Notes:															
¹ Available static pressure after head loss.															
² Building supply, not less than 3/4 of an inch (20 mm) nominal size.															
ASSUMPTION: 3/4" MUNICIPAL WATER SERVICE															
CONNECTION TO BE DETERMINED ON SITE															

NOTES

ASSUMPTION: 3/4" MUNICIPAL WATER SERVICE

CONNECTION TO BE DETERMINED ON SITE



California

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

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

CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL																															
<p>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.</p> <p>301.1.1 Addition and alteration. 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.</p> <p>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 4.106.4.3 for application.</p> <p>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.</p> <p>Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace non-compliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.</p> <p>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.</p> <p>SECTION 302 MIXED OCCUPANCY BUILDINGS</p> <p>302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.</p> <p>Exception:</p> <ul style="list-style-type: none"> 1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable. 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. 																															
<p>DIVISION 4.1 PLANNING AND DESIGN</p> <p>ABBREVIATION DEFINITIONS:</p> <p>HCD Department of Housing and Community Development BSC California Building Standards Commission DSA-SS Division of the State Architect, Structural Safety OSHPD Office of Statewide Health Planning and Development LR Low Rise HR High Rise AA Additions and Alterations N New</p> <p>CHAPTER 4 RESIDENTIAL MANDATORY MEASURES</p> <p>SECTION 4.102 DEFINITIONS</p> <p>4.102.1 DEFINITIONS</p> <p>The following terms are defined in Chapter 2 (and are included here for reference)</p> <p>FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.</p> <p>WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.</p> <p>4.106 SITE DEVELOPMENT</p> <p>4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.</p> <p>4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development in which 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.</p> <ol style="list-style-type: none"> 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. <p>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.</p> <p>(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)</p> <p>4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:</p> <ol style="list-style-type: none"> 1. Swales 2. Water collection and disposal systems 3. French drains 4. Water retention gardens 5. Other water measures which keep surface water away from buildings and aid in groundwater recharge. <p>Exception: Additions and alterations not altering the drainage path.</p> <p>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.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power. 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 parking facilities. <p>4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, there is a 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.</p> <p>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 proposed location of an EV charger at the time of original construction in accordance with the California Electrical Code.</p> <p>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".</p>																															
<p>4.106.4.2 New multifamily developments, hotels and motels and new residential parking facilities. Where the service panel or subpanel circuit directory is not required to identify the raceway, before space is reserved to 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 for further details.</p> <p>4.106.4.2.1 Multifamily developments projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.</p> <p>4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.</p> <p>4.106.4.2.3 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 EVs at all required EV spaces at a minimum of 40 amperes.</p> <p>Exception: 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.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces. 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 EV chargers installed. <p>Notes:</p> <ol style="list-style-type: none"> a. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use. <p>4.106.4.2.4 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings. 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 altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE.</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. 2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use. <p>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 successor(s).</p> <p>4.106.4.2.6 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings. 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.</p> <p>4.106.4.2.7 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 dwelling unit when more than one parking space is provided for use by a single dwelling unit.</p> <p>Exception: Areas of parking facilities served by parking lifts.</p> <p>4.106.4.2.8 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.</p> <p>4.106.4.2.9 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 EVs at all required EV spaces at a minimum of 40 amperes.</p> <p>Exception: 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.</p> <p>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.</p> <p>Notes:</p> <ol style="list-style-type: none"> a. Construction documents shall show locations of future EV spaces. b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use. <p>4.106.4.2.10 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 dwelling unit when more than one parking space is provided for use by a single dwelling unit.</p> <p>Exception: Areas of parking facilities served by parking lifts.</p> <p>4.106.4.2.11 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 area and shall be available for use by all residents or guests.</p> <p>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 be required for EV capable spaces.</p> <p>4.106.4.2.12 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.</p> <p>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 requirements.</p> <p>4.106.4.2.13 Location. EVCS shall comply with at least one of the following options:</p> <p>These plans and documents have been reviewed for compliance with the applicable codes</p> <p>4.106.4.2.14 Requirements of the jurisdiction. The stamping authority of the jurisdiction of these plans shall not be held to permit or be responsible for any violation of applicable codes and standards nor relieve the owner, designer, professional of record or contractor of compliance with applicable codes and standards.</p> <p>4.106.4.2.15 PRE-rinse spray valves. 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 shut-off.</p> <p>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).</p> <p>4.106.4.2.16 Product Class. Spraying force in onces force (ozf)</p> <p>4.106.4.2.17 Maximum Flow Rate (gpm).</p> <table border="1"> <tr> <td>Product Class 1 (< 5.0 ozf)</td> <td>1.00</td> </tr> <tr> <td>Product Class 2 (> 5.0 ozf and < 8.0 ozf)</td> <td>1.20</td> </tr> <tr> <td>Product Class 3 (> 8.0 ozf)</td> <td>1.28</td> </tr> </table> <p>4.106.4.2.18 Title 20 Section 1605.3 (h)(4)(a). Commercial pre-rinse spray valves 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(grf).</p> <p>4.106.4.2.19 Product Class. Spraying force in onces force (ozf)</p> <p>4.106.4.2.20 Maximum Flow Rate (gpm).</p> <table border="1"> <tr> <td>Product Class 1 (< 5.0 ozf)</td> <td>1.00</td> </tr> <tr> <td>Product Class 2 (> 5.0 ozf and < 8.0 ozf)</td> <td>1.20</td> </tr> <tr> <td>Product Class 3 (> 8.0 ozf)</td> <td>1.28</td> </tr> </table> <p>4.106.4.2.21 Submitters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings. Submitters shall be installed to measure water usage of individual rental dwelling units in accordance with the California Plumbing Code.</p> <p>4.106.4.2.22 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.</p> <p>NOTE: THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.</p> <p>4.106.4.2.23 Maximum Fixture Water Use.</p> <table border="1"> <thead> <tr> <th>Fixture Type</th> <th>Flow Rate</th> </tr> </thead> <tbody> <tr> <td>SHOWER HEADS (RESIDENTIAL)</td> <td>1.8 GMP @ 80 PSI</td> </tr> <tr> <td>LAVATORY FAUCETS (RESIDENTIAL)</td> <td>MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI</td> </tr> <tr> <td>LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS</td> <td>0.5 GPM @ 60 PSI</td> </tr> <tr> <td>KITCHEN FAUCETS</td> <td>1.8 GPM @ 60 PSI</td> </tr> <tr> <td>METERING FAUCETS</td> <td>0.2 GALL/CYCLE</td> </tr> <tr> <td>WATER CLOSET</td> <td>1.28 GAL/FLUSH</td> </tr> <tr> <td>URINALS</td> <td>0.125 GAL/FLUSH</td> </tr> </tbody> </table> <p>4.106.4.2.24 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.</p>				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	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	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 GALL/CYCLE	WATER CLOSET	1.28 GAL/FLUSH	URINALS	0.125 GAL/FLUSH
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WATER CLOSET	1.28 GAL/FLUSH																														
URINALS	0.125 GAL/FLUSH																														
<p>4.304 OUTDOOR WATER USE</p> <p>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.</p> <p>NOTES:</p> <ol style="list-style-type: none"> 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 available at: https://www.water.ca.gov <p>DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY</p> <p>4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE</p> <p>4.406.1 RODENT PROOFING. Animal access around pipes, electric cables, conduits or other openings in soleplate plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.</p> <p>4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING</p> <p>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.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. Excavated soil and land-clearing debris. 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite. 3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility. <p>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.</p> <ol style="list-style-type: none"> 1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale. 2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream). 3. Identify diversion facilities where the construction and demolition waste material collected will be taken. 4. Identify construction methods employed to reduce the amount of construction and demolition waste generated. 5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both. <p>4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.4.</p> <p>Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.</p> <p>4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1</p> <p>4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed 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</p> <p>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.</p> <p>Notes:</p> <ol style="list-style-type: none"> 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). <p>4.410 BUILDING MAINTENANCE AND OPERATION</p> <p>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:</p> <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major equipment and equipment. Plumbing and drainage, including gutters and downspouts. Space conditioning systems, including condensers and air filters. Landscape irrigation systems. Water reuse systems. 3. Information from local utility, water and waste recovery providers on methods to further reduce energy, water and waste. 4. Public transportation and/or cycling options available in the area. 5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range. 6. Information about water-conserving landscape and irrigation design and controllers which conserve water. 7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. 8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. 9. Information about state solar energy and incentive programs available. 10. A copy of all special inspections requirements 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. <p>4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible areas(s) that serve all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.</p> <p>Exception: Residential units that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are not required to comply with the organic waste portion of this section.</p>																															
<p>DIVISION 4.5 ENVIRONMENTAL QUALITY</p> <p>SECTION 4.501 GENERAL</p> <p>5.101.1 Scope. The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.</p> <p>SECTION 4.502 DEFINITIONS</p> <p>5.102.1 DEFINITIONS</p> <p>The following terms are defined in Chapter 2 (and are included here for reference)</p> <p>AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered building elements.</p> <p>COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardwood, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-beams or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 9312.0.</p> <p>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.</p>																															



California

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

Y	N/A	RESPON. PARTY		
MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Residue Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundreds of a gram (g O ₃ /g ROG). Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.				
MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.				
PRODUCT-WEIGHTED MIR (PWWMR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWWMR is the total product reactivity expressed to hundreds of a gram of ozone formed per gram of product (excluding container and packaging). Note: PWWMR is calculated according to equations found in CCR, Title 17, Section 94521 (a).				
REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.				
VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressure greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).				
4.503 FIREPLACES				
4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.				
4.504 POLLUTANT CONTROL				
4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.				
4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.				
4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulk 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 caulk shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAGMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.				
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with section 94504.2.				
4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.				
4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR limits for ROC in Section 94522(e)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of California Code of Regulations, Title 17, commencing with Section 94520, and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.				
4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:				
1. Manufacturer's product specification. 2. Field verification of on-site product containers.				
TABLE 4.504.1 - ADHESIVE VOC LIMIT_{1,2} (Less Water and Less Exempt Compounds in Grams per Liter)				
ARCHITECTURAL APPLICATIONS	VOC LIMIT			
INDOOR CARPET ADHESIVES	50			
CARPET PAD ADHESIVES	50			
OUTDOOR CARPET ADHESIVES	150			
WOOD FLOORING ADHESIVES	100			
RUBBER FLOOR ADHESIVES	60			
SUBFLOOR ADHESIVES	50			
CERAMIC TILE ADHESIVES	65			
VCT & ASPHALT TILE ADHESIVES	50			
DRYWALL & PANEL ADHESIVES	50			
COVE BASE ADHESIVES	50			
MULTIPURPOSE CONSTRUCTION ADHESIVE	70			
STRUCTURAL GLAZING ADHESIVES	100			
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250			
OTHER ADHESIVES NOT LISTED	50			
SPECIALTY APPLICATIONS				
PVC WELDING	510			
CPVC WELDING	490			
ABS WELDING	325			
PLASTIC CEMENT WELDING	250			
ADHESIVE PRIMER FOR PLASTIC	550			
CONTACT ADHESIVE	80			
SPECIAL PURPOSE CONTACT ADHESIVE	250			
STRUCTURAL WOOD MEMBER ADHESIVE	140			
TOP & TRIM ADHESIVE	250			
SUBSTRATE SPECIFIC APPLICATIONS				
METAL TO METAL	30			
PLASTIC FOAMS	50			
POROUS MATERIAL (EXCEPT WOOD)	50			
WOOD	30			
FIBERGLASS	80			
1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.				
2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.				

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 NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

Y	N/A	RESPON. PARTY
TABLE 4.504.2 - SEALANT VOC LIMIT (Less Water and Less Exempt Compounds in Grams per Liter)		
SEALANTS	VOC LIMIT	
ARCHITECTURAL	250	
MARINE DECK	760	
NONMEMBRANE ROOF	300	
ROADWAY	250	
SINGLE-PLY ROOF MEMBRANE	450	
OTHER	420	
SEALANT PRIMERS		
ARCHITECTURAL	250	
NON-POROUS	775	
POROUS	500	
MODIFIED BITUMINOUS	760	
MARINE DECK	750	

TABLE 4.504.2 - SEALANT VOC LIMIT

(Less Water and Less Exempt Compounds in Grams per Liter)

SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS₃

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

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

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

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

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

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.

Y	N/A	RESPON. PARTY
TABLE 4.504.5 - FORMALDEHYDE LIMITS.		
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION		
PRODUCT	CURRENT LIMIT	
HARDWOOD PLYWOOD VENEER CORE	0.05	
HARDWOOD PLYWOOD COMPOSITE CORE	0.05	
PARTICLE BOARD	0.09	
MEDIUM DENSITY FIBERBOARD	0.11	
THIN MEDIUM DENSITY FIBERBOARD	0.13	

1. VALUES IN THIS TABLE ARE DER

Heating, Ventilating and Air Conditioning INSTALLATION REQUIREMENTS

General Notes

- The following Codes apply to this plan: 2022 California Residential Code, 2022 California Building Code, 2022 California Mechanical Code, 2022 California Energy Code, and the 2022 California Green Code.
- Calculations and specifications are based upon Title 24 documents provided at the time the design was performed. Any subsequent changes or additions to these documents or structure may affect the design attached herewith.
- Mechanical exhaust systems in bathrooms shall be in accordance with California 2022 Green Building Standards, Residential Mandatory Measures, Section 4.506.1 A Bathroom is room which contains a bathtub, shower or tub/shower combination.
- Mechanical exhaust systems in private toilet rooms are required and shall have a minimum capacity of 50 CFM intermittent or 25 CFM continuous as per 2022 California Mechanical Code, Table 4.4.
- All mechanical equipment and devices shall be installed in accordance to applicable federal, state and local codes and standards. All applicable codes shall supersede any feature directly or indirectly implied by these plans and specifications. Where work of a higher degree is indicated in the plans and specifications, this requirement shall govern.
- Equipment, registers and grilles are to be as specified, or equal. Substitutions must demonstrate equivalence on unit capacities and air flow performance based upon design conditions, including SEER, EER, AFUE, sensible capacity at design conditions, heating output, airflow at design static pressure, cooling coil static pressure drop across wet coil, etc. All equipment must be installed in accordance with manufacturer's recommendations.
- Where mechanical equipment is located in the attic provide access and passage way in accordance with 2022 California Mechanical Code, Section 304.4 Provide a minimum 24" wide set of stairs access to the attic. The centerline distance from the access point to the equipment shall not exceed 20ft. The passage way must be unobstructed and the access shall be large enough to remove the largest piece of equipment.
- Adhesives, sealants and caulk used on the project shall meet requirements of the 2022 California Green Code, Section 4.504.1.
- This design was based upon the architectural and structural plans provided to the designer at the time this design was performed. It is the owner/builders responsibility to coordinate these plans with framing and other trades.
- Installing contractor shall review the design and assume full responsibility for proper installation, operation, and acceptable noise levels.

Installation Notes

- Locations of equipment, registers, grilles and duct shown on these plans are approximate and are shown for schematic purposes only and for clarity. If the actual location of equipment, registers, grilles and ducts significantly vary from the plans to the extent that airflow may be impeded or reduced, it is the installing contractor's responsibility to meet the intended design performance.
- Cooling coil(s) condensate and overflow lines are to be properly trapped, vented, and sloped for drainage in accordance with 2022 California Mechanical Code, Sections 310.4, 310.5 and 310.6.
- Cooling coils installed in attic spaces are to be installed over an auxiliary water tight safety pan. Safety pan is to have drainage in case of cooling coil overflow. Drainage overflow piping to be piped to an outside wall and over a window. Pipe through wall is to be terminated with a 90-degree elbow, turned down. Piping through walls is to be flashed and made water tight.
- Exact location of heating and cooling unit(s) to be verified and determined on site.
- All ductwork shall be installed and supported in accordance with 2022 California Mechanical Code and manufacturer's published recommendations.
- All supply air registers boots are to be provided and installed with sheet rock grounds and transitional duct connections (PH1- PH2 or PH3) B-Boxes or shallow boots with tap-ins is not allowed unless approved otherwise.
- All return air boots are to be a minimum of 6" in depth and be provide and installed with sheet rock grounds.
- In accordance with 2022 California Green Code, Section 4.504.1, At time of rough installation, or during storage on the construction site and until final start up of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered.
- All sheet metal duct and fittings and register/grille boots, including screens, are to be sealed air tight with approved duct sealant. After installation, the entire system shall be tested and certified in accordance with the Title 24 CF-1R document.
- All sheet metal duct and fittings are to be externally insulated in accordance with Title 24 specifications. Insulation is to be lapped, put in tight and sealed in accordance with metal film tape. NOT acceptable - Filling up flexible duct insulation and vinyl covering over sheet metal film tape. NOT acceptable.
- Exhaust fan discharge air is to be discharged outside. As per 2022 California Mechanical Code, Section 407.2, the point of discharge air shall be located a minimum of 10ft. from any mechanical ventilation intake and a minimum of 10ft. from any occupied areas, doors or windows which allows air entry into the building.
- All ducts and spaces provided to convey supply, return or fresh air shall be fully ducted using duct board, sheet metal, flexible duct or other approved materials. Plywood, drywall, OSB, 2x4's, 2x6's etc are NOT approved materials. Boxed in framing members, panned joists and stud bays, or other non-ducted building cavities are prohibited.
- This design incorporates trunk and branch layouts for the strict purpose of zoning and air balancing. The installing contractor shall furnish and install inline-balancing dampers, with locking quadrants, in all main ducts leading away from the primary supply air plenum and/or where shown on plans.
- Final air balancing is the responsibility of the installing contractor as per 2022 California Mechanical Code, Section 314.1. Air balancing is to be performed on every home using a calibrated Balometer. Unless otherwise noted, the CFM shown at each register is an average design CFM of cardinal orientations, unless specified otherwise, required to meet the room heating and cooling loads. Air balancing using register adjustments is acceptable for fine tuning the air balance only. When an Air Balancing Schedule is provided, air balance to the specific orientation.
- Refrigerant line sets are to be sized in accordance with manufacturer's recommendations and are not to exceed the maximum distance per manufacturer's specifications.
- Refrigerant service ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be protected from unauthorized access by means acceptable to the Enforcing Agency in accordance with 2022 California Mechanical Code, Section 1105.11.
- Refrigerant suction piping is to be insulated in accordance with T24 Mandatory Measures 150/02 Building Energy Efficiency Standards Table 150-B and Equation 150-A. Protection of insulation shall be in accordance with Section 150/03A - Mandatory Features and Devices. If applicable, special care must be taken in laying out, cutting and installing duct through TJI floor joists. Passage through floor joist is to be in accordance with floor joist manufacturer's recommendations and guidelines.
- Thermostats shall be 5-day/2-day programmable night setback.

2022 Energy Efficiency Contractor Requirements

It is the Builder and Installing Contractor responsibility to refer to the Title 24 CF1R Certificates of Energy Compliance for verification of energy measures and required contractor testing.

After installation the installing contractor shall submit an Installation Certificate (Form, CF2R), completed and signed by the installer, listing the equipment installed (manufacturer, model, and efficiencies), along with other field verifications and Testing as specified in the Title 24 Certificate of Compliance (Form CF1R).

Registered copies of Installing Contractor CF2R and HERS Rater CF3R Field Verified and Diagnostic Testing Forms are to be submitted prior to final inspection in accordance with CEEES Sections 10-103(a)(3) and 10-103 (a)(5).

HVAC Title 24		
2022 Energy Standards		
See T24 CF-1 Energy Compliance Document for Selected and/or Required Energy Measures.		

Indoor Air Quality (IAQ)		
Minimum calculated CFM per CF1R = 31 CFM		
Outdoor condensing unit to be installed and securely fastened in accordance with manufacturer's installation instructions. Installation instructions shall be provided to the field inspector. (CMC Section 303.4)		

Humidity Control		
2022 California Green Building Standards Code, Section 4.506.1 for bathrooms with tub, shower, or combination tub/shower only		
H. 1. Humidity controls shall be capable of adjustment between a relative humidity range of not less than 50% to a maximum of 80%. 2. Humidity control may utilize manual or automatic means of adjustment. 3. Humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)		

Minimum Air Filtration		
2022 California Mechanical Code ASHRAE 62.2, Section 401.2 requires that minimum filtration be no less than MERV 13, installed prior to occupancy in HVAC systems outside air and return air having more than 10 ft of ductwork.		
MANDATORY: Filter racks or filter grilles shall be gasketed or sealed to prevent air from bypassing the filter per Section 150.0(m)12Bv		

Environmental Quality		
2022 California Green Building Standards Code, Section 4.504.1 Mandatory Measure requires that at time of rough installation, all duct and other related air distribution component openings shall be covered.		

Installer and Special Inspector Qualifications		
2022 California Green Building Standards, Chapter 7		
702.1 HVAC Systems installer shall be trained and certified in the proper installation of HVAC systems.		
702.2 Special inspectors employed to provide compliance with this code shall be qualified and/or certified in the discipline they are inspecting.		
703.1 Documentation shall be provided showing compliance with the mandatory measures for this code.		

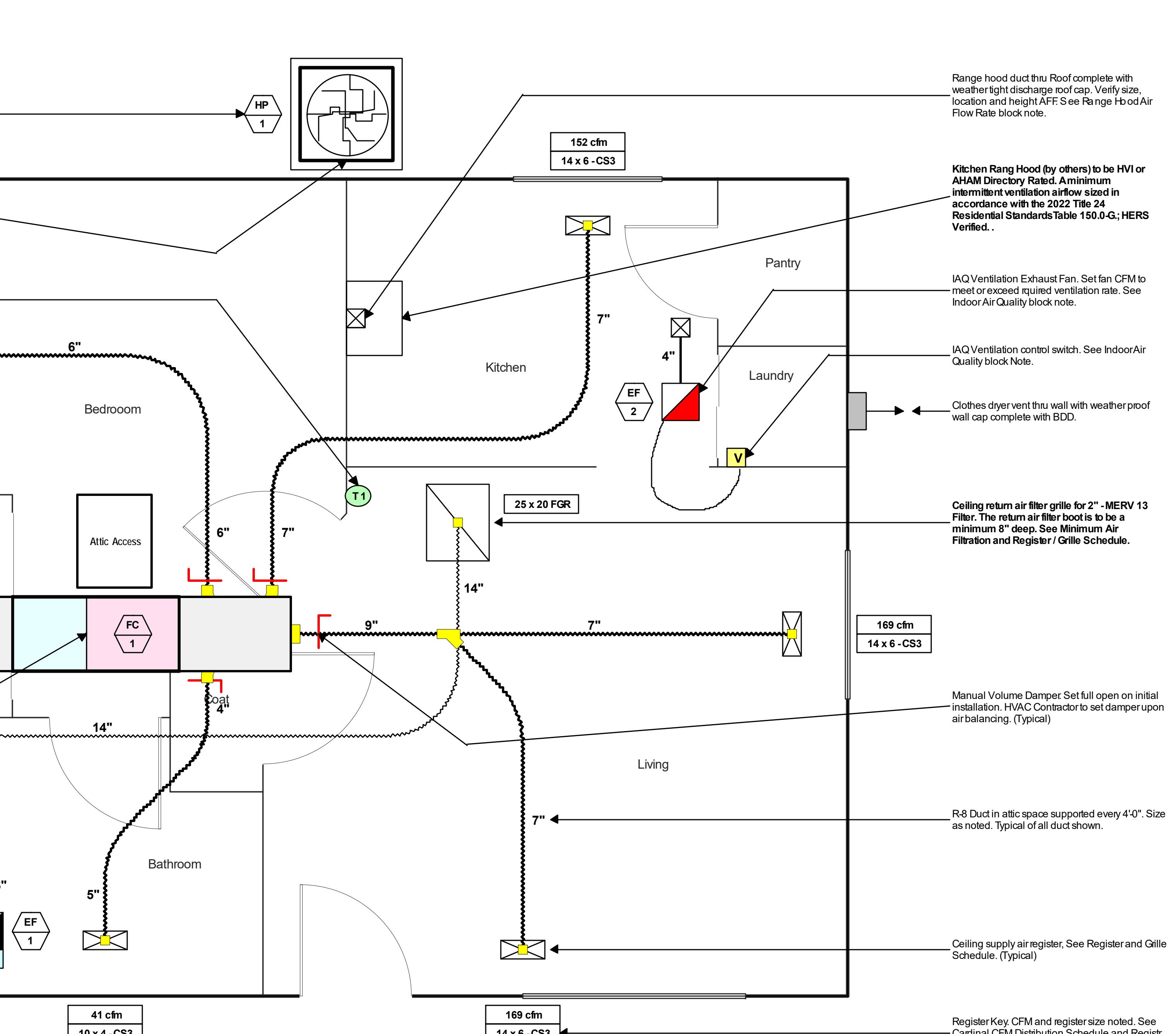
Kitchen Range Hood Air Flow Rates		
Table 150.0.G Kitchen Range Hood Airflow Rates (cfm) and AS TME 308.7 Capture Efficiency (CE) Ratings According to Dwelling Unit Floor Area and Kitchen Range Fuel The Energy Code requires verification that range hoods are HVI or AHAM-certified to provide at least one speed setting at which they can deliver at least 100 CFM at a noise level of 3 sones or less type		
Dwelling Unit Floor Area (sqft)		
>1500		
>1000 - 1500		
750 - 1000		
<750		
Hood Over Electric Range		
50% CE or 110 cfm		
50% CE or 110 cfm		
55% CE or 130 cfm		
65% CE or 160 cfm		
Hood Over Natural Gas Range		
70% CE or 180 cfm		
80% CE or 250 cfm		
85% CE or 280 cfm		
85% CE or 280 cfm		

Heating, Ventilation and Air Conditioning Design Note

Heating and Air Conditioning System Design is in accordance with 2022 California Green Building Standards, Section 4.507.2. Note: 1) Duct system is sized in accordance with ACCA Manual J Load Calculations and Manual D Duct Sizing based upon maximum air flow requirement for cooling CFM. 2) Duct has been sized to accommodate cardinal orientations. 3) CFM distribution noted on plans represent the air flow requirements for the noted orientation. 4) Ducts can be oversized one duct size (i.e. 7" to 8") but not undersized. Oversizing reduces air velocity, therefore, the mechanical contractor is to install manual volume dampers in oversized duct in order to adjust air flow and maintain balance in the duct system. 5) Heating and cooling equipment is sized in accordance with ACCA Manual S based upon building loads calculated in accordance with ACCA Manual J. 6) Contractor to verify SEER, EER, Duct R-value and testing requirements as specified in Title-24 Energy Compliance Document Form CF-1.

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Energy and HVAC Consulting Services

12/11/2023

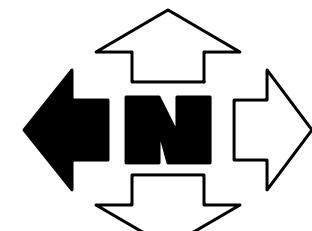


HVAC Floor Plan

Scale: 1/2" = 1'-0"

These plans and documents have been reviewed for compliance with the applicable codes requirements of the jurisdiction. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards nor relieve the owner, design professional of record or contractor of compliance with applicable codes and standards

ROD CARSEY CONSULTING & PLAN CHECK SERVICE



1/2" = 1'-0"
APPROVED
CITY OF HANFORD BUILDING DIVISION
THIS SET OF PLANS AND SPECIFICATIONS MUST BE KEPT ON THE JOB AT ALL TIMES AND NO CHANGES OR ALTERATIONS SHALL BE MADE EXCEPT BY THE BUILDING DIVISION.
THE STAMPING OF THIS PLAN AND SPECIFICATIONS SHALL NOT BE HELD TO PERMIT OR BE AN APPROVAL OF VIOLATION OF ANY PROVISION OF THE CITY ORDINANCE OR STATE LAW. THE REVIEWER FOR CODE COMPLIANCE
By: Mitchell Cook
12/11/2023

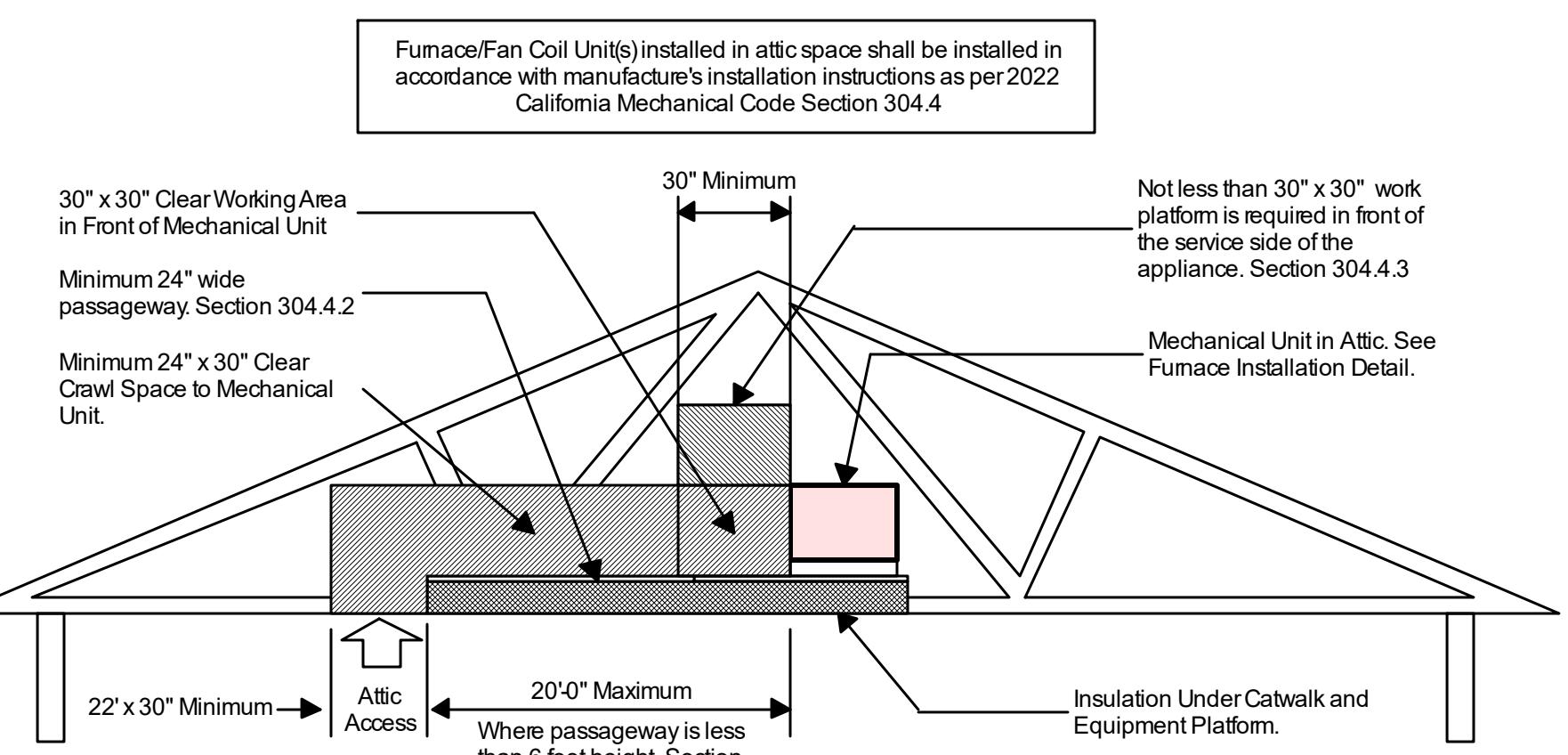
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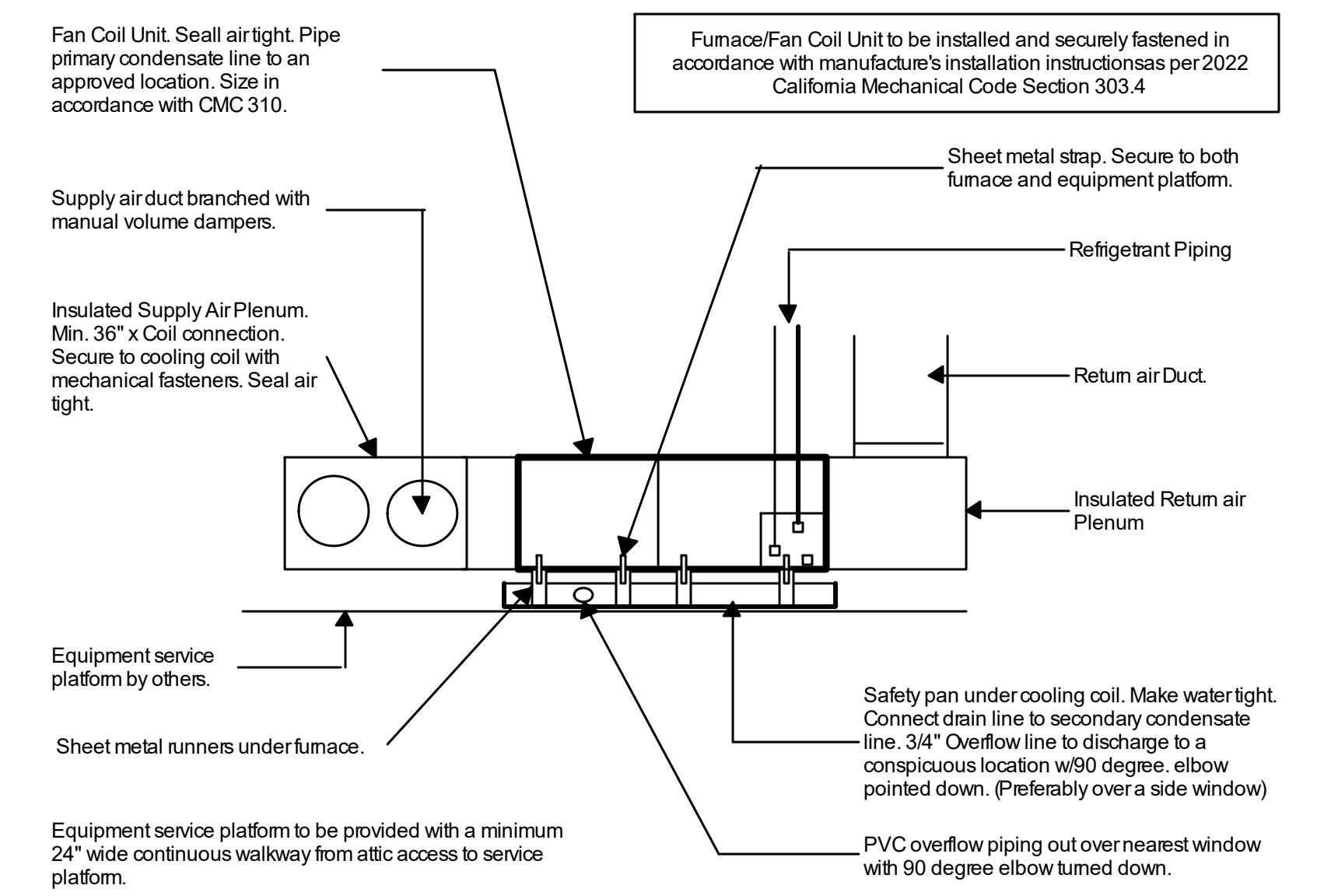
PROJECT TITLE	CITY OF HANFORD - PRE-REVIEWED ADU PROGRAM	DATE	HVAC PLAN
ADU SQFT	550	04/22/2024	

DRAWING SCALE
1/2" = 1'-0"
CITY OF HANFORD BUILDING DIVISION
SPECIFICATIONS APPROVED
BY THE CITY OF HANFORD
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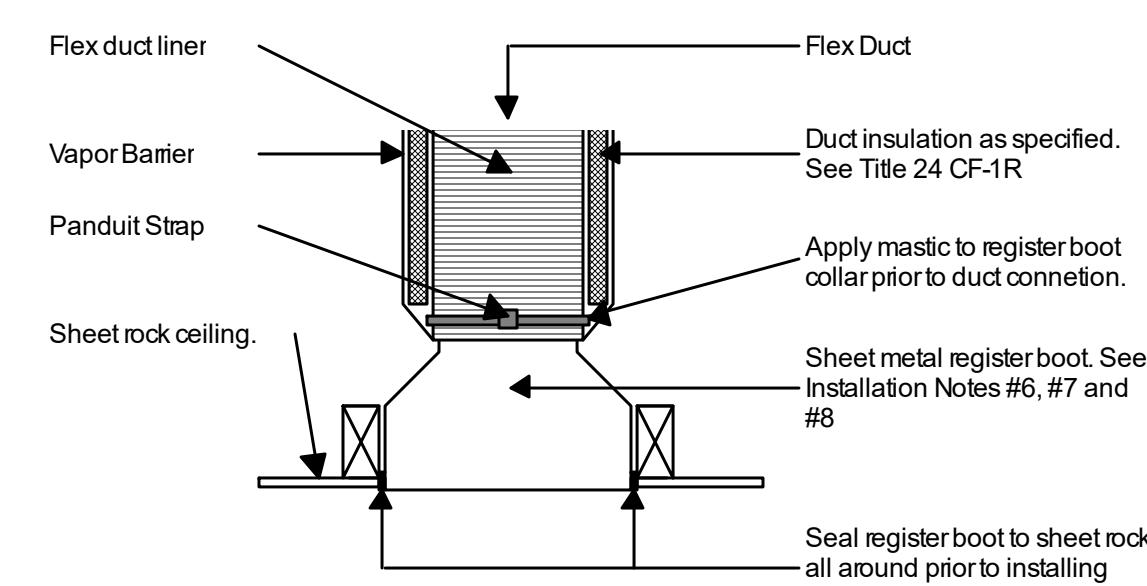
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Minimum Attic Equipment Access Requirements



Fan Coil Installation In Attic Detail



Register Boot Installation

Clothes Dryer Venting Note

Clothes Dryer Venting: 1) Dyer venting shall be installed in accordance with Section 504.4.2 of the 2022 California Mechanical Code, unless otherwise permitted and approved by the building official. 2) A minimum four (4) inch diameter dyer vent is allowed. 3) The total length of a 4" dyer vent shall not exceed a total combined horizontal and vertical length of 14 feet, including (2) two 90-degree elbows. 4) Increasing the size of the dyer venting to increase total length, less than or equal to the pressure drop of item 3, is allowed subject to the local Administrative Authority. 5) Dyer vent ducting is to be five (5) inch unless noted otherwise. 6) Dyer duct is to terminate outside of the building and shall be equipped with a back draft damper. Duct is to be sealed airtight. Duct in crawl spaces or attic space is to be externally insulated with 1", 3/4lb. duct wrap.

Heating and Cooling Equipment Schedule

Heating and Cooling Equipment Schedule									
Outdoor Heat Pump Unit									
Mark	Mfr	Model Number	Nom. Tons	Cooling MBH		Heating MBH		Electrical	
				Total	Sens	47degF	17degF	Volts/Ph	MCA MOP
HP-1	Goodman	GSZH5018	1.5	17.6	12.3	17.4	10.0	208/230-1	12.2 20 171

Fan Coil Unit w/Electric Heat									
Mark	Mfr	Model Number	CFM	Electrical Single Circuit				WT LBS	Remarks
				ESP In. W.C.	Type	Load	Volts/Ph		
FC-1	Goodman	AMST30BU14	600	0.7	HP	3/4	208/230-1	5.6/6.6	15/15 129 R-410A w/TXV

AHRI Certificate										Electric Heat Pack Installed	
Electric Heat Pack Installed											
Mark	Certificate No.	SEER2	EER2	HPSPF2	Mark	Mfr	Model Number	KW	AMPS	MCA	MOP
HP/FC-1	208509794	15.2	12.0	7.8	FC-1	Goodman	HKS*05XC	5	17.3/20	2730.6	30/35

Exhaust Fan Schedule											
Mark	Mfr	Model Number	CFM Set Point	S.P. In. W.G.	Sones	Electrical	Type	Duct Conn	Op. Wt. LBS	REVISIONS	
EF-1	Broan	AE80S	Humidity Sensing		80	0.1	0.7	24.5	3.3	1	
EF-2	Broan	AE50	50		50	0.1	0.5	20.0	3.5	120	

Exhaust fan(s) serving bathrooms which contains a bathtub, shower or tub/shower combination are to be controlled by a Humidistat which shall be readily accessible as per 2019 California Green Code, Section 4.506.1 Mandatory Measure. Humidistat shall be capable of adjustment between a relative humidity range of 50 to 80 percent.

Bathroom Exhaust fan(s) are to be on with either a light switch or motion sensor.

Exhaust fan(s) designated as the IAQ Ventilation Fan is to meet minimum requirements of exhaust rate @ 25: ESP and <= 1.0 Sone level. See Indoor Air Quality (IAQ) block note.

Exhaust ducting is to be sized in accordance with Table 150.0-H (ASHRAE 62.2: Table 5-3) Prescriptive Duct Sizing for Single Fan Exhaust Systems.

Ducts shall be securely connected, be supported and secured using approved straps. All joints are to be seal airtight. Exhaust fans are to be provided with back draft damper. Install an appropriate screened termination cap.

Table 150.0-H Prescriptive Ventilation System Duct Sizing (ASHRAE 62.2:Table 5-3)											
Fan Airflow Rating, cfm at minimum static pressure ^a 0.25 in water column (l/s at minimum 62.5 Pa)	<=50 (25)	<=60 (40)	<=100 (60)	<=125 (70)	<=150 (85)	<=175 (95)	<=200 (120)	<=250 (165)	<=350 (190)	<=400 (210)	<=450 (230)
Minimum Duct Diameter, in. (mm) ^b For Rigid duct	4 (100)	5 (125)	5 (150)	6 (150)	6 (180)	7 (180)	8 (205)	9 (230)	10 (255)	10 (270)	12 (305)
Minimum Duct Diameter, in. (mm) ^c For Flex duct ^d	4 (100)	4 (125)	6 (150)	6 (150)	7 (180)	8 (205)	8 (205)	9 (230)	10 (255)	10 (270)	12 (305)

Footnotes for Table 150.0-H

a. For noncircular ducts, calculate the diameter as four times the cross-sectional area divided by the perimeter.

b. NP = application of the prescriptive table is not permitted for this scenario.

c. Use of this table for ventilation of flex duct systems requires flex duct to be fully extended and any flex duct elbows to have a minimum bend radius to duct diameter ratio of 1.0.

d. For this scenario, use of elbows is not permitted.

e. For this scenario, 4 in. (100 mm) oval duct shall be permitted, provided the minor axis of the oval is greater than or equal to 3 in. (75 mm).

f. When a vented range hood utilizes a capture efficiency rating to demonstrate compliance with 150.0(c) 1 Giib, a static pressure greater than or equal to 0.25 in. of water at the rating point shall not be required, and the airflow listed in the appropriate directory corresponding to the compliant capture efficiency rating point shall be applied to Table 150.0-H for determining compliance.

Register and Grille Schedule									
Mark	Mfr	Model	Service	Type	Pattern	Size	CFM	REVISIONS	
CS2	Shoemaker	202	Supply	Ceiling	2-Way		As Noted	As Noted	
CS3	Shoemaker	203	Supply	Ceiling	3-Way		As Noted	As Noted	
CS4	Shoemaker	204	Supply	Ceiling	4-Way		As Noted	As Noted	
SW	Shoemaker	950	Supply	Sidewall	Spread		As Noted	As Noted	
FGR	Shoemaker	935FG2	Return	Ceiling/Sidewall	Bar Faced		As Noted	-	
CR/CTG	Shoemaker	1050	Return	Ceiling/Sidewall			As Noted	-	

Scheduled registers and grilles are for reference only and can be substituted with "or equal".

Plan 550	
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD					CF1R-PRF-01-E
Project Name: Hanford Plan 550 ADU					Calculation Date/Time: 2024-10-23T12:51:37-07:00
Calculation Description: Title 24 Analysis					(Page 1 of 13)
GENERAL INFORMATION					
01	Project Name	Hanford Plan 550 ADU			
02	Run Title	Title 24 Analysis			
03	Project Location	Various Locations			
04	City	Hanford	05	Standards Version	2022
06	Zip code	93230	07	Software Version	EnergyPro 9.3
08	Climate Zone	13	09	Front Orientation (deg/ Cardinal)	All orientations
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Newly Constructed	13	Number of Bedrooms	1
14	Addition Cond. Floor Area (ft ²)	0	15	Number of Stories	1
16	Existing Cond. Floor Area (ft ²)	n/a	17	Penetration Average U-factor	0.3
18	Total Cond. Floor Area (ft ²)	550	19	Glazing Percentage (%)	14.18%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Fuel Type	Natural gas	23	No Dwelling Unit:	No
COMPLIANCE RESULTS					
01	Building Complies with Computer Performance				
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.				
03	This building incorporates one or more Special Features shown below				

OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD							CF1R-PRF-01-E
e: Hanford Plan 550 ADU							(Page 3 of 13)
Description: Title 24 Analysis							
SUMMARY							
Use	Standard Design Source Energy (EDR1) (kBtu/ft ² -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft ² -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft ² -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft ² -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)	
heating	1.62	11.86	1.65	12.12	-0.03	-0.26	
ooling	2.96	59.98	2.86	59.1	0.1	0.88	
ilation	0.44	4.68	0.44	4.68	0	0	
heating	12.37	52.16	11.14	47.18	1.23	4.98	
f Flexibility lit			0	0	0	0	
acing pliance al	17.39	128.68	16.09	123.08	1.3	5.6	
heating	1.62	11.86	1.6	11.69	0.02	0.17	
ooling	2.96	59.98	2.88	59.72	0.08	0.26	
ilation	0.44	4.68	0.44	4.68	0	0	
heating	12.37	52.16	11.14	47.18	1.23	4.98	
f Flexibility lit			0	0	0	0	
Efficiency nce Total	17.39	128.68	16.06	123.27	1.33	5.41	

STATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD							CF1R-PRF-01-E			
Name: Hanford Plan 550 ADU		Calculation Date/Time: 2024-10-23T12:51:37-07:00			(Page 4 of 13)					
Description: Title 24 Analysis							Input File Name: Precision_Engineering_Hanford_Plan_550_ADU.ribd22x			
USE SUMMARY										
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft ² -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft ² -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft ² -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft ² -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)				
Space Heating	1.62	11.86	1.57	11.49	0.05	0.37				
Space Cooling	2.96	59.98	2.88	59.91	0.08	0.07				
Ventilation	0.44	4.68	0.44	4.68	0	0				
Water Heating	12.37	52.16	11.14	47.18	1.23	4.98				
Self Generation/Flexibility Credit			0	0	0	0				
South Facing Efficacy Compliance Total	17.39	128.68	16.03	123.26	1.36	5.42				
Space Heating	1.62	11.86	1.64	12.09	-0.02	-0.23				
Space Cooling	2.96	59.98	2.92	60.83	0.04	-0.85				
Ventilation	0.44	4.68	0.44	4.68	0	0				
Water Heating	12.37	52.16	11.14	47.18	1.23	4.98				
Self Generation/Flexibility Credit			0	0	0	0				
Facility Efficiency Compliance Total	17.39	128.68	16.14	124.78	1.25	3.9				

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REVISIONS

Registration Number: 424-P010259903A-000-000-0000000-0000	Registration Date/Time: 10/24/2024 13:50	HERS Provider: CHEERS		
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CA Building Energy Efficiency Standards - 2022 Residential Compliance	Report Version: 2022.0.000	Report Generated: 2024-10-23 12:52:08		
CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E				
Project Name: Hanford Plan 550 ADU	Calculation Date/Time: 2024-10-23T12:51:37-07:00			
Calculation Description: Title 24 Analysis	(Page 5 of 13)			
ENERGY USE INTENSITY				
	Standard Design (kBtu/ft ² - yr)	Proposed Design (kBtu/ft ² - yr)	Compliance Margin (kBtu/ft ² - yr)	Margin Percentage
North Facing				
Gross EUI ¹	41.31	39.94	1.37	3.32
Net EUI ²	21.45	20.08	1.37	6.39
East Facing				
Gross EUI ¹	41.31	40.01	1.3	3.15
Net EUI ²	21.45	20.15	1.3	6.06
South Facing				
Gross EUI ¹	41.31	39.94	1.37	3.32
Net EUI ²	21.45	20.08	1.37	6.39
West Facing				
Gross EUI ¹	41.31	40.03	1.28	3.1
Net EUI ²	21.45	20.17	1.28	5.97
Notes				
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area. 2. Net EUI is Energy Use Total (including PV) / Total Building Area.				

Registration Number: 424-P010259903A-000-000-0000000-0000	Registration Date/Time: 10/24/2024 13:50	HERS Provider: CHEERS									
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CA Building Energy Efficiency Standards - 2022 Residential Compliance	Report Version: 2022.0.000	Report Generated: 2024-10-23 12:52:08									
	Schema Version: rev 20220901										
CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD											
Project Name: Hanford Plan 550 ADU	Calculation Date/Time: 2024-10-23T12:51:37-07:00	CF1R-PRF-01-E (Page 6 of 13)									
Calculation Description: Title 24 Analysis	Input File Name: Precision Engineering_Hanford Plan 550 ADU.ribd22x										
REQUIRED PV SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
2.02	NA	Standard (14-17%)	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98
REQUIRED SPECIAL FEATURES											
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.											
<ul style="list-style-type: none"> Insulation below roof deck Window overhangs and/or fins 											
HERS FEATURE SUMMARY											
The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry											
<ul style="list-style-type: none"> Quality insulation installation (QII) Indoor air quality ventilation Kitchen range hood Minimum Airflow Verified EER/EER2 Verified SEER/SEER2 Verified Refrigerant Charge Fan Efficacy Watts/CFM Verified HSPF2 Verified heat pump rated heating capacity Duct leakage testing 											
BUILDING - FEATURES INFORMATION											
01	02	03	04	05	06	07					
Project Name	Conditioned Floor Area (ft ²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems					
Hanford Plan 550 ADU	550	1	1	1	0	1					

Number: 424-P010259903A-000-000-0000000-0000	Registration Date/Time: 10/24/2024 13:50	HERS Provider: CHEERS											
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OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD													
e: Hanford Plan 550 ADU													
Description: Title 24 Analysis													
Calculation Date/Time: 2024-10-23T12:51:37-07:00													
(Page 7 of 13)													
Input File Name: Precision Engineering_Hanford Plan 550 ADU.rbd22x													
ATION													
1	02	03	04	05	06	07							
Name	Zone Type	HVAC System Name	Zone Floor Area (ft ²)	Avg. Ceiling Height	Water Heating System 1	Status							
House	Conditioned	Res HVAC1	550	8	DHW Sys 1	New							
FACES													
1	02	03	04	05	06	07	08						
re	Zone	Construction	Azimuth	Orientation	Gross Area (ft ²)	Window and Door Area (ft ²)	Tilt (deg)						
Wall	Whole House	R21 Wall + R5	0	Front	200	44	90						
Wall	Whole House	R21 Wall + R5	90	Left	176	22	90						
Wall	Whole House	R21 Wall + R5	180	Back	200	16	90						
Wall	Whole House	R21 Wall + R5	270	Right	176	16	90						
Roof	Whole House	R38 Attic + R13 Roof	n/a	n/a	500	n/a	n/a						
form	Whole House	R21 Attic + R13 Roof	n/a	n/a	50	n/a	n/a						
re	02	03	04	05	06	07	08						
re	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof						
House	Attic Roof	Whole House	Ventilated	5	0.1	0.85	No						
ON / GLAZING													
02	03	04	05	06	07	08	09	10	11	12	13	14	
Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft ²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	
0	Window	Front Wall	Front	0	6	4	1	24	0.3	NFRC	0.23	NFRC	Bug Screen
0	Window	Left Wall	Left	90			1	6	0.3	NFRC	0.23	NFRC	Bug Screen
0	Window	Left Wall	Left	90			1	16	0.3	NFRC	0.23	NFRC	Bug Screen
Number: 424-P010259903A-000-000-0000000-0000	Registration Date/Time: 10/24/2024 13:50	HERS Provider: CHEERS											
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Report Version: 2022.0.000	Report Generated: 2024-10-23 12:52:08												
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REPORT VERSION: 2022.0.000 SCHEMA VERSION: rev 20220901										REPORT GENERATED: 2024-10-23 12:52:08				
STATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD												CF1R-PRF-01-E		
NAME: Hanford Plan 550 ADU DESCRIPTION: Title 24 Analysis												(Page 8 of 13)		
SECTION / GLAZING														
1	02	03	04	05	06	07	08	09	10	11	12	13	14	
Category	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft ²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	
040 XO	Window	Back Wall	Back	180	4	4	1	16	0.3	NFRC	0.23	NFRC	Bug Screen	
040 XO	Window	Right Wall	Right	270			1	16	0.3	NFRC	0.23	NFRC	Bug Screen	
DOORS														
01	02				03				04					
Name	Side of Building				Area (ft ²)				U-factor					
3068 Front Door	Front Wall				20				0.2					
WINGS AND FINS														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	
Window	Overhang						Left Fin				Right Fin			
	Depth	Dist Up	Left Extent	Right Extent	Flap Ht.	Depth	Top Up	Dist L	Bot Up	Depth	Top Up	Dist R	Bot Up	
W01 6040 XO	1.5	0.7	17	3.5	0	0	0	0	0	0	0	0	0	
W04 4040 XO	1.5	0.7	6	17	0	0	0	0	0	0	0	0	0	
PORCHES														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	
Name	Zone	Area (ft ²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated							
Lab Floor	Whole House	550	94	none	0	80%	No							
NUMBER: 424-P010259903A-000-000-00000000-0000 This document has been generated by California Home Energy Efficiency Rating Services (CHEERS) using information uploaded by third parties not affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for guarantee, the accuracy or completeness of the information contained in this document. LIVING ENERGY EFFICIENCY STANDARDS - 2022 Residential Compliance										REGISTRATION DATE/TIME: 10/24/2024 13:50 HERS PROVIDER: CHEERS				
REPORT VERSION: 2022.0.000 SCHEMA VERSION: rev 20220901										REPORT GENERATED: 2024-10-23 12:52:08				

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD							CF1R-PRF-01-E				
Project Name: Hanford Plan 550 ADU			Calculation Date/Time: 2024-10-23T12:51:37-07:00				(Page 9 of 13)				
Calculation Description: Title 24 Analysis							Input File Name: Precision Engineering_Hanford Plan 550 ADU.ribd22x				
OPAQUE SURFACE CONSTRUCTIONS											
01	02	03	04	05	06	07	08				
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers				
R21 Wall + R5	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / 5	0.048	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Sheathing / Insulation: R-5 Sheathing Exterior Finish: Synthetic Stucco				
Attic RoofWhole House	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-13	None / 0	0.078	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-13.0 / 2x4 Around Roof Joists: R-0.0 insul.				
R38 Attic + R13 Roof	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board				
R21 Attic + R13 Roof	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-21	None / None	0.044	Over Ceiling Joists: R-11.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board				
BUILDING ENVELOPE - HERS VERIFICATION											
01	02	03	04	05							
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50							
Required	Not Required	N/A	n/a	n/a							

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD									CF1R-PRF-01-E				
Project Name: Hanford Plan 550 ADU				Calculation Date/Time: 2024-10-23T12:51:37-07:00				(Page 10 of 13)					
Calculation Description: Title 24 Analysis									Input File Name: Precision Engineering_Hanford Plan 550 ADU.ribd22x				
WATER HEATING SYSTEMS													
01	02	03	04	05	06	07	08	09					
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)					
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)					
WATER HEATERS													
01	02	03	04	05	06	07	08	09	10	11	12	13	
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency Type	Efficiency	Rated Input Type	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	Tank Location	
DHW Heater 1	Gas	Consumer Instantaneous	1	0	UEF	0.93	Btu/Hr	200000	0	n/a	n/a		
WATER HEATING - HER'S VERIFICATION													
01	02	03	04	05	06	07							
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery							
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required							
SPACE CONDITIONING SYSTEMS													
01	02	03	04	05	06	07	08	09				HVAC	
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type	HVAC				
Res HVAC1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	HVAC Fan 1	Air Distribution System 1	Setback	HVAC				

COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD											CF1R-PRF-01-E	
e: Hanford Plan 550 ADU											Calculation Date/Time: 2024-10-23T12:51:37-07:00	
Description: Title 24 Analysis											(Page 11 of 13)	
PUMPS												
	02	03	04	05	06	07	08	09	10	11	12	13
System Type	Number of Units	Heating				Cooling				Zonally Controlled	Compressor Type	HERS Verification
		Heating Efficiency Type	HSPF/HS PF2/COP	Cap 47	Cap 17	Cooling Efficiency Type	SEER/SE ER2	EER/EER 2/CEER				
Central split HP	1	HSPF2	7.8	17000	9500	EER2/SEER2	15.2	12.5	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump	
PUMPS - HER'S VERIFICATION												
	02	03	04	05	06	07	08	09				
System	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verified Refrigerant Charge	Verified HSPF/HSPF2	Verified Heating Cap 47	Verified Heating Cap 17				
	Required	350	Required	Required	Yes	Yes	Yes	Yes				
DISTRIBUTION SYSTEMS												
	02	03	04	05	06	07	08	09	10	11	12	
Type	Design Type	Duct Ins. R-value		Duct Location		Surface Area		Bypass Duct	Duct Leakage	HERS Verification		
		Supply	Return	Supply	Return	Supply	Return					
Unconditioned attic	Non-Verified	R-8	R-8	Attic	Attic	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist		

STATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD									CF1R-PRF-01-E
Name: Hanford Plan 550 ADU									Calculation Date/Time: 2024-10-23T12:51:37-07:00
ion Description: Title 24 Analysis									(Page 12 of 13)
DISTRIBUTION - HERS VERIFICATION									
01	02	03	04	05	06	07	08	09	
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space	
Distribution 1-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No	
HVAC SYSTEMS									
01	02	03	04	05	06	07	08	09	
Name	Type	Fan Power (Watts/CFM)			Name				
HVAC Fan 1	HVAC Fan	0.45			HVAC Fan 1-hers-fan				
HVAC SYSTEMS - HERS VERIFICATION									
01	02	03	04	05	06	07	08	09	
Name	Verified Fan Watt Draw			Required Fan Efficacy (Watts/CFM)					
HVAC Fan 1-hers-fan	Required			0.45					
AIR QUALITY (IAQ) FANS									
01	02	03	04	05	06	07	08	09	
ing Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE/ASRE	Includes Fault Indicator Display?	HERS Verification	Status	
AQVentRpt	31	0.35	Exhaust	No	n/a / n/a	No	Yes		

These plans and documents have been reviewed for compliance with the applicable codes requirements of the jurisdiction. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards nor relieve the owner, design professional of record or contractor of compliance with applicable codes and standards

ROD CARSEY CONSULTING & PLAN CHECK SERVICE

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CA Building Energy Efficiency Standards - 2022 Residential Compliance

Report Version: 2022.0.000

Schema Version: rev 20220901

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ROD CARSEY CONSULTING & PLAN CHECK SERVICE

CITY OF HANFORD BUILDING DIVISION

APPROVED

THIS SET OF PLANS AND SPECIFICATIONS
MUST BE KEPT ON THE JOB AT ALL TIMES AND
NO CHANGES OR ALTERATIONS SHALL BE
MADE EXCEPT BY THE BUILDING DIVISION.

THE STAMPING OF THIS PLAN AND
SPECIFICATIONS SHALL NOT BE HELD TO
PERMIT OR TO BE AN APPROVAL OF THE
VIOLATION OF ANY PROVISIONS OF ANY CITY
ORDINANCE OR STATE LAW. REVIEWED FOR
CODE COMPLIANCE."

BY: *Mitchell Coach*

12/11/2025