

GENERAL NOTES:

- 1. GENERAL CONDITIONS OF THE CONTRACT ( AIA DOCUMENT A-201) SHALL APPLY TO THIS PROJECT.
2. ALL WORK SHALL COMPLY WITH STATE AND LOCAL BUILDING CODES, FIRE DEPARTMENT REGULATIONS, UTILITY COMPANY STANDARDS, AND THE BEST TRADE PRACTICES.
3. THE GENERAL CONTRACTOR SHALL ARRANGE ALL INSPECTIONS AND TESTS AS SPECIFIED OR REQUIRED BY THE BUILDING DEPARTMENT AND SHALL PAY ALL COSTS AND FEES FOR SAME. THE CONTRACTOR SHALL SECURE ALL BUILDING PERMITS AND UPON COMPLETION OF THE PROJECT (PRIOR TO FINAL PAYMENT) DELIVER TO THE OWNER A CERTIFICATE OF OCCUPANCY OR USE FROM THE BUILDING DEPARTMENT.
4. ALL PLUMBING AND ELECTRICAL WORK SHALL BE PERFORMED BY STATE LICENSED CONTRACTORS. CONTRACTORS SHALL SUBMIT ALL REQUIRED PERMITS, CERTIFICATES, AND SIGN-OFFS TO OWNER AND ARCHITECT FOR THEIR RECORDS.
5. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, BE FAMILIAR WITH THE EXISTING CONDITIONS, AND BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO SUBMISSION OF CONSTRUCTION PROPOSAL AND BEFORE BEGINNING WORK. THE DRAWINGS REFLECT CONDITIONS REASONABLY INFERRED FROM THE EXISTING VISIBLE CONDITIONS BUT CANNOT BE GUARANTEED BY THE ARCHITECT. DRAWINGS MAY BE SCALED FOR ESTIMATING PURPOSES AND FOR GENERAL REFERENCE ONLY. FOR ALL OTHER DIMENSIONS OR LOCATIONS CONSULT THE ARCHITECT OR REFER TO DIMENSIONS ON DRAWINGS. VERIFY ALL DIMENSIONS IN THE FIELD.
6. THE GENERAL CONTRACTOR SHALL LAY OUT ALL WORK AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS FOR TRADES SUCH AS ELECTRICAL, PLUMBING, ETC.
7. THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN ACCESS TO THE PREMISES AT ALL TIMES.
8. THE CONSTRUCTION MANAGER SHALL MAKE THE PREMISES SECURE FROM THE ELEMENTS AND TRESPASS ON A DAILY BASIS.
9. THE GENERAL CONTRACTOR SHALL KEEP THE CONSTRUCTION SITE FREE AND CLEAR OF ALL DEBRIS AND KEEP OUT ALL UNAUTHORIZED PERSONS. UPON COMPLETION OF WORK, THE ENTIRE CONSTRUCTION AREA IS TO BE THOROUGHLY LEANED AND PREPARED FOR OCCUPANCY BY OWNER. ALL MATERIALS AND DEBRIS RESULTING FROM THE CONTRACTOR'S WORK SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY. CARE SHALL BE TAKEN DURING CONSTRUCTION THAT NO DEBRIS OR MATERIALS ARE DEPOSITED IN ANY RIGHT OF WAY AREA.
10. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW CONDITIONS AND MATERIALS ON THE SITE. ANY DAMAGE CAUSED BY OR DURING THE EXECUTION OF THE WORK IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
11. NO CUTTING OR DAMAGE TO BUILDING STRUCTURAL COMPONENTS WILL BE ALLOWED WITHOUT WRITTEN AUTHORIZATION FROM THE ARCHITECT.
12. ALL UTILITIES SHALL BE CONNECTED TO PROVIDE GAS, ELECTRIC, AND WATER TO ALL EQUIPMENT WHETHER SAID EQUIPMENT IS IN CONTRACT OR NOT. EQUIPMENT SHALL BE GUARANTEED TO FUNCTION PROPERLY UPON COMPLETION.
13. MANUFACTURER'S STANDARD SPECIFICATIONS AND MATERIALS APPROVED FOR PROJECT USE ARE HEREBY MADE PART OF THESE NOTES WITH SAME FORCE AND EFFECT AS IF WRITTEN OUT IN FULL HEREIN. ALL APPLIANCES, FIXTURES, EQUIPMENT, HARDWARE ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND PROCEDURES.
14. WRITTEN WORDS TAKE PRECEDENCE OVER DRAWN LINES. LARGE-SCALE DETAILS AND PLANS TAKE PRECEDENCE OVER SMALLER DETAILS. SHOULD A CONFLICT ARRIVE BETWEEN THE SPECIFICATIONS AND DRAWINGS, THE REQUIREMENTS DEEMED MOST STRINGENT SHALL BE USED.
15. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED BY NECESSARY FOR PROPER AND ACCEPTABLE CONSTRUCTION, INSTALLATION, OR OPERATION OF ANY PART OF THE WORK AS DETERMINED BY THE ARCHITECT SHALL BE INCLUDED IN THE WORK AS IF IT WERE SPECIFIED OR INDICATED ON THE DRAWINGS.
16. ALL ARCHITECTURAL DRAWINGS AND CONSTRUCTION NOTES ARE COMPLIMENTARY. WHAT IS INDICATED AND CALLED FOR BY ONE SHALL BE BINDING AS THOUGH CALLED FOR BY ALL.
17. NO DEVIATION FROM THE DRAWINGS OR SPECIFICATIONS OR INTENT OF SAME SHALL BE MADE WITHOUT THE ARCHITECT'S WRITTEN AUTHORIZATION.
18. ALL DIMENSIONS ARE TO FACE OF FINISH STUD OR CENTERLINE OF STRUCTURE UNLESS OTHERWISE NOTED.
19. FLOOR LIVE LOADS: UNINHABITABLE ATTICS WITH LIMITED STORAGE .20PSF
SLEEPING AREAS .....30PSF
ALL OTHER AREAS.....40PSF
ROOF LIVE LOADS: 20 PSF
FLOOD ZONE: X= OUTSIDE A KNOWN FLOOD HAZARD ZONE

DEMOLITION NOTES:

- 1. METHOD OF DEMOLITION REQUIRED TO COMPLETE THE WORK TO BE PER STANDARD INDUSTRY PRACTICES AND WITHIN LIMITATIONS OF GOVERNING REGULATIONS.
2. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE DESIGN INTENT ARE ENCOUNTERED, CONTRACTOR IS TO NOTIFY OWNER AND ARCHITECT PRIOR TO PROCEEDING.
3. VERIFY LOCATION OF REQUIRED STRUCTURAL FRAMING PRIOR TO REMOVAL. DO NOT REMOVE ANY ELEMENT THAT MIGHT RESULT IN A STRUCTURAL DEFICIENCY WITHOUT PROPER TEMPORARY SHORING.
4. EXCEPT FOR ITEMS OR MATERIALS INDICATED TO BE REUSED, SALVAGED, REINSTALLED OR INDICATED AS OWNERS PROPERTY, DEMOLITION MATERIALS SHALL BECOME CONTRACTORS PROPERTY AND SHALL BE REMOVED FROM ON SITE. COMPLY WITH LOCAL REQUIREMENTS FOR OFF HAULING AND DISPOSAL.
5. NOTIFY DESIGNER AND OWNER OF SUSPECTED HAZARDOUS MATERIAL. ANY HAZARDOUS MATERIAL SHALL BE REMOVED BY LICENSED HAZMAT CONTRACTOR.
6. PROVIDE TEMPORARY PROTECTION FOR ANY EXISTING TREES OR LANDSCAPING TO REMAIN.
7. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
8. THE EXISTING BUILDING SHALL BE PROTECTED DURING THE COURSE OF DEMOLITION.
9. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE LOCAL JURISDICTION PRIOR TO COMMENCING DEMOLITION.
10. ALL REQUIRED EXCAVATION SHALL BE CLEARED OF ALL CONCRETE AND ORGANIC MATERIALS PRIOR TO BACKFILLING. ALL EXCAVATION SHALL BE FILLED UNDER THE SUPERVISION OF A SOILS ENGINEER WHERE APPLICABLE OR TO ACCEPTED INDUSTRY STANDARDS.
11. SAW CUT EXISTING CONCRETE TO BE DEMOLISHED WHERE EVER FEASIBLE.
12. OWNER TO RETAIN POSSESSION OF ALL DOORS, WINDOWS, BATHROOM MIRRORS, AND BATHROOM MEDICINE CABINET.
13. DEMOLITION PLAN IS A GRAPHIC REPRESENTATION OF SCOPE OF DEMOLITION BUT IS NOT INTENDED TO BE COMPREHENSIVE. CONTRACTOR TO REVIEW EXISTING CONDITIONS RELATIVE TO SCOPE OF NEW WORK ON ALL ARCHITECTURAL AND STRUCTURAL PLAN FOR ACTUAL DEMOLITION REQUIREMENTS. PRIOR TO FINALIZING BID CONTACT DESIGNER IN THE EVENT OF ANY CONFLICTS OR DISCREPANCIES.

NEW SECONDARY DWELLING

18743 COUNTY RD 97
WOODLAND, CA 95695
APN: 025-480-010-000

PROJECT SCOPE:

CONSTRUCT A NEW 1 BED 1 BATH SINGLE STORY SECONDARY DWELLING AT THE REAR YARD OF THE PROPERTY.
NO WORK TO MAIN HOUSE

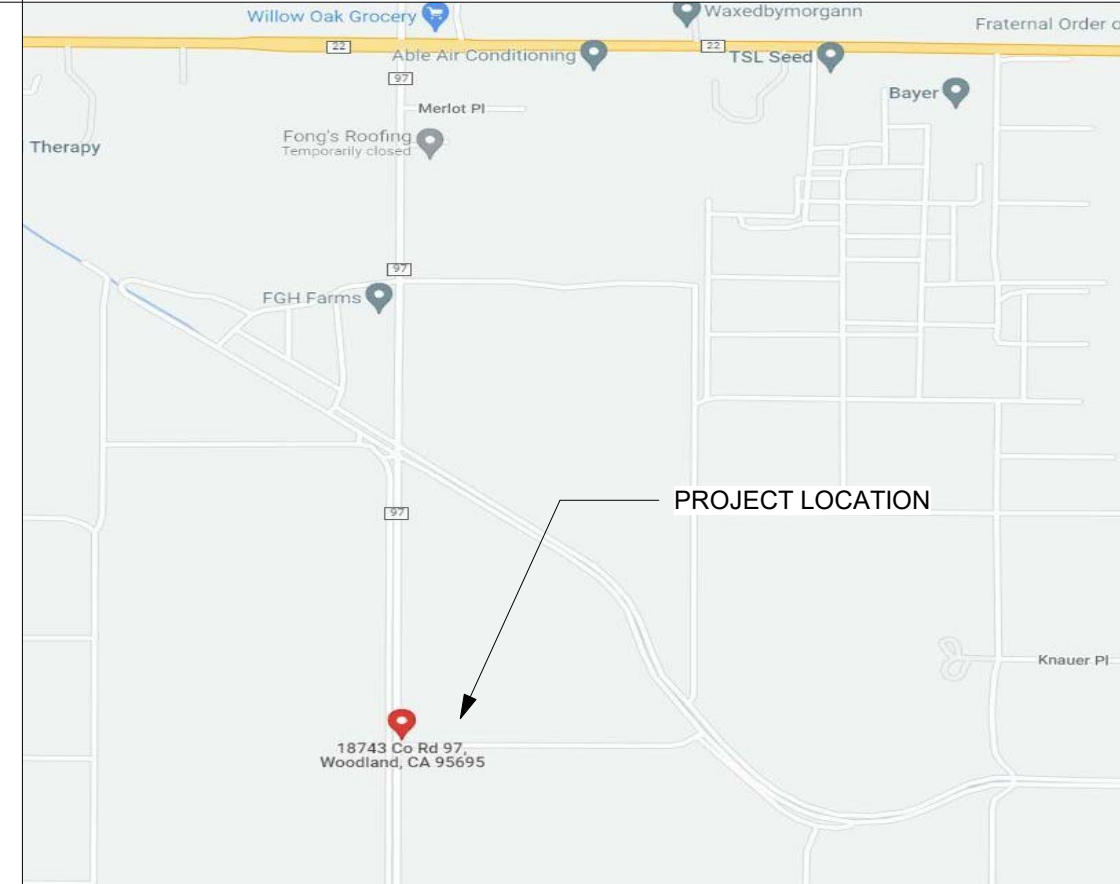
PROJECT INFORMATION:

CONSTRUCTION TYPE: V-B
BUILDING EXISTING & UNSPRINKLERED
SECONDARY DWELLING TO BE SPRINKLERED
ZONING: A-N
WUI: NO
OCCUPANCY: R3
YEAR BUILT: 1989
STORIES: 1 STORY
EXISTING UNITS: 1
PROPOSED UNITS: 2
PARCEL AREA: 21.76 ACRES
(E) MAIN RESIDENCE: 2,088 SF
PROPOSED SECONDARY UNIT: 1,200 SF

PROJECT DIRECTORY:

PROJECT DESIGNER: MJH DESIGN
MANUEL J. HERNANDEZ
1802 Egret Lane
Hayward, CA 94545
510.600.7926
manuelh10@live.com
STRUCTURAL ENGINEER: Imad Abu-Markhieh
Civil & Structural Engineering
916.468.3768
markhieh@gmx.com
GENERAL CONTRACTOR: Redwood ADU LLC
2635 57th Street,
Sacramento, CA 95817
916.619.9585
max@redwoodadu.com
CSL LIC #1098046

VICINITY MAP:



DRAWING INDEX:

Table with 2 columns: Sheet Number, Sheet Name. Lists sheets A0.1 to T24.1 including Title Sheet, Existing Site Plan, Proposed Site Plan, Septic Site Plan, Level 1 Plans, RCP, Roof Plan, Foundation and Framing Plan, Shear Wall Schedule, Mech Plan, Exterior Elevations, Sections, Schedules, Details, Structural Details, Structural Notes, and Title 24 sheets.

DEFERRED SUBMITTALS:

- 1. PV SYSTEM IS DEFERRED, CONTRACTOR TO PROVIDE PV PLANS TO CITY FOR REVIEW AND APPROVAL
2. FIRE SPRINKLER SYSTEM DESIGN & ENGINEERING SHALL BE SUBMITTED FOR APPROVALS PRIOR TO INSTALLATION

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 REFRIGERANT CHARGE
• FAN EFFICACY WATTS/CFM
• VERIFIED HEAT PUMP RATED HEATING CAPACITY
• DUCT LEAKAGE TESTING
• DUCTS LOCATED ENTIRELY IN CONDITIONED SPACE CONFIRMED BY DUCT LEAKAGE TESTING

CODE COMPLIANCE:

2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
2022 CALIFORNIA FIRE CODE
ALL YOLO COUNTY ORDINANCES

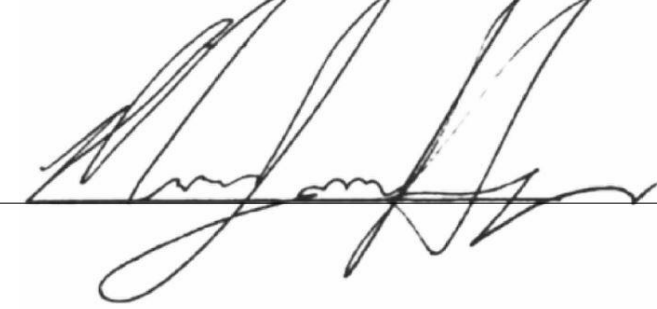
ABBREVIATIONS:

Table of abbreviations including AND ANGLE, AT CENTERLINE, # POUND OR NUMBER, (E) EXISTING, (N) NEW, ADJ. ADJUSTABLE, AGGR. AGGREGATE, ALUM. ALUMINUM, APPROX. APPROXIMATE, ARCH. ARCHITECTURAL, ASPH. ASPHALT, BOARD BOARD, BITUM. BITUMINOUS, BLDG. BUILDING, BLKG. BLOCKING, BEAM BEAM, CER. CERAMIC, CLG. CEILING, CL. CLOSET, CLMN. COLUMN, CONC. CONCRETE, CONT. CONTINUOUS, CORR. CORRIDOR, CPT. CARPET, DET. DETAIL, DIA. DIAMETER, DIM. DIMENSION, DN. DOWN, DR. DOOR, DRWG. DRAWING, EA. EACH, E. J. EXPANSION JOINT, ELEV. ELEVATION, ELEC. ELECTRICAL, EQ. EQUAL, EXT. EXTERIOR, F. D. FLOOR DRAIN, FIN. FINISH, FLR. FLOOR, FLUOR. FLUORESCENT, F. O. C. FACE OF CONCRETE, F. O. F. FACE OF FINISH, F. O. S. FACE OF STUDS, FT. FOOT OR FEET, FTG. FOOTING, FURR. FURRING, GA. GALVANIZED, GL. GLASS, GYP. GYPSUM, H.B. HOSE BIBB, H.C. HOLLOW CORE, HR. HOUR, HGT. HEIGHT, HWD. HARDWOOD, INSUL. INSULATION, INT. INTERIOR, KIT. KITCHEN, LAM. LAMINATE, LAV. LAVATORY, MAX. MAXIMUM, MECH. MECHANICAL, MIN. MINIMUM, M.O. MASONRY OPENING, N.I.C. NOT IN CONTRACT, NO. NUMBER, N.T.S. NOT TO SCALE, O.C. ON CENTER, OPNG. OPENING, OPP. OPPOSITE, PL. PLATE, PLYWD. PLYWOOD, PR. PAIR, PT. POINT, PART. PARTITION, P.B.O. PROVIDED BY OWNER, R. RADIUS, R.D. ROOF DRAIN, REF. REFRIGERATOR, REINF. REINFORCED, REQ. REQUIRED, RM. ROOM, R.O. ROUGH OPENING, R.W.L. RAIN WATER LEADER, S.C. SOLID CORE, SH. SHEET, SIM. SIMILAR, SPEC. SPECIFICATION, SQ. SQUARE, SUB ON GRADE, SEE STRUCTURAL DRAWINGS, S.S. STAINLESS STEEL, STOR. STORAGE, SUSP. SUSPENDED, SYM. SYMBOL, T.O. TOP OF, T.O.C. TOP OF CURB, TEL. TELEPHONE, T.&G. TONGUE AND GROOVE, T.O.W. TOP OF WALL, TYP. TYPICAL, UNLESS OTHERWISE NOTED, VEST. VESTIBULE, W/ WITH, W.C. WATER CLOSET, W/O WITHOUT

Redwood ADU
Built in California



SIGNATURE:



PROJECT INFO:

NEW SECONDARY DWELLING

ADDRESS: 18743 COUNTY RD 97
WOODLAND, CA 95695
APN: 025-480-010-000

Table with 3 columns: NO., DESCRIPTION, DATE. Contains one row with a triangle symbol in the NO. column.

PERMIT SET

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TITLE SHEET

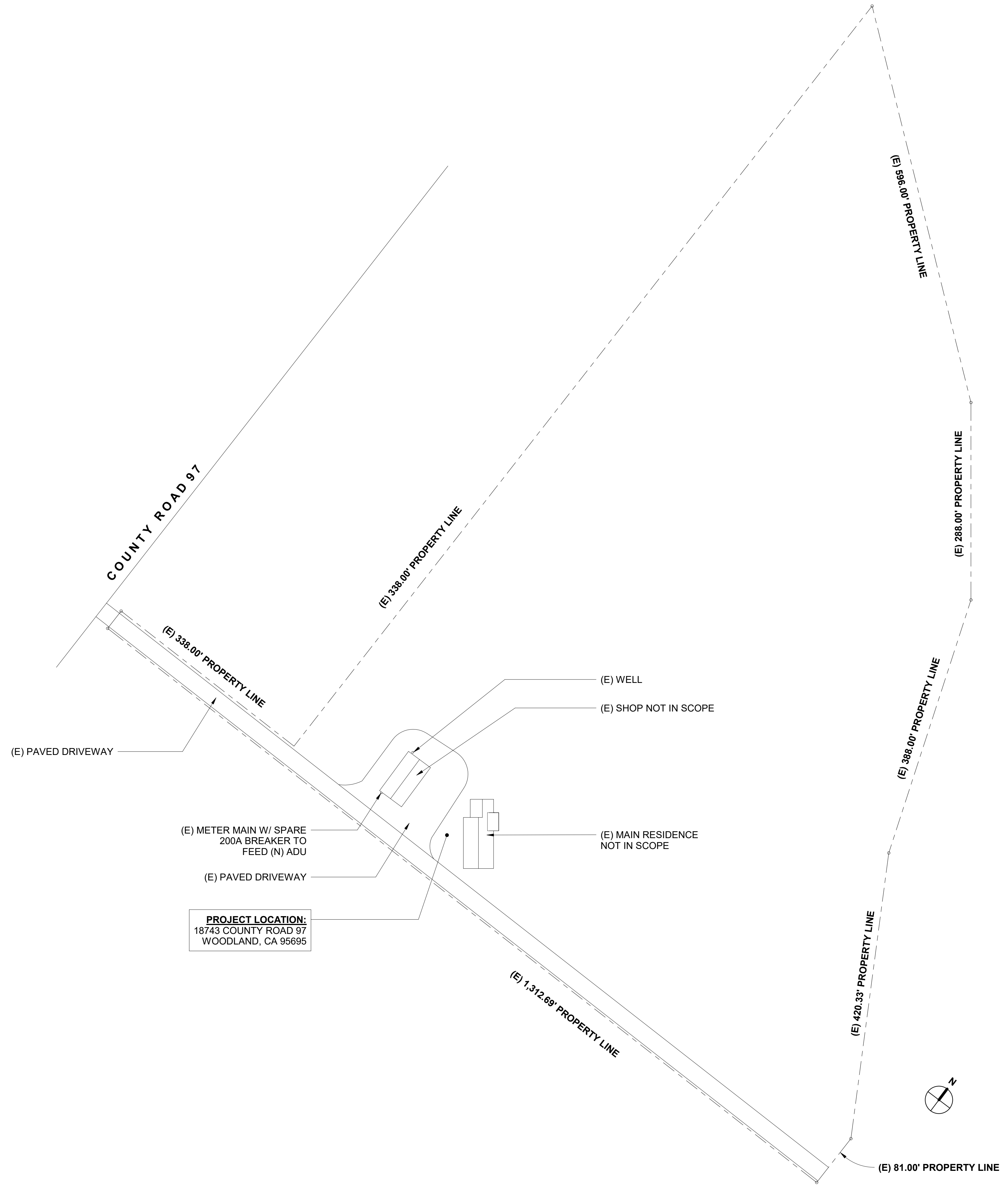
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DRAWN BY: MJH

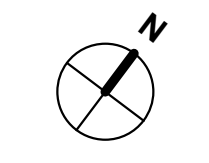
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A0.1



**1** EXISTING SITE PLAN  
1" = 80'-0"



**Redwood  
ADU**  
*Built in California*



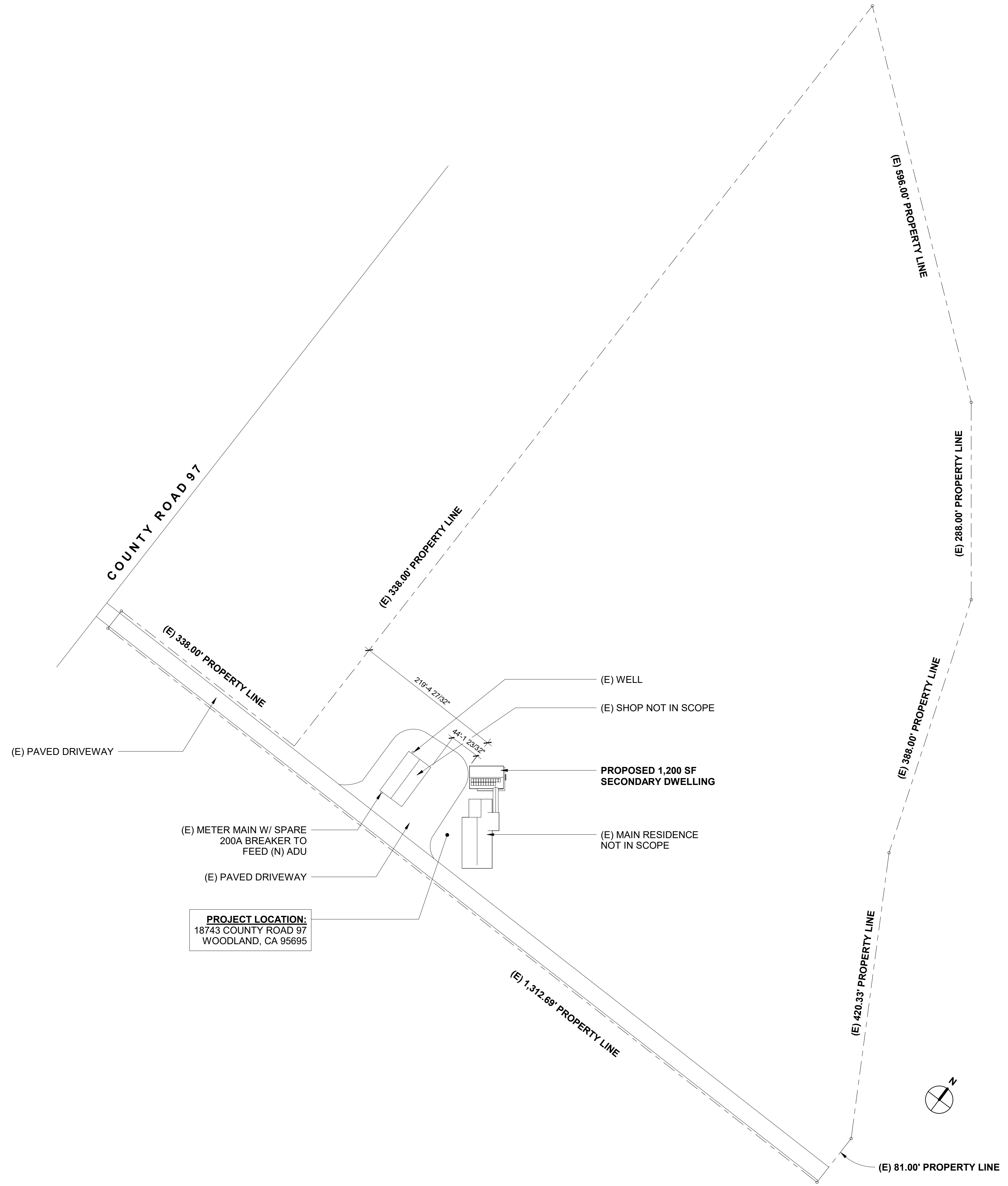
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**NEW SECONDARY DWELLING**  
ADDRESS: 18743 COUNTY RD 97  
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APN: 025-480-010-000

NO.	DESCRIPTION	DATE
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**PERMIT SET**  
DRAWING TITLE:  
**EXISTING SITE PLAN**  
DATE: 05.08.2023  
DRAWN BY: MJH  
SCALE: AS SHOWN  
SHEET #:

**A0.2**



**PROJECT LOCATION:**  
 18743 COUNTY ROAD 97  
 WOODLAND, CA 95695

**1 PROPOSED SITE PLAN**  
 1" = 80'-0"

**Redwood ADU**  
*Built in California*



SIGNATURE:

**PROJECT INFO:**  
**NEW SECONDARY DWELLING**  
 ADDRESS: 18743 COUNTY RD 97  
 WOODLAND, CA 95695  
 APN: 025-480-010-000

NO.	DESCRIPTION	DATE
△		

**PERMIT SET**  
 DRAWING TITLE:  
**PROPOSED SITE PLAN**  
 DATE: 05.08.2023  
 DRAWN BY: Author  
 SCALE: AS SHOWN  
 SHEET #:

**A0.3**



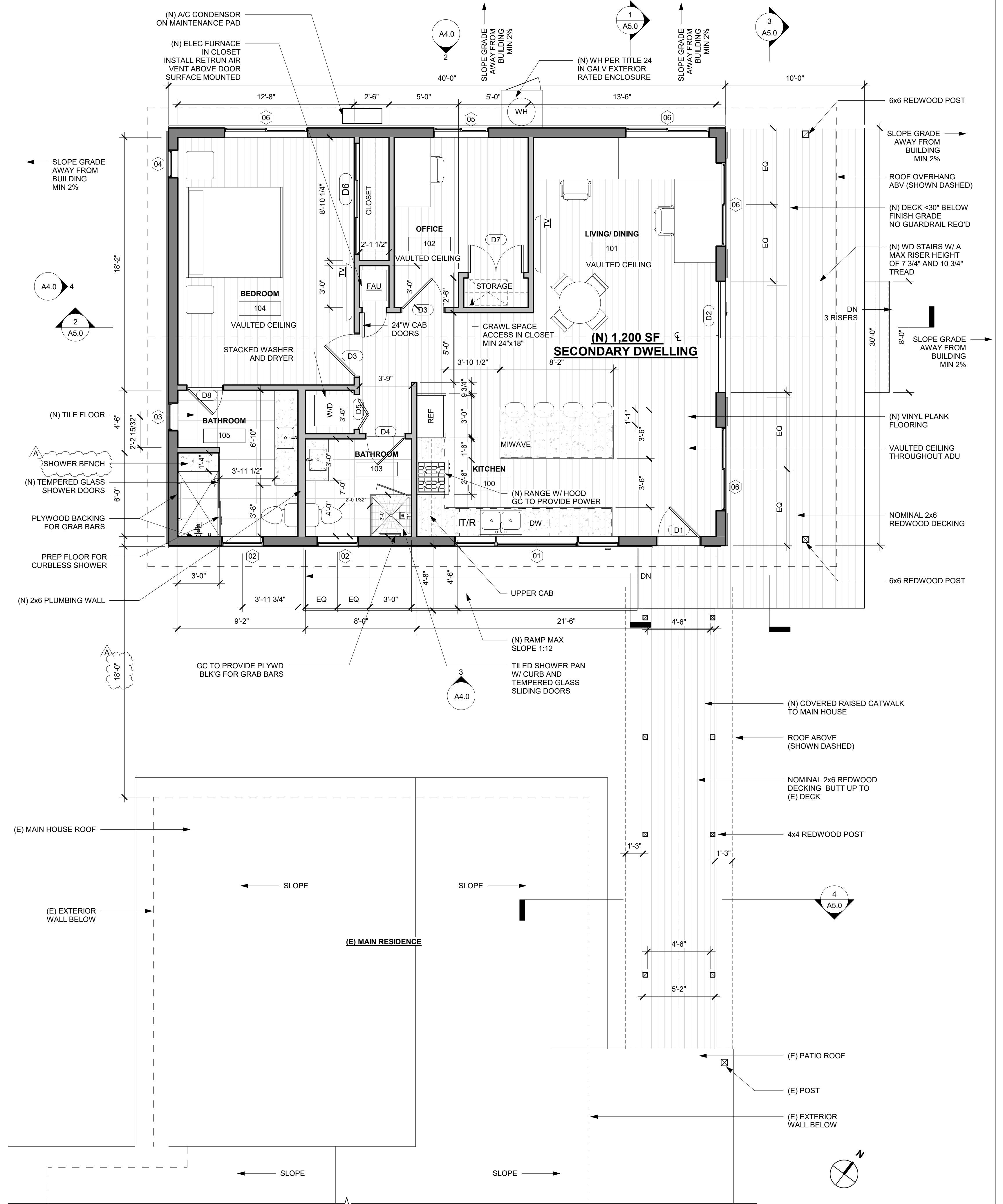
WALL LEGEND	
	EXTERIOR WALL: 2x6 STUD WALL SEE EXTERIOR ELEVATIONS FOR FINISHES
	INTERIOR WALL: 2x4 W/ 1/2" GYPSUM WALL BOARD (UON)

- FLOOR PLAN NOTES**
- INTERIOR WALL AND CEILING FINISHES SHALL NOT EXCEED FLAME SPREAD CLASSIFICATIONS DICTATED BY ALL APPLICABLE BUILDING CODES
  - GYPSUM BOARD AND CEILING SYSTEMS SHALL CONFORM TO ALL LOCAL GOVERNING BUILDING CODES AND ORDINANCES
  - GYPSUM BOARD SHALL NOT BE USED WHERE THERE WILL BE DIRECT EXPOSURE TO WATER OR IN AREAS SUBJECT TO CONTINUOUS HIGH HUMIDITY.
  - OUTSIDE RECEPTACLES SHALL BE WEATHER PROOF
  - ALL WINDOWS SHALL BE DUAL PANE
  - ALL NEW DOORS TO BE SOLID CORE SINGLE PANEL WOOD DOORS
  - ALL BEDROOMS AND HALL AREAS THAT ACCESS HABITABLE ROOMS SHALL HAVE SMOKE DETECTORS, HARD WIRED WITH BATTERY BACK UP
  - SMOKE DETECTORS ARE REQUIRED IN EACH ROOM USED FOR SLEEPING, CENTRALLY LOCATED IN THE WALL OR CEILING, IN CORRIDORS PROVIDING ACCESS TO EACH SEPARATE SLEEPING AREA, AT EACH FLOOR OR BASEMENT LEVEL AND IN CLOSE PROXIMITY TO THE STAIRWAY.
  - ALL GLASS AND GLAZING SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES AS WELL AS THE US CONSUMER PRODUCT SAFETY COMMISSION, SAFETY STANDARDS FOR ARCHITECTURAL GLAZING MATERIALS.
  - BATHTUB, SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NON ABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR PER CRC R307.2
  - PROVIDE 30"x22" ATTIC ACCESS W/ SWITCH AND LIGHT AND RECP
  - THERE SHALL BE A MINIMUM 5% GRADE AWAY FROM ALL FOUNDATION WALLS. CRC R401.3
  - SLEEPING ROOMS SHALL HAVE A WINDOW OR EXTERIOR DOOR FOR EMERGENCY ESCAPE SECTION R310
    - WINDOWS MUST HAVE AN OPENABLE AREA OF AT LEAST 5.7 SQUARE FEET, WITH THE MINIMUM OPENABLE WIDTH 20" AND THE MINIMUM OPENABLE HEIGHT 24".
    - THE BOTTOM OF THE CLEAR OPENING SHALL NOT EXCEED 44" ABOVE THE FLOOR. DO NOT MEASURE TO THE WINDOW SILL. THIS GENERALLY APPLIES TO WINDOWS THAT HAVE A HEIGHT OF 5' OR LESS.
    - SUCH OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY OR A COURT THAT OPENS TO A PUBLIC WAY (4-SIDED COURTS ARE PROHIBITED).
    - IF SUCH OPENINGS OCCUR AT A PATIO, THE PATIO MAY NOT BE ENCLOSED. APPENDIX H, SECTION AH103.2.
    - THE EMERGENCY DOOR OR WINDOW SHALL BE OPENABLE FROM THE INSIDE TO PROVIDE A FULL, CLEAR OPENING WITHOUT THE USE OF ANY KEYS OR TOOLS.
    - FOR EGRESS OPENINGS AT WINDOW WELLS OR AREA WELLS, REFER TO SECTION R310.2 OR R310.3 FOR REQUIREMENTS

- WATER CLOSET REQUIREMENTS**
- THE WATER CLOSET SHALL HAVE A CLEARANCE OF 30 INCHES WIDE (15 INCHES ON CENTER) AND 24 INCHES IN FRONT. (2019 CPC 402.5)
  - WHERE THE WATER CLOSET (OR OTHER PLUMBING FIXTURE) COMES INTO CONTACT WITH THE WALL OR FLOOR, THE JOINT SHALL BE CAULKED AND SEALED TO BE WATERTIGHT. (2019 CPC 402.2)
 

TEMPERED GLAZING (2019 CBC 2406.4, 2403.1 AND CRC R308.1, R308.4) TEMPERED GLAZING SHALL BE INSTALLED IN THE LOCATIONS LISTED BELOW. TEMPERED GLAZING SHALL BE PERMANENTLY IDENTIFIED BY A MANUFACTURER MARKING THAT IS PERMANENTLY APPLIED AND CANNOT BE REMOVED WITHOUT BEING DESTROYED (E.G. SAND BLASTED, ACID ETCHED, CERAMIC FIRED, LASER ETCHED, OR EMBOSSED).
  - WITHIN A PORTION OF WALL ENCLOSING A TUB/SHOWER WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE STANDING SURFACE AND DRAIN INLET.
  - WITHIN 60 INCHES OF A TUB/SHOWER WHERE THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALLING SURFACE.
  - GLAZING ON THE HINGE-SIDE OF AN IN-SWINGING DOOR THAT IS INSTALLED PERPENDICULAR TO A DOOR IN A CLOSED POSITION AND WITHIN 24 INCHES OF THE DOOR.

- GREEN BUILDING NOTES**
- THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. THE EFFECTIVE FLUSH VOLUME FOR DUAL FLUSH TOILETS IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH. (CGBSC SEC.4.303.1.1 AND CPC SEC.403.2.1)
  - SHOWER HEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 80 PSI. (CGBSC SEC.4.303.1.3.1 AND CPC SEC.408.2)
  - WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWER HEAD, THE COMBINED FLOW RATE OF ALL SHOWERHEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 2.0 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPERATION AT A TIME. (CGBSC SEC.4.303.1.3.2)
  - THE MAXIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT EXCEED 1.2 GALLONS PER MINUTE AT 60 PSI AND SHALL NOT BE LESS THAN 0.8 GALLONS PER MINUTE AT 20 PSI. (CGBSC SEC.4.303.1.4.1 AND CPC SEC.403.7)
  - THE MAXIMUM FLOW RATE OF KITCHEN FAUCETS SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE FLOW RATE ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI. (CGBSC SEC.4.303.1.4.4 AND CPC SEC.403.6)
  - EACH BATHROOM THAT CONTAINS A BATHTUB, SHOWER OR TUB/SHOWER COMBINATION SHALL BE MECHANICALLY VENTILATED WITH AN ENERGY STAR COMPLIANT FAN AND, UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, CONTROLLED BY A HUMIDITY CONTROL. (CRC SEC.R303.3.1, CMC SEC.402.5 AND CGBSC SEC.4.506.1)
  - HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 PERCENT OR LESS TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT. (CGBSC SEC.4.506.1(A))
  - A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL (I.E. BUILT-IN). (CGBSC SEC.4.506.1(B))



**1 LEVEL 1 PROPOSED PLAN**  
 1/4" = 1'-0"

**Redwood ADU**  
*Built in California*



SIGNATURE:

**NEW SECONDARY DWELLING**  
 PROJECT INFO:  
 ADDRESS: 18743 COUNTY RD 97  
 WOODLAND, CA 95695  
 APN: 025-480-010-000

NO.	DESCRIPTION	DATE

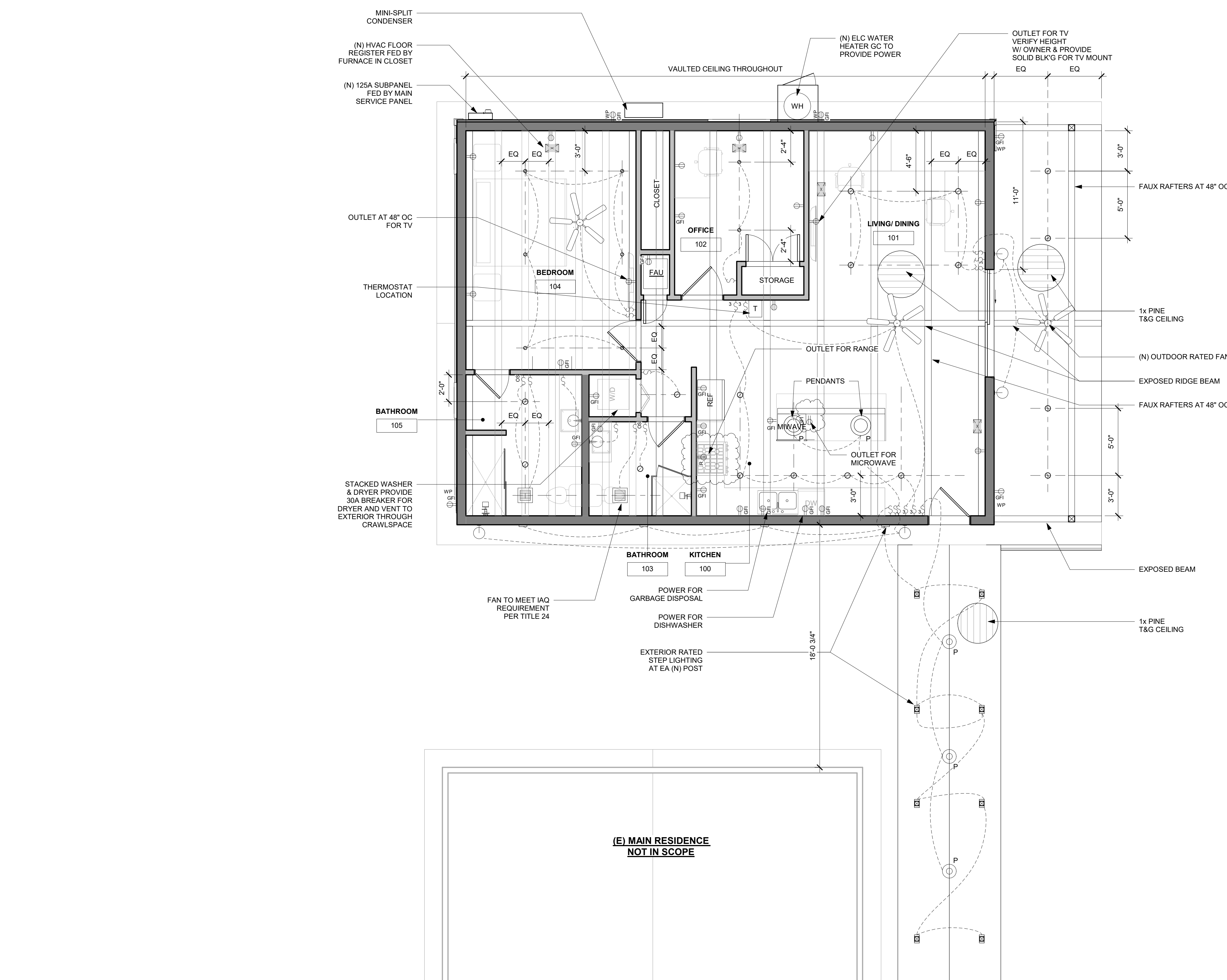
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 DRAWING TITLE:  
**LEVEL 1 PLANS**  
 DATE: 05.08.2023  
 DRAWN BY: MJH  
 SCALE: AS SHOWN  
 SHEET #:

**A2.0**

LIGHTING LEGEND	
	LED PENDANT LIGHT FIXTURE
	SURFACE MOUNTED LED FIXTURE
	LED RECESSED 4" CAN LIGHT
	WALL MOUNTED LED LIGHT FIXTURE
	HARDWIRED SMOKE AND CO DETECTOR
	HARDWIRED SMOKE DETECTOR
	SINGLE POLE SWITCH W/ DIMMER
	3-WAY SWITCH W/ DIMMER
	SINGLE POLE SWITCH W/ OCCUPANCY SENSOR
	DUPLEX CONVENIENCE RECEPTACLE GFI +12" AFF TYP UON
	ENERGY STAR RATED FAN W/ SEPARATE SWITCH 110 CFM & HUMIDITY SENSOR

- ELECTRICAL NOTES**
- DIMMERS ON ALL LIGHTS SERVING LIVING ROOM & KITCHEN SPACES.
  - ALL LIGHT FIXTURES SHALL CONTAIN BULBS THAT ARE LABELED AS JA8-2016 (JA8-2016-E FOR SEALED LENS OR RECESSED FIXTURE). SCREW BASE BULBS ARE PERMITTED, EXCEPT IN RECESSED LIGHTING FIXTURES
  - ALL BATHROOM/LAUNDRY ROOM/UTILITY ROOM LIGHT SWITCHES TO BE MOTION DETECTOR-TYPE W/ 30 MINUTE TIME DELAY OFF OPERATION. FANS SHALL BE ENERGY STAR COMPLIANT, AND TERMINATE OUTSIDE THE BUILDING. FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL CAPABLE OF ADJUSTMENT BETWEEN RELATIVE HUMIDITY RANGE LESS THAN OR EQUAL TO 50% TO A MAXIMUM OF 80%.
  - ALL LIGHT FIXTURES TO BE HIGH EFFICACY
  - RECEPTACLE OUTLETS SHALL BE PROVIDED ON WALL SPACES 2 FT OR GREATER, AND NO MORE THAN 6'-0" FROM THE EDGE OF ANY WALL SURFACE.
  - RECESSED LIGHTING SHALL BE LISTED AS IC (ZERO CLEARANCE TO INSULATION) AND AT (AIR TIGHT), BE SEALED/CAULKED BETWEEN THE FIXTURE HOUSING AND CEILING, SHALL NOT CONTAIN A SCREW BASE SOCKET, AND CONTAIN BULBS MARKED WITH JA8-2016-E EFFICIENCY LABEL
  - OUTDOOR LIGHTING IS TO BE HIGH EFFICACY THAT IS CONTROLLED BY AN ON AND OFF SWITCH IN ADDITION TO ONE OF THE FOLLOWING PER CA ENERGY CODE SEC. 150.0(K)3A:
    - PHOTOCONTROL AND MOTION SENSOR
    - PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL
    - ASTRONOMICAL TIME SWITCH CONTROL
    - ENERGY MANAGEMENT CONTROL SYSTEM
  - NEW ELECTRICAL RECEPTACLES TO BE TAMPER RESISTANT. CEC ARTICLE 406.12 E2. ALL BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, BEDROOMS, LAUNDRY ROOMS, CLOSETS, HALLWAYS, AND SIMILAR ROOMS/SPACES SHALL HAVE A LISTED COMBINATION-TYPE ARC-FAULT CIRCUIT INTERRUPTER (AFCI). CEC ARTICLE 210.12
  - AT LEAST ONE 20-AMPERE BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY BATHROOM RECEPTACLE OUTLET(S) AND SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. CEC ARTICLE 210.11(C)3
  - COUNTER TOPS WIDER THAN 12" REQUIRE RECEPTACLES. RECEPTACLE SHALL BE NO HIGHER THAN 20" ABOVE THE COUNTER. RECEPTACLE OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE WALL LINE IS MORE THAN 24", MEASURED HORIZONTALLY FROM AN OUTLET IN THAT SPACE
  - EACH BATHROOM SHALL BE PROVIDED WITH THE FOLLOWING:
    - ENERGY STAR FANS DUCTED TO TERMINATE OUTSIDE THE BUILDING
    - FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL OR FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM.
    - HUMIDITY CONTROLS WITH MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT, CAPABLE OF ADJUSTMENT BETWEEN RELATIVE HUMIDITY RANGE OF < 50 PERCENT TO A MAX OF 80%.
  - ALL EXTERIOR LIGHTING WILL BE DOWNWARD DIRECTED AND SHIELDED FROM NEIGHBORING VIEWS
  - SMOKE ALARMS SHALL BE LISTED AS COMPLYING W/ UL 217 & BE INSTALLED AND MAINTAINED IN ACCORDANCE W/ NFPA 720 & THE MANUFACTURER'S INSTRUCTIONS
  - CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING W/ UL 2034 & BE INSTALLED AND MAINTAINED IN ACCORDANCE W/ NFPA 720 & THE MANUFACTURER'S INSTRUCTIONS
  - LAUNDRY RECEPTACLE OUTLET TO BE SUPPLIED BY A DEDICATED 20 AMP BRANCH CIRCUIT PER CEC 210.11(C)2
  - PROVIDE A 30 AMP CIRCUIT FOR THE ELECTRIC CLOTHES DRYER. CEC 220.54
  - SMOKE ALARMS SHALL BE LISTED AS COMPLYING W/ UL 217 & BE INSTALLED AND MAINTAINED IN ACCORDANCE W/ NFPA 720 & THE MANUFACTURER'S INSTRUCTIONS
  - CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING W/ UL 2034 & BE INSTALLED AND MAINTAINED IN ACCORDANCE W/ NFPA 720 & THE MANUFACTURER'S INSTRUCTIONS
  - GC TO COORDINATE ALL OUTLET AND SWITCH LOCATION W/ THE OWNER

- PLUMBING NOTES**
- WATER CLOSET TO BE 1.28 GALLONS PER FLUSH MAXIMUM OR DUAL FLUSH PER CPC 411.2.
  - LAVATORY FAUCET TO BE 1.2 GALLONS PER MINUTE MAXIMUM PER CPC 407.2.1.2.
  - SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF 2.0 GALLONS (7.5L) PER MINUTE MEASURED AT 80 psi.
  - WHERE A FIXTURE COMES IN CONTACT WITH THE WALL OR FLOOR, THE JOINT BETWEEN THE FIXTURE AND THE WALL/FLOOR OR SHALL BE MADE WATERTIGHT.
  - BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR. CRC R307.2
  - GYPSON BOARD SHALL NOT BE USED WHERE THERE WILL BE DIRECT EXPOSURE TO WATER, OR IN AREAS SUBJECT TO CONTINUOUS HIGH HUMIDITY CRC R308.4
  - ALL PIPE, FITTINGS, TRAPS, FIXTURES, MATERIALS AND DEVICES USED IN A PLUMBING SYSTEM SHALL BE LISTED OR LABELED (THIRD-PARTY CERTIFIED) BY A LISTING AGENCY AND SHALL BE FREE OF DEFECTS.
  - PLUMBING WASTE VENTS SHALL TERMINATE NOT LESS THAN 10 FEET FROM, OR NOT LESS THAN 3 FEET ABOVE, AN OPENABLE WINDOW, DOOR, OPENING, AIR INTAKE, OR VENT SHAFT, OR NOT LESS THAN 3 FEET IN EVERY DIRECTION FROM A LOT LINE, ALLEY AND STREET EXCEPTED. CPC 906.2
  - THE GRADE OF HORIZONTAL DRAINAGE PIPE SHALL NOT BE LESS THAN 1/4" PER FOOT CPC 708.1
  - DOMESTIC CLOTHES WASHER STANDPIPE SIZE SHALL BE 2" MIN DIA. CPC TABLE 7-3
  - WATER PIPING TO BE UPONOR PEX BRAND AND UTILIZE MONIFOLD SYSTEM W/ 3/4" TRUNK & 1/2" DROPS



- MECHANICAL NOTES**
- ALL INTERIOR SPACES TO BE PROVIDED WITH SPACE HEATING PER CBC 1204.1
  - GAS VENTS OF WATER HEATER AND FURNACE SHALL TERMINATE 4'-0" FROM PROPERTY LINE. THEY SHALL NOT TERMINATE ADJACENT TO THE WALL PER CMC 802.6.2.3. WALL TERMINATION SHALL COMPLY WITH CMC 802.8.6
  - ALL EXHAUST DUCTS SHALL BE A SMOOTH INTERIOR SURFACE MIN 4". TERMINATE TO THE OUTSIDE OF THE BUILDING, EQUIP WITH BACK-DRAFT DAMPER
  - COMBUSTION AIR SHALL MEET THE REQUIREMENTS OF CMC CHAPTER 7. ENV AIR DUCTS SHALL TERMINATE 3' FROM THE PROPERTY LINE AND 3' FROM OPENINGS INTO THE BUILDING PER CMC 504.5. PROVIDE WITH BACK-DRAFT DAMPERS PER CMC 504.1 EXHAUST SHALL NOT DISCHARGE ONTO A PUBLIC WALKWAY
  - ENVIRONMENTAL AIR DUCTS SHALL TERMINATE 3'-0" FROM THE PROPERTY LINE AND BACK-DRAFT DAMPERS PER CMC 504.1.1 EXHAUST SHALL NOT DISCHARGE ONTO A PUBLIC WALKWAY
  - DOMESTIC RANGE HOOD VENTS SHALL MEET THE REQUIREMENTS OF CMC 504.3 AND COMPLY CMC TABLE 403.7
  - DOMESTIC RANGE HOOD EXHAUST REQUIRES A MIN RATE OF 100 CFM MEETING THE REQUIREMENTS OF ASHRAE 62.2
  - (N) FURNACE IN CRAWL SPACE SHALL BE INSTALLED PER MANUF INSTALLATION INSTRUCTIONS AND PER CMC 304.4, 607 & 904
  - THE ENTIRE GROUND SURFACE OF THE UNDER-FLOOR SPACE SHALL BE COVERED WITH A VAPOR BARRIER HAVING A THICKNESS NOT LESS THAN 4 MILS (0.1 MM) AND A FLAME-SPREAD INDEX OF NOT MORE THAN 200 CMC 607.13

**1 PROPOSED RCP**  
1/4" = 1'-0"

# Redwood ADU

*Built in California*

---

SIGNATURE:

PROJECT INFO:

**NEW SECONDARY DWELLING**

ADDRESS: 18743 COUNTY RD 97  
WOODLAND, CA 95695  
APN: 025-480-010-000

**PERMIT SET**

DRAWING TITLE:  
**RCP**

DATE: 05.08.2023

DRAWN BY: MJH

SCALE: AS SHOWN

SHEET #:  
**A2.1**

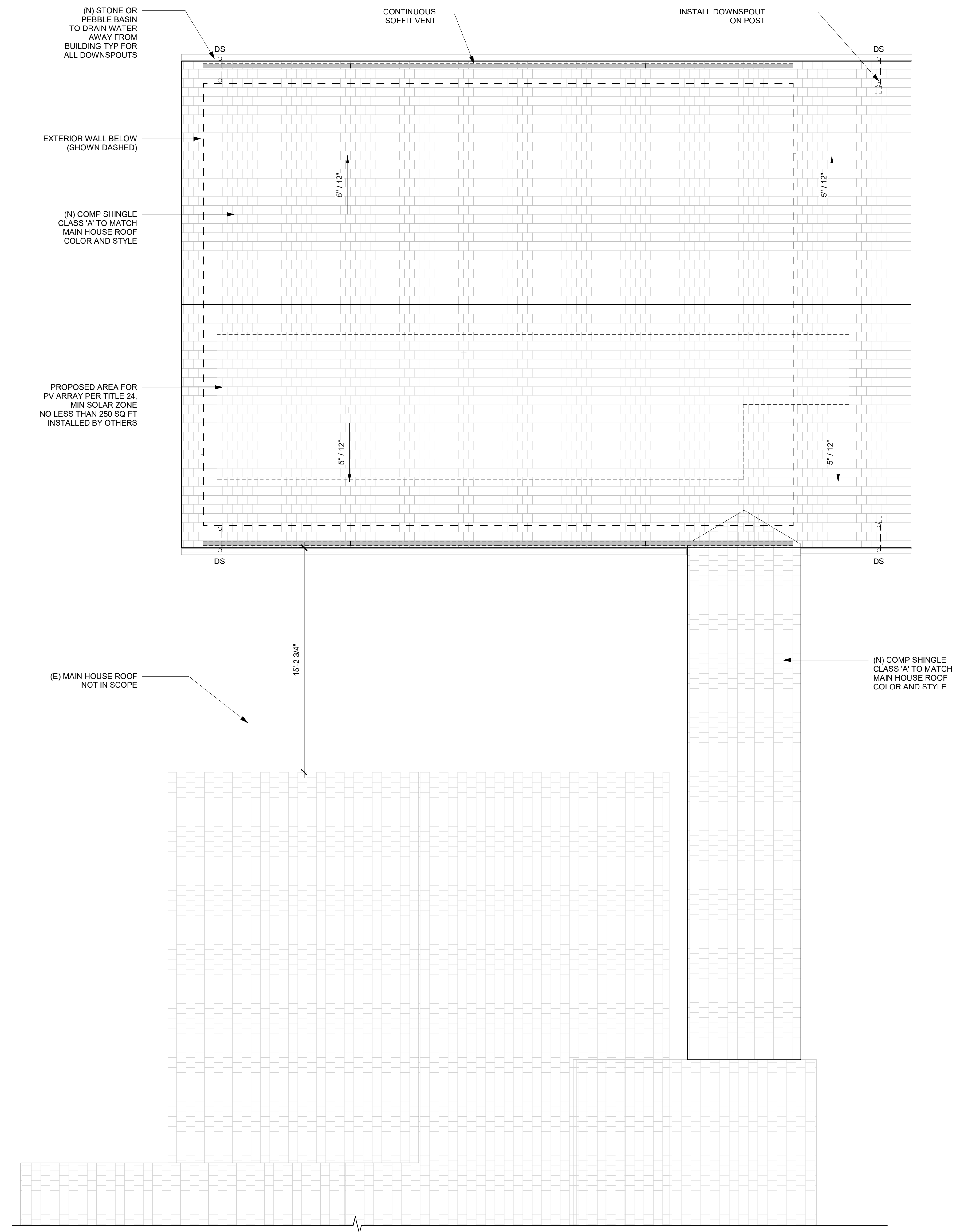
**ROOF VENT CALCULATION:**

ATTIC AREA: 1,200 SQ FT  
 TOTAL NET FREE VENTILATING AREA: 1,200/150 = 8 SQ FT  
 ROOF REQUIRED VENT AREA: 8 SQ FT  
 VENT TYPE:  
 VULCAN VSC35120FF 3.5" X 120" FLANGE FRONT CONTINUOUS SOFFIT VENT N.F.A. = 168. IN. = 1.2 S.F  
 7 x VULCAN VSC35120FF = 1.2 x 7 = 8.4

8.4 > 8 VENT AREA PROVIDED IS GREATER THAN REQUIRED

**NOTES:**

1. FOR INFO NOT NOTED SEE A2.0
2. ALL NEW CEILINGS EXPOSED TO UNCONDITIONED SPACE SHALL BE INSULATED WITH MIN R-30 INSULATION.
3. OPENINGS FOR ALL VENTS SHALL BE COVERED WITH CORROSION RESISTANT METAL MESH WITH 1/4" OPENING DIMENSIONS
4. ALL NEW ROOF MATERIAL TO MATCH (E) MAIN HOUSE, UON
5. DOWNSPOUTS MAY DRAIN TO SPLASH BLOCKS, COBBLESTONES, OR SWALES THAT DIRECT WATER AWAY FROM THE BUILDING



**1 ROOF PLAN**  
 1/4" = 1'-0"

**Redwood**  
**ADU**  
*Built in California*



SIGNATURE:

PROJECT INFO:  
**NEW SECONDARY DWELLING**

ADDRESS:  
 18743 COUNTY RD 97  
 WOODLAND, CA 95695  
 APN: 025-480-010-000

NO.	DESCRIPTION	DATE
△		

**PERMIT SET**  
 DRAWING TITLE:  
**ROOF PLAN**  
 DATE: **05.08.2023**  
 DRAWN BY: **MJH**  
 SCALE: **AS SHOWN**  
 SHEET #:

**A2.2**



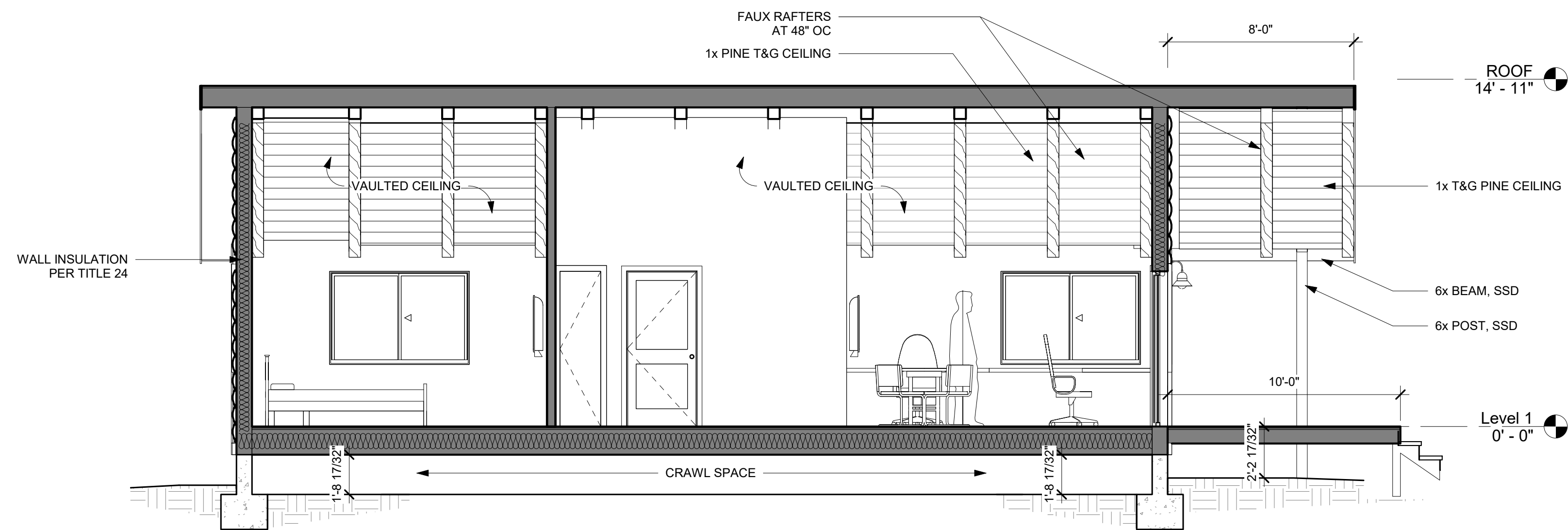




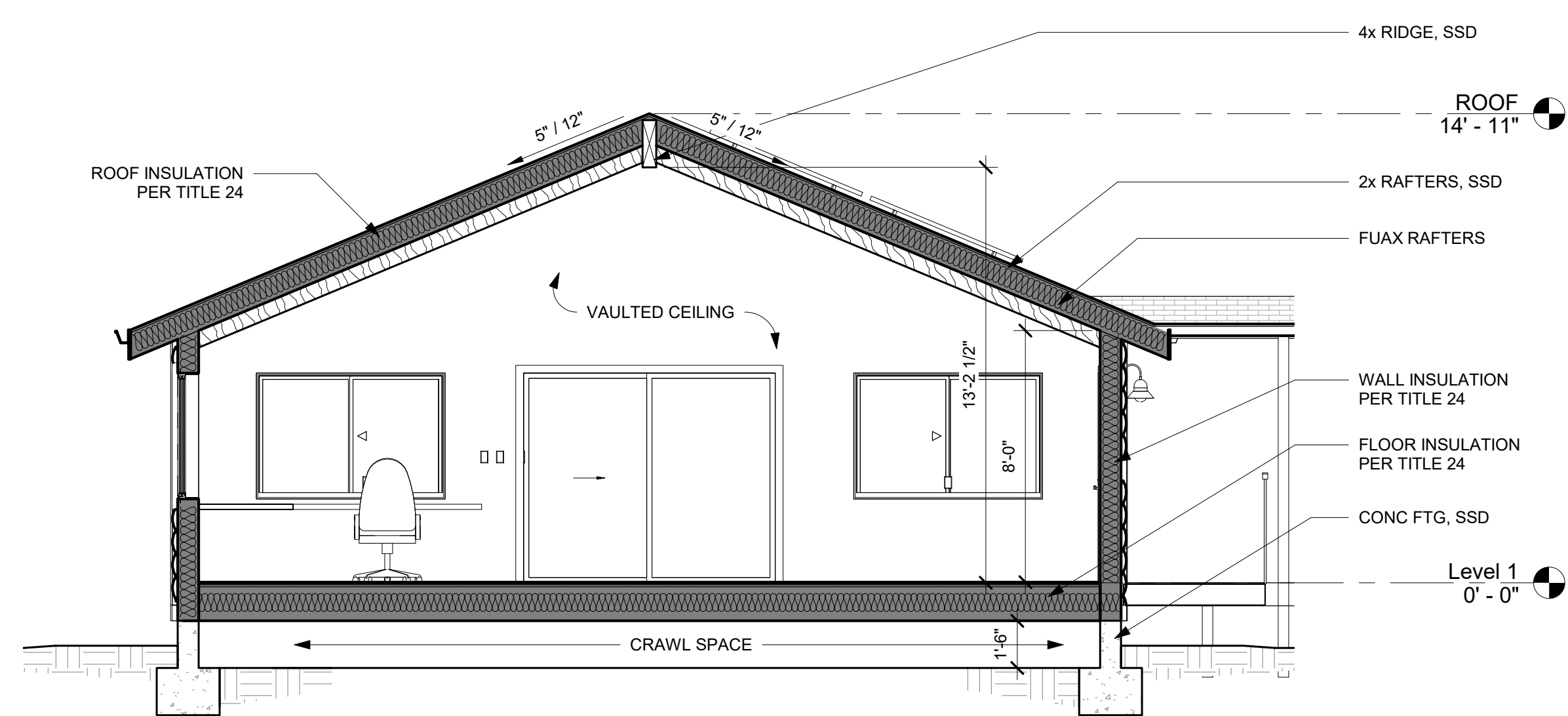




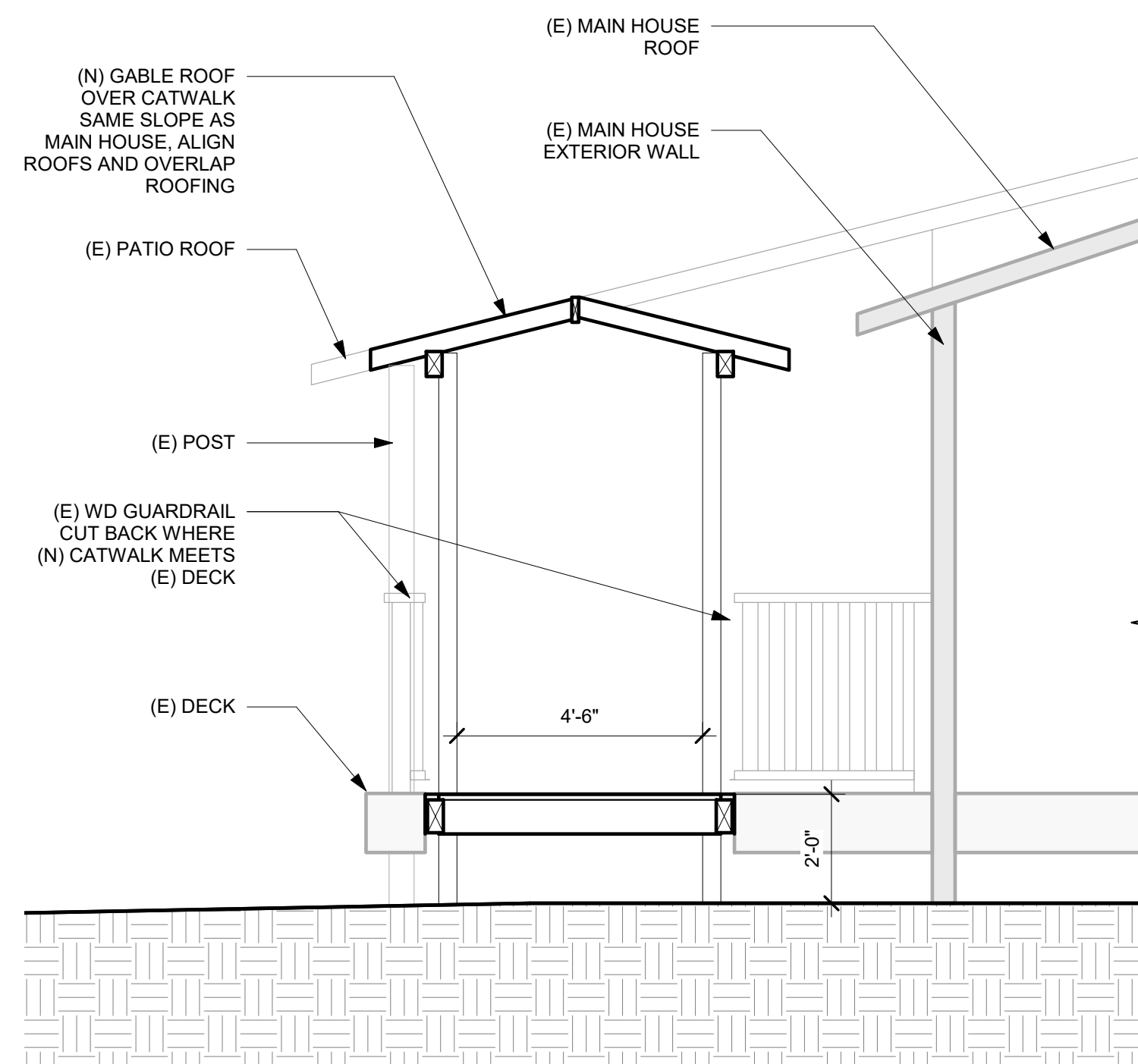




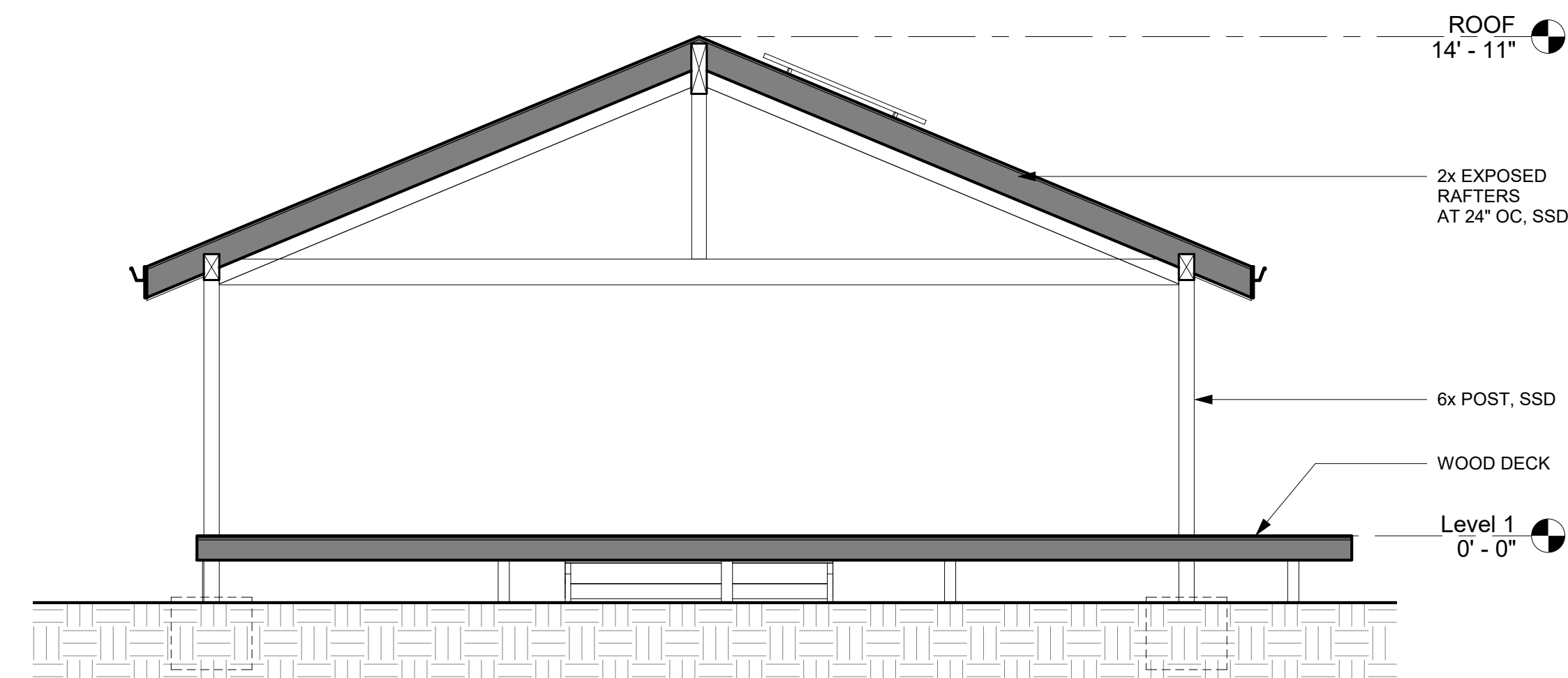
**2 LONGITUDINAL SECTION A**  
1/4" = 1'-0"



**1 LATITUDINAL SECTION A**  
1/4" = 1'-0"



**4 CATWALK SECTION**  
3/8" = 1'-0"



**3 LATITUDINAL SECTION A1**  
1/4" = 1'-0"

**Redwood**  
**ADU**  
*Built in California*



SIGNATURE:

PROJECT INFO:  
**NEW SECONDARY DWELLING**

ADDRESS:  
18743 COUNTY RD 97  
WOODLAND, CA 95695  
APN: 025-480-010-000

NO.	DESCRIPTION	DATE

**PERMIT SET**  
DRAWING TITLE:  
**SECTIONS**  
DATE: 05.08.2023  
DRAWN BY: MJH  
SCALE: AS SHOWN  
SHEET #:

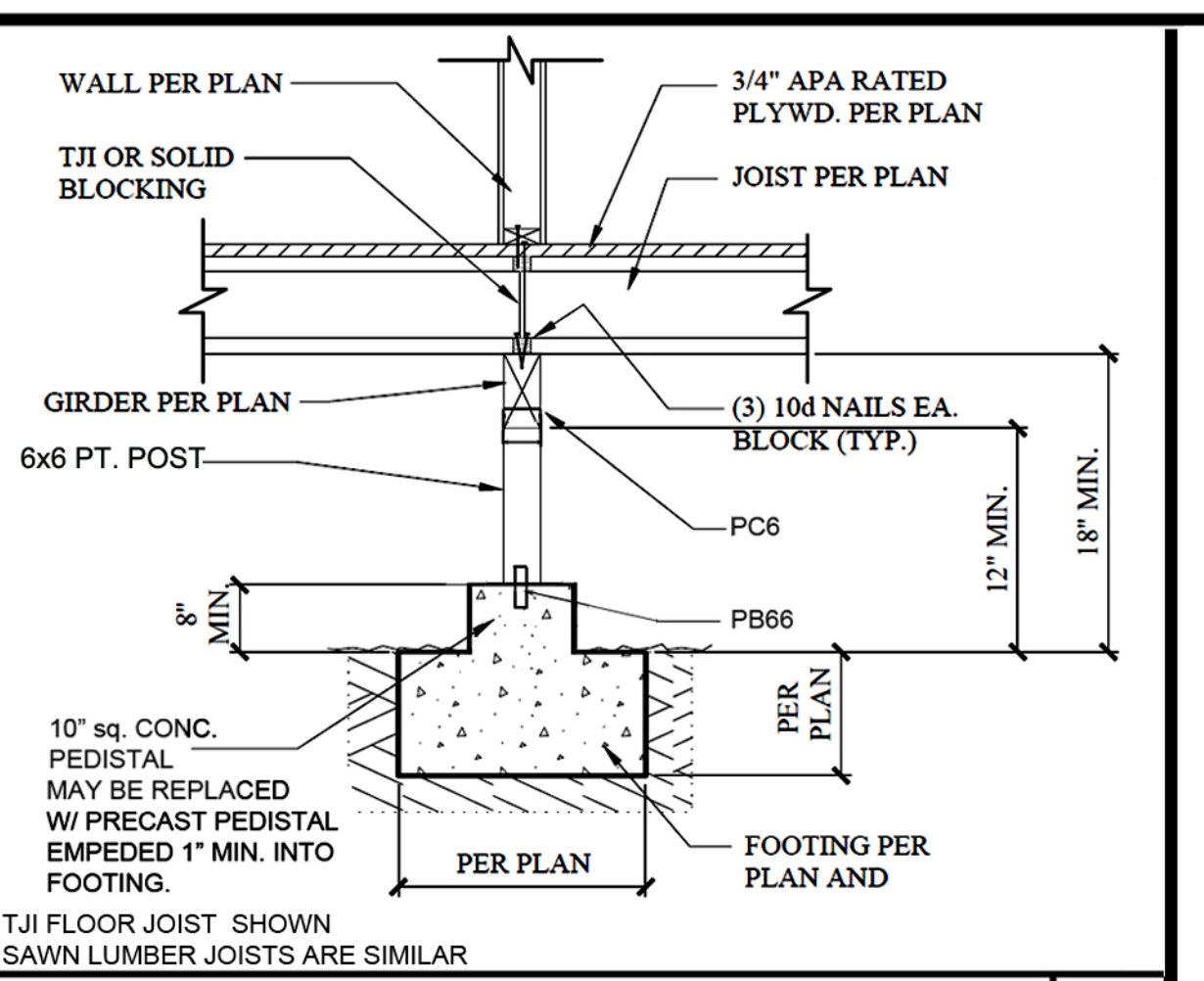
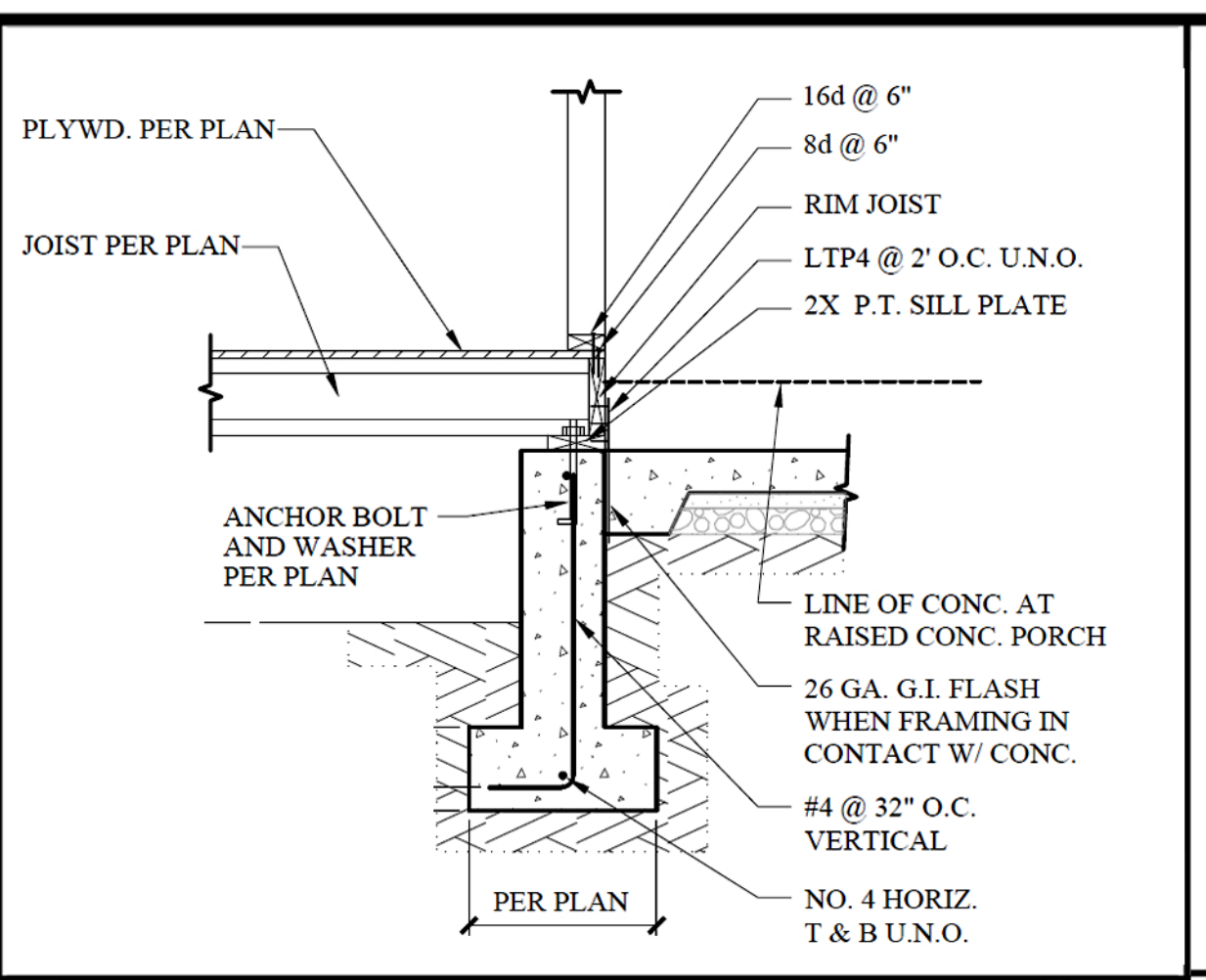
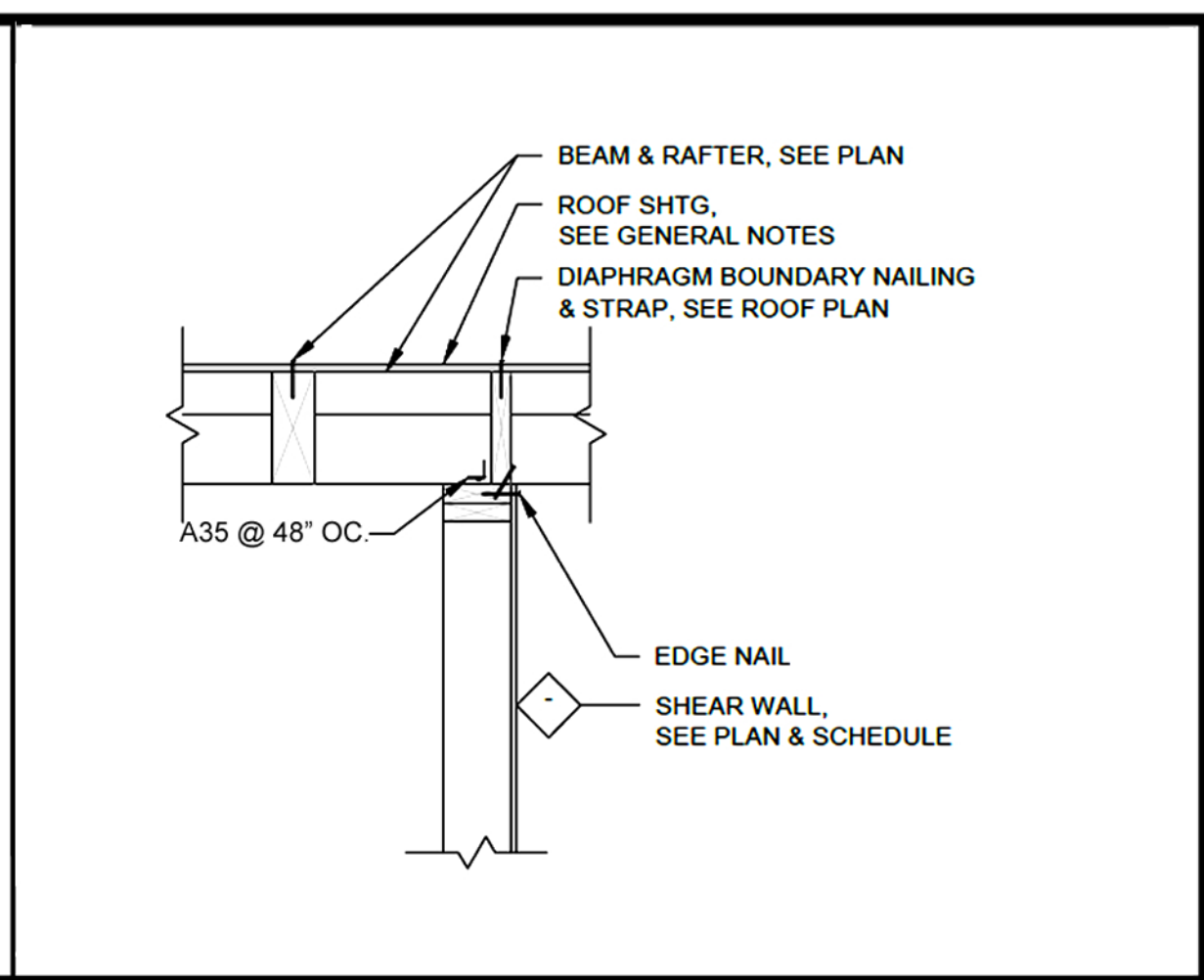
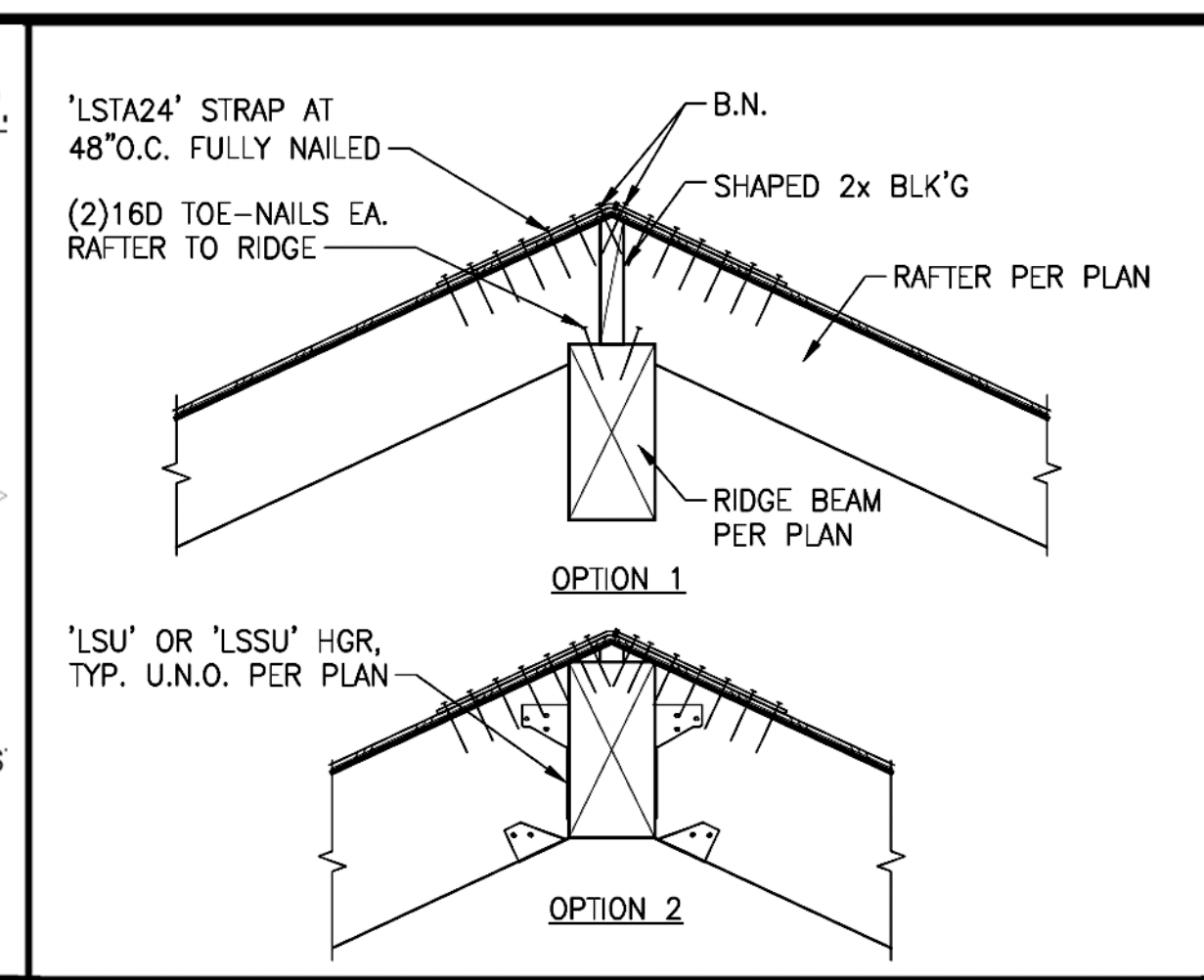
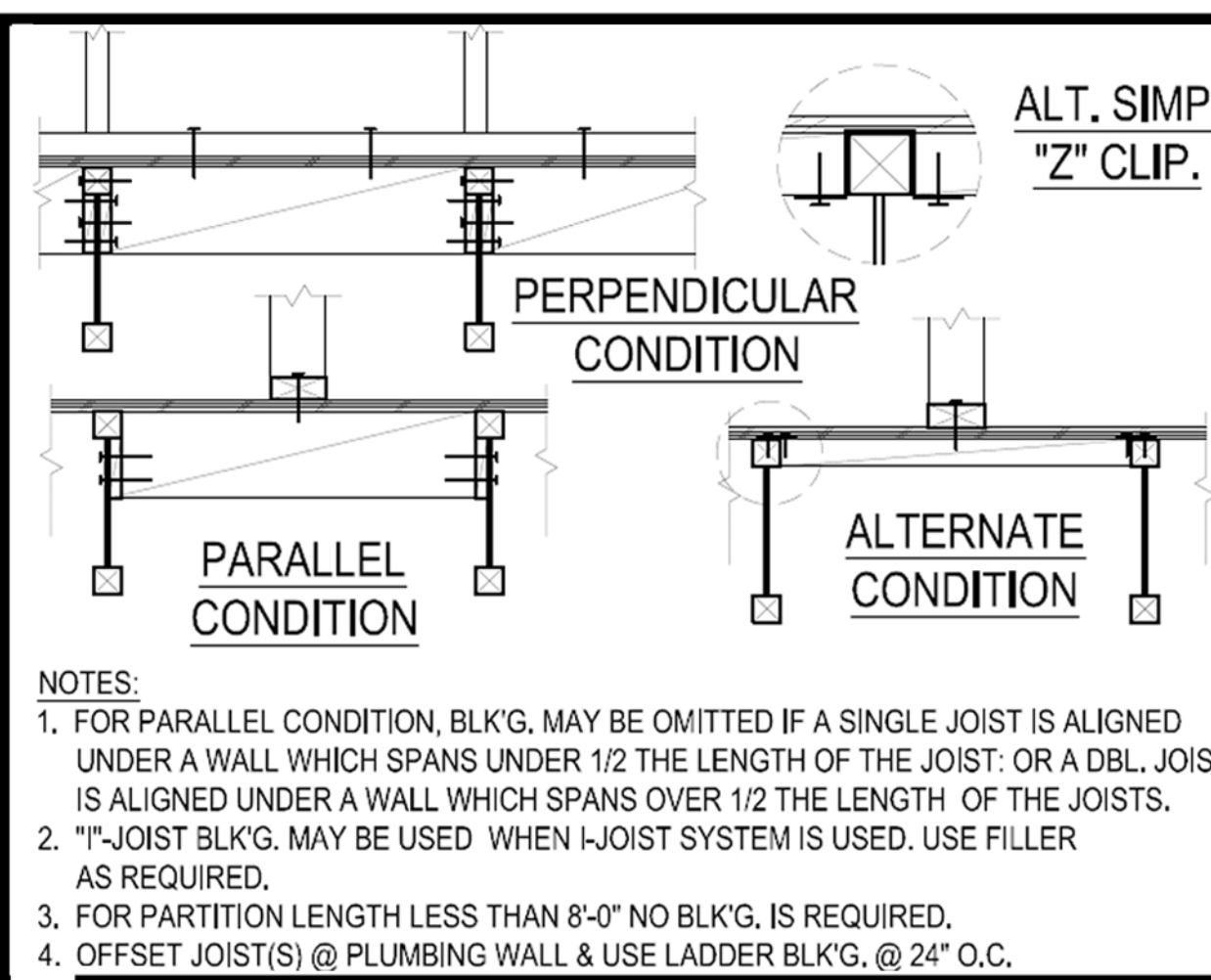
**A5.0**











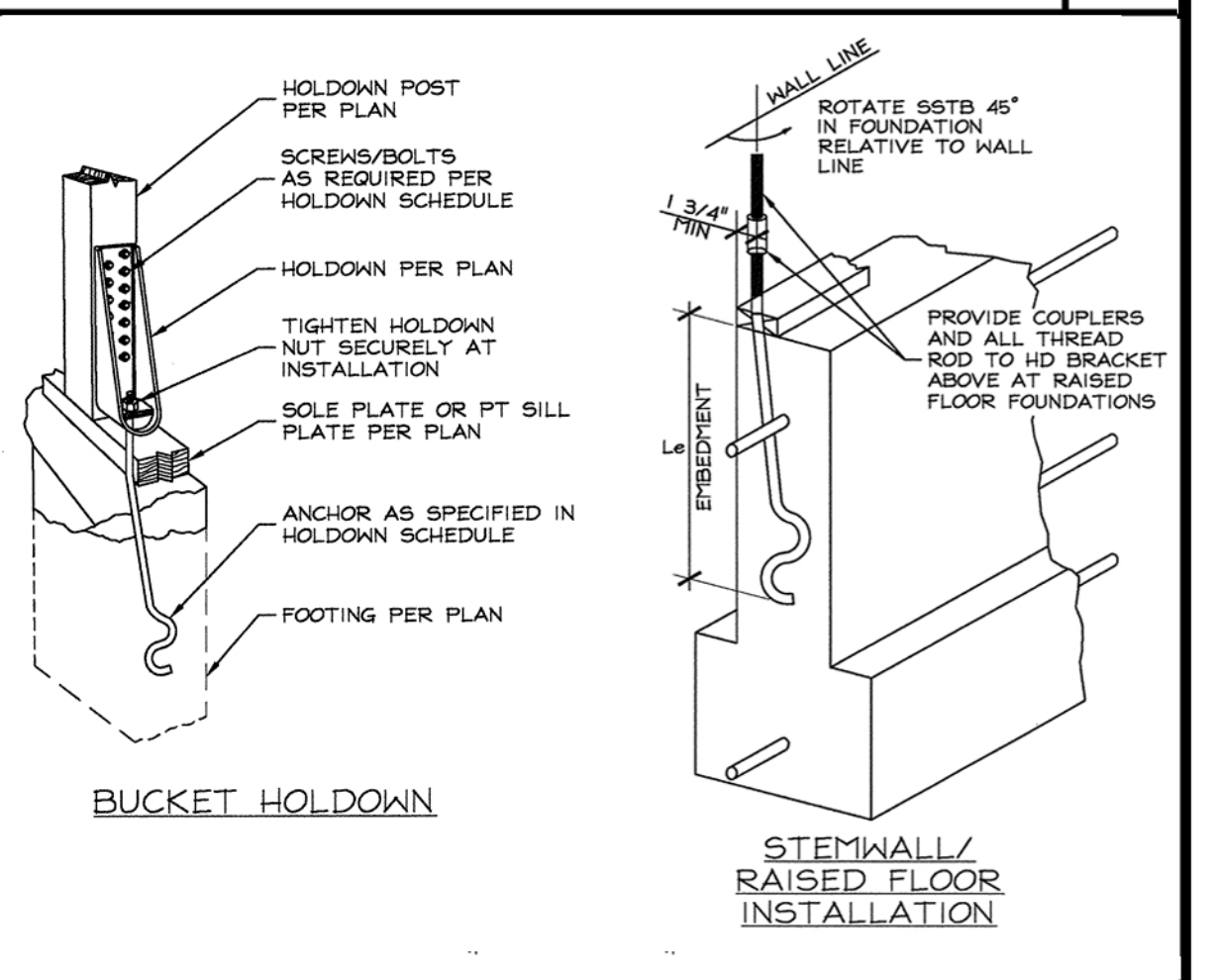
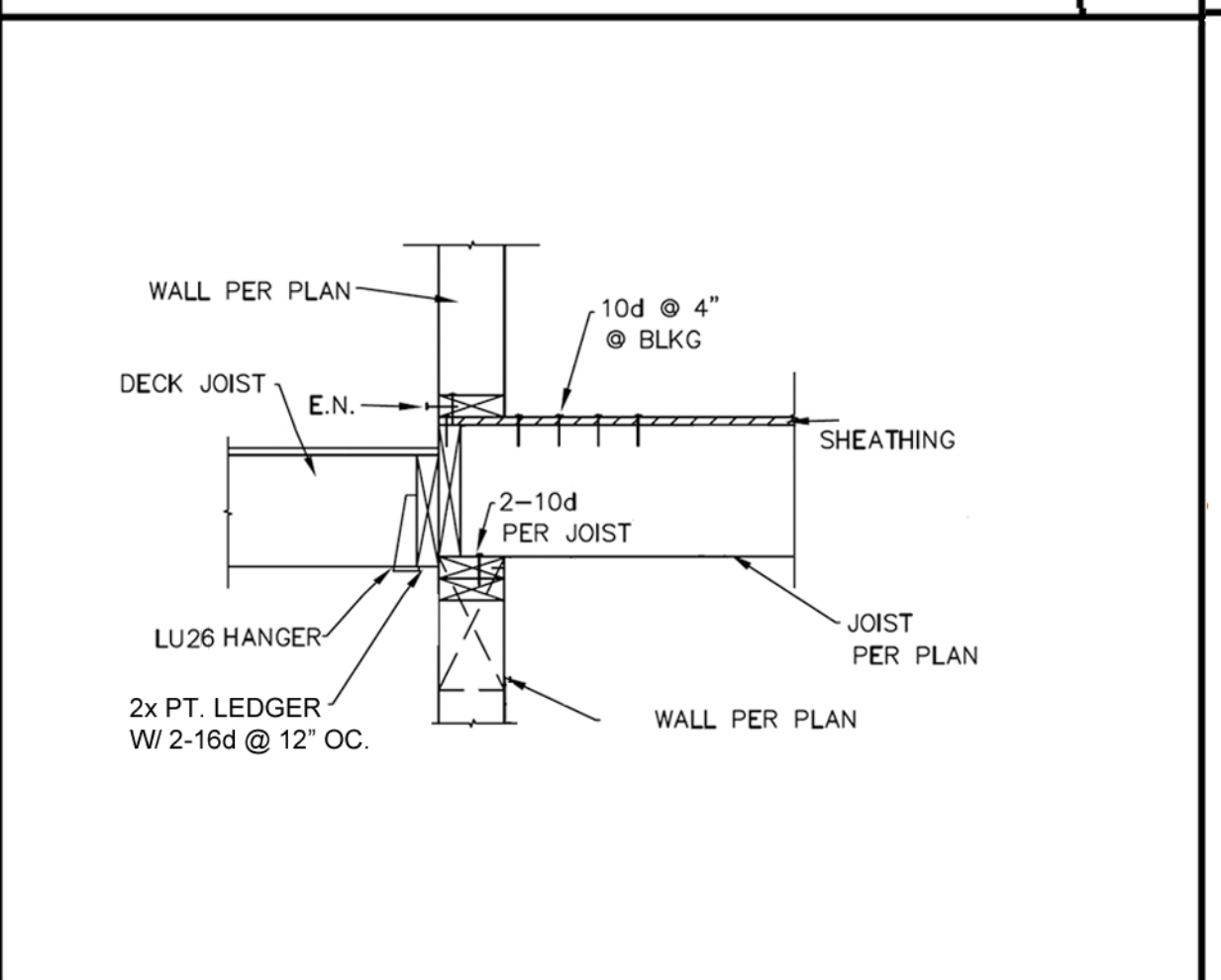
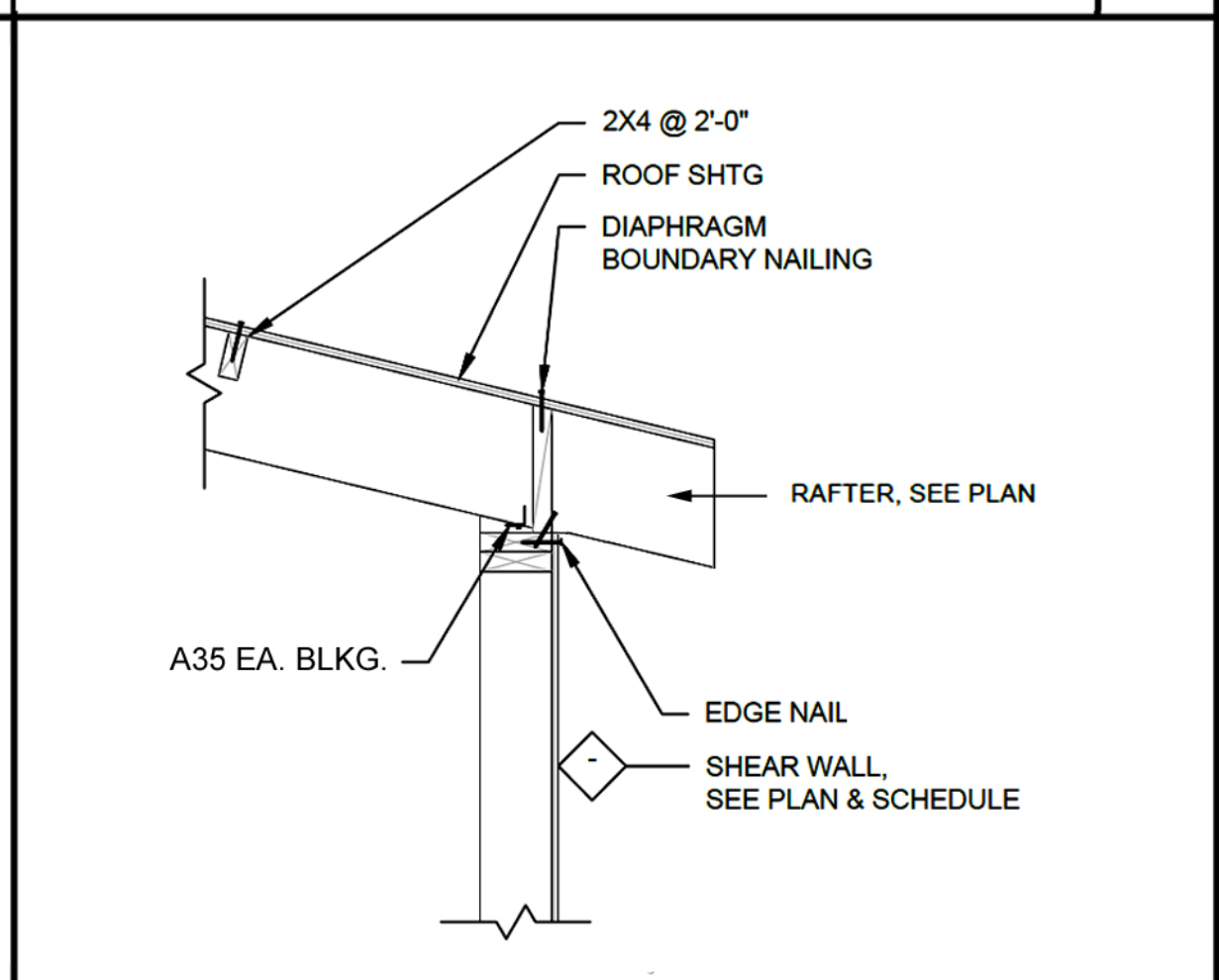
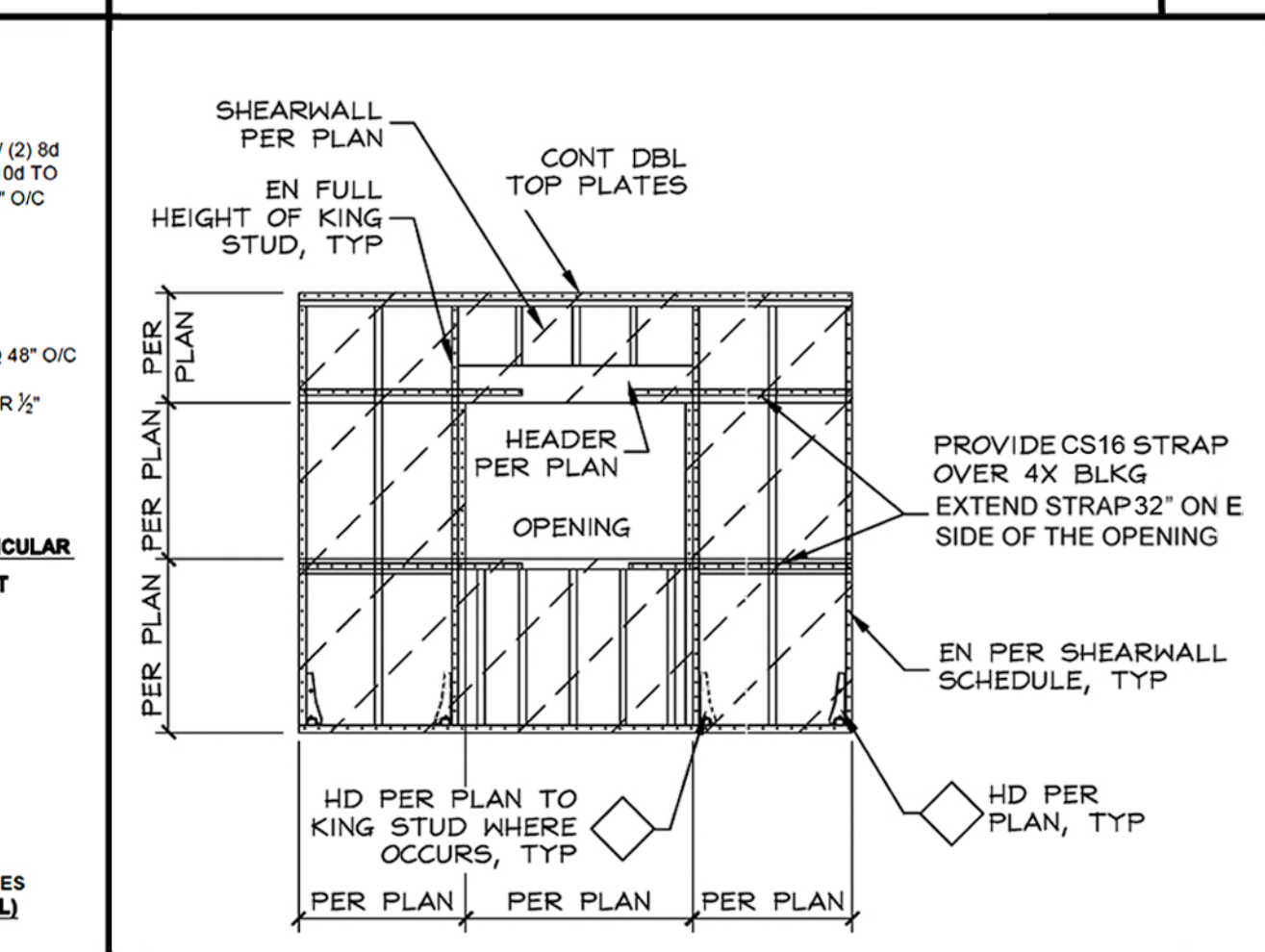
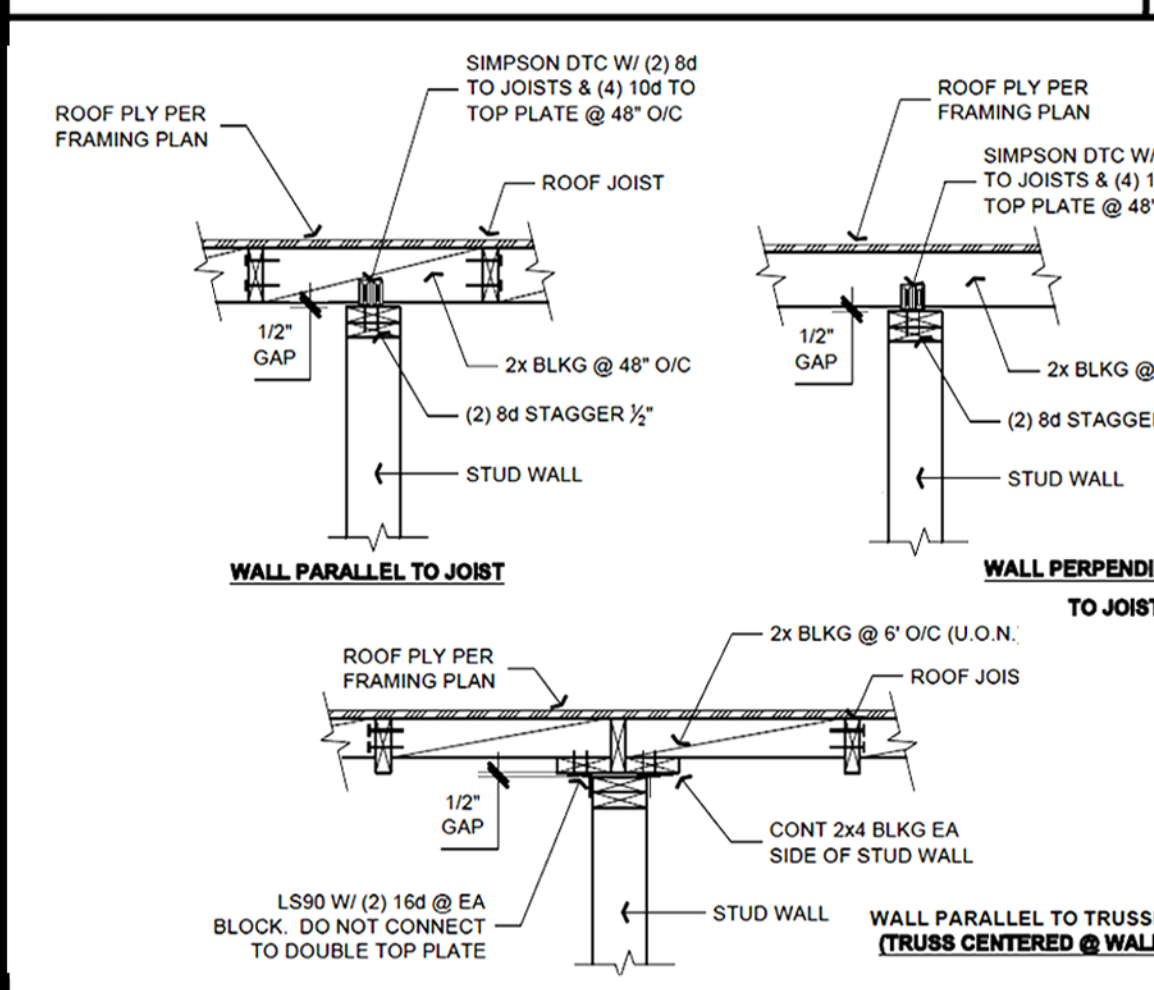
NON-BEARING WALL ON FLOOR 20

RIDGE BEAM AT SLOPED CEILING 16

ROOF FRAMING DETAIL 12

CONC. SLAB AT RAISED FOOTING 8

INTERIOR PIER FOOTING 4



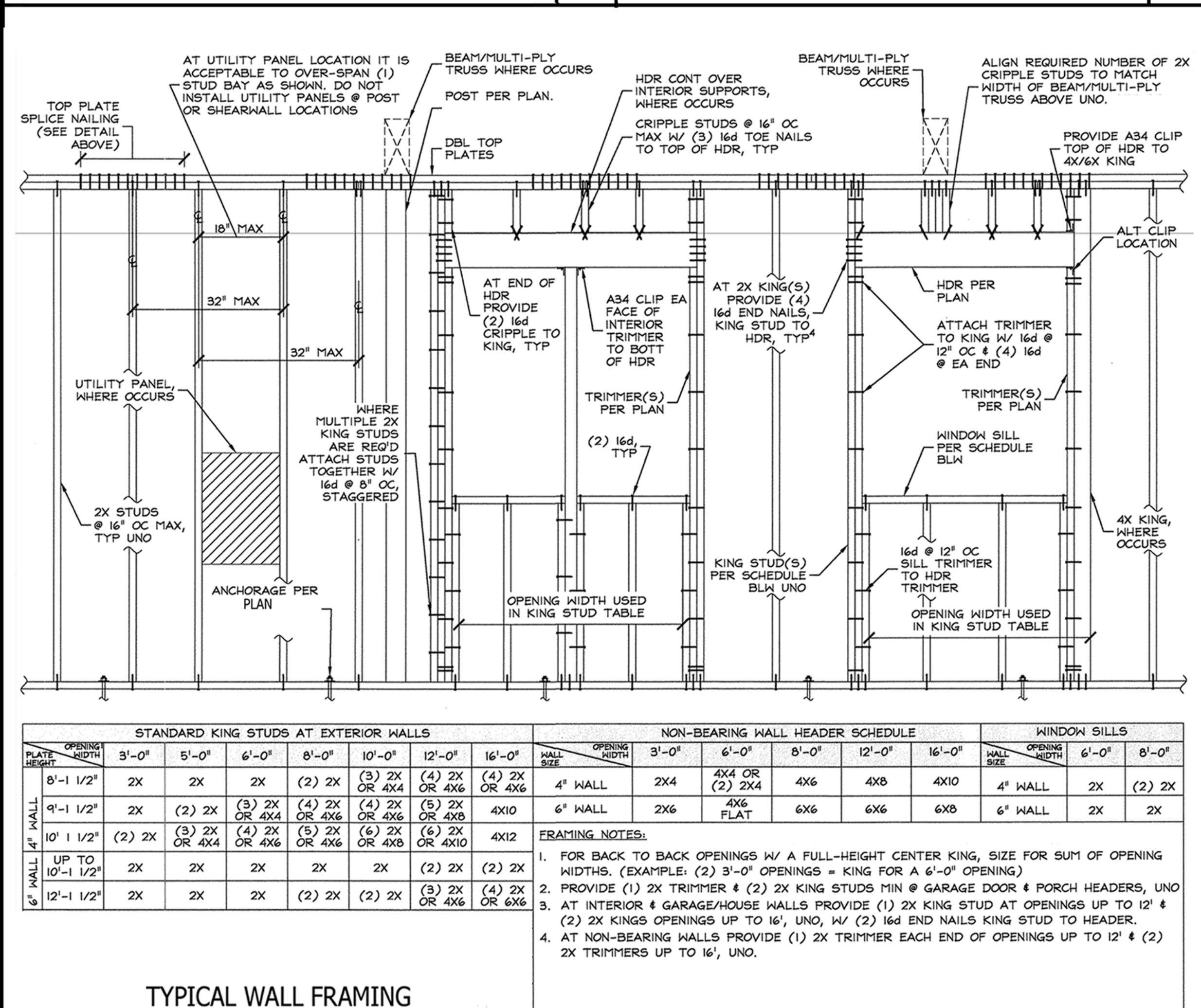
FRAMING TO NON-BEARING WALLS 19

SHEAR WALL WITH OPENING (FTAO) 15

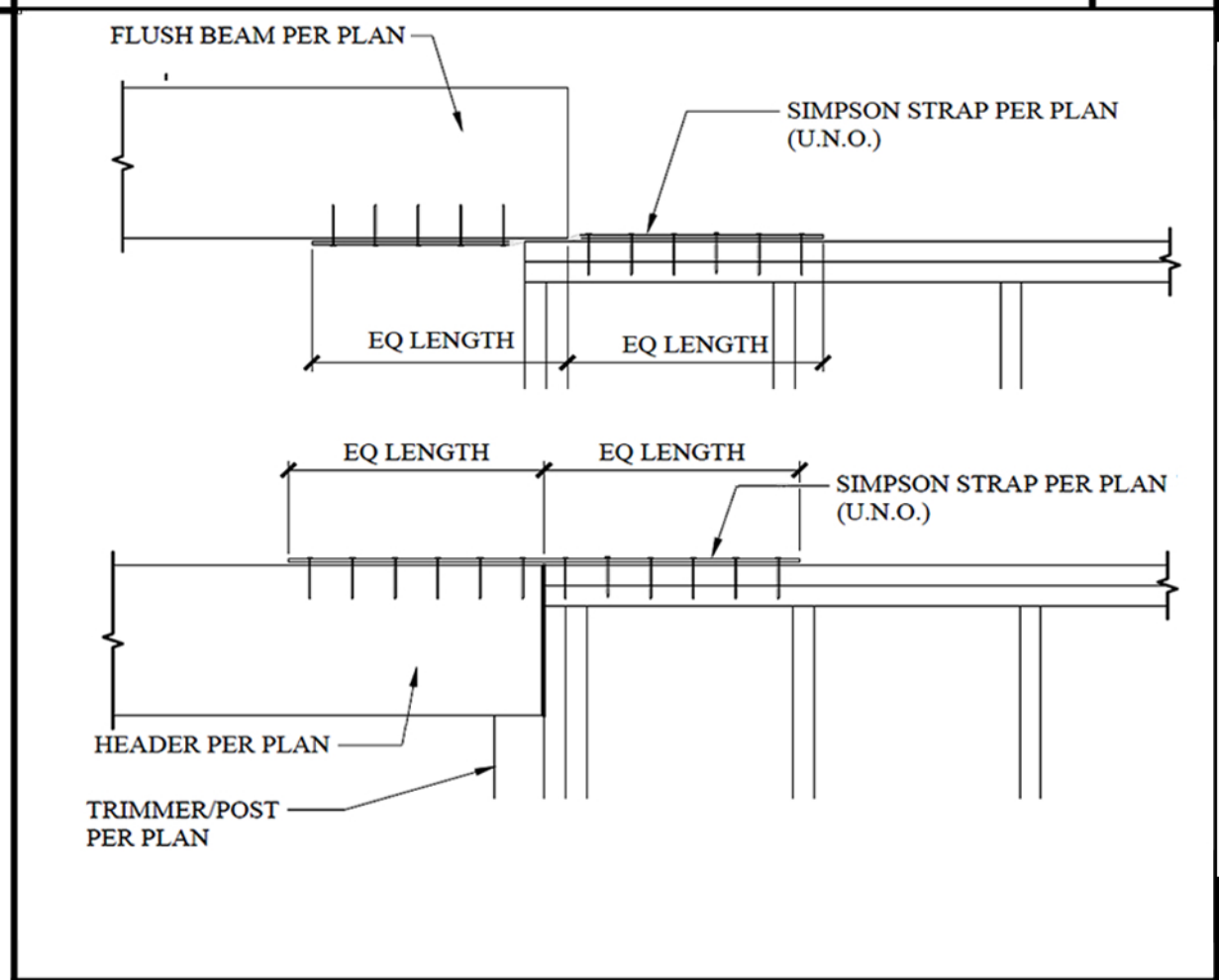
SHEAR TRANSFER 11

DECK LEDGER DETAIL 7

HD W/SSTB/SB ANCHOR BOLT 3



TYPICAL WALL FRAMING



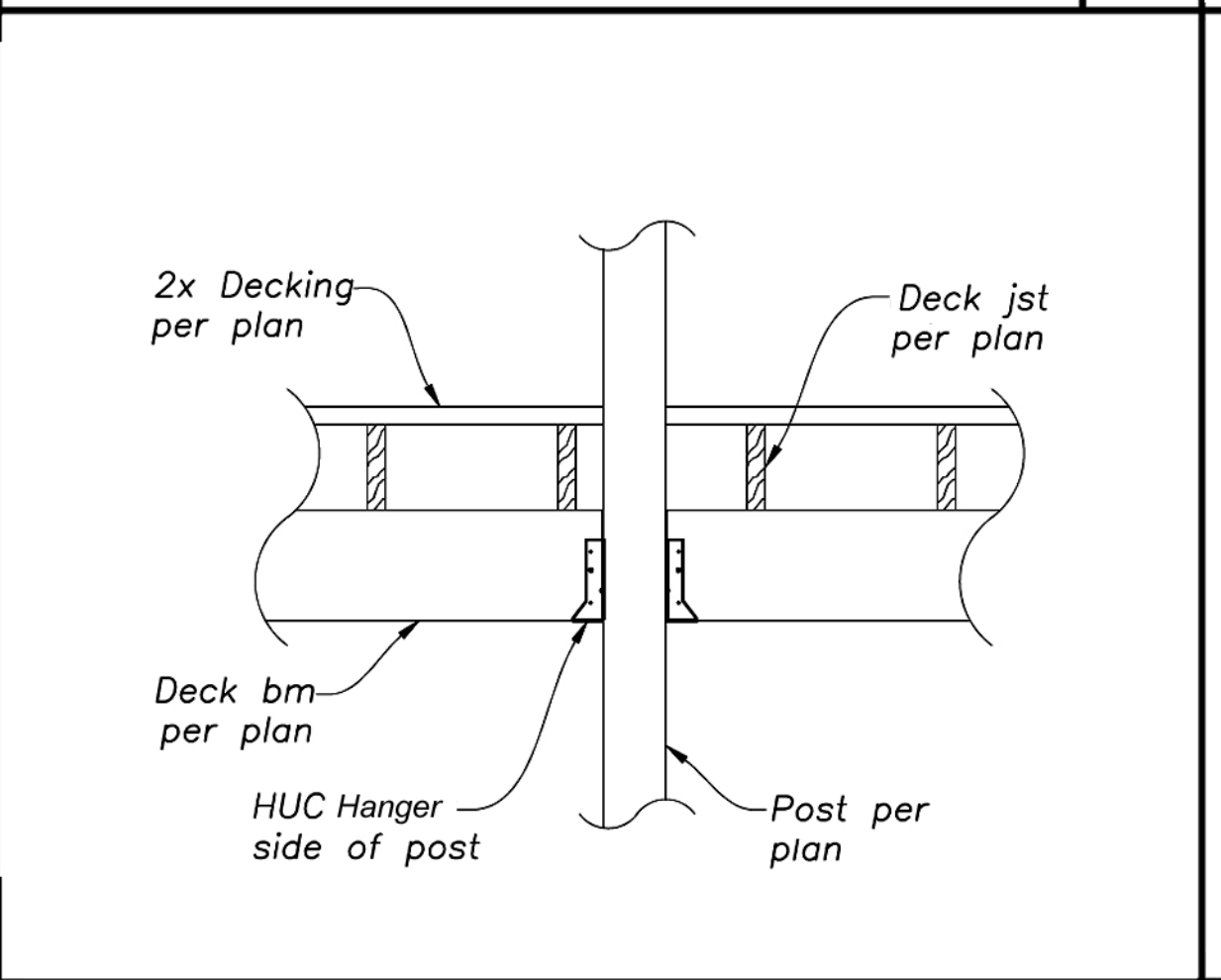
STRAP BEAM TO TOP PLATE 10

FASTENER	ROWS	SPACING	ALLOWABLE LOAD (PLF)	
2 PLY				
10d (3")	2	12" O.C.	370	
	3	12" O.C.	550	
	2	24" O.C.	800	
	2	16" O.C.	1200	
SDW22338	2	12" O.C.	1600	
	3 PLY			
	2	12" O.C.	280	
10d (3") (EACH SIDE)	3	12" O.C.	415	
	2	24" O.C.	450	
	2	16" O.C.	675	
	2	12" O.C.	900	
SDW22500	3	16" O.C.	1015	
	3	12" O.C.	1350	
	4 PLY			
SDW22634	2	24" O.C.	400	
	2	16" O.C.	600	
	2	12" O.C.	800	
	3	16" O.C.	900	
3	12" O.C.	1200		

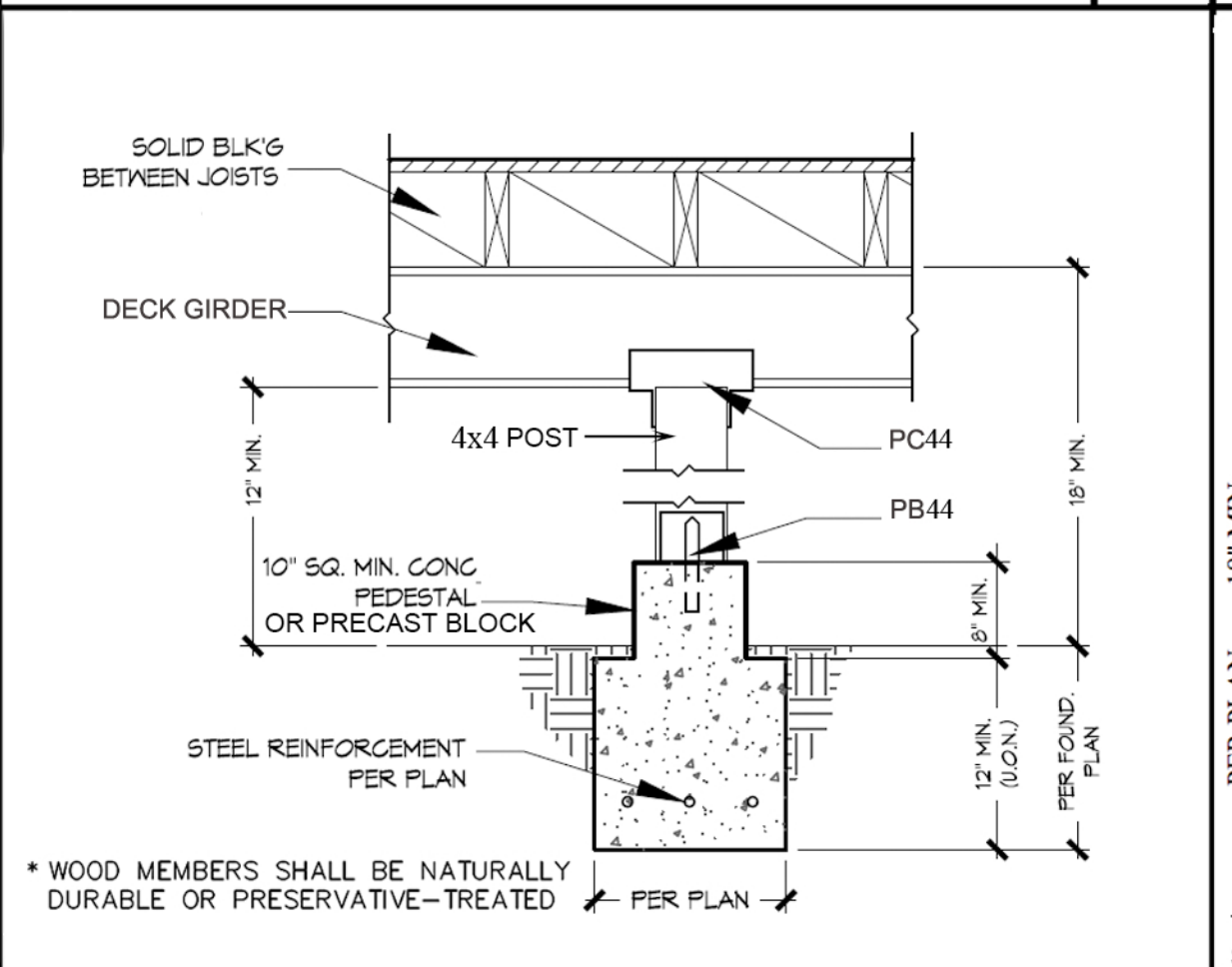
\* ALLOWABLE SIDE LOAD APPLIED TO EXTERIOR PLY

SEE STRUCTURAL PLAN FOR FASTENER SIZE AND SPACING

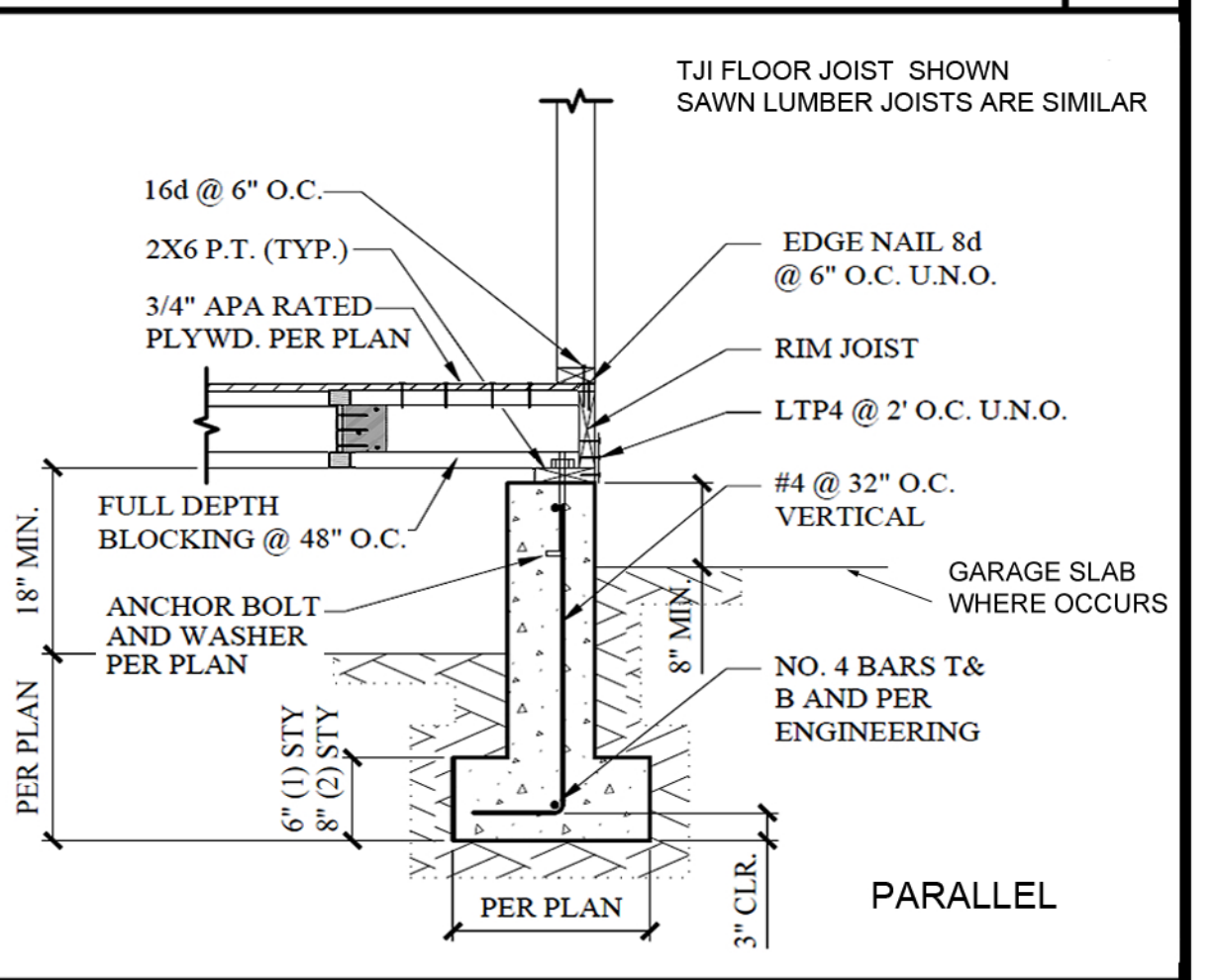
WOOD BEAM - MULTIPLE PLYS (SIDE LOADED) 9



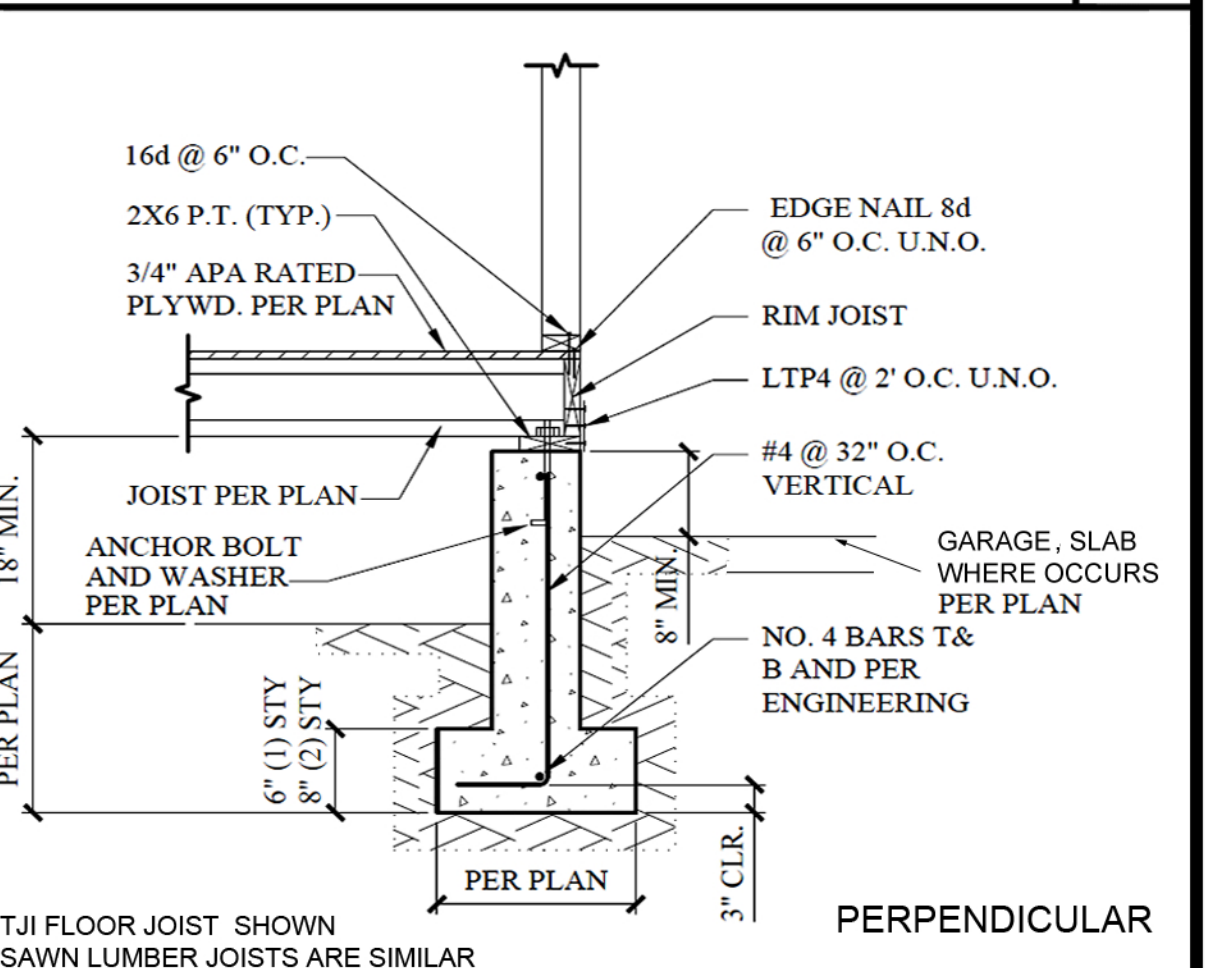
CONT. DECK POST DETAIL 6



DECK FOOTING 5



PARIMETER FOOTING 2



PARIMETER FOOTING 1

**I MAD ABU-MARKHIEH**  
 CIVIL AND STRUCTURAL ENGINEERING  
 BODEGA CT 3590  
 SACRAMENTO, CA 95864  
 TEL: 916-468-3768  
 markhieh@gmail.com

REGISTERED PROFESSIONAL ENGINEER  
 I MAD ABU-MARKHIEH  
 No. C41673  
 Exp. 3-31-24  
 CIVIL  
 STATE OF CALIFORNIA  
 9/9/22

Design  
 Richard R. Espinosa  
 (916) 872-5138

**Redwood ADU**  
 Built in California

NEW ACCESSORY DWELLING UNIT  
 18743 COUNTY RD 97  
 WOODLAND, CA 95695

REVISIONS

NO.	DATE	DESCRIPTION

PROJECT NUMBER:  
N/A

SHEET NAME:  
STRUCTURE DETAILS

SHEET NUMBER:  
SD1

**GENERAL REQUIREMENTS**

- Work performed shall comply with the following:
- These General Requirements unless otherwise noted on plans or specifications.
- Building Code - CBC 2019.
- All applicable local, State and Federal Codes, Ordinances, Laws, regulations and Protective Covenants governing the site of work.
- Standard Specifications of ASTM as noted herein and as required by the Building Code.
- All work needs to be performed by qualified and experienced contractors familiar with this type of project.
- In case of conflict, the more stringent requirement shall govern.
- On site verification of all dimensions and conditions shall be the responsibility of the contractor and sub-contractors. Noted dimensions take precedence over scale of drawings.
- Engineer or architect of record is to be notified immediately by the contractor should any question arise or any discrepancy be found pertaining to the working drawings and/or specifications.
- No deviations from these requirements and structural details shall be made without the written approval of E.O.R.. Approval by the inspector does not constitute authority to deviate from plans or specifications.
- The design, adequacy, and safety of erection bracing, shoring, temporary supports, etc., is the sole responsibility of the contractor and was not been considered by the architect or engineer. The contractor is responsible for the stability of the structure prior to the application of all shear walls, roof and floor diaphragms, and finish materials. The contractor shall provide the necessary bracing to provide stability prior to the application of the aforementioned materials. Observation visits to the site by the architect or structural engineer shall not imply the assumption of any responsibility in this regard.
- Upon completion of above by the engineer & prior to start of construction, contractor is responsible to check all dimensions, coordinate with the work of other consultants & other trades to ensure compliance with his/her requirements.
- E.O.R. shall have no liability for waterproofing or moisture transmission issues, whether related to concrete slabs, footings, foundations, or otherwise. The General Contractor/ Owner shall be responsible for the proper installation of the waterproofing and moisture protection specified by other.
- Special inspection per Building Code Sec.1704 is required & applies to the types of work indicated the plans

THIS STRUCTURE DOESNT REQUIRE SPECIAL INSPECTION

**DESIGN CRITERIA**

- SOILS**  
FOUNDATION REPORT BY FRANK LEE & ASSOCIATES GEOTECHNICAL CONSULTANTS Project No. 12030-S1.
- LATERAL LOADS:**  
Occupancy Category: II  
Seismic Design Category: D  
Seismic Importance Factor (I) = 1.0  
Site Class = D  
S<sub>1</sub> = 1.137g  
S<sub>a</sub> = 0.910g  
S<sub>1</sub> = 0.384g  
S<sub>as</sub> = 1.365  
R = 6.5  
Cs = 1.140
- DESIGN LOADS:**  
Roof Load  
Dead Load = 14 psf  
Live Load = 20 psf  
Total = 34 psf  
Floor Load  
Dead Load = 12 psf  
Live Load = 40 psf  
Total = 52 psf  
Floor Load (Garage)  
Dead Load = N/A  
Live Load = N/A  
Total = 72 psf  
Deck Load  
Dead Load = 12 psf  
Live Load = 60 psf  
Total = 72 psf  
GROUND SNOW LOAD (P<sub>g</sub>) = 0 psf

**FOUNDATION**

- All continuous footings to have 1/2" dia. x min. 12" anchor bolts, min. 7" embedment into concrete footing at 72" o.c. unless noted otherwise. One anchor bolt should be located max. 12" away and min. 9 1/2" from the end of the sill plates. min. (2) A.B.s. per sill plate/shear panel. Sill plate under shear walls of up to 4'-0" in length must be continuous. See note 2 for sill plate fasteners at interior non-shear walls.
  - Anchor bolts at shear walls shall be installed with plate washers of min. 3" sq. x 0.229" thick between sill plate and nut. Edge(s) of plate washers shall be 1/2" max. from inside face of shear panel(s) per conditions shown below.
  - The hole in the plate washer is permitted to be diagonally slotted with a width of up to 3/16 inch larger than the bolt diameter and a slot length not to exceed 1 3/4 inches, provided a standard cut washer is placed between the plate washer and the nut.
- For interior non-shear walls use Simpson PHN series .1450 pins with a penetration of 1 1/4" into slab at 16" O.C. to be installed in accordance with ICC ESR-2138. Actual slab thickness to be minimum 4". All interior shear walls to have A.B.s. per foundation plan.
- All holdowns and post anchors to be installed according to most current Simpson Strong Tie specifications and requirements of ICC-ER reports & shall be tied in place prior to foundation inspection. Dimensions are not furnished to Simpson holdowns. It is the responsibility of the contractor's superintendent, the framing contractor and the concrete contractor to locate these anchors in the exact location. Refer to details for proper installation.
- Min. concrete width to be 8" for receiving PA, HPA & STDH's. Verify locations of holdowns and anchor bolts with rough framing to assure accurate installation.
- Provide #3 X 24" dowel at 24" o.c. and 12" from the corner at all concrete stoops and porches.
- Provide min. (1) #4 reinforcing for electrical ground, location to be verified with the electrical contractor.
- Verify min. foundation depth, width, reinforcing steel and additional expansive soil requirements with valid soils report and if more stringent, they shall supersede the above minimum requirements. See note #7 under reinforced concrete for concrete strength.
- Admixtures in concrete mix containing calcium chlorides shall not be used.
- Footings shall be examined and certified in writing by the project soil/geology engineer prior to inspection and placement of concrete.
- Concrete shall be to the strength and slump as specified per structural design, and consist of Portland cement ASTM C-150 Type I per soils engineer's recommendations and Building Code section 1904.3 (ACI 318 section 4.3) when exposed to sulfate containing solutions. Aggregates shall be per ASTM C-33. Water to be clean and potable.
- Placement shall be in one continuous operation unless otherwise specified. Slab surface shall be cured with "Hunts" compound or equal or cured with other methods in accordance with good construction practice at contractor's option.
- Contractor shall dampen slab underlayment of sand/membrane just prior to concrete placement to assist uniform concrete curing. Slabs must not be poured during or immediately after rainstorms. The specified sand or visqueen should not be saturated at the time of the concrete pour. Any free water trapped in the sand layer must be removed prior to the concrete pour.
- The bottoms of footing excavations shall be level, clean and free of loose material or water when concrete is placed. Over excavation shall be filled with concrete or properly compacted fill that has been tested and approved by the soils engineer. Backfill shall not be placed until supporting foundations, walls and slab have attained sufficient strength to support lateral soil pressure.
- Concrete placement shall be monolithic in one continuous operation uniformly placed and must be vibrated and well consolidated unless shown otherwise on plans. Dual pour is defined by ACI as to when 1st. & 2nd. pour can not be vibrated together.
- Floor slab shall be poured level to 1/8" in 10'.

**STRUCTURAL WOOD**

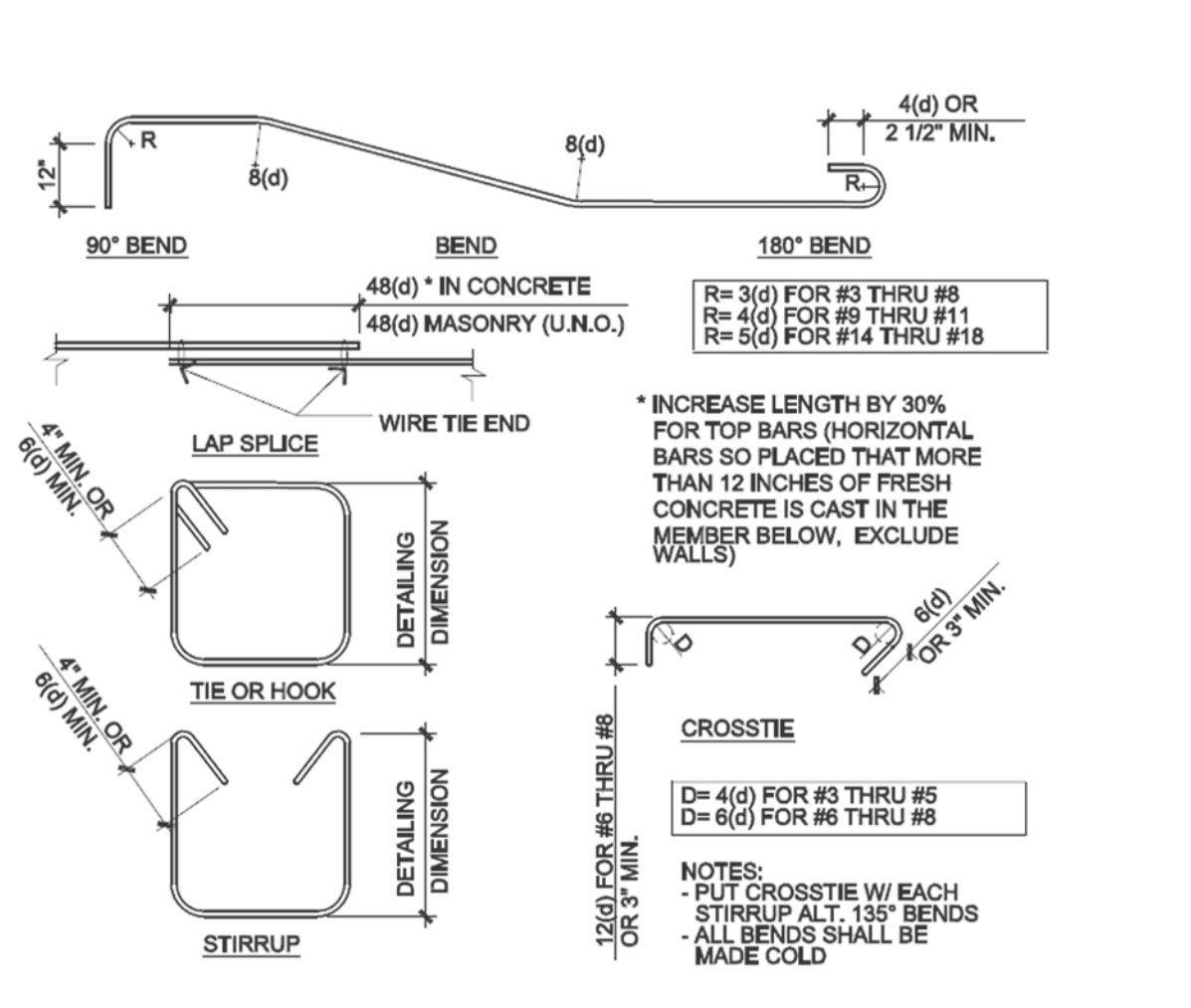
- MINIMUM QUALITY**
- All structural wood shall be of Douglas Fir Larch species, (19% maximum moisture content at the time of construction U.N.O.).
  - All machine bolts shall conform to ASTM A307. Holes for bolts should be drilled 1/16" larger than bolt diameter.
  - For non-shear wall applications, round washers shall be used on all bolts and should conform with ANSI/ASME B 18.2.1. Use min. 1 3/8" x 7/64" thick washer for 1/2" Ø bolt, 1 3/4" x 9/64" thick washer for 5/8" Ø bolt and 2 1/2" x 11/64" thick washer for 1" Ø bolt. U.N.O.
  - All nails shall be sinker nails and staggered U.N.O., except as shown in Nailing Schedule.
  - Adhesive used to attach floor sheathing to framing elements shall conform with APA specification AFG-01.
  - Manufactured hardware specified on the drawings are to be Simpson Strong Tie (Unless specifically authorized in writing by E.O.R.. Follow all manufacturer's requirements & recommendations for installation & handling of the product.
- LUMBER GRADES (U.N.O.)**
- 6x & 8x posts / beams / headers: DFL #1  
4x posts / beams / headers: DFL #2  
2x joists / rafters: DFL #2  
Studs: D.F.L. Stud Grade (up to 9'-0"), DFL #2 (taller than 9'-0")  
Top plates & Mud sills: DFL construction grade or better  
See structural wood note #11 for additional mud sill requirements
- The following beams/headers/rims can be from any manufacturer with current approved ICC evaluation report with the following mechanical properties:
- GLUED LAMINATED MEMBERS COMBINATION 24F-V4 DF/DF 3500' RADIUS.
  - LSL BEAMS  
DOUGLAS FIR 1.55E, SG=50, E=1950000 PSI, Fb=2325 PSI, Fv=910 PSI
  - LVL BEAMS  
DOUGLAS FIR 2.0E, SG=50, E=2000000 PSI, Fb=2600 PSI, Fv=285 PSI
  - PSL BEAMS  
DOUGLAS FIR 2.2E, SG=50, E=2200000 PSI, Fb=2900 PSI, Fv=290 PSI
- 8. TYPICAL FLOOR SHEATHING**  
23/32" APA rated Sturd-I-Floor T&G Exp 1 with min. span rating of 24" o.c. Refer to NER 108 for installation and conditions of use  
B.N.:10d common nails at 6" o.c.  
E.N.:10d common nails at 6" o.c.  
F.N.:3d common nails at 12" o.c.
- Use ring or screw shank nails and glue sheathing to framing using adhesives meeting APA specification AFG-01 or ASTM D3498. Apply glue in accordance with manufacturer's recommendations.
- TYPICAL ROOF SHEATHING**  
15/32" APA rated sheathing Exp 1 with a min. panel index of 32/16.  
Refer to NER 108 for installation and conditions of use.  
B.N.:8d common nail at 6" o.c.  
E.N.:8d common nail at 6" o.c.  
F.N.:3d common nail at 12" o.c.  
\*Note: All structural rated panels must be stamped by one of the following approved agencies, APA, PFS/TECO or Pittsburg.

**FRAMING**

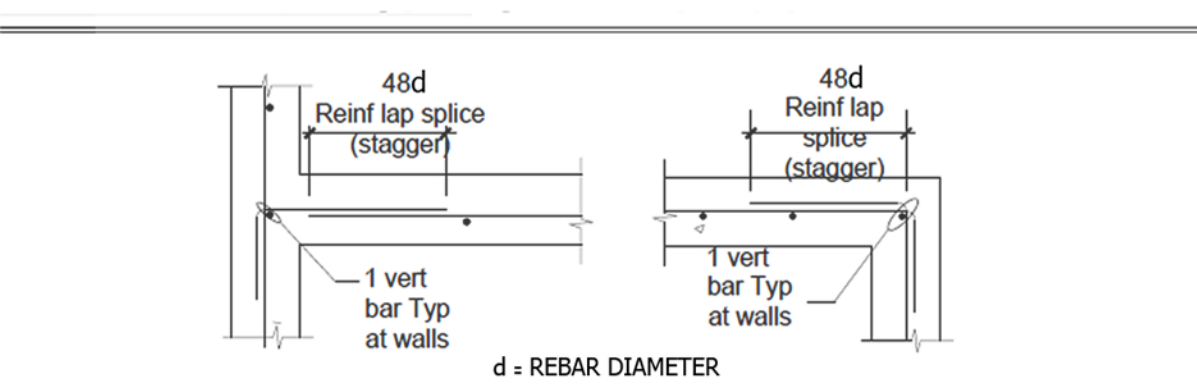
- All framing, bracing, nailing, notching, drilling or boring shall be in accordance with Building Code unless more stringent requirements are specified or required by the local Jurisdiction.
  - Fabrication and handling of Glue-lam beams shall be per ANSI/AITC A 190.1. Standard beams to bear legible APA-ENS or AITC grade stamp. An APA- EWS CRAN AITC Certificate of conformance for glued-laminated members should be submitted to the field inspector prior to installation and Glue-lam members shall be 24F-V4, DF/DF with standard camber on roof beams except cantilever end (U.N.O.). All cantilever ends and floor beams shall have zero camber u.n.o. All beams shall be fabricated using waterproof glue.
  - Fasteners in contact with preservative treated lumber and fire retardant treated wood shall be hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper.  
Exception: Plain carbon steel fasteners in sbx/dot and zinc borate preservative-treated wood in an interior, dry environment shall be permitted.
  - Stud walls perpendicular to a concrete or masonry wall shall be bolted to the concrete or masonry wall with 5/8" diameter x 8" A307 bolts at top, mid-height and bottom.
  - All wood exposed to weather conditions must be pressure treated with hot dipped galvanized connectors as specified in note 11.
  - Conventional light framed construction requirements of chapter 23 should be followed as required.
  - Weight of the roof tie is considered to be 10 psf max. (total roof dead load of 20 psf). If roofing material exceeds this load, the framing contractor should notify E.O.R. in writing prior to construction.
  - Top plates of all wood stud walls to consist of (2) 2x's the same width as the studs U.N.O. Top plates shall lap a min. of 48" and be spliced with not less than 6-16d nails spaced not more than 12" o.c.
  - All shear panels shall have continuous sheathing material from one end to the other and from plate to plate as specified on the drawings. Contractor shall coordinate framing such that continuity of shear panels is assured.
  - All ledgers shall be spliced with ST22 strap, unless noted otherwise.
  - All shear transfer nailing shall be per drawings, and contractor shall provide proper notification for inspections to review the same.
  - Provide post/multiple studs at lower floor under post/multiple studs above. Each post/stud shall be fastened by Gypsum Wall Board w/ 5d cooler nails @ 7" o.c. U.N.O. on plan. Provide full width and depth compression block between floors at such locations.
  - All joist hangers shall be Simpson U hanger, all beam hangers shall be Simpson HU hangers U.N.O. on plan or detail. Follow manufacturer's recommendations for installation.
  - If a double sill plate is used at light-weight concrete flooring, then the framing contractor shall apply sill plate nailing to both sill plates, at 16" o.c. max. or as specified per schedule.
  - Use this span table for stud spacing (U.N.O. on plans):
- | STUD SIZE | STUD HEIGHT | BEARING WALLS    |                       |                                 | NON-BEARING WALLS |         |         |
|-----------|-------------|------------------|-----------------------|---------------------------------|-------------------|---------|---------|
|           |             | ROOF & ONE FLOOR | TWO FLOORS, ONE FLOOR | MAXIMUM SPACING WHEN SUPPORTING | STUD HEIGHT       | SPACING | MAXIMUM |
| 2x4       | 10          | 24               | 16                    | NOT ALLOWED                     | 24                | 14      | 24      |
| 3x4       | 10          | 24               | 24                    | 16                              | 24                | 14      | 24      |
| 2x6       | 10          | 24               | 24                    | 16                              | 24                | 20      | 24      |
| 2-2x4     | 10          | 24               | 24                    | 16                              | 24                | 20      | 24      |
| 2-2x6     | 10          | 24               | 24                    | 16                              | 24                | 20      | 24      |
- \*SHALL NOT BE USED IN EXTERIOR WALLS.  
PREFER TO PLANS FOR STUD HEIGHTS EXCEEDING THIS TABLE.
- Headers: Use 4x4 for openings less than 16" at bearing walls without point loads. For non-bearing walls use 2x4 for openings up to 3'-0" max. Use (2)2x4 for openings up to 6'-0" max. Use 4x6 for openings up to 12'-0" max. U.N.O. (2-2x on edge can be substituted for 4x members).
  - Approved end-jointed lumber may be used interchangeably with solid sawn members of the same species and grade for buildings up to 2-story. When finger jointed lumber is marked "stud use only" or "vert use only" such lumber shall be limited to use for studs only. All finger jointed lumber should bear a certified finger jointed lumber grade stamp.
  - Wood truss manufacturer shall supply to the engineer and the building department calculations and shop drawings for approval of design loads, configuration (2 or 3 point bearing), and shear transfer, prior to fabrication. It shall be the responsibility of the manufacturer to obtain building department approval of calculations and shop drawings prior to fabrication.
  - Trusses shall be designed in accordance with the latest local Building Code for all loads imposed, including lateral loads and mechanical equipment loads.
  - All connections involving trusses shall be ICC approved and of adequate strength to resist stresses due to the loadings involved and shall be designed and specified by the truss manufacturer.
  - Truss members and engineered wood products (i.e. prefabricated wood joist, structural glued-laminated timber and structural composite lumber) cannot be cut, notched, drilled, spliced or otherwise altered in any way without the approval of a registered design professional (CRC)
  - Cross bridging and/or bracing shall be provided and detailed by the truss manufacturer as required to adequately brace all trusses.
  - Truss manufacturer to provide details which allow for normal deflection without imposing lateral loads on their supports (i.e., scissors trusses).
  - Truss manufacturer is responsible for:
    - providing additional shear and drag trusses as shown on the framing plans.
    - reviewing framing plans and details prior to fabrication of trusses and specifying hangers.
    - meet the profile as indicated in the architectural and structural drawings.
    - design trusses for deflection compatibility of the system to avoid hump and sag in roof or ceiling.
  - All trusses designed by truss manufacturer shall be designed to sustain all vertical, lateral and other pertinent loads, including bracing of top and bottom chords, in addition to any connections related to trusses. Contractor to coordinate with truss manufacturer.
  - All truss lumber shall be Douglas Fir Larch (U.N.O.). Roof truss lumber shall be either Douglas Fir Larch or Hem-Fir. (U.N.O.)

**REINFORCED CONCRETE**

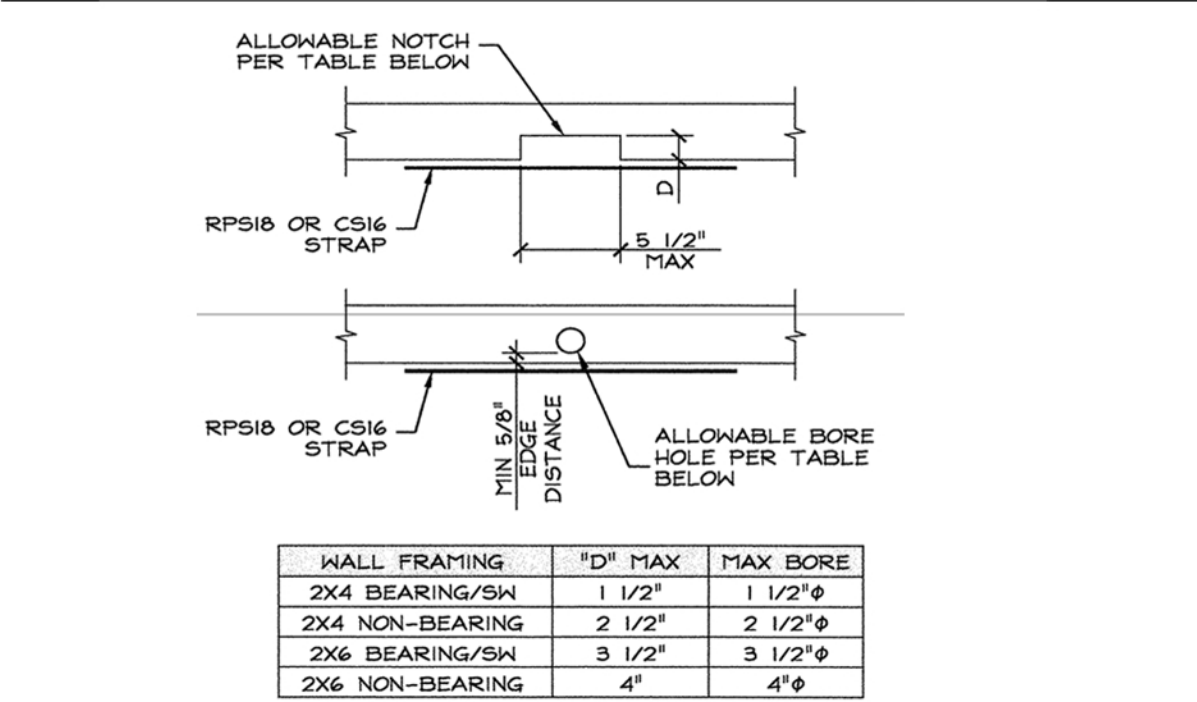
- GENERAL**
- All reinforced concrete materials and construction shall conform to Building Code, chapter 19.
- MATERIALS**
- Cement shall conform to Section 1903 of Building Code and shall correspond to that on which the selection of concrete proportions were based.
  - Concrete aggregates shall conform to Building Code Section 1903.
  - Portland cement shall be Type I or II conforming to ASTM C150. For concrete in contact with soil containing sulfate So<sub>2</sub> ≥ 0.1% by weight use Type II cement, containing sulfate So<sub>2</sub> ≥ 0.2% by weight use Type V cement. Weight percentage of So<sub>2</sub> shall be per soils report. Refer to Section 1904 of the Building Code for special exposure conditions as required by soils engineer & see corrosion engineer's recommendations for concrete exposed to corrosive elements.
- Reinforcing steel shall conform to ASTM A615, Grade 60 for all sizes.**
- Dowels shall be equal in size and spacing.
- STRENGTH**
- The (28 days) concrete compressive strength, F<sub>c</sub>, shall be min 2500 psi U.N.O.
  - Special inspection is required for concrete with F<sub>c</sub> > 2500 psi
- All reinforcing, dowels, holdowns, and other inserts shall be secured in position and approved by the local building official prior to the pouring of any concrete.
  - Min. concrete cover for reinforcing:
    - Concrete, placed against earth not formed - 3"
    - Concrete formed or troweled - 2"
    - Walls and curbs - 1 1/2"
    - Slab on grade - at center



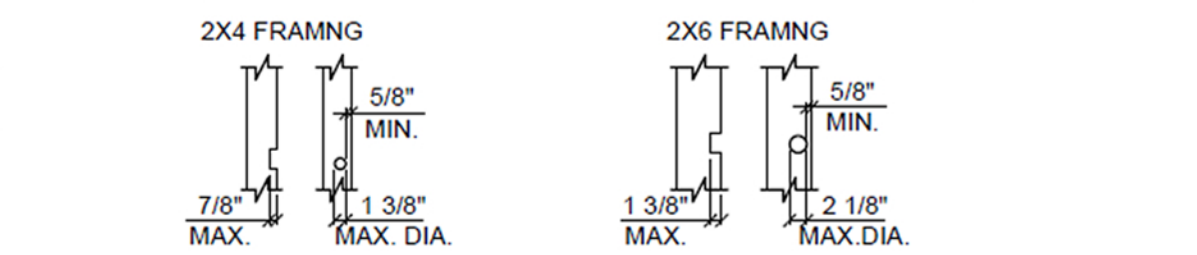
**TYP. REINFORCING DETAILS**



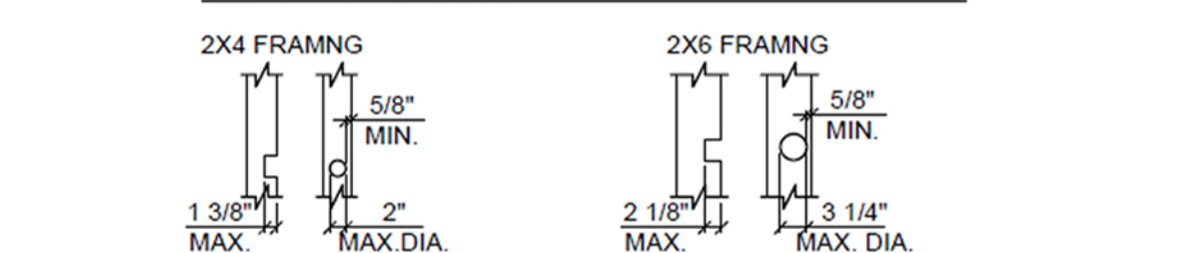
**REBAR LAP SPLICE AT INTERSECTIONS**



**BEARING**

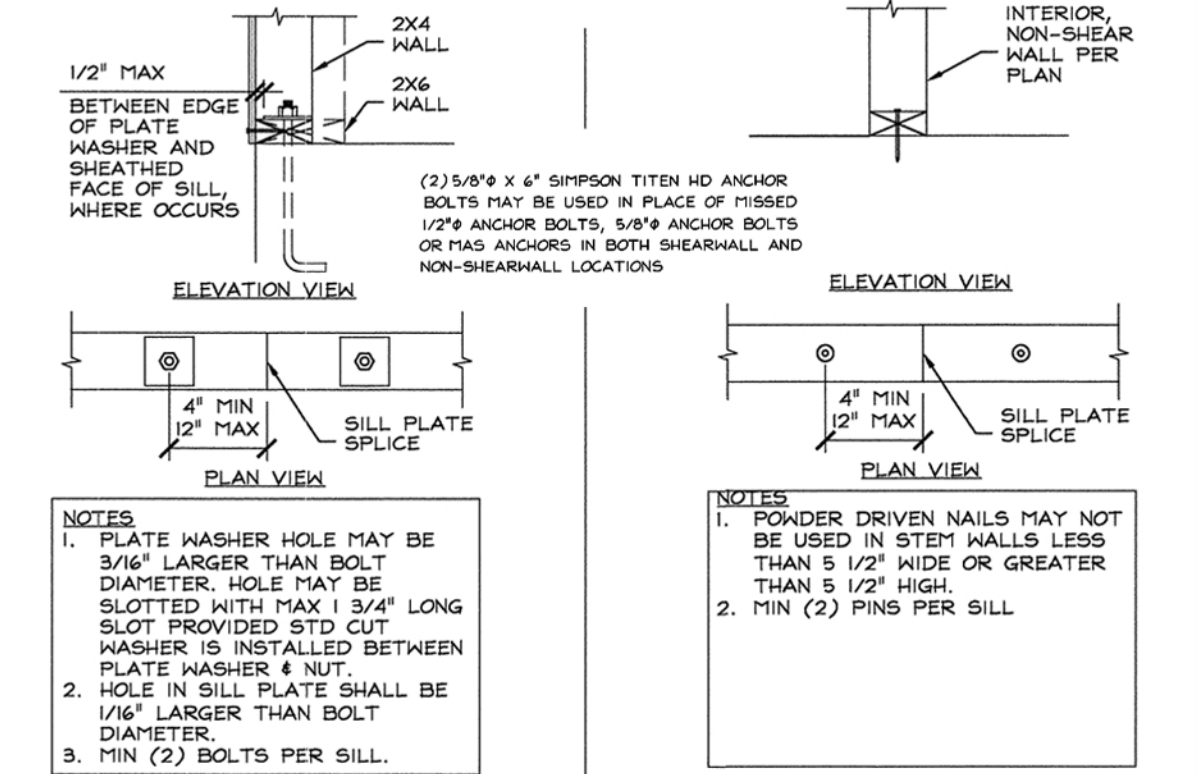


**NON-BEARING**

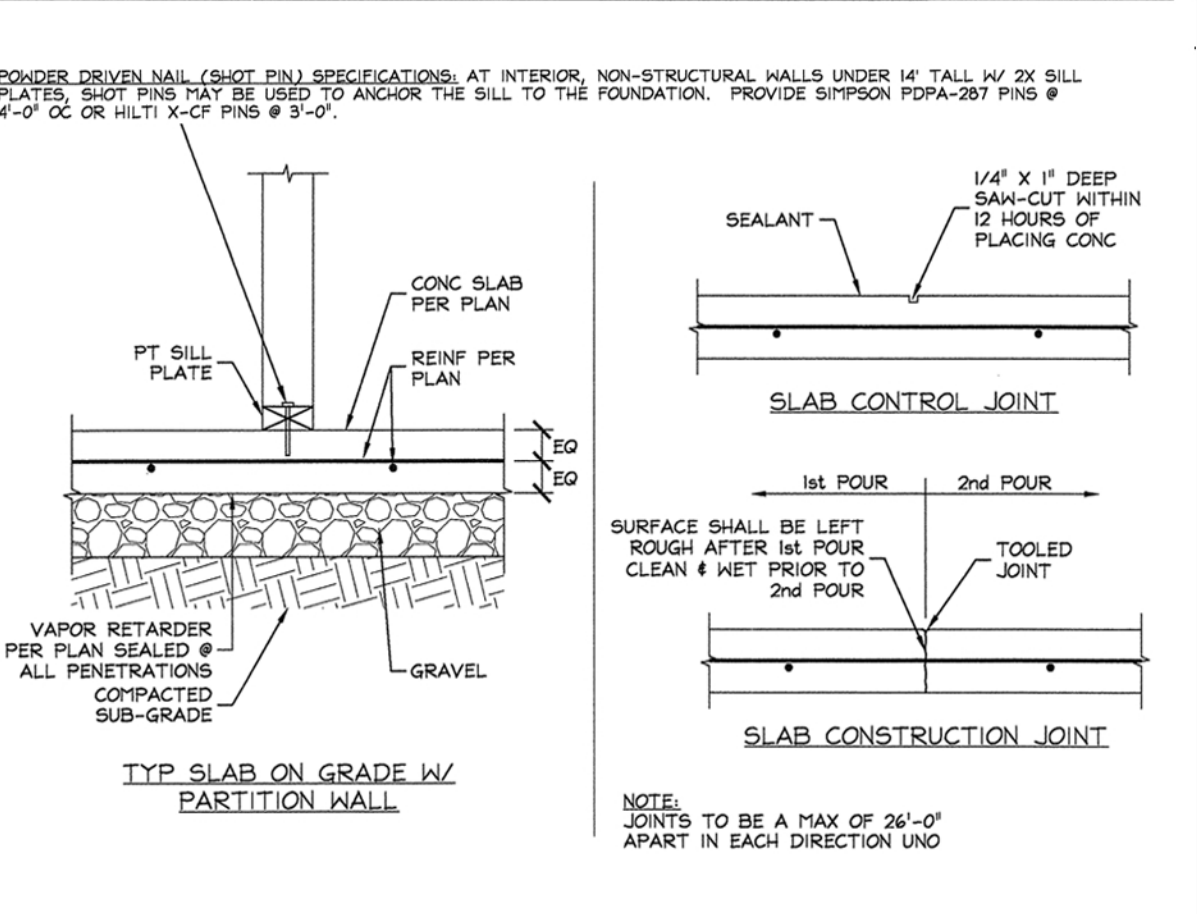


BEARING OR NON-BEARING WALLS MAY BE DRILLED 2" FOR 2X4 & 3 1/4" FOR 2X6 WALLS, w/ 5/8" EDGE DISTANCE. IF STUDS ARE DOUBLED & NO MORE THAN 2 SUCCESSIVE DOUBLED STUDS ARE DRILLED. (SECTION R602.6 2016 CRC)

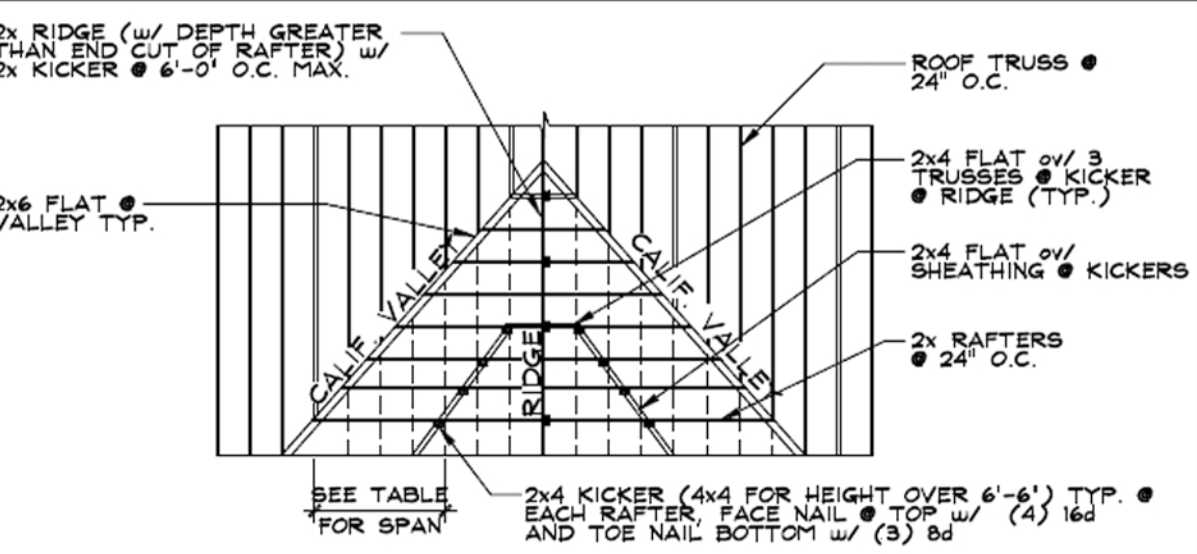
**NOTCH OR DRILLED STUDS**



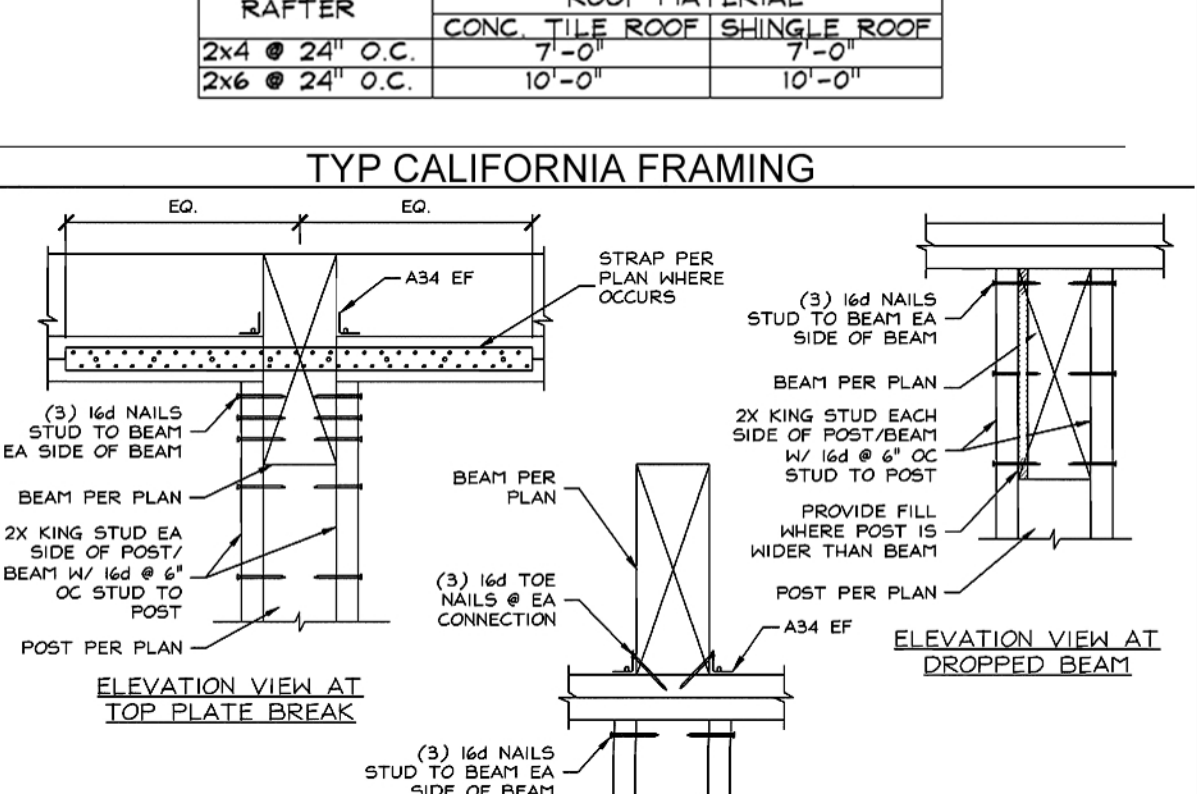
**ANCHOR BOLTS & REQUIREMENTS**



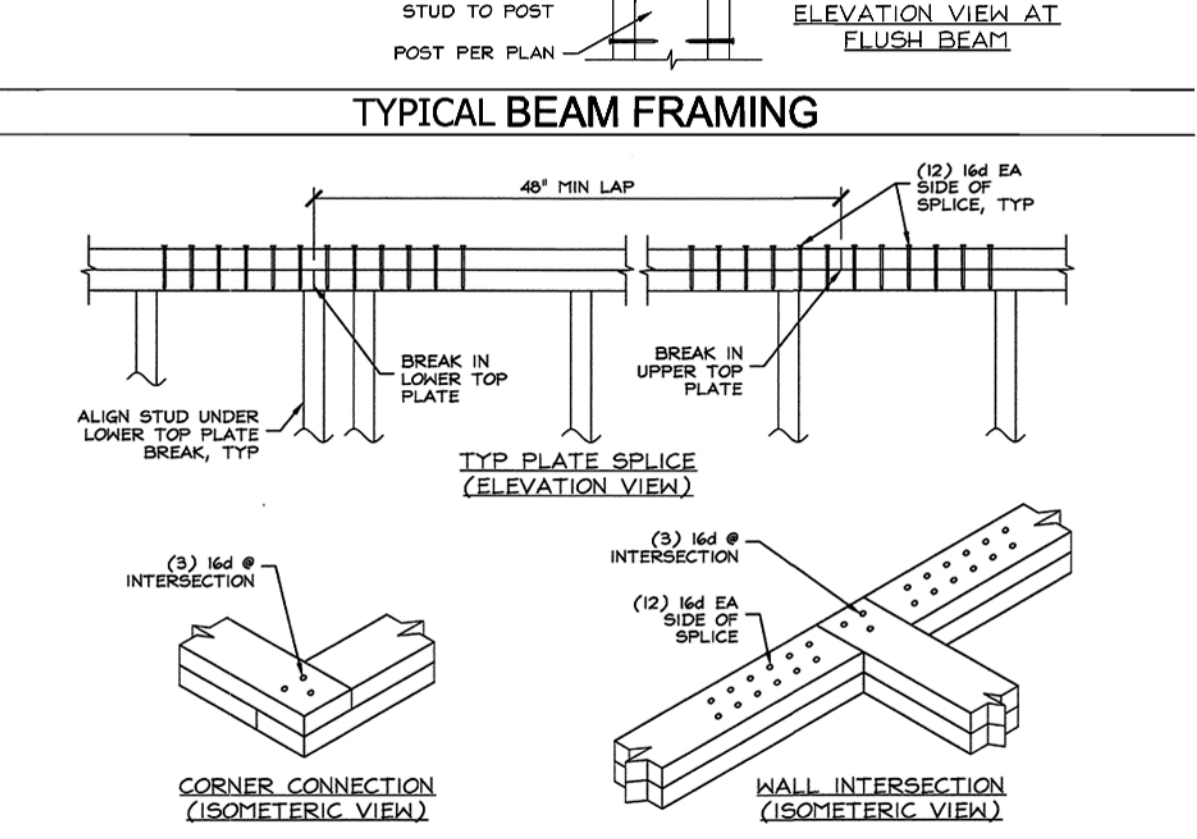
**TYP SLAB ON GRADE**



**TYP BEAM FRAMING**



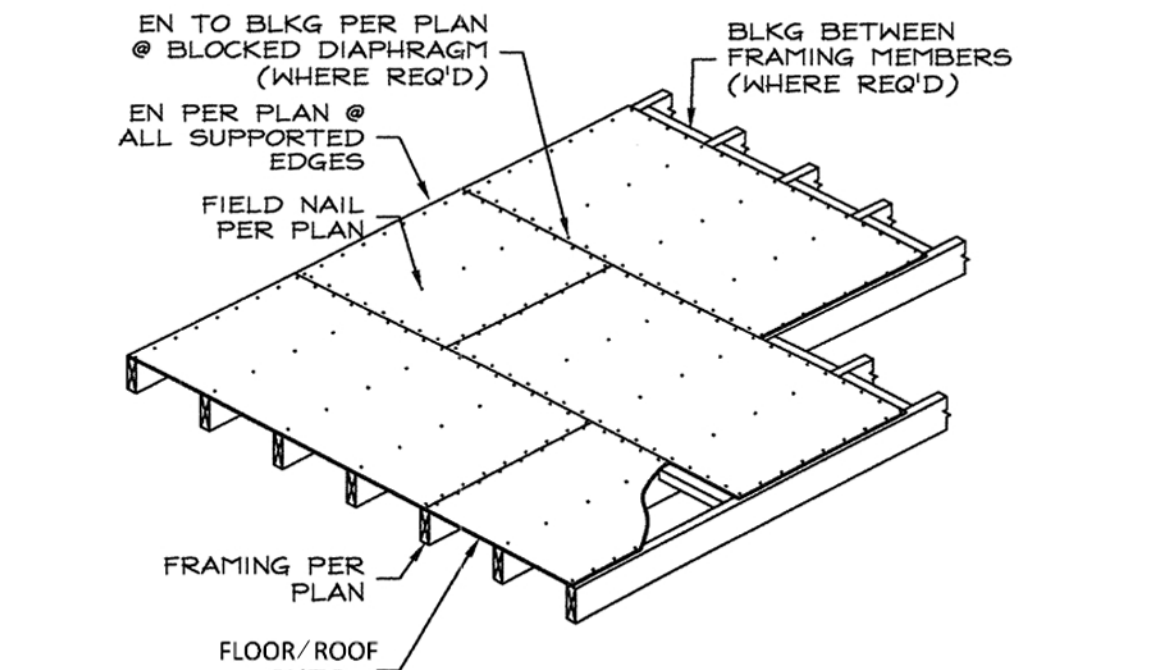
**TYPICAL SHEAR WALL NAILING**



**NAILING SCHEDULE**

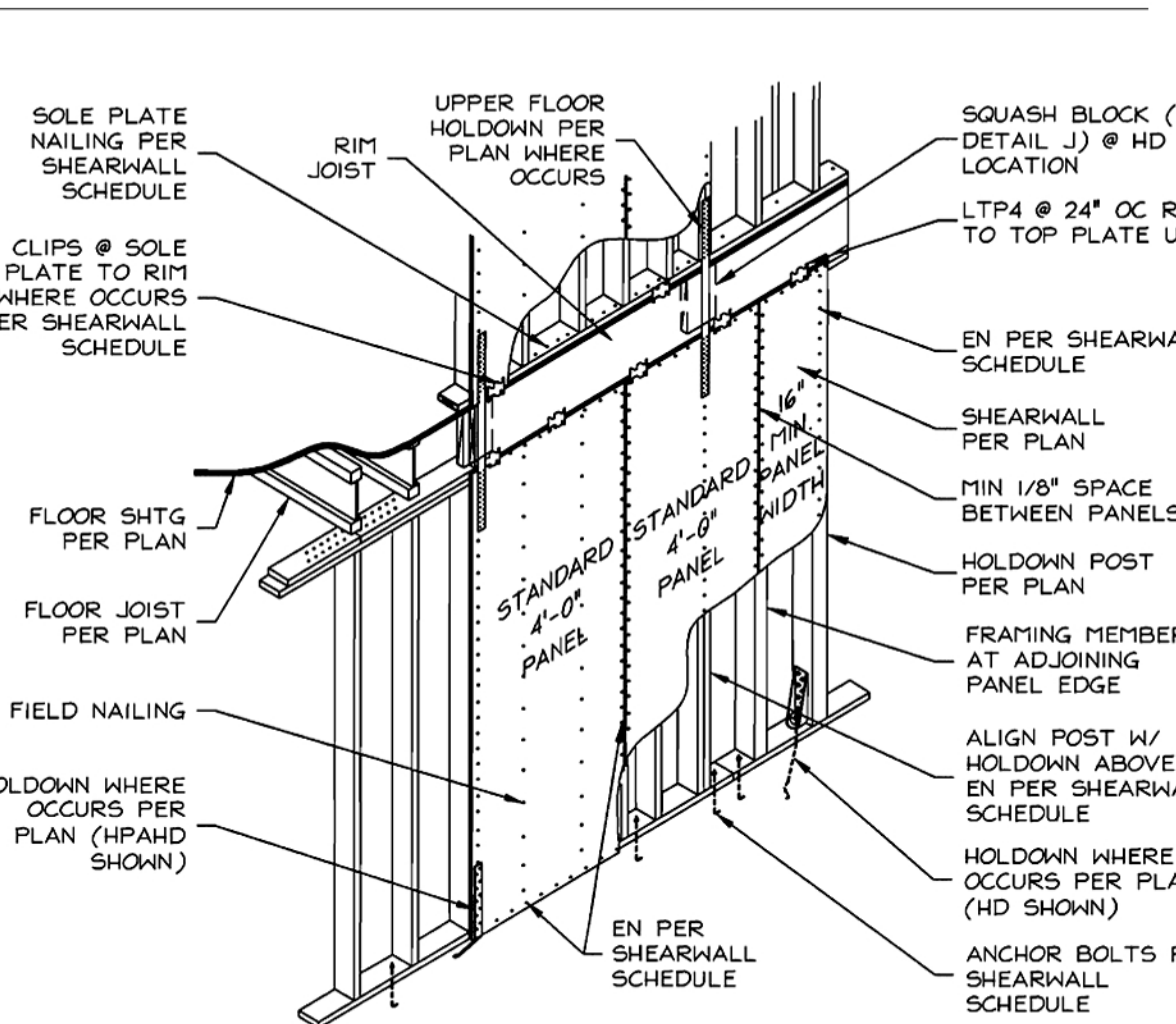
CONNECTION	NAILING
1. JOIST TO SILL OR GIRDER, TOENAIL.....	3-8d
2. BRIDGING TO JOIST, TOENAIL EACH END.....	2-8d
3. 1" X 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL.....	2-8d
4. WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL.....	3-8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL.....	2-16d
6. SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL.....	16d (BOX) AT 16" O.C.
7. SOLE PLATE TO JOIST, AT BRACED WALL PANEL.....	(3) 16d (BOX) PER 16"
8. TOP PLATE TO STUD, END NAIL.....	2-16d
9. STUD TO SOLE PLATE.....	4-8d, TOENAIL OR 2X SOLE: 2-16d 3X SOLE: 2-20d (BOX)
10. DOUBLE STUDS, FACE NAIL.....	16d (BOX) AT 24" O.C.
11. DOUBLED TOP PLATES, FACE NAIL.....	16d (BOX) AT 16" O.C.
12. DOUBLE TOP PLATES, LAP SPLICE.....	3-16d
13. BLOCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE, TOENAIL.....	3-8d
14. RIM JOIST TO TOP PLATE, TOE NAIL.....	8d AT 6" O.C.
15. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL.....	2-16d
16. CONTINUOUS HEADER, TWO PIECES.....	16d AT 16" O.C. ALONG EACH EDGE
17. CEILING JOISTS TO PLATE, TOENAIL.....	3-8d
18. CONTINUOUS HEADER TO STUD, TOENAIL.....	4-8d
19. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL.....	3-16d
20. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL.....	3-16d
21. RAFTER TO PLATE, TOENAIL.....	3-8d
22. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL.....	2-8d
23. 1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL.....	3-8d
24. WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL.....	3-8d
25. BUILT-UP CORNER STUDS.....	16d AT 24" O.C.
26. BUILT-UP GIRDER AND BEAMS.....	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2-20d AT ENDS AND AT EACH SPLICE

NOTES:  
1. COMMON NAILS SHALL BE USED (U.N.O.)  
2. JOIST CAN BE EITHER SAWN LUMBER OR JOIST PER PLAN

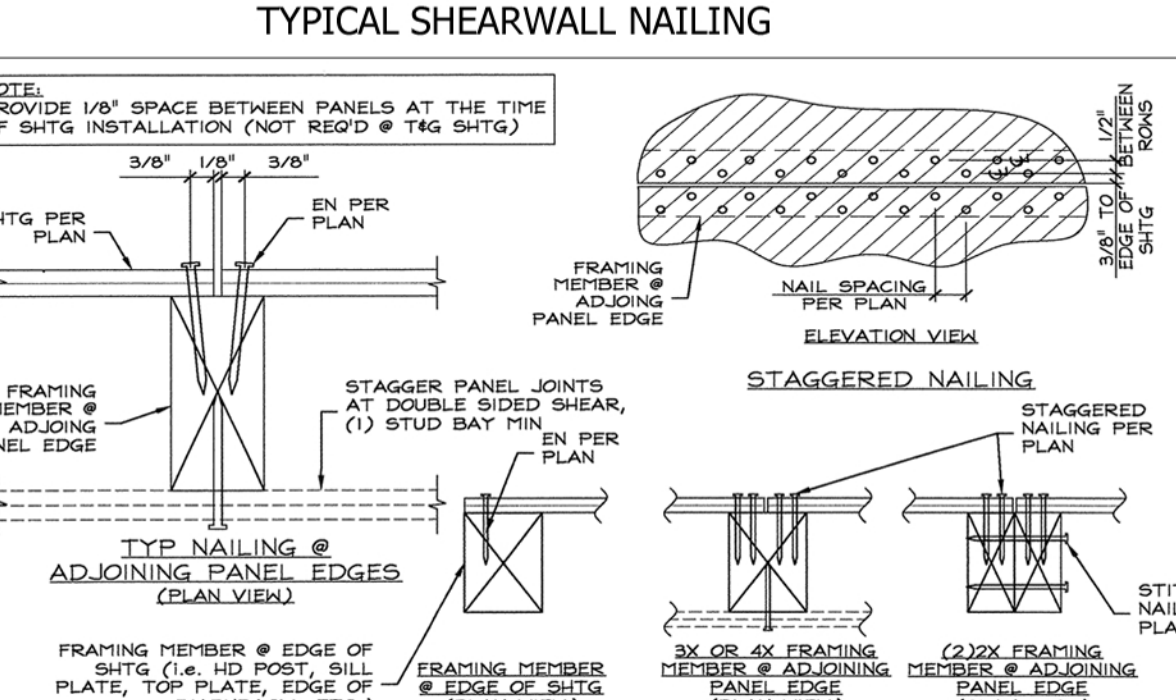


NOTES:  
1. STAGGER PLYWOOD JOINTS MIN 2'-0" OC & ALIGN PLYWOOD JOINTS OVER FRAMING MEMBERS.  
2. ORIENT PLYWOOD WITH FACE GRAIN PERPENDICULAR TO FRAMING MEMBERS.  
3. MIN PANEL SIZE TO BE 2'-0" x 2'-0" UNLESS ALL EDGES ARE BLOCKED.

**TYPICAL DIAPHRAGM NAILING**

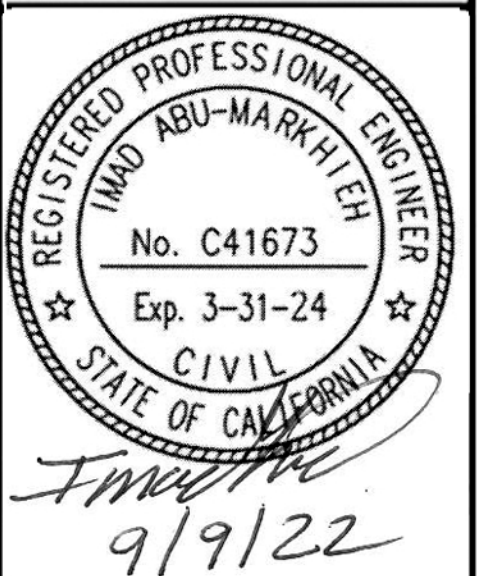


**TYPICAL SHEATHING NAILING**



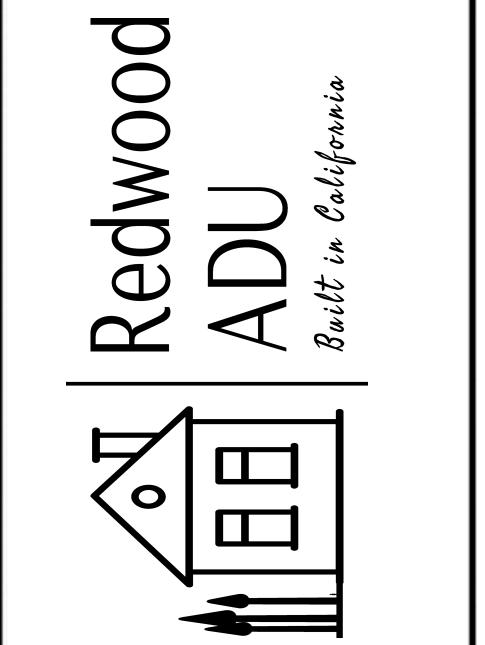
**I/MAD ABU-MARKHIEH**

CIVIL AND STRUCTURAL ENGINEERING  
BODEGA CT 3590  
SACRAMENTO, CA 95864  
TEL: 916-468-3768  
markhieh@gmail.com



**Design**

Richard R. Espinosa  
(916) 872-5138



**NEW ACCESSORY DWELLING UNIT**  
18743 COUNTY RD 97  
WOODLAND, CA 95695

**REVISIONS**

NO.	DATE	DESCRIPTION

PROJECT NUMBER:  
N/A

SHEET NAME:

**STRUCTURE NOTES**

SHEET NUMBER:  
SN

GENERAL INFORMATION	
01	Project Name: 18743 County Road 97 ADU
02	Run Title: Title 24 Analysis
03	Project Location: 18743 County Road 97
04	City: Woodland
05	Standards Version: 2022
06	Zip code: 95695
07	Software Version: CBECC-Res 2022.2.1
08	Climate Zone: 12
09	Front Orientation (deg/ Cardinal): 145
10	Building Type: Single family
11	Number of Dwelling Units: 1
12	Project Scope: Newly Constructed
13	Number of Bedrooms: 2
14	Addition Cond. Floor Area (ft²): 0
15	Number of Stories: 1
16	Existing Cond. Floor Area (ft²): n/a
17	Fenestration Average U-factor: 0.29
18	Total Cond. Floor Area (ft²): 1200
19	Glazing Percentage (%): 23.30%
20	ADU Bedroom Count: n/a

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

Registration Number: 223-P01009725A-000-000-0000000-0000  
 Registration Date/Time: 2023-01-25 11:53:08  
 CA Building Energy Efficiency Standards - 2022 Residential Compliance  
 HERS Provider: CalCERTS, Inc.  
 Report Version: 2022.0.000  
 Report Generated: 2023-01-24 07:26:57  
 Schema Version: rev 20220901

ENERGY USE INTENSITY				
	Standard Design (kBtu/ft² - yr)	Proposed Design (kBtu/ft² - yr)	Compliance Margin (kBtu/ft² - yr)	Margin Percentage
Gross EU1	20.16	17.5	2.66	13.19
Net EU2	9.9	7.24	2.66	26.87

Notes:  
 1. Gross EU1 is Energy Use Total (not including PV) / Total Building Area.  
 2. Net EU2 is Energy Use Total (including PV) / Total Building Area.

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	Asimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
2.31	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"> <li>Cool roof</li> <li>Window overhangs and/or fins</li> <li>Non-standard duct location (any location other than attic)</li> <li>Compact distribution system basic credit</li> <li>Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed</li> </ul>	

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FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Asimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Win 06 3	Window	Right	Right	55			1	24	0.29	NFRC	0.21	NFRC	Bug Screen
Door 02	Window	Right	Right	55			1	53.33	0.29	NFRC	0.21	NFRC	Bug Screen
Win 06 4	Window	Right	Right	55			1	24	0.29	NFRC	0.21	NFRC	Bug Screen

OVERHANGS AND FINIS													
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	Flag Ht.	Depth	Top Up	Dist L	Bot Up	Depth	Top Up	Dist R	Bot Up
Win 02	2	0.1	2	2	0	0	0	0	0	0	0	0	0
Win 02 2	2	0.1	2	2	0	0	0	0	0	0	0	0	0
Win 01	2	0.1	2	2	0	0	0	0	0	0	0	0	0
Door 01	6	0.1	6	6	0	0	0	0	0	0	0	0	0
Win 06	2	0.1	2	2	0	0	0	0	0	0	0	0	0
Win 13	2	0.1	2	2	0	0	0	0	0	0	0	0	0
Win 06 2	2	0.1	2	2	0	0	0	0	0	0	0	0	0

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ENERGY DESIGN RATINGS						
	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency <sup>3</sup> EDR (EDR2/efficiency)	Total <sup>2</sup> EDR (EDR2total)	Source Energy (EDR1)	Efficiency <sup>3</sup> EDR (EDR2/efficiency)	Total <sup>2</sup> EDR (EDR2total)
Standard Design	35.3	42	36.1			
Proposed Design	31.5	41.4	35.7	3.8	0.6	0.4
RESULT <sup>1</sup> : PASS						

<sup>1</sup>Efficiency EDR includes improvements like a better building envelope and more efficient equipment  
<sup>2</sup>Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries  
<sup>3</sup>Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

Standard Design PV Capacity: 2.31 kWdc  
 PV System resized to 2.31 kWdc (a factor of 2.307) to achieve Standard Design PV PV scaling

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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"> <li>Quality insulation installation (QII)</li> <li>Indoor air quality ventilation</li> <li>Kitchen range hood</li> <li>Minimum Airflow</li> <li>Verified Refrigerant Charge</li> <li>Fan Efficacy Watts/CFM</li> <li>Verified heat pump rated heating capacity</li> <li>Duct leakage testing</li> <li>Ducts located entirely in conditioned space confirmed by duct leakage testing</li> </ul>						

BUILDING - FEATURES INFORMATION						
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
18743 County Road 97 ADU	1200	1	2	1	0	1

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status
ADU	Conditioned	HVAC1	1200	10	DHW Sys 1	New

OPAQUE SURFACES							
01	02	03	04	05	06	07	08
Name	Zone	Construction	Asimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	Tilt (deg)
Front	ADU	R-19 Wall	145	Front	320	86	90
Left	ADU	R-19 Wall	235	Left	300	24	90
Back	ADU	R-19 Wall	325	Back	320	68	90
Right	ADU	R-19 Wall	55	Right	300	101.33	90

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 Schema Version: rev 20220901

OPAQUE SURFACE CONSTRUCTIONS							
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-19 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-19	None / None	0.07	Inside Finish: Gypsum Board Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6 Exterior Finish: Wood Siding/sheathing/decking
R-35 Roof Cathedral + CR	Cathedral Ceilings	Wood Framed Ceiling	2x10 @ 16 in. O. C.	R-38	None / None	0.033	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-38 in 9-1/4 in. (R-35) / 2x10 Inside Finish: Gypsum Board
R-19 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x12 @ 16 in. O. C.	R-19	None / None	0.045	Floor Surface: Carpeted Siding/sheathing/decking Cavity / Frame: R-19 / 2x12

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

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	Basic	n/a	DHW Heater 1 (1)

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 Schema Version: rev 20220901

ENERGY USE SUMMARY						
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft²-yr)	Standard Design TDV Energy (EDR2) (kTWh/ft²-yr)	Proposed Design Source Energy (EDR1) (kBtu/ft²-yr)	Proposed Design TDV Energy (EDR2) (kTWh/ft²-yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	3.85	16.98	3.73	28.52	0.12	-11.54
Space Cooling	1.06	30.71	0.8	27.97	0.26	2.74
IAQ Ventilation	0.36	3.91	0.36	3.91	0	0
Water Heating	2.25	23.01	1.16	13.09	1.09	9.92
Self Utilization/Flexibility Credit				0		0
Efficiency Compliance Total	7.52	74.61	6.05	73.49	1.47	1.12
Photovoltaics	-1.57	-54.29	-1.57	-54.14		
Battery			0	0		
Flexibility						
Indoor Lighting	0.8	8.05	0.8	8.05		
Appl. & Cooking	3.08	38.54	3.07	38.38		
Plug Loads	3.77	39.32	3.77	39.32		
Outdoor Lighting	0.2	1.8	0.2	1.8		
TOTAL COMPLIANCE	13.8	108.03	12.32	106.9		

Registration Number: 223-P01009725A-000-000-0000000-0000  
 Registration Date/Time: 2023-01-25 11:53:08  
 CA Building Energy Efficiency Standards - 2022 Residential Compliance  
 HERS Provider: CalCERTS, Inc.  
 Report Version: 2022.0.000  
 Report Generated: 2023-01-24 07:26:57  
 Schema Version: rev 20220901

OPAQUE SURFACES							
01	02	03	04	05	06	07	08
Name	Zone	Construction	Asimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	Tilt (deg)
Raised Floor	ADU	R-19 Floor Crawlspace	n/a	n/a	1200	n/a	n/a

OPAQUE SURFACES - CATHEDRAL CEILINGS										
01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Asimuth	Orientation	Area (ft²)	Skylight Area (ft²)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
Cathedral Roof	ADU	R-35 Roof Cathedral + CR	145	Front	1200	0	5	0.25	0.85	Yes

FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Asimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Win 02	Window	Front	Front	145	3	4	1	12	0.29	NFRC	0.21	NFRC	Bug Screen
Win 02 2	Window	Front	Front	145	3	4	1	12	0.29	NFRC	0.21	NFRC	Bug Screen
Win 01	Window	Front	Front	145	12	3.5	1	42	0.29	NFRC	0.21	NFRC	Bug Screen
Door 01	Window	Front	Front	145	3	6.66	1	20	0.29	NFRC	0.21	NFRC	Bug Screen
Win 04	Window	Left	Left	235			1	8	0.29	NFRC	0.21	NFRC	Bug Screen
Win 04 2	Window	Left	Left	235			1	8	0.29	NFRC	0.21	NFRC	Bug Screen
Win 03</													

